E-112-17

REDACTED

RECEIVED
NASSAU COUNTY
CLERK OF THE LEGISLATURE

2017 APR 27 P 2:30

Contract ID#: CFPW05-000024

Department: POLICE

CF E-112-17 RUSH!

SERVICE Motorola Radio Project

CF (Capital) Contract Details

NIFS ID #: CLPD17-00002 NIFS Entry Date: 3-23-17 Term: from: June 30, 2005 to: Completion

New ☐ / Renewal ☐	
Amendment ☐	
Time Extension ☐	
Addl. Funds ☒	
Blanket Resolution ☐ RES#	

1) Mandated Program:	Yes ☐	No ☒
2) Comptroller Approval Form Attached:	Yes ☐	No ☒
3) CSEA Agreement § 32 Compliance Attached:	Yes ☐	No ☒
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☒
5) Insurance Required	Yes ☒	No ☐

Agency Information

Vendor	
Name: Motorola Solutions, Inc.	Vendor ID# 361115800
Address 1301 East Algonquin Road Schaumburg, IL 60196	Contact Person Courtney Hansen
	Phone (847) 576-6090

County Department
Department Contact DI Robert Torres
Address 1490 Franklin Ave Mineola, NY 11501
Phone (516) 573-7500

Routing Slip

DATE Rec'd.	DEPARTMENT	Internal Verification	DATE Appv'd& Fw'd.	SIGNATURE	Leg. Approval Required
	Department	NIFS Entry (Dept) ☑ NIFS Appvl (Dept. Head) ☑ Contractor Registered	3.23.17		
	DPW (Capital Only)	CF Capital Fund Approval ☐			Yes ☐ No ☐ Not required if blanket resolution
	OMB	NIFS Approval (Contractor Registered) ☑	3/27/17		
4/6/17	County Attorney	CA RE & Insurance Verification ☑	4/6/17		Yes ☑ No ☐
4/6/17	County Attorney	CA Approval as to form ☑	4/7/17		
	Legislative Affairs	Fw'd Original Contract to CA ☐			
	County Attorney	NIFS Approval ☐			
	Comptroller	NIFS Approval ☐			
4/14/17	County Executive	Notarization ☐ Filed with Clerk of the Leg. ☐	4/17/17		

2017 APR 27 P 2:30

RECEIVED
NASSAU COUNTY ATTORNEY

54 (1/06)

Contract ID#: CFPW05-000024

Department: POLICE

Contract Summary

Description: Additional encumbrance for Change Order 21 & adjust final system acceptance date.

Purpose: To encumbrance additional funds rebuild the NCPD 4th Precinct radio technology (RTI 16-0397).

Method of Procurement: The County issued an RFP on November 29, 2010 resulting in four vendors submitting a sealed proposal. All proposer's were invited to meet the selection committee and view a story board.

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Costs and Technical Evaluation Teams which operated independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents..

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500MHz and will provide the capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system, though Motobridge (an IP based soft switched radio network), will provide interoperability with the County's current Department of Public Works ADACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems. The adoption of MCC 7500 IP based console technology increased the capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis: Rebuild 4th Precinct radio technology not to exceed $144,031.00

Change in Contract from Prior Procurement: N/A

Recommendation: Approve as submitted

Advisement Information

BUDGET CODES	
Fund:	CAP
Control/Project:	50680
Resp:	PWCAP
Object:	00004
Transaction:	109

RENEWAL	
% Increase	
% Decrease	

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	XXXXXXX
County	$
Federal	$
State	$
Capital	$ 144,031.00
Other	$
TOTAL	$ 144,031.00

LINE	INDEX/OBJECT CODE	AMOUNT
1		$
2		$
3		$
4		$
5	PWCAPCAP/50680/00004	$ 144,031.00
6		$
	TOTAL	$ 144,031.00

Document Prepared By: DI Robert Torres

Date: 03/22/2017

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date 4/24/17
Date	Date	(For Office Use Only) E #:

PR5254 (1/06)

RULES RESOLUTION NO. – 2017

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AMENDMENT TO A PERSONAL SERVICES AGREEMENT BETWEEN THE COUNTY OF NASSAU, ACTING ON BEHALF OF THE NASSAU COUNTY POLICE DEPARTMENT AND MOTOROLA, INC.

WHEREAS, the County has negotiated an amendment to a personal services agreement with Motorola, Inc. to increase the maximum amount of the Agreement for Contractor in connection with the Nassau County Police Department Land Mobile Modernization Project, a copy of which is on file with the Clerk of the Legislature; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said amended agreement with Motorola, Inc.

RUSH !

NIFA

Nassau County Interim Finance Authority

Contract Approval Request Form (As of January 1, 2015)

1. Vendor: Motorola Solutions, Inc.

2. Dollar amount requiring NIFA approval: $ 144,031.00

Amount to be encumbered: $ 144,031.00

This is a ___ New Contract ___ Advisement ✓ Amendment

If new contract - $ amount should be full amount of contract
If advisement – NIFA only needs to review if it is increasing funds above the amount previously approved by NIFA
If amendment - $ amount should be full amount of amendment only

3. Contract Term: 6/30/2005 to termination

Has work or services on this contract commenced? ✓ Yes ___ No

If yes, please explain: This is an ongoing radio project construction contract.

4. Funding Source:

___ General Fund (GEN)
✓ Capital Improvement Fund (CAP)
___ Other

___ Grant Fund (GRT)
Federal % ___
State % ___
County % 100

Is the cash available for the full amount of the contract? ✓ Yes ___ No
If not, will it require a future borrowing? ___ Yes ___ No

Has the County Legislature approved the borrowing? ___ Yes ___ No ___ N/A

Has NIFA approved the borrowing for this contract? ___ Yes ___ No ___ N/A

5. Provide a brief description (4 to 5 sentences) of the item for which this approval is requested:

Rebuild existing 500mhz radio technology at 4th Precinct.

6. Has the item requested herein followed all proper procedures and thereby approved by the:

Nassau County Attorney as to form ___ Yes ___ No ___ N/A
Nassau County Committee and/or Legislature ___ Yes ___ No ___ N/A

Date of approval(s) and citation to the resolution where approval for this item was provided:

7. Identify all contracts (with dollar amounts) with this or an affiliated party within the prior 12 months:

AUTHORIZATION

To the best of my knowledge, I hereby certify that the information contained in this Contract Approval Request Form and any additional information submitted in connection with this request is true and accurate and that all expenditures that will be made in reliance on this authorization are in conformance with the Nassau County Approved Budget and not in conflict with the Nassau County Multi-Year Financial Plan. I understand that NIFA will rely upon this information in its official deliberations.

Rosemarie Dalle — 3/28/17

Signature | Title | Date

Print Name

COMPTROLLER'S OFFICE

To the best of my knowledge, I hereby certify that the information listed is true and accurate and is in conformance with the Nassau County Approved Budget and not in conflict with the Nassau County Multi-Year Financial Plan.

Regarding funding, please check the correct response:

_____ I certify that the funds are available to be encumbered pending NIFA approval of this contract.

If this is a capital project:

_____ I certify that the bonding for this contract has been approved by NIFA.

_____ Budget is available and funds have been encumbered but the project requires NIFA bonding authorization

Signature | Title | Date

Print Name

NIFA

Amount being approved by NIFA: _____

Signature | Title | Date

Print Name

NOTE: All contract submissions MUST include the County's own routing slip, current NIFS printouts for all relevant accounts and relevant Nassau County Legislature communication documents and relevant supplemental information pertaining to the item requested herein.

NIFA Contract Approval Request Form MUST be filled out in its entirety before being submitted to NIFA for review.

NIFA reserves the right to request additional information as needed.

REQUEST TO INITIATE RTI Number: 16-0397

REQUEST FOR QUALIFICATIONS/REQUET FOR PROPOSAL/REQUET FOR BID CONTRACT

PART I: Approval by the Deputy County Executive for Operations must be otained prior to ANY RFQ/RFP/RFBC

☐ RFQ ☐ RFP ☐ RFBC ☐ In-House or Requirements Work Order

Project Title: 4TH PRECINCT - REBUILD

Department: Police Dept Project Manager: DI Robert Torres Date: _____

Service Requested: To provide equipment and supplies to the rebuild of the 4TH Precinct's technology needs. including Access control and surveilance cameras

Justification: Equiptment, cabling, supplies.

Requested by: DI ROBERT TORRES Department/Agency/Office: PD

Project Cost for this Phase/Contract: (plan/Design/Construction/CM/Equipment) _____

Circle appropriate phase

Total Project Cost: $496,059.28 Date Start Work: _____ Duration: _____

Phase being requested Phase being requested

Capital Funding Approval: YES ☒ NO ☐ _____ SIGNATURE _____ DATE

Funding Allocation (Capital Project): 50680

NIFS Entered: N/A SIGNATURE DATE AIM Entered: Deanna Funk 10-24-16 SIGNATURE DATE

Funding Code: 50680-004 use this on all encumbrances Timesheet Code: 16-0397 use this on timesheets

State Environmental Quality Review Act (SEQRA):

Type II Action ☒ or, Environmental Assessment Form Required ☐

Supplemental environmental Documentation _____

Department Head Approval: ☒ YES ☐ NO _____ SIGNATURE

DCE/Ops Approval: ☐ YES ☐ NO _____ SIGNATURE

PART II: To be submitted to Chief Deputy County Executive after Qualifications/Proposals/Contracts are received from Responding vendors.

Vendor	Quote	Comment	See Attached Sheet ☐
1.			
2.			
3.			
4.			

DCE/Ops Approval: YES NO Signature: _____

Version January 2014

George Maragos
Comptroller

OFFICE OF THE COMPTROLLER
240 Old Country Road
Mineola, New York 11501

COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

Attach this form along with all personal, professional or human services contracts, contract renewals, extensions and amendments.

CONTRACTOR NAME: Motorola Solutions, Inc.

CONTRACTOR ADDRESS: 1301 East Algonquin Road
Schaumburg, IL 60196

FEDERAL TAX ID #: 361115800

Instructions: **Please check the appropriate box ("☑") after one of the following roman numerals, and provide all the requested information.**

I. ☐ The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids. The contract was awarded after a request for sealed bids was published in _____ [newspaper] on _____ [date]. The sealed bids were publicly opened on _____ [date]. _____ [#] of sealed bids were received and opened.

II. ☐ The contractor was selected pursuant to a Request for Proposals.
The Contract was entered into after a written request for proposals was issued on _____ [date]. Potential proposers were made aware of the availability of the RFP by advertisement in _____ [newspaper], posting on industry websites, via email to interested parties and by publication on the County procurement website. Proposals were due on _____ [date]. _____ [state #] proposals were received and evaluated. The evaluation committee consisted of: three members of the Comptroller's Office and one member of the County Executive's Office. The proposals were scored and ranked. As a result of the scoring and ranking, the highest-ranking proposer was selected.

III. ☑ This is a renewal, extension or amendment of an existing contract.
The contract was originally executed by Nassau County on June 30, 2005 [date]. This is a renewal or extension pursuant to the contract, or an amendment within the scope of the contract or RFP (copies of the relevant pages are attached). The original contract was entered into after_____
_____
_____ [describe procurement method, i.e., RFP, three proposals evaluated, etc.] Attach a copy of the most recent evaluation of the contractor's performance for any contract to be renewed or extended. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to continue to contract with the county.

IV. ☐ Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.

☐ **A.** The contract has been awarded to the proposer offering the lowest cost proposal; **OR:**

☐ **B.** The attached memorandum contains a detailed explanation as to the reason(s)why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

V. ☐ Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.

☐ **A.** There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.

☐ **B.** The memorandum explains that the contractor's selection was dictated by the terms of a federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).

☐ **C.** Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no._____, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.

☐ **D.** Pursuant to General Municipal Law Section 119-o, the department is purchasing the services required through an inter-municipal agreement.

VI. ☐ This is a human services contract with a not-for-profit agency for which a competitive process has not been initiated. Attached is a memorandum that explains the reasons for entering into this contract without conducting a competitive process, and details when the department intends to initiate a competitive process for the future award of these services. For any such contract, where the vendor has previously provided services to the county, attach a copy of the most recent evaluation of the vendor's performance. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to contract with the county.

In certain limited circumstances, conducting a competitive process and/or completing performance evaluations may not be possible because of the nature of the human services program, or because of a compelling need to continue services through the same provider. In those circumstances, attach an explanation of why a competitive process and/or performance evaluation is inapplicable.

Instructions with respect to Sections VII, VIII and IX: **All Departments must check the box for VII. Then, check either box Section VIII or IX, as applicable.**

VII. ☐ This is a public works contract for the provision of architectural, engineering or surveying services. The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No. 928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.

VIII. ☑ Participation of Minority Group Members and Women in Nassau County Contracts. The selected contractor has agreed that it has an obligation to utilize best efforts to hire MWBE sub-contractors. Proof of the contractual utilization of best efforts as outlined in Exhibit "EE" may be requested at any time, from time to time, by the Comptroller's Office prior to the approval of claim vouchers.

IX. ☐ Department MWBE responsibilities. To ensure compliance with MWBE requirements as outlined in Exhibit "EE", Department will require vendor to submit list of sub-contractor requirements prior to submission of the first claim voucher, for services under this contract being submitted to the Comptroller.

X. ☑ Vendor will not require any sub-contractors.

In addition, if this is a contract with an individual or with an entity that has only one or two employees: ☐ a review of the criteria set forth by the Internal Revenue Service, *Revenue Ruling No.* 87-41, 1987-1 C.B. 296, attached as Appendix A to the Comptroller's Memorandum, dated February 13, 2004, concerning independent contractors and employees indicates that the contractor would not be considered an employee for federal tax purposes.

Department Head Signature

4/12/17

Date

NOTE: Any information requested above, or in the exhibit below, may be included in the county's "staff summary" form in lieu of a separate memorandum.

Exhibit A

COUNTY OF NASSAU

POLITICAL CAMPAIGN CONTRIBUTION DISCLOSURE FORM

1. Has the vendor or any corporate officers of the vendor provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator? If yes, to what campaign committee?

NONE

2. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

The undersigned further certifies and affirms that the contribution(s) to the campaign committees identified above were made freely and without duress, threat or any promise of a governmental benefit or in exchange for any benefit or remuneration.

Vendor: Motorola Solutions, Inc.

Dated: 2/8/17

Signed:

Print Name: Roy Kirchner

Title: MSSSI Vice President

Rev. 3-2016

Exhibit B

COUNTY OF NASSAU

LOBBYIST REGISTRATION AND DISCLOSURE FORM

1. Name, address and telephone number of lobbyist(s)/lobbying organization. The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term "lobbyist" does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

None

2. List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

None

3. Name, address and telephone number of client(s) by whom, or on whose behalf, the lobbyist is retained, employed or designated:

None

4. Describe lobbying activity conducted, or to be conducted, in Nassau County, and identify client(s) for each activity listed. **See page 4 for a complete description of lobbying activities.**

None

5. The name of persons, organizations or governmental entities before whom the lobbyist expects to lobby:

None

6. If such lobbyist is retained or employed pursuant to a written agreement of retainer or employment, you must attach a copy of such document; and if agreement of retainer or employment is oral, attach a written statement of the substance thereof. If the written agreement of retainer or employment does not contain a signed authorization from the client by whom you have been authorized to lobby, separately attach such a written authorization from the client.

7. Has the lobbyist/lobbying organization or any of its corporate officers provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator? If yes, to what campaign committee?

None

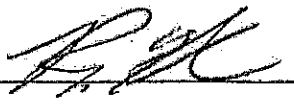
I understand that copies of this form will be sent to the Nassau County Department of Information Technology ("IT") to be posted on the County's website.

I also understand that upon termination of retainer, employment or designation I must give written notice to the County Attorney within thirty (30) days of termination.

VERIFICATION: The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

The undersigned further certifies and affirms that the contribution(s) to the campaign committees listed above were made freely and without duress, threat or any promise of a governmental benefit or in exchange for any benefit or remuneration.

Dated: 2/8/17

Signed: 

Print Name: Roy Kirchner

Title: MSSSI Vice President

The term <u>lobbying</u> shall mean any attempt to influence: any determination made by the Nassau County Legislature, or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including by not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions, department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission, with respect to the zoning, use, development or improvement of real property subject to County regulation, or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

The term "lobbying" or "lobbying activities" <u>does not include</u>: Persons engaged in drafting legislation, rules, regulations or rates; persons advising clients and rendering opinions on proposed legislation, rules, regulations or rates, where such professional services are not otherwise connected with legislative or executive action on such legislation or administrative action on such rules, regulations or rates; newspapers and other periodicals and radio and television stations and owners and employees thereof, provided that their activities in connection with proposed legislation, rules, regulations or rates are limited to the publication or broadcast of news items, editorials or other comment, or paid advertisements; persons who participate as witnesses, attorneys or other representatives in public rule-making or rate-making proceedings of a County agency, with respect to all participation by such persons which is part of the public record thereof and all preparation by such persons for such participation; persons who attempt to influence a County agency in an adjudicatory proceeding, as defined by § 102 of the New York State Administrative Procedure Act.

PRINCIPAL QUESTIONNAIRE FORM

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD

1. Principal Name David R. White, Jr.
   Date of birth [redacted]
   Home address [redacted]
   City/state/zip [redacted]
   Business address 123 Tice Blvd, Suite 202
   City/state/zip Woodcliff Lake, NJ 07677
   Telephone 201-949-5501
   Other present address(es) _____
   City/state/zip _____
   Telephone _____
   List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)
   President ___/___/___ Treasurer ___/___/___
   Chairman of Board ___/___/___ Shareholder ___/___/___
   Chief Exec. Officer ___/___/___ Secretary ___/___/___
   Chief Financial Officer ___/___/___ Partner ___/___/___
   Vice President 05/01/16 ___/___/___
   (Other)

3. Do you have an equity interest in the business submitting the questionnaire?
   YES ___ NO X If Yes, provide details.

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire? YES ___ NO X If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or not-for-profit organization other than the one submitting the questionnaire? YES ___ NO X; If Yes, provide details.

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer? YES ___ NO _X_ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency.
Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:

   a. Been debarred by any government agency from entering into contracts with that agency?
   YES _____ NO _X_ If Yes, provide details for each such instance.

   b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause? YES _____ NO _X_ If Yes, provide details for each such instance.

   c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards? YES ___ NO _X_ If Yes, provide details for each such instance.

   d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract? YES _____ NO _X_ If Yes, provide details for each such instance.

8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated? If 'Yes', provide details for each such instance. (Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.)

   a) Is there any felony charge pending against you? YES ___ NO _X_ If Yes, provide details for each such charge.

   b) Is there any misdemeanor charge pending against you? YES _____ NO _X_ If Yes, provide details for each such charge.

   c) Is there any administrative charge pending against you? YES _____ NO _X_ If Yes, provide details for each such charge.

   d) In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? YES ___ NO _X_ If Yes, provide details for each such conviction.

e) In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?
YES ___ NO __X__ If Yes, provide details for each such conviction.

f) In the past 5 years, have you been found in violation of any administrative or statutory charges? YES ____ NO __X__ If Yes, provide details for each such occurrence.

9. In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5? YES ____ NO __X__ If Yes, provide details for each such investigation.

10. In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer? YES ____ NO __X__ If Yes; provide details for each such investigation.

11. In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held? YES ____ NO __X__ If Yes; provide details for each such instance.

12. For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges? YES ____ NO __X__ If Yes, provide details for each such year.

CERTIFICATION

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

I, David R. White, Jr., being duly sworn, state that I have read and understand all the items contained in the foregoing pages of this questionnaire and the following pages of attachments; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this questionnaire and before the execution of the contract; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this questionnaire as additional inducement to enter into a contract with the submitting business entity.

Sworn to before me this 11 day of April 2017

Christina Albanese
Notary Public

CHRISTINA ALBANESE
ID # 2206967
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires August 17, 2019

Motorola Solutions, Inc.
Name of submitting business

David R. White, Jr.
Print name

David R White Jr
Signature

Northeast Region Vice President
Title

04 / 11 / 2017
Date

Business History Form

The contract shall be awarded to the responsible proposer who, at the discretion of the County, taking into consideration the reliability of the proposer and the capacity of the proposer to perform the services required by the County, offers the best value to the County and who will best promote the public interest.

In addition to the submission of proposals, each proposer shall complete and submit this questionnaire. The questionnaire shall be filled out by the owner of a sole proprietorship or by an authorized representative of the firm, corporation or partnership submitting the Proposal.

NOTE: All questions require a response, even if response is "none" or "not-applicable." No blanks.

(USE ADDITIONAL SHEETS IF NECESSARY TO FULLY ANSWER THE FOLLOWING QUESTIONS).

Date: 4/12/17

1) Proposer's Legal Name: Motorola Solutions, Inc.

2) Address of Place of Business: 123 Tice Blvd, Suite 202, Woodcliff Lake, NJ 07677

List all other business addresses used within last five years:
5 Paragon Drive, Montvale, NJ 07645

3) Mailing Address (if different):

Phone : 201-949-5500

Does the business own or rent its facilities? rent

4) Dun and Bradstreet number: 00-132-5463

5) Federal I.D. Number: 36-1115800

6) The proposer is a (check one): ____ Sole Proprietorship ____ Partnership X
Corporation ___ Other (Describe)

7) Does this business share office space, staff, or equipment expenses with any other business?
Yes X No ___ If Yes, please provide details: In some locations around the world, Motorola rents office space in a building that is shared with other entities but, to the best of our knowledge, office space, staff, equipment & expenses are not shared.

8) Does this business control one or more other businesses? Yes x No __ If Yes, please provide details: Motorola acknowledges that it owns numerous legal entities and attached is the active subsidiary list.

9) Does this business have one or more affiliates, and/or is it a subsidiary of, or controlled by, any other business? Yes ___ No X If Yes, provide details.

10) Has the proposer ever had a bond or surety cancelled or forfeited, or a contract with Nassau County or any other government entity terminated? Yes ___ No X If Yes, state the name of bonding agency, (if a bond), date, amount of bond and reason for such cancellation or forfeiture: or details regarding the termination (if a contract).

11) Has the proposer, during the past seven years, been declared bankrupt? Yes ___ No X If Yes, state date, court jurisdiction, amount of liabilities and amount of assets

12) In the past five years, has this business and/or any of its owners and/or officers and/or any affiliated business, been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency? And/or, in the past 5 years, have any owner and/or officer of any affiliated business been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency, where such investigation was related to activities performed at, for, or on behalf of an affiliated business.
Yes ___ No X If Yes, provide details for each such investigation.

13) In the past 5 years, has this business and/or any of its owners and/or officers and/or any affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies? And/or, in the past 5 years, has any owner and/or officer of an affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies, for matters pertaining to that individual's position at or relationship to an affiliated business. Yes ___ No X If Yes, provide details for each such investigation.

14) Has any current or former director, owner or officer or managerial employee of this business had, either before or during such person's employment, or since such employment if the charges pertained to events that allegedly occurred during the time of employment by the submitting business, and allegedly related to the conduct of that business:

a) Any felony charge pending? Yes ___ No X If Yes, provide details for each such charge.

b) Any misdemeanor charge pending? Yes ___ No X If Yes, provide details for each such charge.

c) In the past 10 years, you been convicted, after trial or by plea, of any felony and/or any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? Yes ___ No X

If Yes, provide details for each such conviction _____

d) In the past 5 years, been convicted, after trial or by plea, of a misdemeanor? Yes ___ No __X__ If Yes, provide details for each such conviction. _____

e) In the past 5 years, been found in violation of any administrative, statutory, or regulatory provisions? Yes ___ No __X__ If Yes, provide details for each such occurrence. _____

15) In the past (5) years, has this business or any of its owners or officers, or any other affiliated business had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held? Yes ____ No __X__; If Yes, provide details for each such instance. _____

16) For the past (5) tax years, has this business failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges? Yes ___ No __X__ If Yes, provide details for each such year. Provide a detailed response to all questions checked 'YES'. If you need more space, photocopy the appropriate page and attach it to the questionnaire. _____

Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

17) Conflict of Interest:

a) Please disclose any conflicts of interest as outlined below. **NOTE: If no conflicts exist, please expressly state "No conflict exists."**

(i) Any material financial relationships that your firm or any firm employee has that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflicts exist

(ii) Any family relationship that any employee of your firm has with any County public servant that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflicts exist

(iii) Any other matter that your firm believes may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflicts exist

b) Please describe any procedures your firm has, or would adopt, to assure the County that a conflict of interest would not exist for your firm in the future.

See attached page

Business History Form - 17. B.

Motorola Solutions has a robust process for avoiding or addressing conflicts of interest. Starting with the company's Code of Business Conduct, the process also integrates the company's various ethics policies, including a policy specifically tailored to conflicts of interest. The process is put in action through a comprehensive communications plan that includes live and on-line training for employees. Employee awareness is further bolstered via in-person briefings, written communications, and campus television announcements. Motorola Solutions regularly reinforces the importance of compliance, particularly in the area of conflicts of interest and anti-corruption and provides coaching and on-line tools to assist in employees in their efforts. Finally, the company's policy governing our business dealings with North American governmental entities and officials requires that all employees and board members comply with applicable laws and provide notice to the company as required in order to facilitate disclosures.

A. Include a resume or detailed description of the Proposer's professional qualifications, demonstrating extensive experience in your profession. Any prior similar experiences, and the results of these experiences, must be identified.

Should the proposer be other than an individual, the Proposal **MUST** include:

i) Date of formation; 9/25/1928

ii) Name, addresses, and position of all persons having a financial interest in the company, including shareholders, members, general or limited partner; **

iii) Name, address and position of all officers and directors of the company; * See Attached

iv) State of incorporation (if applicable); Delaware

v) The number of employees in the firm; 13,676

vi) Annual revenue of firm; $6,038m

vii) Summary of relevant accomplishments See Attached

viii) Copies of all state and local licenses and permits. See Attached

Vendor # 1000031408

B. Indicate number of years in business. 88 years

C. Provide any other information which would be appropriate and helpful in determining the Proposer's capacity and reliability to perform these services.

D. Provide names and addresses for no fewer than three references for whom the Proposer has provided similar services or who are qualified to evaluate the Proposer's capability to perform this work.

Company Massachusetts State Police

Contact Person Blair Sutherland

Address 470 Worcester Road

City/State Framingham, MA 01702

Telephone 508-641-1082

Fax # Not on file

E-Mail Address Not on file

A ii **

See list of Executive Committee and Board of Directors. Motorola Solutions, Inc., ("Motorola") is a publicly traded corporation (NYSE symbol MSI) with hundreds of thousands of shareholders and, as such Motorola is unable to provide specific information on all owners.

Company Connecticut State Police

Contact Person Paul Zito

Address 111 Country Club Road

City/State Middletown, CT 06457

Telephone 860-685-8280

Fax # Not on file

E-Mail Address Not on file

Company Morris County Department of Publice Safety

Contact Person Dave DeCoons

Address PO Box 900

City/State Morristown, NJ 07963

Telephone 973-285-2945

Fax # Not on file

E-Mail Address Not on file

A iii Attachment

Motorola Solutions, Inc. 500 W. Monroe, Chicago, IL 60661

Effective: April 11, 2017

Executive Committee

Gregory Q. Brown	Chairman and Chief Executive Officer
Gino A. Bonanotte	Executive Vice President and Chief Financial Officer
Bruce Brda	Executive Vice President, Products & Services
Eduardo Conrado	Executive Vice President, Strategy & Innovation Office
Mark S. Hacker	Executive Vice President, General Counsel & Chief Administrative Officer
Jack Molloy	Executive Vice President, Worldwide Sales
Kristin Kruska	Vice President and Corporate Secretary

Board of Directors

Gregory Q. Brown
Kenneth C. Dahlberg
Kenneth Denman
Egon P. Durban
General Michael V. Hayden
Clayton M. Jones
Judy C. Lewent
Gregory K. Mondre
Anne R. Pramaggiore
Samuel C. Scott III

A. vii Summary of relevant accomplishments

500 MHz County-Wide Radio project (2006)

Inwood Radio Tower (2012)

800 MHz County-Wide Radio project (2013)

State of New York
Department of State } ss:

I hereby certify, that MOTOROLA DELAWARE, INC., a DELAWARE corporation, filed an Application for Authority to do business in the State of New York on 05/11/1973. I further certify that so far as shown by the records of this Department, such corporation is still authorized to do business in the State of New York.

A certificate changing name to MOTOROLA, INC. was filed on 10/23/1973.

A certificate changing name to MOTOROLA SOLUTIONS, INC. was filed on 01/07/2011.

***

Witness my hand and the official seal of the Department of State at the City of Albany, this 10th day of April two thousand and seventeen.

Brendan W. Fitzgerald
Executive Deputy Secretary of State

201704110551 * EZ

CERTIFICATION

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

I, Roy Kirchner, being duly sworn, state that I have read and understand all the items contained in the foregoing pages of this questionnaire and the following pages of attachments; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this questionnaire and before the execution of the contract; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this questionnaire as additional inducement to enter into a contract with the submitting business entity.

Sworn to before me this 11 day of April 20 17

Christina Albanese
Notary Public

CHRISTINA ALBANESE
ID # 2206967
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires August 17, 2019

Name of submitting business: Motorola Solutions, Inc.

By: Roy Kirchner
Print name

Signature

MSSSI Vice President
Title

04 / 11 / 2017
Date

COUNTY OF NASSAU

CONSULTANT'S, CONTRACTOR'S AND VENDOR'S DISCLOSURE FORM

1. Name of the Entity: Motorola Solutions, Inc.

Address: 123 Tice Blvd, Suite 202

City, State and Zip Code: Woodcliff Lake, NJ 07677

2. Entity's Vendor Identification Number: 36-1115800

3. Type of Business: X Public Corp ____Partnership ____Joint Venture

____Ltd. Liability Co ____Closely Held Corp _____Other (specify)

4. List names and addresses of all principals; that is, all individuals serving on the Board of Directors or comparable body, all partners and limited partners, all corporate officers, all parties of Joint Ventures, and all members and officers of limited liability companies (attach additional sheets if necessary):

*See Attached List

5. List names and addresses of all shareholders, members, or partners of the firm. If the shareholder is not an individual, list the individual shareholders/partners/members. If a Publicly held Corporation, include a copy of the 10K in lieu of completing this section.

*See Attached 10k

4. *Attachment

Motorola Solutions, Inc. 500 W. Monroe, Chicago, IL 60661

Effective: April 11, 2017

Executive Committee

Gregory Q. Brown	Chairman and Chief Executive Officer
Gino A. Bonanotte	Executive Vice President and Chief Financial Officer
Bruce Brda	Executive Vice President, Products & Services
Eduardo Conrado	Executive Vice President, Strategy & Innovation Office
Mark S. Hacker	Executive Vice President, General Counsel & Chief Administrative Officer
Jack Molloy	Executive Vice President, Worldwide Sales
Kristin Kruska	Vice President and Corporate Secretary

Board of Directors

Gregory Q. Brown
Kenneth C. Dahlberg
Kenneth Denman
Egon P. Durban
General Michael V. Hayden
Clayton M. Jones
Judy C. Lewent
Gregory K. Mondre
Anne R. Pramaggiore
Samuel C. Scott III

6. List all affiliated and related companies and their relationship to the firm entered on line 1. above (if none, enter "None"). Attach a separate disclosure form for each affiliated or subsidiary company that may take part in the performance of this contract. Such disclosure shall be updated to include affiliated or subsidiary companies not previously disclosed that participate in the performance of the contract.

Motorola Solutions, Inc., acknowledges that it owns numerous legal entities, attached is the active subsidiary list.

7. List all lobbyists whose services were utilized at any stage in this matter (i.e., pre-bid, bid, post-bid, etc.). If none, enter "None." The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term "lobbyist" does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

(a) Name, title, business address and telephone number of lobbyist(s):

None

Active MSI Subsidiaries as of 4/11/2017

Name
Airwave Application Services Limited
Airwave Solutions Deutschland GmbH
Airwave Solutions International Limited
Airwave Solutions Limited
Antelope Finance 1 Limited
Antelope Finance 2 Limited
Antelope Finance 3 Limited
Antelope Finance 4 Limited
Antelope Finance 5 Limited
Citadex Tech Services, LLC
Citadex, LLC
Clarigo Technology (Shanghai) Co., Ltd.
CRISNet, Inc.
Dansk Beredskabskommunikation A/S
Duressapp Pty. Limited
Emergency CallWorks, Inc.
Gridstone Pty. Limited
Guardian Digital Communications Limited
InfoPower, Inc.
Ino Servicos Especializados de Telecomunicacoes, Ltda
Interexport Telecomunicaciones e Integracion de Sistemas S.A.
Interexport Telecomunicaciones y Servicios S.A.
Invisix, Inc.
MeshNetworks, Inc.
Mobilink S.A.
Motorola Card, Inc.
Motorola Electronica de Puerto Rico, Inc.
Motorola International Network Ventures, Inc.
Motorola Iridium Network Investments, Inc.
Motorola Maroc SA
Motorola Nigeria Limited
Motorola Sistem Çözümleri Ticaret ve Servis Limited Şirketi
Motorola SMR, Inc.
Motorola Solutions (China) Co. Ltd.
Motorola Solutions (China) Investment Co. Ltd.
Motorola Solutions (Oman) LLC
Motorola Solutions (Thailand) Limited
Motorola Solutions Arabia, Inc.
Motorola Solutions Argentina S.A.
Motorola Solutions Asia Limited
Motorola Solutions Asia Pacific Limited
Motorola Solutions Australia Pty. Limited
Motorola Solutions Austria GmbH
Motorola Solutions Belgium S.A.
Motorola Solutions Bulgaria EOOD
Motorola Solutions Canada Inc.
Motorola Solutions Chile Holdings SpA
Motorola Solutions Chile S.A.
Motorola Solutions Closed Joint Stock Company
Motorola Solutions Colombia Limitada
Motorola Solutions Credit Company LLC
Motorola Solutions Czech Republic s.r.o.
Motorola Solutions Danmark A/S
Motorola Solutions de Mexico, S.A.
Motorola Solutions de Puerto Rico, Inc.
Motorola Solutions del Ecuador S.A.
Motorola Solutions Egypt

Motorola Solutions El Salvador S.A.
Motorola Solutions Espana S.A.
Motorola Solutions Finance EMEA Limited
Motorola Solutions Foundation
Motorola Solutions France SAS
Motorola Solutions Funding Corporation
Motorola Solutions Germany GmbH
Motorola Solutions Hellas A.E. (Motorola Solutions Hellas Industrial and Commercial Societe Anonyme)
Motorola Solutions Holding S.a.r.l.
Motorola Solutions Holdings (Malaysia) Sdn. Bhd.
Motorola Solutions Holdings, LLC
Motorola Solutions India Private Limited
Motorola Solutions International Capital LLC
Motorola Solutions International Holding Limited
Motorola Solutions Israel Limited
Motorola Solutions Italia SRL
Motorola Solutions Japan Limited
Motorola Solutions Korea, Inc.
Motorola Solutions Lebanon SARL
Motorola Solutions Logistics Germany GmbH
Motorola Solutions Ltda
Motorola Solutions Malaysia Sdn. Bhd.
Motorola Solutions Netherlands B.V.
Motorola Solutions New Zealand Limited
Motorola Solutions Norway AS
Motorola Solutions Overseas Limited
Motorola Solutions Pakistan (Private) Limited
Motorola Solutions Pension Trustees Limited
Motorola Solutions Peru S.A.
Motorola Solutions Philippines, Inc.
Motorola Solutions Polska Sp.z.o.o.
Motorola Solutions Portugal, Lda
Motorola Solutions Romania S.R.L.
Motorola Solutions Sales and Services, Inc.
Motorola Solutions Services Limited
Motorola Solutions Services Nigeria Limited
Motorola Solutions Singapore Pte. Ltd.
Motorola Solutions South Africa (Proprietary) Limited
Motorola Solutions Sweden AB
Motorola Solutions Switzerland AG (Motorola Solutions Switzerland SA) (Motorola Solutions Switzerland Limited)
Motorola Solutions Systems Polska Sp.z.o.o.
Motorola Solutions Taiwan, Ltd.
Motorola Solutions U.S. Holdco One, Inc.
Motorola Solutions U.S. Holdco Two, Inc.
Motorola Solutions UK Acquisition Company Limited
Motorola Solutions UK Limited
Motorola Solutions UK One LP
Motorola Solutions UK Two LP
Motorola Solutions Ukraine LLC
Motorola Solutions USFGMD, Inc.
Motorola Solutions Venezuela, C.A.
Motorola Solutions Vietnam Limited Liability Company
Motorola SudAmerica Holdings, Inc.
Motorola Telecommunications Bangladesh Private Limited
MV I LLC
Network Ventures I, Inc.
PT Motorola Solutions Indonesia
Public Engines, Inc.
Quorum II S.A.
Software Corporation of America, Inc.

Spillman Technologies, Inc.
TCS Insurance Company of Ireland Limited
TETRON Sicherheitsnetz Einrichtungs- und BetriebsgmbH
Twisted Pair Solutions UK, Inc.
Twisted Pair Solutions, Inc.
Vertex Standard (Suzhou) Co., Ltd.
Vertex Standard LMR, Inc.
Vertex Standard Trademark Holding LLC
Vertex Standard USA, Inc.
Winphoria Networks Holdings, Inc.
Wireless Technology Equipment Company, Inc.

(b) Describe lobbying activity of each lobbyist. **See below for a complete description of lobbying activities.**

None

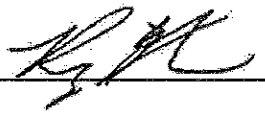
(c) List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

None

8. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

Dated: 4/11/17

Signed: 

Print Name: Roy Kirchner

Title: MSSSI Vice President

The term lobbying shall mean any attempt to influence: any determination made by the Nassau County Legislature, or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including by not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions, department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission, with respect to the zoning, use, development or improvement of real property subject to County regulation, or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

SECURITY OWNERSHIP INFORMATION

Management and Directors

The following table sets forth information as of the close of business on March 10, 2017 regarding the beneficial ownership of shares of Common Stock by each director and nominee for director of the Company, the named executive officers ("NEOs") in the Summary Compensation Table, and all current directors and executive officers of the Company as a group. Except for Mr. Brown, who owns 2% of the outstanding Common Stock, each other director and NEO owns less than 1% of the outstanding Common Stock based on 168,523,557 shares of Common Stock outstanding on March 10, 2017. All current directors, NEOs and executive officers as a group own 2.5% of the outstanding Common Stock.

Name	Shares Owned[1]	Shares Under Exercisable Options and SARs[2]	Stock Units[3]	Total Shares Beneficially Owned[4][5]
Gregory Q. Brown	359,538	3,095,115	33,651	3,488,304
Gino A. Bonanotte	24,721	89,957	0	114,678
Bruce W. Brda	13,228	22,202	0	35,430
Mark S. Hacker	11,901	103,486	0	115,387
John P. Molloy	12,887	30,358	0	43,245
Kenneth C. Dahlberg	10,213	0	9,217	19,430
Kenneth D. Denman	0	0	438	438
Egon P. Durban	0	0	5,498	5,498
Michael V. Hayden	0	0	17,862	17,862
Clayton M. Jones	0	0	4,435	4,435
Judy C. Lewent	22,991	0	6,111	29,102
Gregory K. Mondre	70	0	5,498	5,568
Anne R. Pramaggiore	0	0	13,191	13,191
Samuel C. Scott	5,129	0	34,250	39,379
Joseph M. Tucci	0	0	0	0
All current directors, NEOs and executive officers as a group (15 persons)	480,555	3,522,466	130,151	4,133,172

(1) Includes shares over which the person currently holds or shares voting and/or investment power but excludes the shares listed under "Shares Under Exercisable Options and SARs" and "Stock Units."

(2) Includes shares under options and SARs exercisable on March 10, 2017 and which may become exercisable within 60 days thereafter (assuming all performance measures are satisfied).

(3) Includes stock units which are deemed to be beneficially owned on March 10, 2017 or within 60 days thereafter (assuming all performance measures are satisfied). Stock units are not deemed beneficially owned until the restrictions on the units have lapsed. Each stock unit is intended to be the economic equivalent of one share of Common Stock.

(4) Unless otherwise indicated, each person has sole voting and investment power over the shares reported.

(5) Includes the shares listed under "Shares Under Exercisable Options" and units listed under "Stock Units."

(6) Mr. Brown's holdings under "Total Shares Beneficially Owned" include: 277,863 shares subject to exercisable stock settled stock appreciation rights ("SARs"). The number of shares subject to the stock settled SARs, assumes the exercise of 134,297 shares of stock settled SARs at an exercise price of $40.33 and the exercise of 471,398 stock settled SARs at an exercise price of $38.04, on March 10, 2017. The closing price of the Company stock on March 10, 2017 was $82.10. Mr. Brown has shared voting and investment power over 83,220 shares, included under "Total Shares Beneficially Owned". He disclaims beneficial ownership over 81,000 shares held in a trust of which his wife is trustee and 2,220 shares held by his wife, except to the extent of his pecuniary interest in these shares.

(7) Mr. Scott does not have investment power over 2,133 of these shares.

No directors, nominees or current executive officers have pledged shares of Common Stock pursuant to any loan or arrangement.

Principal Stockholders

The following table sets forth information as of December 31, 2016 with respect to any person who is known to be the beneficial owner of more than 5% of Common Stock.

Name and Address	Number of Shares of Motorola Solutions, Inc. and Nature of Beneficial Ownership	Percent of Outstanding Shares[1]
The Vanguard Group 100 Vanguard Blvd. Malvern, PA 19355	15,592,309[2] shares of Common Stock	9.4%
BlackRock, Inc. 55 East 52nd Street New York, NY 10055	15,203,774[3] shares of Common Stock	9.2%

(1) The percentage calculations set forth above are based on 164,744,310 shares of Common Stock outstanding as of February 1, 2017 rather than the percentages set forth on various stockholders' Schedule 13G filings.

(2) Solely based on information in a Schedule 13G/A Amendment No. 1 dated February 9, 2017 filed with the SEC by The Vanguard Group. The Schedule 13G/A indicates that as of December 31, 2016, The Vanguard Group was the beneficial owner with sole voting power as to 260,000 shares, shared voting power as to 36,930 shares, sole dispositive power as to 15,294,340 shares and shared dispositive power as to 297,968 shares.

(3) Solely based on information in a Schedule 13G/A Amendment No. 3 dated January 24, 2017 filed with the SEC by BlackRock, Inc. The Schedule 13G/A indicates that as of December 31, 2016, BlackRock, Inc., as the parent holding company, was the beneficial owner with sole voting power as to 13,520,716 shares and sole dispositive power as to 15,203,774 shares.

Section 16(a) Beneficial Ownership Reporting Compliance

Each director and certain officers of the Company are required to report to the SEC, by a specified date, his or her transactions related to our Common Stock. Based solely on a review of the copies of reports furnished to the Company or written representations that no other reports were required, the Company believes that, during the 2016 fiscal year, all reports required by Section 16(a) were timely filed by its officers and directors except as follows: In November of 2015, John P. Molloy filed a Form 3 with the SEC on a timely basis reporting, among other things, the amount of securities beneficially held. Due to an administrative error, the number of securities reported was incorrect. Upon being informed of the error, Mr. Molloy filed an amendment to the Form 3 on October 26, 2016 reporting the correct number of securities beneficially owned.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2016

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission File number 1-7221

MOTOROLA SOLUTIONS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	36-1115800
(State of Incorporation)	(I.R.S. Employer Identification No.)

500 West Monroe Street, Chicago, Illinois 60661
(Address of principal executive offices)
(847) 576-5000
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $.01 Par Value per Share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant as of July 2, 2016 (the last business day of the Registrant's most recently completed second quarter) was approximately $11.0 billion.

The number of shares of the registrant's Common Stock, $.01 par value per share, outstanding as of February 1, 2017 was 164,744,310.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be delivered to stockholders in connection with its Annual Meeting of Stockholders to be held on May 15, 2017, are incorporated by reference into Part III.

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PART I

Throughout this 10-K report we "incorporate by reference" certain information in parts of other documents filed with the Securities and Exchange Commission (the "SEC"). The SEC allows us to disclose important information by referring to it in that manner. Please refer to such information.

We are making forward-looking statements in this report. In "Item 1A: Risk Factors" we discuss some of the risk factors that could cause actual results to differ materially from those stated in the forward-looking statements.

"Motorola Solutions" (which may be referred to as the "Company," "we," "us," or "our") means Motorola Solutions, Inc. or Motorola Solutions, Inc. and its subsidiaries, or one of our segments, as the context requires. MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo, as well as iDEN are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license.

Item 1: Business

General

We are a leading global provider of mission-critical communication infrastructure, devices, accessories, software and services. Our products and services help government, public safety, and commercial customers improve their operations through increased effectiveness, efficiency, and safety of their mobile workforces. We serve our customers with a global footprint of sales in more than 100 countries based on our industry leading innovation and a deep portfolio of products and services.

We are incorporated under the laws of the State of Delaware as the successor to an Illinois corporation, Motorola, Inc., organized in 1928. We changed our name from Motorola, Inc. to Motorola Solutions, Inc. on January 4, 2011. Our principal executive offices are located at 500 W. Monroe Street, Chicago, Illinois 60661.

Business Organization

We conduct our business globally and manage it through two segments: Products and Services.

Products Segment

The Products segment offers an extensive portfolio of infrastructure, devices, accessories, and software. The primary customers of the Products segment are government, public safety and first-responder agencies, municipalities, and commercial and industrial customers who operate private communications networks and manage a mobile workforce. In 2016, the segment's net sales were $3.6 billion, representing 60% of our consolidated net sales. The Products segment has the following two principal product lines:

Devices: Devices includes: (i) two-way portable radios and vehicle-mounted radios, (ii) accessories such as speaker microphones, batteries, earpieces, headsets, carry cases and cables, and (iii) software features and upgrades. Devices represented 76% of the net sales of the Products segment in 2016.

Systems: Systems includes: (i) the radio network core and central processing software, (ii) base stations, (iii) consoles, (iv) repeaters, and (v) software applications and features. Systems represented 24% of the net sales of the Products segment in 2016.

Our Devices and Systems are based on the following industry technology standards:

Industry standard definition	The Association of Public Safety Communications Officials Project 25 standard ("APCO-25")	The European Telecommunications Standards Institute ("ETSI") Terrestrial Trunked Radio standard ("TETRA")	ETSI, Digital mobile radio ("DMR") and professional commercial radio ("PCR") standards
Industry standard name	APCO P25	TETRA	DMR
Motorola Solutions product name	ASTRO	Dimetra IP	PCR MOTOTRBO (Digital)
Primary end users	Government, Public Safety	Government, Public Safety	Commercial
Primary geographic region of use	North America, Latin America, Asia, Middle East, Africa	Europe, Asia, Latin America, Middle East, Africa	All regions

Services Segment

The Services segment provides a full set of service offerings for government, public safety, and commercial communication networks. In 2016, the segment's net sales were $2.4 billion, representing 40% of our consolidated net sales. The Services segment has the following principal product lines:

Integration services	Integration services includes the implementation, optimization, and integration of systems, devices, software, and applications. Integration services represented 33% of the net sales of the Services segment in 2016.
Managed & Support services	Managed & Support services includes a continuum of service offerings beginning with repair, technical support, and hardware maintenance. More advanced offerings include network monitoring, software maintenance, and cyber security services. Managed service offerings range from partial or full operation of customer owned networks to operation of Motorola Solutions owned networks. Services and Software as a Service (SaaS) are provided across all radio network technologies, Command Center Software Offerings, and Smart Public Safety Solutions. Managed & Support services represented 66% of the net sales of the Services segment in 2016.
iDEN services	Integrated Digital Enhanced Network ("iDEN") is a Motorola Solutions proprietary push-to-talk technology. iDEN services consist primarily of hardware and software maintenance services for our legacy iDEN customers and represented 1% of the net sales of the Services segment in 2016.

Strategy and Focus Areas

Our strategy is to partner with our customers to enable them to efficiently deliver reliable services through our innovative products and best-in-class services. We have a history of delivering these products and services by focusing on the following areas:

- Building technology that improves productivity and safety;
- Driving innovation and thought leadership;
- Ensuring security and resiliency;
- Providing ongoing support for customer investments; and
- Delivering complete solutions, comprised of infrastructure, devices, system software and applications, and services to solve complex communication needs.

This focus provides us with the leadership position we have in our core products. We define our core products as our standards-based voice and data communication devices and systems and the related Integration and Managed & Support services. We expect to demonstrate strong results from our core products and services through: (i) leading the ongoing global migration to digital products, (ii) continuing to innovate APCO P25, TETRA, and DMR standards-based voice and data communication devices and systems, (iii) innovating new products and technologies for the future, (iv) enhancing and expanding our services offerings including Managed & Support services; and (v) expanding our direct sales and channel partner programs both geographically and across new commercial verticals.

We believe we have the scale and global presence to continue to maintain a leadership position in our core products. We have over 12,500 systems deployed in over 180 countries around the world. These systems have a multi-year useful life to the customer. We believe many of our government and commercial customers have yet to replace aged analog communications networks with next-generation digital systems that enable enhanced features and more efficient use of spectrum, providing us opportunities to help customers migrate to these digital systems. In addition, we believe government and commercial customers are just beginning to experience the benefits of converged wireless communications and the efficiencies realized through a connected, mobile workforce, which will provide opportunities for the implementation of new public safety communications systems. We believe we are well-positioned to assist our customers in the deployment of new networks as additional public safety dedicated spectrum becomes available.

In addition, we continue to innovate around our existing core products and services by finding innovative ways to improve our products by adding features and functionality to improve the user experience. By partnering with customers and observing how our products are used, our goal is to enhance our customers' experience through future product enhancements and upgrades.

In addition to focused research and development ("R&D") efforts on existing technologies, our strategy for long-term growth and the evolution of our business includes the development of: (i) Software solutions for the Command Center including critical command center applications that incorporate voice, data and video, and (ii) new product introductions for expansion into adjacent markets and geographic regions, (iii) next-generation public safety solutions' including public safety Long Term Evolution ("LTE") systems and devices,

We have been investing in next-generation public safety broadband networks based on the LTE standard since 2010, which reflects our belief that broadband is a foundational long-term growth trend for our government and public safety customers globally. We believe that the application of these new broadband technologies will also generate innovation and lead to new smart public safety technologies, products, and services which will change how government and public safety organizations create, organize, and effectively manage vast amounts of data. These changes will also require a more comprehensive approach to the services required to assist our customers in managing an ever more complex world of real-time, interconnected technology and processes.

Our strategy includes leveraging our products and services for markets outside of the public safety and commercial markets we traditionally serve. A portion of our new product introductions in recent years include products which may also be used in the hospitality, mining, military, transportation, education, and utility vertical markets ("verticals").

Geographical diversification is accelerated by our investments supporting: (i) different regional interfaces, (ii) multiple languages, (iii) tailored form factors, and (iv) unique feature sets.

In addition to organic development opportunities and growth, we continually evaluate opportunities for inorganic growth through acquisitions or targeted investments in innovative technology companies that align with our strategic initiatives.

Our Customers and Contracts

We address the communication needs of government agencies, state and local public safety and first-responder agencies, and commercial and industrial customers who utilize private communications networks and manage a mobile workforce. Our customer base is fragmented and widespread when considering the many levels of governmental and first-responder decision-makers that procure and use our products and services. Serving this global customer base spanning federal, state, county, province, territory, municipal, and departmental independent bodies, along with our commercial and industrial customers, requires a significant go-to-market investment.

Our sales model includes both direct sales by our in-house sales force, which tends to focus on our largest accounts, and sales through our channel partner program. Our trained channel partners include independent dealers, distributors, and software vendors around the world. The dealers and distributors each have their own sales organizations that complement and extend the reach of our sales force. The independent software vendors offer customized applications that meet specific needs in the verticals we serve.

Our largest customers are the U.S. federal government (through multiple contracts with its various branches and agencies, including the armed services), and the Home Office of the United Kingdom representing approximately 9% and 8% of our consolidated net sales in 2016, respectively. The loss of these customers could have a material adverse effect on our revenue and earnings over several quarters as many of our contracts with these governments are long-term in nature. All contracts with the U.S. federal government, and certain other government agencies within the U.S., are subject to cancellation at the customer's convenience. For a discussion of risks related to government contracting requirements, please refer to "Item 1A. Risk Factors."

Net sales in North America continued to comprise a significant portion of our business, accounting for 63%, 65% and 61% of our consolidated net sales in 2016, 2015, and 2014, respectively.

Payment terms with our customers vary worldwide. Generally, contractual payment terms range from 30 to 45 days from the invoice date within North America and typically do not exceed 90 days from the invoice date in regions outside of North America. A portion of our contracts include implementation milestones, such as delivery, installation, and system acceptance, which generally take 30 to 180 days to complete. Invoicing the customer is dependent on completion of the milestones. We generally do not grant extended payment terms. As required for competitive reasons, we may provide long-term financing in connection with equipment purchases. Financing may cover all or a portion of the purchase price.

Generally, our contracts do not include a right of return, other than for standard warranty provisions. Due to customer purchasing patterns and the cyclical nature of the markets we serve, our sales tend to be somewhat higher in the second half of the year, with the fourth quarter being the highest.

Competition

The markets in which we operate are highly competitive. Key competitive factors include: performance, features, quality, availability, warranty, price, vendor financing, availability of service, company reputation and financial strength, partner community, and relationships with customers. Our strong reputation with customers and partners, trusted brand, technology leadership, breadth of portfolio, product performance, and specialized support services position us well for success.

We experience widespread competition from a growing number of existing and new competitors, including large system integrators and manufacturers of private and public wireless network equipment and devices. Traditional Land Mobile Radio competitors include: Harris, Airbus, Kenwood, Hytera, and Sepura.

As demand for fully integrated voice, data, and broadband systems continue to grow, we may face additional competition from public telecommunications carriers and telecommunications equipment providers. As we continue to evolve our Integration services and Managed & Support services strategy, we may work with other companies on a consortium or joint venture basis as customers' delivery needs become more complex to fulfill.

Several other competitive factors may have an impact on our future business including: evolving spectrum mandates by government regulators, increasing investment by broadband and IP solution providers, and new low-tier competitors.

Other Information

Backlog

Our backlog for the Products and Services segments includes all product and service orders that have been received and are believed to be firm. As of December 31, 2016 and December 31, 2015, our backlog was as follows:

(In millions)	*December 31*	
	2016	*2015*
Products	$ 1,513	$ 1,234
Services	6,858	5,241
	$ 8,371	$ 6,475

The increase in backlog of $1.9 billion is primarily driven by $1.2 billion from the acquisition of GDCL in 2016. Approximately 50% of the Products segment backlog and 25% of the Services segment backlog is expected to be recognized as revenue during 2017. The forward-looking estimate of the firmness of such orders is subject to future events that may cause the amount recognized to change.

Research and Development

We continue to prioritize investments in R&D to expand and improve our portfolio of products through both new product introductions and continuous enhancements to our core products. Our R&D programs are focused on the development of: (i) new public safety devices, infrastructure, software and solutions, (ii) Command Center applications that include voice, data, and video, and (iii) public safety broadband solutions based on the LTE technology.

R&D expenditures were $553 million in 2016, $620 million in 2015, and $681 million in 2014. As of December 31, 2016, we had approximately 5,000 employees engaged in R&D activities. In addition, we engage in R&D activities with joint development and manufacturing partners and outsource certain activities to engineering firms to further supplement our internal spend.

Intellectual Property Matters

Patent protection is an important aspect of our operations. We have a portfolio of U.S. and foreign utility and design patents relating to our products, systems, and technologies, including research developments in radio frequency technology and circuits, wireless network technologies, over-the-air protocols, mission critical communications, software and services, and next-generation public safety. We have filed new patent applications with the U.S. Patent and Trademark Office and foreign patent offices.

We license some of our patents to third-parties, but licensing revenue is not a significant source of revenue. We are also licensed to use certain patents owned by others. Royalty and licensing fees vary from year-to-year and are subject to the terms of the agreements and sales volumes of the products subject to the license. Motorola Solutions has a royalty-free license under all of the patents and patent applications assigned to Motorola Mobility at the time of the separation of the two businesses in 2011.

We actively participate in the development of standards for interoperable, mission-critical digital two-way radio systems. Our patents are used in standards in which our products and services are based. We offer standards-based licenses to those patents on fair, reasonable, and non-discriminatory terms.

We believe that our patent portfolio will continue to provide us with a competitive advantage in our core product areas as well as provide leverage in the development of future technologies. Furthermore, we believe we are not dependent upon a single patent or even a few patents. Our success depends more upon our extensive know-how, innovative culture, technical leadership, and distribution channels. We do not rely primarily on patents or other intellectual property rights to protect or establish our market position; however, we will enforce our intellectual property rights in certain technologies when attempts to negotiate mutually agreeable licenses are not successful.

We seek to obtain patents and trademarks to protect our proprietary positions whenever possible and wherever practical. As of December 31, 2016, we owned approximately 4,783 granted patents in the U.S. and in foreign countries. As of December 31, 2016, we had approximately 1,161 U.S. and foreign patent applications pending. Foreign patents and patent applications are mostly counterparts of our U.S. patents. During 2016, we were granted approximately 511 patents in the U.S. and in foreign countries.

We no longer own certain logos and other trademarks, trade names and service marks, including MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M logo and all derivatives thereof ("Motorola Marks") and we license the Motorola Marks from Motorola Mobility, which is currently owned by Lenovo.

Inventory and Raw Materials

Our practice is to carry reasonable amounts of inventory to meet customers' delivery requirements. We provide custom products which require the stocking of inventories and a large variety of piece parts and replacement parts in order to meet delivery and warranty requirements. To the extent suppliers' product life cycles are shorter than ours, stocking of lifetime buy inventories is required to meet long-term warranty and contractual requirements. In addition, replacement parts are stocked for delivery on customer demand within a short delivery cycle.

Availability of required materials and components is generally dependable; however, fluctuations in supply and market demand could cause selective shortages and affect our results of operations. We currently procure certain materials and components from single-source vendors. A material disruption from a single-source vendor may have a material adverse impact on our results of operations. If certain single-source suppliers were to become capacity constrained or insolvent, it could result in a reduction or interruption in supplies, or an increase in the price of supplies, and adversely impact our financial results.

Natural gas, electricity and, to a lesser extent, oil are the primary sources of energy for our manufacturing operations. Each of these resources is currently in adequate supply for our operations. The cost to operate our facilities and freight costs are dependent on world oil prices. Labor is generally available in reasonable proximity to our manufacturing facilities and the manufacturing facilities of our largest outsourced manufacturing suppliers. Difficulties in obtaining any of the aforementioned resources, or a significant cost increase, could affect our financial results.

Environmental Quality and Regulatory Matters

Some of our operations use substances regulated under various federal, state, local, and international laws governing the environment and worker health and safety, including those governing the discharge of pollutants into the ground, air, and water, the management and disposal of hazardous substances and wastes, and the cleanup of contaminated sites, as well as relating to the protection of the environment. Certain of our products are subject to various federal, state, local, and international laws governing chemical substances in electronic products. During 2016, compliance with these U.S. federal, state and local, and international laws did not have a material effect on our capital expenditures, earnings, or competitive position.

Radio spectrum is required to provide wireless voice, data, and video communications service. The allocation of spectrum is regulated in the U.S. and other countries and limited spectrum space is allocated to wireless services and specifically to public safety users. In the U.S., the Federal Communications Commission ("FCC") and the National Telecommunications and Information Administration ("NTIA") regulate spectrum use by non-federal entities and federal entities, respectively. Similarly, countries around the world have one or more regulatory bodies that define and implement the rules for use of radio spectrum, pursuant to their respective national laws and international coordination under the International Telecommunications Union ("ITU"). We manufacture and market products in spectrum bands already made available by regulatory bodies. These include voice and data infrastructure, mobile radios, and portable or hand-held devices. Consequently, our results could be positively or negatively affected by the rules and regulations adopted from time to time by the FCC, NTIA, ITU, or regulatory agencies in other countries. Our products operate both on licensed and unlicensed spectrum. The availability of additional radio spectrum may provide new business opportunities. Conversely, the loss of available radio spectrum may result in the loss of business opportunities. Regulatory changes in current spectrum bands may also provide opportunities or may require modifications to some of our products so they can continue to be manufactured and marketed.

As television transmission and reception technology transitions from analog to more efficient digital modes, various countries around the world are examining, and in some cases already pursuing, the redevelopment of portions of the television spectrum. In the U.S., spectrum historically used for broadcast television, known as the 700MHz band, has been redeveloped and deployed for new uses (the so-called "digital dividend" spectrum), including broadband and narrowband wireless communications. In 2016, this trend continued in the US and additional TV spectrum in the 600MHz band is being auctioned for broadband communications (part of the "Broadcast Incentive Auction"). This auction is expected to finish in 2017, but auction winners will not get access to the spectrum for several years.

In the U.S., thirty-four MHz of spectrum in the 700 MHz band is now allocated to support public safety narrowband and broadband communications systems. This includes 24 MHz of spectrum previously allocated by the FCC and an additional ten MHz of spectrum (the "D block") allocated in February 2012 as part of the Middle Class Tax Relief and Job Creation Act of 2012 in response to public safety requests for additional broadband spectrum. The resulting law also identified up to $7 billion in funding for the nationwide public safety broadband network. The law further provides for the establishment of a centralized governance model through an independent authority within NTIA designated as the "First-Responder Network Authority" or "FirstNet" to manage deployment and operation of the network. Additional work, currently ongoing in FirstNet, is required to enable deployment of the nationwide public safety broadband network. FirstNet released its network Request for Proposal in early 2016 and an Award is projected in 2017.

The law allows for states to opt out of the plan to develop a nationwide public safety network and perform their own competitive procurements if certain criteria are met. States that opt out would still be eligible for funding and would also be allowed to generate revenue through leases to secondary users which would have to be reinvested in their FirstNet public safety network. FirstNet and the FCC have also enabled the early deployment of broadband systems in several areas so that field experience can be gained regarding the benefits of broadband communications for public safety operations. In September 2012, the State of Texas received a Special Temporary Authorization ("STA") for deployment of 14 broadband sites in the Harris County area around Houston. A Spectrum Manager Lease Agreement ("SMLA") was signed in August 2014, with FirstNet and the State of Texas on behalf of Harris County, extending the access to this spectrum for three years. The State of Texas and Harris County, with assistance from Motorola Solutions, have deployed broadband equipment and applications and successfully demonstrated the benefits such systems can bring to FirstNet and other officials. FirstNet also entered into a spectrum lease with the State of California on behalf of Los Angeles Regional Interoperable Communications System Authority ("LA-RICS") to allow for a radio system that will provide mission critical communications for the region's more than 34,000 law enforcement, fire service and health service professionals and more than 80 public safety agencies. LA-RICS selected Motorola Solutions to develop this radio system.

Although the law has been enacted, the implementation of a nationwide public safety network under FirstNet has been slow to progress. For a discussion of risks related to the implementation of a nationwide public safety network, please refer to *"Item 1A, Risk Factors."*

Internationally, the ITU World Radio Conference ("WRC") is held every three to four years to discuss and promote global agreement on the use and cooperation of spectrum usage. The most recent WRC-15 was held in November 2015. During this conference, leaders from United Nations member countries considered a number of initiatives, including whether to allocate additional spectrum for commercial broadband use as well as whether to allocate spectrum dedicated for public safety broadband. The WRC has agreed to support countries making individual decisions to allocate spectrum for public safety broadband in the 700MHz and 800MHz spectrum bands. Studies are underway to assess whether and how much spectrum is needed and to develop recommendations on where in the spectrum range the spectrum should be allocated (taking into account regional and global harmonization to the extent practicable). Motorola Solutions continues to work with its customers and governments around the world to advocate for future allocations of dedicated broadband spectrum for public safety which will provide new business opportunities for us in the future.

Several major markets including: Canada, the United States, the UAE, Mexico, Singapore, and South Korea have already set aside broadband spectrum for use by public safety and the wider first-responder communities. We believe this trend will continue over time and the planned implementation of broadband public safety networks provides new opportunities for our broadband portfolio and services growth strategy. In addition, certain countries, in response to increasing security concerns, already have spectrum landscapes that permit country administrations to allocate public safety spectrum quickly without a protracted process or agreement. Some other markets including Australia and the UK are launching broadband public safety networks drawing on basic LTE infrastructure built by the carriers. These trends also provide opportunities for our broadband and services portfolio.

Employees

At December 31, 2016, and December 31, 2015 we had approximately 14,000 employees.

Material Dispositions

On October 27, 2014, we completed the sale of certain assets and liabilities of the Enterprise business to Zebra Technologies Corporation ("Zebra"). The financial results of the disposed business have been classified as discontinued operations for all periods presented. The results of discontinued operations are discussed in further detail in the "Discontinued Operations" footnote included in Item 8.

Financial Information About Geographic Areas

The response to this section of Item 1 incorporates by reference Note 11, "Commitments and Contingencies" and Note 12, "Information by Segment and Geographic Region" of Part II, "Item 8: Financial Statements and Supplementary Data" of this document, the "Results of Operations—2016 Compared to 2015" and "Results of Operations—2015 Compared to 2014" sections of Part II, "Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Item 1A: Risk Factors" of this document.

Financial Information About Segments

The response to this section of Item 1 incorporates by reference Note 12, "Information by Segment and Geographic Region," of Part II, "Item 8: Financial Statements and Supplementary Data" of this document.

Available Information

We make available free of charge through our website, www.motorolasolutions.com/investors, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, other reports filed under the Securities Exchange Act of 1934 ("Exchange Act"), and all amendments to those reports simultaneously or as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Our reports are also available free of charge on the SEC's website, *www.sec.gov.* Also available free of charge on our website are the following corporate governance documents:

- Motorola Solutions, Inc. Restated Certificate of Incorporation with Amendments
- Conformed Restated Certificate of Incorporation of Motorola Solutions, Inc. (amended Jan. 4, 2011)
- Certificate of Amendment to the Restated Certificate of Incorporation of Motorola, Inc. (effective Jan. 4, 2011)
- Certificate of Ownership and Merger of Motorola Name Change Corporation into Motorola, Inc. (effective Jan. 4, 2011)
- Motorola Solutions, Inc. Amended and Restated Bylaws
- Board Governance Guidelines
- Director Independence Guidelines
- Principles of Conduct for Members of the Motorola Solutions, Inc. Board of Directors
- Motorola Solutions Code of Business Conduct, which is applicable to all Motorola Solutions employees, including the principal executive officers, the principal financial officer and the controller (principal accounting officer)
- Audit Committee Charter

- Compensation and Leadership Committee Charter
- Governance and Nominating Committee Charter

All of our reports and corporate governance documents may also be obtained without charge by contacting Investor Relations, Motorola Solutions, Inc., Corporate Offices, 500 W. Monroe Street, Chicago, IL 60661, E-mail: *investors@motorolasolutions.com*. This annual report on Form 10-K and Definitive Proxy Statement are available on the Internet at www.motorolasolutions.com/investors and may also be requested in hardcopy by completing the on-line request form available on our website at www.motorolasolutions.com/investors. Our Internet website and the information contained therein or incorporated therein are not intended to be incorporated into this Annual Report on Form 10-K.

Item 1A: Risk Factors

We face a number of risks related to current global economic and political conditions, including low economic growth rates in certain markets, the impact of currency fluctuations, falling commodity prices, and unstable political conditions that have and could continue to unfavorably impact our business.

Global economic and political conditions continue to be challenging for many of our government and commercial markets, as economic growth in many countries, particularly in Europe and Latin America and in emerging markets, has remained low or declined, currency fluctuations have impacted profitability, credit markets have remained tight for certain of our counterparties and many of our customers remain dependent on government grants to fund purchases of our products and services. In addition, conflicts in the Middle East and elsewhere have created many economic and political uncertainties that continue to impact worldwide markets. The length of time these adverse economic and political conditions may persist is unknown. These global economic and political conditions have impacted and could continue to impact our business, financial condition, results of operations, and cash flows in a number of ways, including:

- Requests by Customers for vendor financing by Motorola Solutions: Certain of our customers, particularly, but not limited to, those who purchase large infrastructure systems, request that their suppliers provide financing in connection with equipment purchases and/or the provision of solutions and services, particularly as the size and length of these types of contracts increases and as we increase our business in developing countries. Requests for vendor financing continue to increase in volume and scope, including in response to reduced tax revenue at the state and local government level and ongoing tightening of credit for certain commercial customers. Motorola Solutions has continued to provide vendor financing to both our government and commercial customers. We have been faced with and expect to continue to be faced with choosing between further increasing our level of vendor financing or potentially losing sales, as some of our competitors, particularly those in Asia, have been more willing to provide vendor financing to customers around the world, particularly customers in Africa and Latin America. To the extent we are unable to sell these receivables on terms acceptable to us we may retain exposure to the credit quality of our customers who we finance.
- Customers' Inability to Obtain Financing to Make Purchases from Motorola Solutions and/or Maintain Their Business: Some of our customers require substantial financing, including public financing or government grants, in order to fund their operations and make purchases from us. The inability of these customers to obtain sufficient credit or other funds, including as a result of lower tax revenues, currency fluctuations or unavailability of government grants, to finance purchases of our products and services and/or to meet their payment obligations to us could have, and in some cases has had, a negative impact on our financial results. This risk increases as the size and length of our contracts increase. In addition, if global economic conditions result in insolvencies for our customers, it will negatively impact our financial results.
- Challenges in Budgeting and Forecasting: It is difficult to estimate changes in various parts of the U.S. and world economy, including the markets in which we participate. Components of our budgeting and forecasting are dependent upon estimates of demand for our products and estimates of foreign exchange rates. The prevailing economic uncertainties render estimates of future income and expenditures challenging.
- Potential Deferment or Cancellation of Purchases and Orders by Customers: Uncertainty about current and future global economic conditions may cause, and in some cases has caused, businesses and governments to defer or cancel purchases in response to tighter credit, decreased cash availability and de-prioritization of communications equipment within the budgeting process. If future demand for our products declines due to economic conditions, it will negatively impact our financial results.
- Inability to Operate and Grow in Certain Markets: We operate in a number of markets with a risk of intensifying political instability, including Europe, Russia, Brazil, the Middle East and Africa. If political instability continues in these markets and in other parts of the world in which we operate it could have a significant impact on our ability to grow and, in some cases, operate in those locations, which will negatively impact our financial results.

A significant amount of our international business is transacted in local currency and a significant percentage of our cash and cash equivalents are held outside of the United States, which exposes us to risk relating to currency fluctuations, changes in foreign exchange regulations and repatriation delays and costs, which could negatively impact our sales, profitability and financial flexibility.

We have sizable sales and operations in Canada and our Europe and Africa, Asia, Middle East, and Latin America regions. A significant amount of this business is transacted in local currency. As a result, our financial performance is impacted by currency fluctuations. We are also experiencing increased pressure to agree to established currency conversion rates and cost of living adjustments as a result of foreign currency fluctuations or the requirement to transact business in local currencies.

A significant percentage of our cash and cash equivalents is currently held outside the U.S. and we continue to generate profits outside of the U.S., while many of our liabilities, such as our public debt, the majority of our pension liabilities and certain other cash payments, such as dividends and share repurchases, are payable in the U.S. While we have regularly repatriated funds with minimal adverse impact, repatriation of some of the funds has been and could continue to be subject to delay for local country approvals and could have potential adverse tax consequences. In addition, foreign exchange regulations may limit our ability to convert or repatriate foreign currency. As a result of having a lower amount of cash and cash equivalents in the U.S., our financial flexibility may be reduced.

We face uncertainty in the global geopolitical landscape that may impede the implementation of our strategy outside the United States.

In June 2016, the United Kingdom (the "U.K") held a referendum in which voters approved an exit from the European Union ("E.U."), commonly referred to as Brexit. It is expected that the U.K. government will initiate a process to withdraw from the E.U. and begin negotiating the terms of its separation. The announcement of Brexit has resulted in volatility in the global stock market and currency exchange rate fluctuations that resulted in strengthening of the U.S. dollar relative to other foreign currencies in which we conduct business. The announcement of Brexit and likely withdrawal of the U.K. from the E.U. may also create global economic uncertainty, which may cause our customers to closely monitor their costs and reduce their spending budgets. In addition, there may be uncertainty as to the position the United States will take with respect to certain treaty and trade relationships with other countries. This uncertainty may impact (i) the ability or willingness of non-U.S. companies to transact business in the United States, including with our Company, (ii) regulation and trade agreements affecting U.S. companies, (iii) global stock markets and (iv) general global economic conditions. All of these factors are outside of our control, but may cause us to adjust our strategy in order to compete effectively in global markets and could adversely affect our business, financial condition, operating results and cash flows.

A security breach or other significant disruption of our IT systems, those of our outsource partners, suppliers or those we manufacture, install, and in some cases operate and maintain for our customers, caused by cyber attack or other means, could have a negative impact on our operations, sales, and operating results.

All information technology systems are potentially vulnerable to damage, unauthorized access or interruption from a variety of sources, including but not limited to, cyber attack, cyber intrusion, computer viruses, security breach, energy blackouts, natural disasters, terrorism, sabotage, war, insider trading, and telecommunication failures. As a provider of mission-critical communications systems for customers in critical infrastructure sectors of the U.S. and globally, including systems that we operate and maintain for certain of our customers, we face additional risk as a target of sophisticated attacks aimed at compromising both our Company's and our customers' sensitive information and intellectual property, through means referred to as advanced persistent threats. This risk is heightened because these systems may contain sensitive governmental information or personally identifiable or other protected information. While we employ a number of countermeasures and security controls, including training and audits and utilization of commercial information security threat sharing networks to protect against such attacks, we have experienced a gradual and steady increase in the sophistication of these threats, most noticeably through well-crafted social engineering and phishing attempts. We cannot guarantee that all threat attempts will be successfully thwarted even with these countermeasures. Further, we are dependent, in certain instances, upon our outsourced business partners, suppliers, and customers to adequately protect our IT systems and those IT systems that we manage for our customers. In addition, some of our customers are exploring broadband solutions that use public carrier networks on which our solutions would operate. We do not have direct oversight or influence over how public carrier networks manage the security, quality, or resiliency of their networks, and because they are an attractive high value target due to their role in critical infrastructure, they expose customers to an elevated risk over our private networks.

Our Company outsources certain business operations, including, but not limited to IT, HR information systems, manufacturing, repair, distribution and engineering services. These arrangements are governed by various contracts and agreements which reference and mandate Company and international standards of information protection, as appropriate. In addition, we maintain certain networked equipment at customer locations and are reliant on those customers to protect and maintain that equipment. The "attack surface" for us to protect against our adversaries is thus often extended to these partners and customers, as well as our suppliers, and we may be dependent upon their cyber security capabilities as well as their willingness to exchange threat and response information with us

A cyber attack or other significant disruption involving our IT systems or those of our outsource partners, suppliers or our customers could result in the unauthorized release of proprietary, confidential or sensitive information of ours or our customers. Such unauthorized access to, or release of, this information could: (i) allow others to unfairly compete with us, (ii) compromise safety or security, given the mission-critical nature of our customers' systems, (iii) subject us to claims for breach of contract, tort, and other civil claims, and (iv) damage our reputation. We could face regulatory penalties, enforcement actions, remediation

obligations and/or private litigation by parties whose data is improperly disclosed or misused. In addition, there has been a sharp increase in laws in Europe, the U.S. and elsewhere, imposing requirements for the handling of personal data, including data of employees, consumers and business contacts, as well as imposing requirements for remediation action, including specific timing and method of notification. There is a risk that our Company, directly or as the result of some third-party service provider we use, could be found to have failed to comply with the laws or regulations of some country regarding the collection, consent, handling, transfer, retention or disposal of such personal data, and therefore subject us to fines or other sanctions. The European Courts invalidation of Safe Harbor as a mechanism to legitimize cross border data flows increases the risk that our Company, directly or through some third-party service provider that we use, may inappropriately transfer EU personal data. Any or all of the foregoing could have a negative impact on our business, financial condition, results of operations, and cash flow.

A portion of our business is dependent upon U.S. government contracts and grants, which are highly regulated and subject to oversight audits by U.S. government representatives and subject to cancellations. Such audits could result in adverse findings and negatively impact our business.

Our U.S. government business is subject to specific procurement regulations with numerous compliance requirements. These requirements, although customary in government contracting in the U.S., increase our performance and compliance costs. These costs may increase in the future, thereby reducing our margins, which could have an adverse effect on our financial condition. Failure to comply with these regulations or other compliance requirements could lead to suspension or debarment from U.S. government contracting or subcontracting for a period of time. Among the causes for debarment are violations of various laws or policies, including those related to procurement integrity, export control, U.S. government security regulations, employment practices, protection of criminal justice data, protection of the environment, accuracy of records, proper recording of costs, foreign corruption and the False Claims Act.

Generally, in the U.S. government contracts and grants are subject to oversight audits by government representatives. Such audits could result in adjustments to our contracts. Any costs found to be improperly allocated to a specific contract may not be allowed, and such costs already reimbursed may have to be refunded. Future audits and adjustments, if required, may materially reduce our revenues or profits upon completion and final negotiation of audits. Negative audit findings could also result in investigations, termination of a contract or grant, forfeiture of profits or reimbursements, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government. All contracts with the U.S. government are subject to cancellation at the convenience of the U.S. government.

In addition, contacts with government officials and participation in political activities are areas that are tightly controlled by federal, state, local and international laws. Failure to comply with these laws could cost us opportunities to seek certain government sales opportunities or even result in fines, prosecution, or debarment.

Government regulation of radio frequencies may limit the growth of public safety broadband systems or reduce barriers to entry for new competitors.

Radio frequencies are required to provide wireless services. The allocation of frequencies is regulated in the U.S. and other countries and limited spectrum space is allocated to wireless services and specifically to public safety users. The growth of public safety broadband communications systems may be affected: (i) by regulations relating to the access to allocated spectrum for public safety users, (ii) if adequate frequencies are not allocated, or (iii) if new technologies are not developed to better utilize the frequencies currently allocated for such use. Industry growth may also be affected by new licensing fees required to use frequencies.

The U.S. leads the world in allocating spectrum to enable wireless communications including LTE. Other countries have also allocated spectrum to allow deployment of these and other technologies. This changing landscape may introduce new competition and new opportunities for us.

The Middle Class Tax Relief and Job Creation Act of 2012 (the "Legislation") authorized an additional ten MHz of broadband spectrum for public safety use for a total of 20 MHz of broadband spectrum for public safety. In addition, public safety retained 14 MHz of the 700 MHz narrowband spectrum, subject to the FCC's authority to determine whether such spectrum should be authorized for future broadband use. The Legislation further provides for the establishment of a centralized governance model through an independent authority within NTIA designated as the "First-Responder Network Authority" or "FirstNet" but allows for states to opt out of the plan to develop a nationwide public safety network and perform their own competitive procurements if certain criteria are met. States that opt out would still be eligible for some funding and would also be allowed to help cover their operating costs by leasing unused/underused spectrum to secondary users, although revenue from such leasing arrangements would need to be reinvested in their FirstNet public safety network.

Longer term, MSI's opportunities to sell LTE equipment and related services in this space will be substantially impacted by: (1) whether FirstNet awards the nationwide contract to MSI's bidding partner, although MSI will still have opportunities to sell public safety broadband devices and software solutions even if its bidding partner is not selected; (2) the winning bidder's success in satisfying contract requirements and milestones, including, among others, subscriber adoption rate, mandatory payments to FirstNet, development of State plans, and covrage; (3) the timing and number of states (if any) that choose to opt out of FirstNet, and whether the FCC and NTIA approve their request, as detailed in the Legislation; (4) FirstNet's stated intent to reduce handset prices; (5) fiscal, public, and regulatory policies and/or special interest politics that risk delaying deployment and (6) the finally negotiated terms and conditions in the FirstNet contract and/or subcontract awarded FirstNet released its RFP in early 2016, and an award is projected in 2017.

We derive a portion of our revenue from government customers who award business through competitive bidding which can involve significant upfront costs and risks. This effort may not result in awards of business or we may fail to accurately estimate the costs to fulfill contracts awarded to us, which could have adverse consequences on our future profitability.

Many government customers, including most U.S. government customers, award business through a competitive bidding process, which results in greater competition and increased pricing pressure. The competitive bidding process involves significant cost and managerial time to prepare bids for contracts that may not be awarded to us. Even if we are awarded contracts, we may fail to accurately estimate the resources and costs required to fulfill a contract, or to resolve problems with our subcontractors or suppliers, which could negatively impact the profitability of any contract award to us, particularly in the case of fixed price contracts. In addition, following the award of a contract, we have experienced and may continue to experience significant expense or delay, contract modification or contract rescission as a result of customer delay or our competitors protesting or challenging contracts awarded to us in competitive bidding.

We enter into fixed-price contracts that could subject us to losses in the event we fail to properly estimate our costs or hedge our risks associated with currency fluctuations.

We enter into a number of firm fixed-price contracts. If our initial cost estimates are incorrect, we can lose money on these contracts. Because certain of these contracts involve new technologies and applications, require us to engage subcontractors and/or can last multiple years, unforeseen events, such as technological difficulties, fluctuations in the price of raw materials, problems with our subcontractors or suppliers and other cost overruns, can result in the contract pricing becoming less favorable or even unprofitable to us and have an adverse impact on our financial results. In addition, a significant increase in inflation rates or currency fluctuations could have an adverse impact on the profitability of longer-term contracts.

The expansion of our solutions and services business creates new competitors and new and increased areas of risk that we have not been exposed to in the past and that we may not be able to properly assess or mitigate.

We plan to continue to expand our solutions and services business by offering additional and expanded managed services for existing and new types of customers, such as designing, building, operating, managing and in some cases owning a public-safety system or other commercial system. The offering of managed services involves the integration of multiple services, multiple vendors and multiple technologies, requiring that we partner with other solutions and services providers, often on multiyear projects.

Additionally, our managed services business will be expanded to include the hosting of software applications. This allows the customers to "consume" the software "as a service" and avoid the costs and complexities of acquiring and operating the software.

- We may be unable to recognize revenue from the sale of equipment in connection with managed services contracts for a period of time, which may be several years.
- The managed services business is one characterized by large subcontracting arrangements and we may not be able to obtain favorable contract terms including adequate indemnities, performance commitments or other protections from our subcontractors to adequately mitigate our exposure to our customers.
- We may face increasing competition from traditional system integrators and the defense industry as solutions and services contracts become larger and more complicated.
- Expansion will bring us into contact with new regulatory requirements and restrictions, such as data security or data residency/localization obligations, with which we will have to comply and may increase the costs of doing business, reduce margins and delay or limit the range of new solutions and services which we will be able to offer.
- We may be required to agree to specific performance metrics that meet the customer's requirements for network security, availability, reliability, maintenance and support and, in some cases, if these performance metrics are not met we may not be paid.

We no longer own a number of our enterprise legacy information systems, including components of our Enterprise Resource Planning (ERP) system. We are planning to implement a new ERP system and we rely on complex and in some cases aging information technology systems and networks to operate our business. Any system or network disruption could have a negative impact on our operations, sales and operating results.

We rely on the efficient and uninterrupted operation of complex information technology systems and networks, some of which are within the Company and some of which are outsourced. In connection with the sale of our Enterprise business to Zebra, we transferred ownership of a number of our enterprise legacy information systems including components of our Enterprise Resource Planning (ERP) system to Zebra. We are currently in a transition services agreement to co-use these systems with Zebra until 2017 which limits our ability to make changes to these systems. We are planning to implement a new ERP system to replace pieces of the systems now owned by Zebra. If this implementation is delayed or introduces defective, or improperly installed or implemented computer code, it may result in a business disruption.

We also currently rely on a number of older legacy information systems that are harder to maintain and when we begin to implement our new ERP system we will have fewer resources to maintain these older legacy systems. A system failure could negatively impact our operations and financial results.

In addition, as we have outsourced more of our business operations we have increased our dependence on the IT systems of our outsourced business partners which are not under our direct management or control. Any disruption to either those outsourced systems or the communication links between Motorola Solutions and the outsourced supplier, may negatively impact our ability to manufacture, distribute, or repair products. We may incur additional costs to remedy the damages caused by these disruptions.

Our future operating results depend on our ability to purchase at acceptable prices a sufficient amount of materials, parts, and components, as well as services and software to meet the demands of our customers and any disruption to our suppliers or significant increase in the price of supplies could have a negative impact on our results of operations.

Our ability to meet customers' demands depends, in part, on our ability to timely obtain an adequate delivery of quality materials, parts, and components, as well as services and software from our suppliers. In addition, certain supplies, including for some of our critical components, are available only from a single source or limited sources and we may not be able to diversify sources in a timely manner. If demand for our products or services increases from our current expectations or if suppliers are unable to meet our demand for other reasons, including as a result of natural disasters or financial issues, we could experience an interruption in supplies or a significant increase in the price of supplies, including as a result of having to move to an alternative source, that could have a negative impact on our business as a result of increased cost or delay in or inability to deliver our products. This risk may increase as a result of consolidation of certain of our suppliers. We have experienced shortages in the past that have negatively impacted our results of operations and may experience such shortages in the future. In addition, credit constraints at our suppliers could cause us to accelerate payment of accounts payable by us, impacting our cash flow.

We have seen and expect to continue to see increases in the price of certain supplies as we no longer qualify for certain volume discounts given our significant decrease in direct material spend over the last several years as a result of our spin-offs and divestitures. We have also experienced less support and focus from our suppliers as our spend has diminished, making it more difficult for us to resolve gaps in supply due to unforeseen changes in forecast and demand. In addition, our current contractual arrangements with certain suppliers may be cancelled or not extended by such suppliers and, therefore, not afford us with sufficient protection against a reduction or interruption in supplies. Moreover, in the event any of these suppliers breach their contracts with us, our legal remedies associated with such a breach may be insufficient to compensate us for any damages we may suffer.

Over the last several years we have outsourced portions of certain business operations like IT, HR information systems, manufacturing, repair, distribution and engineering services and expect to outsource additional business operations. This outsourcing limits our control over these business operations and exposes us to additional risk as a result of the actions of our outsource partners.

As we outsource more of our business operations we are not able to directly control these activities. Our outsource partners may not prioritize our business over that of their other customers and they may not meet our desired level of quality, performance, service, cost reductions or other metrics. Failure to meet key performance indicators may result in our being in default with our customers. In addition, we may rely on our outsource partners to secure materials from our suppliers with whom our outsource partners may not have existing relationships and we may be required to continue to manage these relationships even after we outsource certain business operations.

As we outsource business operations we become dependent on the IT systems of our outsource partners, including to transmit demand and purchase orders to suppliers, which can result in a delay in order placement. In addition, in an effort to reduce costs and limit their liabilities, our outsource partners may not have robust systems or make commitments in as timely a manner as we require.

In some cases the actions of our outsource partners may result in our being found to be in violation of laws or regulations like import or export regulations. As many of our outsource partners operate outside of the U.S., our outsourcing activity exposes us to information security vulnerabilities and increases our global risks. In addition, we are exposed to the financial viability of our outsource partners. Once a business activity is outsourced we may be contractually prohibited from or may not practically be able to bring such activity back within the Company or move it to another outsource partner. The actions of our outsource partners could result in reputational damage to us and could negatively impact our business, financial conditions, results of operations, and cash flows.

Our sales within a quarter are not linear, with a substantial percentage of products shipping in the final month of the quarter. This lack of linearity creates inefficiencies in our business performance and any interruption during this final month could have a substantial impact on our quarterly financial results.

On average, a substantial percentage of our quarterly sales ship in the final month of a quarter. Any interruption in our ability to ship products during this final month, such as unavailability of critical components, disruption to our manufacturing capabilities or disruptions in our distribution channel, will have a disproportionately large impact on our quarterly financial results, as we may be unable to recover in time to ship the products and recognize revenue in that quarter.

In addition, this lack of linearity results in inefficiencies in our financial performance, as we must invest in capacity and resources to support this business model, meaning we have underutilized operations during the first two months of the quarter. We also must maintain additional component inventory and engage in pre-builds of finished goods to mitigate the impact of this lack of linearity and meet potential last month demand. This could result in our carrying excess inventory, which is costly and may result in increased inventory obsolescence over time.

We no longer own certain logos and other trademarks, trade names and service marks, including MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M logo and all derivatives and formatives thereof ("Motorola Marks") and we license the Motorola Marks from Motorola Trademark Holdings, LLC ("MTH"), which is currently owned by Motorola Mobility, a subsidiary of Lenovo. Our joint use of the Motorola Marks could result in product and market confusion and negatively impact our ability to expand our business under the Motorola brand. In addition, if we do not comply with the terms of the license agreement we could lose our rights to the Motorola Marks. Because of the change of control of Motorola Mobility, which is now owned by Lenovo, we may find that an incompatible third-party owns the Motorola Marks.

We have a worldwide, perpetual and royalty-free license from MTH to use the Motorola Marks as part of our corporate name and in connection with the manufacture, sale, and marketing of our current products and services. The license of the Motorola Marks is important to us because of the reputation of the Motorola brand for our products and services. There are risks associated with both Motorola Mobility and the Company using the Motorola Marks and with this loss of ownership. As both Motorola Mobility and the Company will be using the Motorola Marks, confusion could arise in the market, including customer confusion regarding the products offered by and the actions of the two companies. Motorola Mobility was acquired by Lenovo in 2014, which resulted in Lenovo having effective control over the Motorola Marks. This risk could increase as both Motorola Mobility's and our products continue to converge. This risk could increase under Lenovo's control if they expand their use of the Motorola Marks. Also, any negative publicity associated with either company in the future could adversely affect the public image of the other. In addition, because our license of the Motorola Marks will be limited to products and services within our specified fields of use, we will not be permitted to use the Motorola Marks in other fields of use without the approval of Motorola Mobility, which is now controlled by Lenovo. In the event that we desire to expand our business into any other fields of use, we may need to do so with a brand other than the Motorola brand. Developing a brand as well-known and with as much brand equity as Motorola could take considerable time and expense. The risk of needing to develop a second brand increases as Motorola Mobility's and our products continue to converge and if our business expands into other fields of use. In addition, we could lose our rights to use the Motorola Marks if we do not comply with the terms of the license agreement. Such a loss could negatively affect our business, results of operations and financial condition. Furthermore, MTH has the right to license the brand to third-parties and either Motorola Mobility or licensed third-parties may use the brand in ways that make the brand less attractive for customers of Motorola Solutions, creating increased risk that Motorola Solutions may need to develop an alternate or additional brand. In 2013 Motorola Mobility modified certain Motorola Marks used by the Company. Motorola Mobility may require the Company to adopt the use of the modified Motorola Marks, which would result in the Company incurring the costs of rebranding.

In addition, neither Motorola Mobility nor Lenovo are prohibited from selling the Motorola Marks. In the event of a liquidation of Motorola Mobility or the then owner of the Motorola Marks, it is possible that a bankruptcy court would permit the Motorola Marks to be assigned to a third-party. While our right to use the Motorola Marks under our license should continue in our specified field of use in such situations, it is possible that we could be party to a license arrangement with a third-party whose interests are incompatible with ours, thereby potentially making the license arrangement difficult to administer, and increasing the costs and risks associated with sharing the Motorola Marks. In addition, there is a risk that, in the event of a bankruptcy of Motorola Mobility or the then owner of the Motorola Marks, Motorola Mobility, the then owner or its bankruptcy trustee may attempt to reject the license, or a bankruptcy court may refuse to uphold the license or certain of its terms. Such a loss could negatively affect our business, results of operations and financial condition.

We may not continue to have access to the capital markets for financing on acceptable terms and conditions, particularly if our credit ratings are downgraded, which could limit our ability to repay our indebtedness and could cause liquidity issues.

From time to time we access the capital markets to obtain financing. Our access to the capital markets and the bank credit markets at acceptable terms and conditions are impacted by many factors, including: (i) our credit ratings, (ii) the liquidity of the overall capital markets, (iii) strength and credit availability in the banking markets, and (iv) the current state of the global economy. In addition, we frequently access the credit markets to obtain performance bonds, bid bonds, standby letters of credit and surety bonds, as well as to hedge foreign exchange risk and sell receivables. In addition, there can be no assurances we will be able to refinance our existing indebtedness (i) on commercially reasonable terms, (ii) on terms, including with respect to interest rates, as favorable as our current debt, or (iii) at all. There can be no assurances that we will continue to have access to the capital markets or bank credit markets on terms acceptable to us and if we are unable to repay or refinance our debt, we cannot guarantee that we will be able to generate enough cash flows from operations or that we will be able to obtain enough capital to service our debt, fund our planned capital expenditures or pay future dividends.

We are rated investment grade by all three national rating agencies. Any downward changes by the rating agencies to our credit rating may negatively impact the value and liquidity of both our debt and equity securities. Under certain circumstances, an increase in the interest rate payable by us under our revolving credit facility, if any amounts were borrowed under such facility, could negatively affect our operating cash flows. In addition, a downgrade in our credit ratings could limit our ability to: (i) access the capital markets or bank credit markets, (ii) provide performance bonds, bid bonds, standby letters of credit and surety bonds, (iii) hedge foreign exchange risk, (iv) fund our foreign affiliates, and (v) sell receivables. A downgrade in our credit rating could also result in less favorable trade terms with suppliers. In addition, any downgrades in our credit ratings may affect our ability to obtain additional financing in the future and may affect the terms of any such financing. Any future disruptions, uncertainty or volatility in the capital markets may result in higher funding costs for us and adversely affect our ability to access funds and other credit related products. In addition, we may avoid taking actions that would otherwise benefit us or our stockholders, such as engaging in certain acquisitions or engaging in stock repurchases, that would negatively impact our credit rating.

We utilize the services of subcontractors to perform under many of our contracts and the inability of our subcontractors to perform in a timely and compliant manner could negatively impact our ability to comply with our performance obligations as the prime contractor.

We engage subcontractors, including third-party integrators, on many of our contracts and as we expand our solutions and services business our use of subcontractors has and will continue to increase. Our subcontractors may further subcontract performance and may supply third-party products and software from a number of smaller companies. We may have disputes with our subcontractors, including disputes regarding the quality and timeliness of work performed by the subcontractor or its subcontractors and the functionality, warranty and indemnities of products, software and services supplied by our subcontractor. We are not always successful in passing down customer requirements to our subcontractors, and thus in some cases may be required to absorb contractual risks from our customers without corresponding back-to-back coverage from our subcontractor. Even when we are able to pass down customer requirements to our subcontractors, sometimes those subcontractors have less financial resources than we do, and a customer may look to us to cover a loss or damage. Our subcontractors may not be able to acquire or maintain the quality of the materials, components, subsystems and services they supply, or secure preferred warranty and indemnity coverage from their suppliers which might result in greater product returns, service problems, warranty claims and costs and regulatory compliance issues. Any of the foregoing could harm our business, financial condition and results of operations.

Failure of our suppliers, subcontractors, distributors, resellers and representatives to use acceptable legal or ethical business practices and adhere to our Supplier Code of Conduct or our Human Rights Policy could negatively impact our business.

It is our policy to require our suppliers, subcontractors, distributors, resellers, and third-party sales representatives ("TPSRs") to operate in compliance with applicable laws, rules and regulations regarding working conditions, employment practices, environmental compliance, anti-corruption and trademark and copyright licensing. However, we do not control their labor and other business practices. If one of our suppliers, subcontractors, brokers, distributors, resellers, or TPSRs violates labor or other laws or implements labor or other business practices that are regarded as unethical, the shipment of finished products to us could be interrupted, orders could be canceled, relationships could be terminated and our reputation could be damaged. If one of our suppliers or subcontractors fails to procure necessary license rights to trademarks, copyrights or patents, legal action could be taken against us that could impact the salability of our products and expose us to financial obligations to a third-party. Any of these events could have a negative impact on our sales and results of operations.

Our employees, customers, suppliers and outsource partners are located throughout the world and, as a result, we face risks that other companies that are not global may not face.

Most of our products that are manufactured by or for us outside the U.S. are manufactured in Malaysia. If manufacturing in our facility, or a facility manufacturing products for us, in Malaysia is disrupted, our overall capacity would be significantly reduced and our business, financial condition, results of operation, and cash flows could be negatively impacted.

Our customers and suppliers are located throughout the world. In 2016, approximately 41% percent of our revenue was generated outside the U.S. In addition, we have a number of research and development, administrative and sales facilities outside the U.S. and more than 47% of our employees are employed outside the U.S. Most of our suppliers' operations are outside the U.S. and most of our products are manufactured outside the U.S., both internally and by third-parties.

Because we have sizable sales and operations, including outsourcing and procurement arrangements, outside of the U.S., we have more complexity in our operations and are exposed to a unique set of global risks that could negatively impact our business, financial condition, results of operations, and cash flows, including but not limited to: (i) currency fluctuations, (ii) import/export regulations, tariffs, trade barriers and trade disputes, customs classifications and certifications, including but not limited to changes in classifications or errors or omissions related to such classifications and certifications, (iii) changes in U.S. and non-U.S. rules related to trade, environmental, health and safety, technical standards, consumer and intellectual property and consumer protection, (iv) longer payment cycles, (v) tax issues, such as tax law changes, variations in tax laws from country to country and as compared to the U.S., obligations under tax incentive agreements, difficulties in repatriating cash generated or held abroad in a tax-efficient manner and difficulties in securing local country approvals for cash repatriations, (vi) changes in foreign exchange regulations, (vii) challenges in collecting accounts receivable, (viii) cultural and language differences, (ix) employment regulations and local labor conditions, (x) privacy and data protection regulations and restrictions, (xi) difficulties protecting intellectual property in foreign countries, (xii) instability in economic or political conditions, including inflation, recession and actual or anticipated military or political conflicts and terrorism, (xiii) natural disasters, (xiv) public health issues or outbreaks, (xv) changes in laws or regulations that negatively impact benefits being received by us or that require costly modifications in products sold or operations performed in such countries, (xvi) litigation in foreign court systems and foreign administrative proceedings, and (xvii) applicability of anti-corruption laws including the Foreign Corrupt Practices Act ("FCPA") and the U.K. Bribery Act.

We have a number of employees, contractors, representatives and agents in, and sell our products and services throughout, the Middle East and our operations, as well as demand for our products and services, could be negatively impacted by political conflicts and hostilities in this region. The potential for future unrest, terrorist attacks, increased global conflicts, hostility against U.S.-based multinational companies and the escalation of existing conflicts has created worldwide uncertainties that have negatively impacted, and may continue to negatively impact, demand for certain of our products.

We also are subject to risks that our operations could be conducted by our employees, contractors, representatives or agents in ways that violate the FCPA, the U.K. Bribery Act, or other similar anti-corruption laws. While we have policies and

procedures to comply with these laws, our employees, contractors, representatives and agents may take actions that violate our policies. Any such violations could have a negative impact on our business. Moreover, we face additional risks that our anti-corruption policies and procedures may be violated by TPSRs or other third-parties that help sell our products or provide other solutions and services, because such TPSRs and other third parties are not our employees, and, it is therefore more difficult to oversee [and control] their conduct.

Many of our components and some of our products, including software, are developed and/or manufactured by third-parties and in some cases designed by third-parties and if such third-parties lack sufficient quality control, change the design of components or if there are significant changes in the financial or business condition of such third-parties, it may have a negative impact on our business.

We rely on third-parties to develop and/or manufacture many of our components and some of our finished products, and to design certain components and finished products, as well as provide us with software necessary for the operation of those products and we may increase our reliance such third-parties in the future. We could have difficulties fulfilling our orders and our sales and profits could decline if: (i) we are not able to engage such third-parties with the capabilities or capacities required by our business, (ii) such third-parties lack sufficient quality control or fail to deliver quality components, products, services or software on time and at reasonable prices, or deliver products, services or software that do not meet regulatory or industry standards or requirements, (iii) if there are significant changes in the financial or business condition of such third-parties, or (iv) if we have difficulties transitioning operations to such third-parties.

Because of the long life-cycle of many of our products, we need access to limited quantities of components for manufacturing and repair and suppliers have been and may continue to be unwilling to manufacture such components or may only do so at high prices. Certain key component suppliers are reducing the expected lifetime of key components, in particular semiconductor and electrical components, on some of our products. This could result in the need for more frequent product redesigns and increased engineering costs on some products or costly last time buys, which may negatively impact our financial performance. In addition, we may be unable to meet our repair obligations to our customers.

We are exposed to risks under large, multi-year system and solutions and services contracts that may negatively impact our business.

We enter into large, multi-year system and solutions and services contracts with large municipal, state, and nationwide government and commercial customers. In some cases we may not be the prime contractor and may be dependent on other third-parties such as commercial carriers or systems integrators. This exposes us to risks, including among others: (i) technological risks, especially when the contracts involve new technology, (ii) risk of defaults by third-parties on whom we are relying for products or services as part of our offering or who are the prime contractors, (iii) financial risks, including the estimates inherent in projecting costs associated with large, long-term contracts, the impact of currency fluctuations, inflation, and the related impact on operating results, (iv) cyber security risk, especially in managed services contracts with public safety and commercial customers that process data, and (v) political risk, especially related to the contracts with government customers. In addition, multi-year awards from governmental customers may often only receive partial funding initially and may typically be cancelable on short notice with limited penalties. Recovery of front loaded capital expenditures in long-term managed services contracts is dependent on the continued viability of such customers. The termination of funding for a government program or insolvency of commercial customer could result in a loss of anticipated future revenue attributable to that program, which could have an adverse impact on our profitability.

Our success depends in part on our timely introduction of new products and technologies and our results can be impacted by the effectiveness of our significant investments in new products and technologies.

The markets for certain of our products are characterized by changing technologies and evolving industry standards. In some cases it is unclear what specific technology will be adopted in the market or what delivery model will prevail, including whether public safety LTE will be delivered via private networks, public carriers or some combination thereof. In addition, new technologies such as voice over LTE or push-to-talk clients over LTE could reduce sales of our traditional products. The shift to smart public safety and the prevalence of data in our customer's use cases results in our competing in a more fragmented marketplace. In addition, new technologies and new competitors continue to enter our markets at a faster pace than we have experienced in the past, resulting in increased competition from non-traditional suppliers, including public carriers, telecom equipment providers, consumer device manufacturers and software companies. New products are expensive to develop and bring to market and additional complexities are added when this process is outsourced as we have done in certain cases or as we increase our reliance on third-party content and technology. Our success depends, in substantial part, on the timely and successful introduction of new products, upgrades and enhancements of current products to comply with emerging industry standards, laws and regulations, such as China's proprietary technology, PDT, and to address competing technological and product developments carried out by our competitors. Developing new technologies to compete in a specific market may not be financially viable, resulting in our inability to compete in that market. The R&D of new, technologically-advanced products is a complex and uncertain process requiring high levels of innovation and investment, as well as the accurate anticipation of technology and market trends. Many of our products and systems are complex and we may experience delays in completing development and introducing new products or technologies in the future. We may focus our resources on technologies that do not become widely accepted or are not commercially viable or involve compliance obligations with additional areas of regulatory requirements.

Our results are subject to risks related to our significant investment in developing and introducing new products. These risks include among others: (i) difficulties and delays in the development, production, testing and marketing of products,

particularly when such activities are done through third-parties, (ii) customer acceptance of products, (iii) the development of, approval of, and compliance with industry standards and regulatory requirements, (iv) the significant amount of resources we must devote to the development of new technologies, and (v) the ability to differentiate our products and compete with other companies in the same markets.

If the quality of our products does not meet our customers' expectations or regulatory or industry standards, then our sales and operating earnings, and ultimately our reputation, could be negatively impacted.

Some of the products we sell may have quality issues resulting from the design or manufacture of the product, or from the software used in the product. Sometimes, these issues may be caused by components we purchase from other manufacturers or suppliers. Often these issues are identified prior to the shipment of the products and may cause delays in shipping products to customers, or even the cancellation of orders by customers. Sometimes, we discover quality issues in the products after they have been shipped to our customers, requiring us to resolve such issues in a timely manner that is the least disruptive to our customers, particularly in light of the mission-critical nature of our communications products. Such pre-shipment and post-shipment quality issues can have legal, financial and reputational ramifications, including: (i) delays in the recognition of revenue, loss of revenue or future orders, (ii) customer-imposed penalties for failure to meet contractual requirements, (iii) increased costs associated with repairing or replacing products, and (iv) a negative impact on our goodwill and brand name reputation.

In some cases, if the quality issue affects the product's performance, safety or regulatory compliance, then such a "defective" product may need to be "stop-shipped" or recalled. Depending on the nature of the quality issue and the number of products in the field, it could cause us to incur substantial recall or corrective field action costs, in addition to the costs associated with the potential loss of future orders and the damage to our goodwill or brand reputation. In addition, we may be required, under certain customer contracts, to pay damages for failed performance that might exceed the revenue that we receive from the contracts. Recalls and field actions involving regulatory non-compliance could also result in fines and additional costs. Recalls and field actions could result in third-party litigation by persons or companies alleging harm or economic damage as a result of the use of the products.

We expect to continue to make strategic acquisitions of other companies or businesses and these acquisitions introduce significant risks and uncertainties, including risks related to integrating the acquired businesses and achieving benefits from the acquisitions.

In order to position ourselves to take advantage of growth opportunities or to meet other strategic needs such as product or technology gaps, we have made, and expect to continue to make, strategic acquisitions that involve significant risks and uncertainties. These risks and uncertainties include: (i) the difficulty or inability in integrating newly-acquired businesses and operations in an efficient and effective manner, particularly in light of the fact that certain of our enterprise legacy information systems including components of our ERP system are owned by Zebra and we are unable to make significant changes to these systems until completion of our new ERP implementation, (ii) risks associated with integrating financial reporting and internal control systems, particularly in light of the ERP system changes, (iii) the challenges in achieving strategic objectives, cost savings and other benefits from acquisitions, (iv) the risk that our contractual relationships or the markets do not evolve as anticipated and that the technologies acquired do not prove to be those needed to be successful in those markets, (v) the potential loss of key employees of the acquired businesses, (vi) the risk of diverting the attention of senior management from our operations, (vii) the risks of entering new markets in which we have limited experience, (viii) difficulties in integrating information technology systems and other business processes to accommodate the acquired businesses and (ix) future impairments of goodwill of an acquired business. In particular, failure to achieve targeted cost and revenue synergies could negatively impact our business performance.

Certain acquisition candidates in the industries in which we participate may carry higher relative valuations (based on revenues, earnings, cash flow, or other relevant multiples) than we do. This is particularly evident in software and certain services businesses. Acquiring a business that has a higher relative valuation than Motorola Solutions may be dilutive to our earnings. In addition, we may not pursue opportunities that are highly dilutive to near-term earnings.

Key employees of acquired businesses may receive substantial value in connection with a transaction in the form of cash payments for their ownership interest, particularly in the case of founders and other shareholder employees, change-in-control agreements, acceleration of stock options and the lifting of restrictions on other equity-based compensation rights. To retain such employees and integrate the acquired business, we may offer additional retention incentives, but it may still be difficult to retain certain key employees.

We have completed a number of large divestitures over the last several years and have ongoing obligations and potential liabilities associated with those transactions and the businesses we divested. In addition, these divestitures have resulted in less diversity of our business and our customer base, which could negatively impact our financial results in the event of a downturn in our mission-critical communications business.

Over the last several years we have spun-off or sold a number of large businesses, including Motorola Mobility, our Networks business and our Enterprise business. In connection with our divestitures we typically remain liable for certain pre-closing liabilities associated with the divested business, such as pension liabilities, taxes, employment, environmental liabilities and litigation. In the case of the sale of our Enterprise business we agreed to a multi-year non-compete which may limit our ability to develop and sell products for our commercial customers. In addition, although we often assign contracts associated with the divested business to a buyer in a divestiture, often that assignment will be subject to the consent of the contractual counterparty, which may not be obtained or may be conditioned, resulting in the company remaining liable under the contract. In connection with our divestitures we make representations and warranties and agree to covenants relating to the business divested. We remain liable for a period of time for breaches of representations, warranties and covenants and we also indemnify buyers in the event of such breaches and for other specific risks. Even though we establish reserves for any expected ongoing liability associated with divested businesses, those reserves may not be sufficient if unexpected liabilities arise and this could negatively impact our financial condition and future results of operations.

Because we are now singularly focused on mission-critical communications for public safety and commercial customers we have less diversity in our business and our customer base. A downturn in this business could have a greater negative impact on our financial results than when we were a more diversified communications provider.

We face many risks relating to intellectual property rights.

Our business will be harmed if: (i) we, our customers and/or our suppliers are found to have infringed intellectual property rights of third-parties, (ii) the intellectual property indemnities in our supplier agreements are inadequate to cover damages and losses due to infringement of third-party intellectual property rights by supplier products, (iii) we are required to provide broad intellectual property indemnities to our customers, (iv) our intellectual property protection is inadequate to protect against threats of misappropriation from internal or external sources or otherwise inadequate to protect our proprietary rights, or (v) our competitors negotiate significantly more favorable terms for licensed intellectual property. We may be harmed if we are forced to make publicly available, under the relevant open-source licenses, certain internally developed software-related intellectual property as a result of either our use of open-source software code or the use of third-party software that contains open-source code.

Since our products are comprised of complex technology, much of which we acquire from suppliers through the purchase of components or licensing of software, we are often involved in or impacted by assertions, including both requests for licenses and litigation, regarding patent and other intellectual property rights. Third-parties have asserted, and in the future may assert, intellectual property infringement claims against us and against our customers and suppliers. Many of these assertions are brought by non-practicing entities whose principle business model is to secure patent licensing-based revenue from product manufacturing companies. The patent holders often make broad and sweeping claims regarding the applicability of their patents to our products, seeking a percentage of sales as licenses fees, seeking injunctions to pressure us into taking a license, or a combination thereof. Defending claims may be expensive and divert the time and efforts of our management and employees. Increasingly, third-parties have sought broad injunctive relief which could limit our ability to sell our products in the U.S. or elsewhere with intellectual property subject to the claims. If we do not succeed in any such litigation, we could be required to expend significant resources to pay damages, develop non-infringing products or to obtain licenses to the intellectual property that is the subject of such litigation, each of which could have a negative impact on our financial results. However, we cannot be certain that any such licenses, if available at all, will be available to us on commercially reasonable terms. In some cases, we might be forced to stop delivering certain products if we or our customer or supplier are subject to a final injunction.

We attempt to negotiate favorable intellectual property indemnities with our suppliers for infringement of third-party intellectual property rights. However, there is no assurance that we will be successful in our negotiations or that a supplier's indemnity will cover all damages and losses suffered by us and our customers due to the infringing products or that a supplier will choose to accept a license or modify or replace its products with non-infringing products which would otherwise mitigate such damages and losses. Further, we may not be able to participate in intellectual property litigation involving a supplier and may not be able to influence any ultimate resolution or outcome that may negatively impact our sales if a court enters an injunction that enjoins the supplier's products or if the International Trade Commission issues an exclusionary order that blocks our products from importation into the U.S. Intellectual property disputes involving our suppliers have resulted in our involvement in International Trade Commission proceedings from time to time. These proceedings are costly and entail the risk that we will be subjected to a ban on the importation of our products into the U.S. solely as a result of our use of a supplier's components.

In addition, our customers increasingly demand that we indemnify them broadly from all damages and losses resulting from intellectual property litigation against them. These demands stem from the increasing trend of the non-practicing entities that engage in patent enforcement and litigation targeting the end users of our products. End users are targeted so the non-practicing entities can seek royalties and litigation judgments in proportion to the value of the use of our products, rather than in proportion to the cost of our products. Such demands can amount to many times the selling price of our products.

Our patent and other intellectual property rights are important competitive tools and may generate income under license agreements. We regard our intellectual property as proprietary and attempt to protect it with patents, copyrights, trademarks, trade secret laws, confidentiality agreements and other methods. We also generally restrict access to and distribution of our

proprietary information. Despite these precautions, it may be possible for a third-party to obtain and use our proprietary information or develop similar technology independently. In addition, effective patent, copyright, trademark and trade secret protection may be unavailable or limited in certain foreign countries. Unauthorized use of our intellectual property rights by third-parties and the cost of any litigation necessary to enforce our intellectual property rights could have a negative impact on our financial results.

As we expand our business, including through acquisitions, and compete with new competitors in new markets, the breadth and strength of our intellectual property portfolio in those new markets may not be as developed as in our longer-standing businesses. This may expose us to a heightened risk of litigation and other challenges from competitors in these new markets. Further, competitors may be able to negotiate significantly more favorable terms for licensed intellectual property than we are able to, which puts them at a competitive advantage.

We may not have the ability to settle the principal amount of the $1 billion of 2% Senior Convertible Notes (the "Senior Convertible Notes") in cash in the event of conversion or to repurchase the Senior Convertible Notes upon the occurrence of a fundamental change.

Our Senior Convertible Notes are convertible any time on or after two years from their issuance date, except in certain limited circumstances. In the event of conversion, the Company currently intends to settle the principal amount of the Senior Convertible Notes in cash.

If we do not have adequate cash available, either from cash on hand, funds generated from operations or existing financing arrangements, or we cannot obtain additional financing arrangements, we may not be able to settle the principal amount of the Senior Convertible Notes in cash and, in the case of settlement of conversion elections, will be required to settle the principal amount of the Senior Convertible Notes in stock. If we settle any portion of the principal amount of the Senior Convertible Notes in stock, it will result in immediate, and possibly material, dilution to the interests of existing security holders.

Following any conclusion that we no longer have the ability to settle the Senior Convertible Notes in cash, we will be required on a going forward basis to change our accounting policy for earnings per share from the treasury stock method to the if-converted method. Earnings per share will most likely be lower under the if-converted method as compared to the treasury stock method.

Our ability to repurchase the Senior Convertible Notes in cash upon the occurrence of a fundamental change or make any other required payments may be limited by law or the terms of other agreements relating to our indebtedness outstanding at the time. Our failure to repurchase the Senior Convertible Notes when required would result in an event of default with respect to the Senior Convertible Notes and may constitute an event of default or prepayment under, or result in the acceleration of the maturity of, our then-existing indebtedness.

Tax matters could have a negative impact on our financial condition and results of operations.

We are subject to income taxes in the U.S. and numerous foreign tax jurisdictions. Our provision for income taxes and cash tax liability may be negatively impacted by: (i) changes in the mix of earnings taxable in jurisdictions with different statutory tax rates, (ii) changes in tax laws and accounting principles, (iii) changes in the valuation of our deferred tax assets and liabilities, (iv) failure to meet commitments under tax incentive agreements, (v) discovery of new information during the course of tax return preparation, (vi) increases in nondeductible expenses, or (vii) difficulties in repatriating cash held abroad in a tax-efficient manner.

Tax audits may also negatively impact our business, financial condition and results of operations. We are subject to continued examination of our income tax returns, and tax authorities may disagree with our tax positions and assess additional tax. We regularly evaluate the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. There can be no assurance that the outcomes from these continuing examinations will not have a negative impact on our future financial condition and operating results.

Certain tax policy efforts, including the Organisation for Economic Co-operation and Development's ("OECD") Base Erosion and Profit Shifting ("BEPS") Project, the European Commission's state aid investigations, and other initiatives could have an adverse effect on the taxation of international businesses. Furthermore, many of the countries where we are subject to taxes, including the United States, are independently evaluating their tax policy and we may see significant changes in legislation and regulations concerning taxation. Certain countries have already enacted legislation which could affect international businesses, and other countries have become more aggressive in their approach to audits and enforcement of their applicable tax laws. Such changes, to the extent they are brought into tax legislation, regulations, policies, or practices, could increase our effective tax rates in many of the countries where we have operations and have an adverse effect on our overall tax rate, along with increasing the complexity, burden and cost of tax compliance, all of which could impact our operating results, cash flows and financial condition.

Our success depends in part upon our ability to attract, retain and prepare succession plans for senior management and key employees.

The performance of our CEO, senior management and other key employees is critical to our success. If we are unable to retain talented, highly qualified senior management and other key employees or attract them when needed, it could negatively impact our business. We rely on the experience of our senior management, most of whom have been with the Company for many years and as a result have specific knowledge relating to us and our industry that is difficult to replace and competition for management with experience in the communications industry is intense. A loss of the CEO, a member of senior management or key employee particularly to a competitor could also place us at a competitive disadvantage. Further, if we fail to adequately plan for the succession of our CEO, senior management and other key employees, our business could be negatively impacted.

It may be difficult for us to recruit and retain the types of engineers and other highly-skilled employees that are necessary to remain competitive and layoffs of such skilled employees as a result of divestitures, restructuring activities or cost reductions may benefit our competitors.

Competition for key technical personnel in high-technology industries is intense. As we expand our solutions and services business we have an even greater demand for technical personnel in areas like software development than we have not historically experienced and competition for such resources is greater. We believe that our future success depends in large part on our continued ability to hire, assimilate, retain and leverage the skills of qualified engineers and other highly-skilled personnel needed to develop successful new products or services. We may not be as successful as our competitors at recruiting, assimilating, retaining and utilizing these highly-skilled personnel, which could have a negative impact on our business. In addition, as we have divested businesses and restructured our operations we have, in some cases, had to layoff engineers and other highly skilled employees. If these employees were to go to work for our competitors it could have a negative impact on our business.

The accounting for convertible debt securities that may be settled in cash or in shares of common stock could have a material effect on our reported financial results.

Under U.S. GAAP, an entity must separately account for the debt component and the embedded conversion option of convertible debt instruments that may be settled entirely or partially in cash or in shares of common stock upon conversion, such as our Senior Convertible Notes, in a manner that reflects the issuer's effective interest cost. The fair value of the embedded conversion option is classified as an addition to stockholder's equity. The difference between book carrying cost and face value of the debt represents a non-cash discount. This difference will be amortized into interest expense over the estimated life of the Senior Convertible Notes using the effective yield method. As a result, we will be required to record a greater amount of non-cash interest expense as a result of the amortization of their discount over the term of the Senior Convertible Notes. Accordingly, we will report lower net income because of the recognition of both the current period's discount amortization and the Senior Convertible Notes' coupon interest, which could adversely affect the trading price of our shares of common stock and the trading price (if any) of the Senior Convertible Notes.

Under certain circumstances, convertible debt instruments (such as the Senior Convertible Notes) that may be settled entirely or partially in cash are evaluated for their impact on earnings per share utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the Senior Convertible Notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the Senior Convertible Notes exceeds their principal amount. Under the treasury stock method the number of shares outstanding for purposes of calculating diluted earnings per share includes the number of shares that would be required to settle the excess of the conversion value of the Senior Convertible Notes, if any, over the principal amounts of the Senior Convertible Notes (which would be settled in cash). The conversion value of the Senior Convertible Notes will exceed the principal amount of the notes to the extent the trading price of a share of our stock exceeds $68.50. We intend to settle the principal amount of the convertible notes in cash. However, we may not have access to the capital markets for financing on acceptable terms and conditions, particularly if our credit ratings are downgraded. Accordingly, we may be forced to fully settle the Senior Convertible Notes in shares of common stock upon conversion, the effect of which would cause the dilutive impact to earnings per share to be significantly in excess of the dilutive impact reflected by the treasury stock method.

Returns on pension and retirement plan assets and interest rate changes could affect our earnings and cash flows in future periods.

Although we engaged in pension de-risking activities in 2014, we continue to have large underfunded pension obligations, in part resulting from the fact that we retained almost all of the U.S. pension liabilities and a major portion of our non-U.S. pension liabilities following our divestitures, including the distribution of Motorola Mobility, the sale of our Networks business and the sale of our Enterprise business. The funding position of our pension plans is affected by the performance of the financial markets, particularly the equity and debt markets, and the interest rates used to calculate our pension obligations for funding and expense purposes. Minimum annual pension contributions are determined by government regulations and calculated based upon our pension funding status, interest rates, and other factors. If the financial markets perform poorly, we have been and could be required to make additional large contributions. The equity and debt markets can be volatile, and therefore our estimate of future contribution requirements can change dramatically in relatively short periods of time. Similarly, changes in interest rates can affect our contribution requirements. In volatile capital market environments, the uncertainty of material changes in future minimum required contributions increases.

Changes in our operations or sales outside the U.S. markets could result in lost benefits in impacted countries and increase our cost of doing business.

We have entered into various agreements with non-U.S. governments, agencies or similar organizations under which we receive certain benefits relating to its operations and/or sales in the jurisdiction. If our circumstances change, and operations or sales are not at levels originally anticipated, we may be at risk of having to reimburse benefits already granted, and losing some or all of these benefits and increasing our cost of doing business.

We transferred a significant portfolio of intellectual property rights, including patents, to Motorola Mobility and Zebra and we are unable to leverage these intellectual property rights as we did prior to the distribution of Motorola Mobility or the sale of our Enterprise business.

We contributed approximately 17,200 granted patents and approximately 8,000 pending patent applications worldwide to Motorola Mobility in connection with the distribution. We also transferred approximately 2,700 granted patents and approximately 800 pending patent applications to Zebra in connection with the sale of the Enterprise business. Although we have a worldwide, perpetual, royalty-free license to these patents and other intellectual property rights, we no longer own them. As a result we are unable to leverage these intellectual property rights for purposes of generating licensing revenue or entering into favorable licensing arrangements with third-parties. As a result we may incur increased license fees or litigation costs. Although we cannot predict the extent of such unanticipated costs, it is possible such costs could negatively impact our financial results.

We are subject to a wide range of product regulatory and safety, consumer, worker safety and environmental laws that continue to expand and could impact our ability to grow our business, could subject us to unexpected costs and liabilities and could impact our financial performance.

Our operations and the products we manufacture and/or sell are subject to a wide range of product regulatory and safety, consumer, worker safety and environmental laws. Compliance with such existing or future laws could subject us to future costs or liabilities, impact our production capabilities, constrict our ability to sell, expand or acquire facilities, restrict what products and services we can offer, and generally impact our financial performance. Some of these laws are environmental and relate to the use, disposal, clean up of, and exposure to certain substances. For example, in the U.S., laws often require parties to fund remedial studies or actions regardless of fault and often times in response to action or omissions that were legal at the time they occurred. We continue to incur disposal costs and have ongoing remediation obligations. Changes to environmental laws or our discovery of additional obligations under these laws could have a negative impact on our financial performance.

Laws focused on: (i) the energy efficiency of electronic products and accessories, (ii) recycling of both electronic products and packaging, (iii) reducing or eliminating certain hazardous substances in electronic products, (iv) and the transportation of batteries continue to expand significantly. Laws pertaining to accessibility features of electronic products, standardization of connectors and power supplies, the transportation of lithium-ion batteries and other aspects of our products are also proliferating. There are also demanding and rapidly changing laws around the globe related to issues such as product safety, radio interference, radio frequency radiation exposure, medical related functionality, and consumer and social mandates pertaining to use of wireless or electronic equipment. These laws, and changes to these laws, could have a substantial impact on whether we can offer certain products, solutions and services, on product costs, and on what capabilities and characteristics our products or services can or must include.

These laws could impact our products and negatively affect our ability to manufacture and sell products competitively. We expect these trends to continue. In addition, we anticipate that we will see increased demand to meet voluntary criteria related to reduction or elimination of certain constituents from products, increasing energy efficiency, and providing additional accessibility.

We may be unable to obtain components and parts that are verified to be Democratic Republic of Congo ("DRC") Conflict Free, which could result in reputational damage if we disclose that our products include minerals that have been identified as "not found to be DRC conflict free" or if we disclose that we are unable to determine whether such minerals are included in our products.

The Dodd-Frank Wall Street Reform and Consumer Protection Act included disclosure requirements regarding the use of tin, tantalum, tungsten and gold (which are defined as "conflict minerals") in our products and if the origin of these materials were from the DRC or an adjoining country. If the minerals originated from the DRC or an adjoining country then a company must disclose the measures it has taken to exercise due diligence and chain of custody to prevent the sourcing of such minerals that have been found to be financing conflict in the DRC. There is a limited pool of suppliers who can provide verifiable DRC Conflict Free components and parts, particularly since our supply chain is complex. As a result, we may be required to publicly disclose that we are not currently able to determine if the products we manufactured in 2016 are DRC Conflict Free. For future reporting years, if the industry systems that we are relying on are not mature enough for us to make a definitive Conflict Free determination, we may have to declare our products as "not found to be DRC conflict free," or such other definitional standard as determined by the SEC and/or the judicial system and we may face reputational challenges with our customers, other stockholders and the activist community as a result. In addition, the European Union has passed conflict minerals legislation which may have an impact on our reporting obligations and compliance programs in Europe.

Item 1B: Unresolved Staff Comments

None.

Item 2: Properties

Motorola Solutions' principal executive offices are located at 500 W. Monroe Street, Chicago, Illinois 60661. Motorola Solutions also operates manufacturing facilities and sales offices in other U.S. locations and in many other countries.

As of December 31, 2016, we: (i) owned 2 facilities (manufacturing and office), both of which were located in Europe; (ii) leased 216 facilities, 98 of which were located in North America and South America and 118 of which were located in other countries; and (iii) primarily utilized three major facilities for the manufacturing and distribution of our products, located in: Penang, Malaysia; Elgin, Illinois; and Berlin, Germany. Motorola Solutions sold its Penang, Malaysia facility and manufacturing operations to Sanmina Corporation ("Sanmina") on February 1, 2016.

We generally consider the productive capacity of our manufacturing facilities to be adequate and sufficient for our requirements. The extent of utilization of each manufacturing facility varies throughout the year.

In 2016, approximately 35% of our products were manufactured in Illinois. Approximately 60% of our products were manufactured in Penang. We rely on third-party providers in order to enhance our ability to lower costs and deliver products that meet demand. If manufacturing in Malaysia or Illinois were disrupted, our overall productive capacity could be significantly reduced.

Item 3: Legal Proceedings

We are a defendant in various lawsuits, claims, and actions, which arise in the normal course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our consolidated financial position, liquidity, or results of operations. However, an unfavorable resolution could have a material adverse effect on our consolidated financial position, liquidity, or results of operations in the periods in which the matters are ultimately resolved, or in the periods in which more information is obtained that changes management's opinion of the ultimate disposition.

Item 4: Mine Safety Disclosures

Not applicable.

Executive Officers of the Registrant

The following are the persons who were the executive officers of Motorola Solutions, their ages, and their current titles as of February 21, 2017 and the positions they have held during the last five years with the Company:

Gregory Q. Brown; age 56; Chairman and Chief Executive Officer since May 3, 2011; President and Chief Executive Officer from January 2011 to May 2011.

Gino A. Bonanotte; age 52; Executive Vice President and Chief Financial Office since November 13, 2013; Corporate Vice President and Acting Chief Financial Officer from August 2013 to November 2013; Corporate Vice President, Finance, Sales and Field Operations, from October 2012 to August 2013; and Corporate Vice President, Finance, Product and Business Operations and Americas Field Operations from September 2010 to October 2012.

Bruce W. Brda; age 54; Executive Vice President, Products & Services since January 4, 2016; Executive Vice President, Systems & Products from May 2015 to January 2016; Senior Vice President, Systems & Products from December 2014 to May 2015; Senior Vice President, Government Solutions from March 2014 to December 2014; Senior Vice President, Global Solutions & Services from January 2013 to March 2014; and Senior Vice President, Global Services from July 2011 to January 2013.

Eduardo F. Conrado; age 50; Executive Vice President, Strategy & Innovation Office since August 24, 2015; Senior Vice President and Chief Innovation Officer from January 2015 to August 2015; Senior Vice President, Marketing and IT from January 2013 to January 2015; and Senior Vice President, Chief Marketing Officer from January 2011 to January 2013.

Mark S. Hacker; age 45; Executive Vice President, General Counsel and Chief Administrative Officer since January 21, 2015; Senior Vice President and General Counsel from June 2013 to January 2015; and Corporate Vice President, Law, Sales and Product Operations, International and Legal Operations from January 2013 to June 2013; Corporate Vice President, Law, Sales and Field Operations and Legal Operations from January 2012 to January 2013;

John P. "Jack" Molloy; age 45; Executive Vice President, Worldwide Sales since January 4, 2016; Executive Vice President, Americas Sales & Services from November 2015 to January 2016; Senior Vice President, The Americas Sales & Marketing from September 2015 to November 2015; Senior Vice President, North America Sales from January 2014 to August 2015; Corporate Vice President, Central US & Canada and NA Energy Market from January 2013 to December 2013; and Vice President, Central US & Canada Sales from July 2011 to December 2012.

John K. Wozniak; age 45; Corporate Vice President and Chief Accounting Officer since November 3, 2009.

The above executive officers will serve as executive officers of Motorola Solutions until the regular meeting of the Board of Directors in May 2017 or until their respective successors are elected. There is no family relationship between any of the executive officers listed above.

PART II

Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Motorola Solutions' common stock is listed on the New York Stock Exchange. The number of stockholders of record of its common stock on February 1, 2017 was 30,715.

Information regarding securities authorized for issuance under equity compensation plans is incorporated by reference to the information under the caption "Equity Compensation Plan Information" of Motorola Solutions' Proxy Statement for the 2017 Annual Meeting of Stockholders. The remainder of the response to this Item incorporates by reference Note 16, "Quarterly and Other Financial Data (unaudited)" of the Notes to Consolidated Financial Statements appearing under "Item 8: Financial Statements and Supplementary Data."

The following table provides information with respect to acquisitions by the Company of shares of its common stock during the quarter ended December 31, 2016.

ISSUER PURCHASES OF EQUITY SECURITIES

Period	*(a) Total Number of Shares Purchased*	*(b) Average Price Paid per Share* [1]	*(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Program* [2]	*(d) Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Program* [2]
9/28/16 to 10/25/16	517,419	$ 73.29	517,419	$ 2,267,280,220
10/26/16 to 11/22/16	186,610	$ 75.61	186,610	$ 2,249,547,763
11/23/16 to 12/27/16	774,730	$ 80.23	774,730	$ 2,191,014,453
Total	1,478,759	$ 77.22	1,478,759	

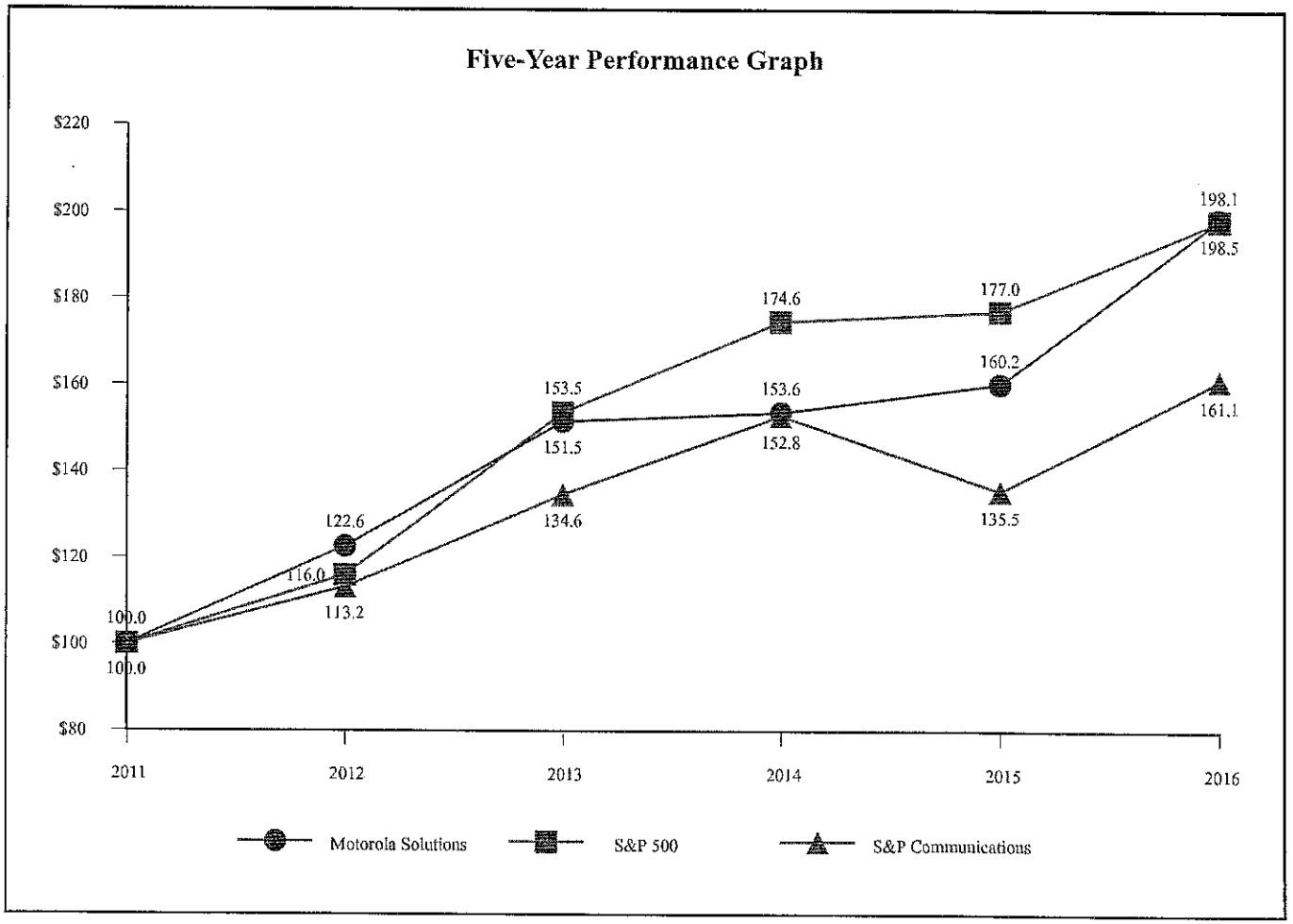
(1) Average price paid per share of common stock repurchased is the execution price, including commissions paid to brokers.

(2) Through actions taken on July 28, 2011, January 30, 2012, July 25, 2012, July 22, 2013, November 4, 2014, and August 3, 2016, the Board of Directors has authorized the Company to repurchase an aggregate amount of up to $14.0 billion of its outstanding shares of common stock (the "share repurchase program"). The share repurchase program does not have an expiration date. As of December 31, 2016, the Company had used approximately $11.8 billion, including transaction costs, to repurchase shares.

PERFORMANCE GRAPH

The following graph compares the five-year cumulative total returns of Motorola Solutions, Inc., the S&P 500 Index and the S&P Communications Equipment Index.

This graph assumes $100 was invested in the stock or the indices on December 31, 2011 and reflects the payment of dividends.



Item 6: Selected Financial Data

(In millions, except per share amounts)	*Years Ended December 31* 2016	2015	2014	2013	2012
Operating Results					
Net sales	**$ 6,038**	$ 5,695	$ 5,881	$ 6,227	$ 6,269
Operating earnings (loss)	**1,067**	994	(1,006)	947	920
Earnings (loss) from continuing operations, net of tax*	**560**	640	(697)	933	670
Per Share Data (in dollars)					
Diluted earnings (loss) from continuing operations per common share*	**$ 3.24**	$ 3.17	$ (2.84)	$ 3.45	$ 2.25
Earnings per diluted common share*	**3.24**	3.02	5.29	4.06	2.96
Diluted weighted average common shares outstanding (in millions)	**173.1**	201.8	245.6	270.5	297.4
Dividends declared per share	**$ 1.70**	$ 1.43	$ 1.30	$ 1.14	$ 0.96
Balance Sheet					
Total assets	**$ 8,463**	$ 8,346	$ 10,423	$ 11,851	$ 12,679
Total debt	**4,396**	4,349	3,400	2,461	1,863
Other Data					
Capital expenditures	**$ 271**	$ 175	$ 181	$ 169	$ 170
% of sales	**4.5%**	3.1%	3.1%	2.7%	2.7%
Research and development expenditures	**$ 553**	$ 620	$ 681	$ 761	$ 790
% of sales	**9.2%**	10.9%	11.6%	12.2%	12.6%

* Amounts attributable to Motorola Solutions, Inc. common shareholders.

Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations

The following is a discussion and analysis of our financial position as of December 31, 2016 and 2015 and results of operations for each of the three years in the period ended December 31, 2016. This commentary should be read in conjunction with our consolidated financial statements and the notes thereto appearing under "Item 8: Financial Statements and Supplementary Data."

Executive Overview

Recent Developments

On February 19, 2016, we completed the acquisition of Guardian Digital Communications Limited ("GDCL"), a holding company of Airwave Solutions Limited ("Airwave"), the largest private operator of a public safety network in the world. All of the outstanding equity of GDCL was acquired for the sum of £1, after which we invested into GDCL £698 million, net of cash acquired, or approximately $1.0 billion, to settle all third party debt. We will make a deferred cash payment of £64 million on November 15, 2018. We funded the investment with a $675 million term loan (the "Term Loan"), which was subsequently repaid on December 30, 2016, and approximately $400 million of international cash on hand. The acquisition of GDCL enables us to geographically diversify our global Managed & Support services offerings, while offering a proven service delivery platform to build on for providing innovative, leading, mission-critical communications solutions and services to customers.

On November 10, 2016, we completed the acquisition of Spillman Technologies, a provider of comprehensive law enforcement and public safety software solutions, for a gross purchase price of $217 million using cash on hand. The acquisition expands our Command Center software and services portfolio and enables us to offer a full suite of solutions to a broader customer base.

During the year ended December 31, 2016, we relocated our global headquarters from Schaumburg, IL to Chicago, IL. The move provides us with access to key talent and allows the Company to optimize the Schaumburg campus for current space requirements.

Our Business

We are a leading global provider of mission-critical communication infrastructure, devices, accessories, software, and services. Our products and services help government, public safety, and commercial customers improve their operations through increased effectiveness, efficiency, and safety of their mobile workforces. We serve our customers with a global footprint of sales in more than 100 countries and 14,000 employees worldwide based on our industry leading innovation and a deep portfolio of products and services.

We conduct our business globally and manage it by two segments:

Products: The Products segment is comprised of Devices and Systems. Devices includes two-way portable and vehicle mounted radios, accessories, and software features and upgrades. Systems includes the radio network core and central processing software, base stations, consoles, repeaters, and software applications and features. The primary customers of the Products segment are government, public safety and first-responder agencies, municipalities, and commercial and industrial customers who operate private communications networks and manage a mobile workforce. In 2016, the segment's net sales were $3.6 billion, representing 60% of our consolidated net sales.

Services: The Services segment provides a full set of service offerings for government, public safety, and commercial communication networks including: (i) Integration services, (ii) Managed & Support services, and (iii) iDEN services. Integration services includes the implementation, optimization, and integration of systems, devices, software, and applications. Managed & Support services includes a continuum of service offerings beginning with repair, technical support, and hardware maintenance. More advanced offerings include network monitoring, software maintenance, and cyber security services. Managed service offerings range from partial or full operation of customer owned networks to operation of Motorola Solutions owned networks. Services and SaaS offerings are provided across all radio network technologies, Command Center Consoles, and Smart Public Safety Solutions. iDEN services consists primarily of hardware and software maintenance services for our legacy iDEN customers. In 2016, the segment's net sales were $2.4 billion, representing 40% of our consolidated net sales.

Trends Affecting Our Business

Impact of Macroeconomic Conditions: The stronger U.S. dollar and weakening economic conditions have had a negative impact on sales, particularly in Latin America, parts of EMEA, and China. Additionally, the strengthening dollar has reduced the purchasing power of our customers, and economic challenges have negatively impacted government budgets and funds available for the purchase of our products in these regions.

The impact of foreign exchange rate fluctuations on net earnings is mitigated by the following: (i) the majority of our revenues are derived from contracts within North America denominated in U.S. dollars, (ii) the cost of sales for the delivery of our Services offerings are predominately labor costs incurred within the same geographic region as the associated sales, resulting in minimal impact of foreign exchange rates on gross margin within the Services segment, and (iii) a significant portion of our operating expenses are denominated in foreign currencies as a result of our offshore R&D and selling, general, and administrative ("SG&A") footprint.

Growth of Our Services Portfolio: Our Services segment is expected to grow at a higher rate than our Products segment. Overall, the Services segment has a lower gross margin percentage than the Products segment, but we expect consolidated operating margins to continue to expand.

iDEN: We have experienced a downward trend in iDEN product and services sales over recent years due to decreased demand as a result of the dated nature of the technology. We expect the downward trend to continue as service contracts expire and new technology replaces iDEN equipment in the marketplace. This trend primarily relates to our Services segment as the majority of iDEN sales are hardware and software maintenance services. The expected decline in iDEN sales of approximately $50 million in 2017 will impact both revenues and gross margins within the Services segment as iDEN services' gross margins are generally higher than the remainder of our services portfolio.

Change in Presentation

During the first quarter of 2016, we restructured our regions operationally combining the Europe and Africa and Middle East regions into one region which is now reflected as Europe, Middle East, and Africa ("EMEA"). Accordingly, we now report net sales in the following four geographic regions: North America, Latin America, EMEA, and Asia Pacific ("AP"). We have updated all periods presented to reflect this change in presentation.

2016 financial results and accomplishments

- Ended 2016 with a record backlog position of $8.4 billion, up 29% compared to 2015
- Net sales were $6.0 billion in 2016 compared to $5.7 billion in 2015. Net sales grew in EMEA, including $462 million from the acquisition of GDCL, North America and AP
- Operating earnings were $1.1 billion in 2016, compared to $1.0 billion in 2015
- Earnings from continuing operations were $560 million, or $3.24 per diluted common share in 2016, compared to earnings of $640 million, or $3.17 per diluted common share in 2015
- Operating cash flow increased $144 million to $1.2 billion in 2016
- Returned $1.1 billion of capital in the form of $842 million in share repurchases and $280 million in dividends 2016
- Invested $1.3 billion in four acquisitions of software and services companies
- Increased our quarterly dividend by 15% to $0.47 per share in November 2016

Financial results for our two segments in 2016

- In the Products segment, net sales were $3.6 billion in 2016, a decrease of $27 million, or 1%, compared to $3.7 billion in 2015. On a geographic basis, net sales decreased in EMEA and Latin America and increased in North America and AP, compared to 2015. Operating earnings were $734 million in 2016, compared to $704 million in 2015. Operating margin increased in 2016 to 20.1% from 19.2% in 2015.
- In the Services segment, net sales were $2.4 billion in 2016, an increase of $370 million, or 18%, compared to $2.0 billion in 2015. Managed & Support services grew 49% primarily due to the acquisition of GDCL. Managed & Support services grew 5% organically. On a geographic basis, net sales increased in EMEA, North America, and AP and decreased in LA compared to 2015. Operating earnings were $333 million in 2016, compared to $290 million in 2015. Operating margin decreased in 2016 to 13.9% from 14.4% in 2015.

Looking Forward

We remain committed to driving shareholder value with revenue growth, operating leverage, cash flow generation, and efficient capital deployment. We strive to optimize our capital structure to enable prioritized investments in the business and targeted acquisitions as a source of generating solid future operating cash flows. These potential investments are balanced against returning excess capital to shareholders through dividends and share repurchases. We expect to continue the quarterly dividends that were initiated in 2011, as well as the opportunity to return capital to shareholders through share repurchases. Our share repurchase program has approximately $2.2 billion of authority available as of December 31, 2016.

Entering 2017, we believe we are well-positioned to compete in both our core markets and adjacent growth areas. We have a broad, compelling products and services portfolio specifically tailored for our mission-critical communications customer base that spans many layers of governments, public safety, and first responders, as well as commercial and industrial customers in a number of key verticals. As we add new products, features, and software upgrades, we ensure our solutions are interoperable and backward-compatible, enabling customers to confidently invest for their future needs while allowing them to utilize their prior investment in our technology.

Supplementing our traditional core business is our investment in our Managed & Support services business and software solutions in the Command Center. As communication networks have become increasingly complex, software-centric, and data-driven, we have shifted our offerings to align with this technology trend in serving our customers. We expect to continue to see growing demands for our Managed & Support services going forward. These services offerings help customers manage, support, and upgrade their networks as well as utilize features, applications, and data in new ways including predictive policing, proactive support, or smarter response strategies. We expect our overall revenue mix to continue to shift towards software and services over time. On February 19, 2016, the Company expanded our Managed & Support services business with the acquisition of GDCL, the largest private operator of a public safety network in the world, delivering mission-critical voice and data communications to more than 300 public service agencies in Great Britain. Additionally, we expanded our software solutions

portfolio in 2016 with the acquisition of three software and services businesses that provide software solutions in the Command Center and mobile applications for public safety.

Another key technology trend complementing our existing business is the expanded use of broadband LTE by our customers. We have been proactively investing in next-generation public safety broadband solutions for years, as we believe public safety LTE solutions are the next-generation tool for our public safety first-responder customers. We believe our expertise in both public and private networks makes us uniquely qualified to provide these public safety broadband solutions to this customer base. We have now won the four largest public safety LTE network installations awarded to date and expect LTE sales to represent a larger portion of our revenue in the coming years.

Results of Operations

(Dollars in millions, except per share amounts)	Years ended December 31 2016	% of Sales **	2015	% of Sales **	2014	% of Sales **
Net sales from products	$ 3,649		$ 3,676		$ 3,807	
Net sales from services	2,389		2,019		2,074	
Net sales	6,038		5,695		5,881	
Costs of product sales	1,649	45.2 %	1,625	44.2 %	1,678	44.1 %
Costs of services sales	1,520	63.6 %	1,351	66.9 %	1,372	66.2 %
Costs of sales	3,169	52.5 %	2,976	52.3 %	3,050	51.9 %
Gross margin	2,869	47.5 %	2,719	47.7 %	2,831	48.1 %
Selling, general and administrative expenses	1,000	16.6 %	1,021	17.9 %	1,184	20.1 %
Research and development expenditures	553	9.2 %	620	10.9 %	681	11.6 %
Other charges	249	4.1 %	84	1.5 %	1,972	33.5 %
Operating earnings (loss)	1,067	17.7 %	994	17.5 %	(1,006)	(17.1)%
Other income (expense):						
Interest expense, net	(205)	(3.4)%	(173)	(3.0)%	(126)	(2.1)%
Gains (losses) on sales of investments and businesses, net	(6)	(0.1)%	107	1.9 %	5	0.1 %
Other	(12)	(0.2)%	(11)	(0.2)%	(34)	(0.6)%
Total other expense	(223)	(3.7)%	(77)	(1.4)%	(155)	(2.6)%
Earnings (loss) from continuing operations before income taxes	844	14.0 %	917	16.1 %	(1,161)	(19.7)%
Income tax expense (benefit)	282	4.7 %	274	4.8 %	(465)	(7.9)%
Earnings (loss) from continuing operations	562	9.3 %	643	11.3 %	(696)	(11.8)%
Less: Earnings attributable to noncontrolling interests	2	— %	3	0.1 %	1	— %
Earnings (loss) from continuing operations*	560	9.3 %	640	11.2 %	(697)	(11.9)%
Earnings (loss) from discontinued operations, net of tax	—	— %	(30)	(0.5)%	1,996	33.9 %
Net earnings*	$ 560	9.3 %	$ 610	10.7 %	$ 1,299	22.1 %
Earnings (loss) per diluted common share*:						
Continuing operations	$ 3.24		$ 3.17		$ (2.84)	
Discontinued operations	—		(0.15)		8.13	
Earnings per diluted common share*	$ 3.24		$ 3.02		$ 5.29	

* Amounts attributable to Motorola Solutions, Inc. common shareholders.

** Percentages may not add due to rounding.

Geographic Market Sales by Locale of End Customer

	2016	2015	2014
North America	63%	65%	61%
Latin America	5%	6%	9%
EMEA	21%	17%	19%
AP	11%	12%	11%
	100%	100%	100%

Results of Operations—2016 Compared to 2015

Net Sales

Net sales were $6.0 billion in 2016, up $343 million, or 6%, compared to $5.7 billion in 2015. The increase in net sales is reflective of growth in EMEA, North America, and AP partially offset by a decrease in Latin America. EMEA grew on Services sales, partially offset by lower Products sales. The increase in EMEA Services sales was due to expansion of our Managed & Support services, primarily from the acquisition of GDCL which provided $462 million of net sales during the year ended December 31, 2016. North America and AP grew on both Services and Products sales. The decrease in Latin America was the result of lower Products and Services sales primarily due to macroeconomic pressures.

Gross Margin

Gross margin was $2.9 billion, or 47.5% of net sales in 2016, compared to $2.7 billion, or 47.7% of net sales in 2015. The decrease in gross margin percentage was driven by higher employee separation costs as a result of headcount reductions, offset by gross margin expansion within the Services segment driven by our Managed & Support services portfolio, primarily due to the acquisition of GDCL, which has higher margins than our legacy portfolio.

Selling, General and Administrative Expenses

SG&A expenses decreased 2% to $1.0 billion, or 16.6% of net sales in 2016, compared to $1.0 billion, or 17.9% of net sales in 2015. The decrease in SG&A expenditures is primarily due to cost savings initiatives, including headcount reductions, partially offset by higher incentive compensation and acquisitions costs.

Research and Development Expenditures

R&D expenditures decreased 11% to $553 million, or 9.2% of net sales in 2016, compared to $620 million, or 10.9% of net sales in 2015. The decrease in R&D expenditures is primarily due to: (i) cost savings initiatives, including headcount reductions, and (ii) the movement of employees to lower cost work sites.

Other Charges

We recorded net other charges of $249 million in 2016, compared to net charges of $84 million in 2015. The charges in 2016 included: (i) $113 million of charges relating to the amortization of intangibles, (ii) $97 million of net reorganization of business charges, including a $17 million building impairment and a $3 million impairment on our corporate aircraft, (iii) $26 million of losses on settlements within a non-U.S. pension plan, and (iv) $13 million of transaction fees on the acquisition of GDCL. The charges in 2015 included: (i) $108 million of net reorganization of business charges, including a $31 million impairment of our corporate aircraft which was sold and (ii) $8 million of charges relating to the amortization of intangibles, partially offset by a $32 million non-U.S. pension curtailment gain. The net reorganization of business charges are discussed in further detail in the "Reorganization of Businesses" section.

Net Interest Expense

Net interest expense was $205 million in 2016 compared to $173 million in 2015. The increase in net interest expense in 2016 compared to 2015 was a result of higher outstanding debt balances.

Gains (losses) on Sales of Investments and Businesses, net

Net losses on sales of investments and businesses were $6 million in 2016, compared to net gains on sales of investments and businesses of $107 million in 2015. The net losses in 2016 consisted primarily of: (i) a $19 million loss on the sale of an investment in United Kingdom treasury securities and (ii) a $7 million loss from the sale of our Malaysia manufacturing operations, partially offset by $20 million of gains on the sales of equity investments. The net gains in 2015 were related to the sales of equity investments.

Other

Net Other expense was $12 million in 2016, compared to $11 million in 2015. The net Other expense in 2016 was primarily comprised of: (i) a $56 million loss on derivative instruments, (ii) a $10 million foreign currency loss on currency purchased and held in anticipation of the acquisition of GDCL, (iii) a $4 million investment impairment, and (iv) a $2 million loss on the extinguishment of long-term debt, partially offset by: (i) a $46 million foreign currency gain, (ii) $9 million of other non-operating gains, and (iii) a $5 million gain on equity method investments. The net Other expense in 2015 was primarily comprised of: (i) a $23 million foreign currency loss and (ii) a $6 million investment impairment, partially offset by: (i) a $7 million gain on derivative instruments, (ii) a $6 million gain on equity method investments, and (iii) $5 million of other non-operating gains.

Effective Tax Rate

We recorded $282 million of net tax expense in 2016, resulting in an effective tax rate of 33%, compared to $274 million of net tax expense in 2015, resulting in an effective tax rate of 30%. Our effective tax rate in 2016 and 2015 were lower than the U.S. statutory tax rate of 35% primarily due to lower tax rates on non-U.S. income.

Our effective tax rate will change from period to period based on non-recurring events, such as the settlement of income tax audits, changes in valuation allowances, and the tax impact of significant unusual or extraordinary items, as well as recurring factors including changes in the geographic mix of income and effects of various global income tax strategies.

Earnings (Loss) from Continuing Operations Attributable to Motorola Solutions, Inc.

After taxes, we had earnings from continuing operations attributable to Motorola Solutions, Inc. of $560 million, or $3.24 per diluted share, in 2016, compared to $640 million, or $3.17 per diluted share, in 2015.

The decrease in earnings from continuing operations in 2016, as compared to 2015, was primarily driven by: (i) a $165 million increase in Other charges primarily due to the increase in intangible amortization expense and (ii) a $113 million decrease in Gains on sales of investments and businesses, partially offset by: (i) a $150 million increase in Gross margin, (ii) a $67 million decrease in R&D, and (iii) a $21 million decrease in SG&A. The increase in earnings from continuing operations per diluted share was driven by lower shares outstanding as a result of repurchases made through our ongoing share repurchase program, offset by a decrease in earnings from continuing operations.

Earnings from Discontinued Operations

In 2016, we reported no earnings from discontinued operations, compared to a loss from discontinued operations of $30 million, or $0.15 per diluted share, in 2015. The loss from discontinued operations in 2015 was related to the sale of the Enterprise business.

Results of Operations—2015 Compared to 2014

Net Sales

Net sales were $5.7 billion in 2015, down $186 million, or 3% compared to $5.9 billion in 2014. The decline in net sales is reflective of decreases in EMEA and Latin America, partially offset by growth in North America and AP. The decrease in EMEA and Latin America was primarily the result of lower Products and Services sales, driven by challenging macroeconomic conditions in Latin America and Eastern Europe, and foreign exchange rate unfavorability. North America grew on strong Products and Services sales and AP grew on stronger Products sales.

Gross Margin

Gross margin was $2.7 billion, or 47.7% of net sales in 2015, compared to $2.8 billion, or 48.1% of net sales in 2014. The decrease in gross margin was primarily a result of foreign exchange rate unfavorability. The decrease in gross margin percentage is primarily attributable to a decrease in gross margin as a percentage of sales within the Services segment while the gross margin percentage of the Products segment remained relatively flat. The decrease in gross margin percentage in the Services segment was primarily driven by: (i) a decrease in North America Integration services margins due to the deployment of certain large projects at lower gross margins and (ii) lower net sales in iDEN services which have a slightly higher gross margin percentage compared to the rest of the services portfolio.

Selling, General and Administrative Expenses

SG&A expenses decreased 14% to $1.0 billion, or 17.9% of net sales in 2015, compared to $1.2 billion, or 20.1% of net sales in 2014. The decrease in SG&A is primarily due to: (i) cost savings initiatives, including headcount reductions, (ii) lower pension expenses, and (iii) the favorable impact of foreign exchange rates, partially offset by higher incentive compensation accruals.

Research and Development Expenditures

R&D expenditures decreased 9% to $620 million, or 10.9% of net sales in 2015, compared to $681 million, or 11.6% of net sales in 2014. The decrease in R&D expenditures is primarily due to: (i) cost savings initiatives, including headcount reductions, and the movement of employees to lower cost work sites and (ii) the favorable impact of foreign exchange rates, partially offset by higher incentive compensation accruals.

Other Charges

We recorded net charges of $84 million in 2015, compared to net charges of $2.0 billion in 2014. The charges in 2015 included: (i) $108 million of net reorganization of business charges, including a $31 million impairment of the corporate aircraft and (ii) $8 million of charges relating to the amortization of intangibles, partially offset by a $32 million non-U.S. pension curtailment gain. The charges in 2014 included: (i) a $1.9 billion charge related to the settlement of a U.S. pension plan, (ii) $64 million of net reorganization of business charges, (iii) $8 million of legal settlement charges, and (iv) $4 million of charges relating to the amortization of intangibles, partially offset by a $21 million gain on the sale of a building and land. The net reorganization of business charges are discussed in further detail in the "Reorganization of Business" section.

Net Interest Expense

Net interest expense was $173 million in 2015, compared to net interest expense of $126 million in 2014. The increase in interest expense in 2015 compared to 2014 was a result of higher outstanding debt balances.

Gains (losses) on Sales of Investments and Businesses, net

Net gains on sales of investments and businesses were $107 million in 2015, compared to $5 million in 2014. The net gains in 2015 and 2014 were related to the sales of equity investments.

Other

Net Other expense was $11 million in 2015, compared to net Other expense of $34 million in 2014. The net Other expense in 2015 was primarily comprised of: (i) a $23 million foreign currency loss and (ii) a $6 million investment impairment, partially offset by: (i) a $7 million gain on derivative instruments, (ii) a $6 million gain on equity method investments, and (iii) $5 million of other non-operating gains. Net Other expense in 2014 was primarily comprised of: (i) a $37 million loss on the extinguishment of debt, (ii) a $4 million loss on derivative instruments, (iii) a $3 million foreign currency loss, and (iv) $6 million of other non-operating losses, partially offset by a $16 million gain on equity method investments.

Effective Tax Rate

We recorded a $274 million net tax expense in 2015, resulting in an effective tax rate of 30%, compared to $465 million of net tax benefit in 2014, resulting in an effective tax rate of 40%. Our effective tax rate in 2015 was lower than the U.S. statutory tax rate of 35% primarily due to lower tax rates on non-U.S. income.

Our effective tax rate in 2014 was favorably impacted by: (i) state tax benefits on the pension settlement loss, (ii) $29 million in tax benefits associated with the net reduction in unrecognized tax benefits, and (iii) $19 million in net reduction in our deferred tax liability for undistributed foreign earnings primarily due to changes in permanent reinvestment assertions. These benefits were partially offset by tax expense for the establishment of a $55 million valuation allowance on certain foreign deferred tax assets.

Earnings (Loss) from Continuing Operations Attributable to Motorola Solutions, Inc.

After taxes, we had earnings from continuing operations attributable to Motorola Solutions, Inc. of $640 million, or $3.17 per diluted share, in 2015, compared to a net loss from continuing operations attributable to Motorola Solutions, Inc. of $697 million, or a loss of $2.84 per diluted share, in 2014.

The increase in earnings (loss) from continuing operations in 2015, as compared to 2014, was primarily driven by: (i) a $1.9 billion decrease in Other charges, (ii) a $163 million decrease in SG&A, and (ii) a $61 million decrease in R&D. The increase in earnings from continuing operations per diluted share was driven by a reduction in shares outstanding, primarily as a result of our "Dutch auction" tender offer, as well as repurchases made through our ongoing share repurchase program, and an increase in earnings from continuing operations.

Earnings from Discontinued Operations

In 2015, we reported a $30 million, or $0.15 per diluted share, loss from discontinued operations, compared to earnings from discontinued operations of $2.0 billion, or $8.13 per diluted share, in 2014. The earnings (loss) from discontinued operations in both 2015 and 2014 were primarily related to the sale of the Enterprise business.

Segment Information

The following commentary should be read in conjunction with the financial results of each operating business segment as detailed in Note 12, "Information by Segment and Geographic Region," of our consolidated financial statements. Net sales and operating results for our two segments for 2016, 2015, and 2014 are presented below.

Products Segment

The Products segment's net sales represented 60% of our consolidated net sales in 2016, compared to 65% in 2015 and 2014.

	Years ended December 31			*Percent Change*	
(Dollars in millions)	***2016***	*2015*	*2014*	***2016—2015***	*2015—2014*
Segment net sales	$ 3,649	$ 3,676	$ 3,807	(1)%	(3)%
Operating earnings (loss)	734	704	(667)	4 %	N/M

** N/M = Percent Change is not meaningful due to the comparison using prior year operating losses as a basis for the calculation.*

Segment Results—2016 Compared to 2015

The segment's net sales decreased $27 million, or 1%, to $3.6 billion in 2016, as compared to $3.7 billion in 2015. The decrease in the segment's net sales was primarily driven by: (i) a decrease in global systems sales, (ii) decreases in both devices and systems sales in Latin America primarily due to macroeconomic conditions, and (iii) unfavorable foreign exchange rates with a strengthening U.S. dollar in EMEA, Latin America, and AP, partially offset by growth in devices in NA. On a geographic basis, net sales decreased in EMEA and Latin America and increased in North America and AP in 2016, compared to 2015. The segment's backlog was $1.5 billion at December 31, 2016 and $1.2 billion at December 31, 2015.

Net sales in North America continued to comprise a significant portion of the segment's business, accounting for approximately 69% of the segment's net sales in 2016, up from 67% of the segment's net sales in 2015.

The segment had operating earnings of $734 million in 2016, compared to $704 million in 2015. The increase in operating earnings in 2016 compared to 2015 was driven primarily by: (i) lower SG&A and R&D expenditures as a result of cost savings initiatives including headcount reductions, partially offset by an increase in Other charges.

Segment Results—2015 Compared to 2014

The segment's net sales decreased $131 million, or 3%, to $3.7 billion in 2015, as compared to $3.8 billion in 2014. The decrease in the segment's net sales was primarily driven by: (i) the effect of unfavorable foreign exchange rates with a strengthening U.S. dollar in EMEA, Latin America, and AP, (ii) decreases in devices and systems sales in Latin America and EMEA impacted by the reduced purchasing power of our customers caused by the devaluation of their local currency and macroeconomic conditions, (iii) a decrease in systems sales in North America, and (iv) a decline in devices sales in AP, partially offset by: (i) growth in devices sales in North America and (ii) increased systems sales in AP. On a geographic basis, net sales decreased in EMEA and Latin America and increased in North America and AP in 2015, compared to 2014. The segment's backlog was $1.2 billion at both December 31, 2015 and December 31, 2014.

Net sales in North America continued to comprise a significant portion of the segment's business, accounting for approximately 67% of the segment's net sales in 2015, up from 62% of the segment's net sales in 2014.

The segment had operating earnings of $704 million in 2015, compared to an operating loss of $667 million in 2014. The increase in operating earnings in 2015 compared to 2014 was driven primarily by: (i) a decrease in Other charges as a result of a $1.3 billion expense related to the 2014 settlement of a U.S. pension plan, (ii) lower SG&A expenditures as a result of cost savings initiatives, including headcount reductions, the favorable impact of foreign exchange rates, and reduced pension expenses, and (iii) lower R&D expenditures driven by cost savings initiatives and the favorable impact of foreign exchange rates.

Services Segment

The Services segment's net sales represented 40% of our consolidated net sales in 2016, compared to 35% in 2015 and 2014 respectively.

	Years ended December 31			*Percent Change*	
(Dollars in millions)	***2016***	*2015*	*2014*	***2016—2015***	*2015—2014*
Segment net sales	**$ 2,389**	$ 2,019	$ 2,074	**18%**	(3)%
Operating earnings (loss)	**333**	290	(339)	**15%**	N/M

** N/M = Percent Change is not meaningful due to the comparison using prior year operating losses as a basis for the calculation.*

Segment Results—2016 Compared to 2015

The segment's net sales increased $370 million, or 18%, to $2.4 billion in 2016, as compared to $2.0 billion in 2015. The increase in the segment's net sales was primarily driven by higher Managed & Support services sales from both the acquisition of GDCL as well as organic growth. The acquisition of GDCL provided $462 million of net sales within EMEA during the year ended December 31, 2016, while the organic Managed & Support services business grew in North America and AP. This sales growth was partially offset by: (i) a decrease in Integration services sales, with a significant decrease in EMEA related to the winding down of a large system implementation, (ii) declining iDEN services sales in Latin America, and (iii) the effect of unfavorable foreign exchange rates with a strengthening U.S. dollar in EMEA, Latin America, and AP. On a geographic basis, net sales increased in EMEA, North America, and AP and decreased in Latin America in 2016, compared to 2015. The segment's backlog was $6.9 billion at December 31, 2016 and $5.2 billion at December 31, 2015. The increase in the segment's backlog in 2016 compared to 2015 was driven in part by $1.2 billion from the acquisition of GDCL.

Net sales in North America continued to comprise a significant portion of the segment's business, accounting for approximately 54% of the segment's net sales in 2016, down from 62% of the segment's net sales in 2015.

The segment had operating earnings of $333 million in 2016 compared to $290 million in 2015. The increase in operating earnings in 2016 compared to 2015 was driven primarily by: (i) increased sales volume generating higher gross margin on our Managed & Support services, primarily in EMEA due to the acquisition of GDCL, and (ii) lower SG&A expenditures due to cost savings initiatives, including headcount reductions, partially offset by an increase in Other charges, including $105 million of intangible amortization expense, primarily associated with the GDCL acquisition.

Segment Results—2015 Compared to 2014

The segment's net sales decreased $55 million, or 3%, to $2.0 billion in 2015, as compared to $2.1 billion in 2014. The decrease in the segment's net sales was primarily driven by: (i) the effect of unfavorable foreign exchange rates with a strengthening U.S. dollar in EMEA, Latin America, and AP, (ii) lower Integration services sales, primarily in EMEA, related to the winding down of a large system implementation in Norway, and (iii) declining iDEN services sales in Latin America, partially offset by an increase in Managed & Support services in North America. On a geographic basis, net sales for 2015 decreased in EMEA, Latin America, and AP and increased in North America, compared to 2014. The segment's backlog was $5.2 billion at December 31, 2015 and $4.6 billion at December 31, 2014. The increase in the segment's backlog in 2015 compared to 2014 was driven in part by the United Kingdom government LTE contract awarded in 2015.

Net sales in North America continued to comprise a significant portion of the segment's business, accounting for approximately 62% of the segment's net sales in 2015, up from 59% of the segment's net sales in 2014.

The segment had operating earnings of $290 million in 2015, compared to an operating loss of $339 million in 2014. The increase in operating earnings in 2015 compared to 2014 was driven primarily by: (i) a decrease in Other charges as a result of a $584 million expense related to the 2014 settlement of a U.S. pension plan and (ii) lower SG&A expenditures as a result of cost savings initiatives, including headcount reductions, the favorable impact of foreign exchange rates, and reduced pension expenses.

Reorganization of Businesses

During 2016 we implemented various productivity improvement plans aimed at continuing operating margin improvements by driving efficiencies and reducing operating costs. In 2016, we recorded net reorganization of business charges of $140 million relating to the separation of 1,300 employees, of which 900 were indirect employees and 400 were direct employees. The $140 million of charges included $43 million recorded to Cost of sales and $97 million recorded to Other charges. Included in the aggregate $140 million are charges of: (i) $120 million for employee separation costs, (ii) $20 million for impairments, including $17 million for a building impairment and $3 million for the impairment of the corporate aircraft, and (iii) $5 million for exit costs, partially offset by $5 million of reversals for accruals no longer needed.

During 2015, we recorded net reorganization of business charges of $117 million relating to the separation of 1,100 employees, of which 900 were indirect employees and 200 were direct employees. The $117 million of charges in earnings from continuing operations included $9 million recorded to Cost of sales and $108 million recorded to Other charges. Included in the aggregate $117 million are charges of: (i) $74 million for employee separation costs, (ii) $31 million for the impairment of the corporate aircraft, (iii) $10 million for exit costs, and (iv) a $6 million building impairment charge, partially offset by $4 million of reversals for accruals no longer needed.

During 2014, we recorded net reorganization of business charges of $96 million relating to the separation of 1,200 employees, of which 900 were indirect employees and 300 were direct employees. Of these charges, $23 million was related to discontinued operations. The remaining $73 million of charges in earnings (loss) from continuing operations included $9 million recorded to Cost of sales and $64 million recorded to Other charges. Included in the aggregate $73 million are charges of: (i) $67 million for employee separation costs and (ii) $7 million related to charges for exit costs, partially offset by $1 million of reversals for accruals no longer needed.

The following table displays the net charges incurred by business segment:

Years ended December 31	***2016***	*2015*	*2014*
Products	$ 106	$ 84	$ 48
Services	34	33	25
	$ 140	$ 117	$ 73

Cash payments for exit costs and employee severance in connection with the reorganization of business plans were $79 million, $71 million, and $148 million in 2016, 2015, and 2014, respectively. The reorganization of business accruals at December 31, 2016 were $101 million, of which $94 million relates to employee separation costs that are expected to be paid within one year and $7 million relates primarily to lease termination obligations that are expected to be paid over a number of years.

Liquidity and Capital Resources

We decreased the aggregate of our cash and cash equivalent balances from $2.0 billion as of December 31, 2015 to $1.0 billion as of December 31, 2016. The decrease is primarily due to: (i) $1.1 billion of capital returned to shareholders through share repurchases and dividends paid, and (ii) $1.0 billion paid in the acquisition of GDCL, offset by $1.2 billion of cash generated by operating activities.

As highlighted in the consolidated statements of cash flows, our liquidity and available capital resources are impacted by four key components: (i) cash and cash equivalents, (ii) operating activities, (iii) investing activities, and (iv) financing activities.

Cash and Cash Equivalents

At December 31, 2016, $575 million of the $1.0 billion cash and cash equivalents balance was held in the U.S. and $455 million was held by the Company or its subsidiaries in other countries, with approximately $138 million held in the United Kingdom. Restricted cash was approximately $63 million at both December 31, 2016 and December 31, 2015.

We continue to analyze and review various repatriation strategies to efficiently repatriate cash. In 2016, we repatriated approximately $288 million in cash to the U.S. from international jurisdictions. Undistributed earnings that we intend to reinvest indefinitely, and for which no U.S. income taxes have been provided, aggregate to $1.6 billion at December 31, 2016. We currently have no plans to repatriate the foreign earnings permanently reinvested. If circumstances change and it becomes

apparent that some or all of the permanently reinvested earnings will be remitted to the U.S. in the foreseeable future, an additional income tax charge may be necessary.

Where appropriate, we may also pursue capital reduction activities; however, such activities can be involved and lengthy. While we regularly repatriate funds, and a portion of offshore funds can be repatriated with minimal adverse financial impact, repatriation of some of these funds may be subject to delay for local country approvals and could have potential adverse cash tax consequences.

Operating Activities

Net cash provided by operating activities from continuing operations in 2016 was $1.2 billion, compared to cash provided by operating activities from continuing operations of $1.0 billion in 2015 and cash used by operating activities from continuing operations of $637 million in 2014. Operating cash flows in 2016, as compared to 2015, were positively impacted by high earnings from continuing operations (adjusted for net non-cash charges), offset by higher employee incentive compensation payments. Operating cash flows in 2015, as compared to 2014, were positively impacted by: (i) an increase in earnings from continuing operations, (ii) reduced pension contributions, and (iii) higher sales of accounts receivable.

We made $3 million of contributions to our U.S. pension plans during 2016, compared to $3 million contributed in 2015, and $1.1 billion contributed in 2014. In addition, we contributed $8 million, $10 million, and $237 million to our Non-U.S. Pension Plans during 2016, 2015, and 2014, respectively. We expect to make approximately $9 million of cash contributions in 2017, primarily to our Non-U.S. Pension Benefit Plans in 2017.

Investing Activities

Net cash used by investing activities from continuing operations was $1 billion in 2016, compared to net cash used by investing activities from continuing operations of $528 million in 2015 and net cash provided by investing activities from continuing operations of $3.2 billion in 2014. The $474 million increase in net cash used by investing activities from 2015 to 2016 was primarily due to the acquisition of GDCL for $1.0 billion and Spillman for $217 million, offset by the sale of an investment of $382 million used to fund the acquisition of GDCL. The $3.7 billion decrease in net cash provided by investing activities from 2014 to 2015 was primarily due to proceeds provided by the sale of the Enterprise business in 2014 compared to cash used for a $401 million investment earmarked for the purchase of GDCL in 2015.

Acquisitions and Investments: We used net cash of $1.5 billion for acquisitions and new investment activities in 2016, compared to $586 million in 2015, and $47 million in 2014. We paid cash of $1.0 billion during 2016 related to the acquisition of GDCL, $217 million for the acquisition of Spillman, and $26 million related to the acquisition of other software and services related businesses. The remainder of the cash was used for several debt and equity investments. In 2015, we invested $401 million in order to partially offset our foreign currency risk associated with the purchase of GDCL. We liquidated these investments in February 2016 to partially fund the acquisition. Additionally, we paid $49 million for the acquisition of two public safety software solution providers, as well as several debt and equity investments. The cash used in 2014 was for the acquisition of an equipment provider for $22 million and a number of equity investments.

Sales of Investments and Businesses: We received $670 million of proceeds in 2016 compared to $230 million in 2015 and $3.4 billion in 2014. The $670 million of cash provided by investments in 2016 primarily consisted of: (i) $382 million from the sale of an investment used to finance the acquisition of GDCL, (ii) $242 million from the sales of various debt and equity securities, and (iii) $46 million from the sale of our Penang, Malaysia facility and manufacturing operations. The $230 million of cash received in 2015 was primarily comprised of: (i) $49 million reimbursement from Zebra for cash transferred with the sale of the Enterprise business in conjunction with legal entities sold through a stock sale, (ii) $107 million from the sale of two equity investments, (iii) $13 million net cash received from Zebra for the final purchase price adjustment, as well as for reimbursement of liabilities of the Enterprise business paid on Zebra's behalf, and (iv) proceeds from the sale of various debt and equity securities, partially offset by $27 million of net cash transferred in conjunction with the sale of our ownership interest in a majority owned subsidiary to the entity's noncontrolling interest. The $3.4 billion of cash received in 2014 was primarily comprised of proceeds from the sale of the Enterprise business.

Capital Expenditures: Capital expenditures were $271 million in 2016, compared to $175 million in 2015, and $181 million in 2014. The increase in capital spending in 2016, as compared to 2015, was primarily driven by a increase in revenue-generating network expenditures, information technology spend and facilities expenditures. The decrease in capital spending in 2015, as compared to 2014, was primarily driven by an decrease in revenue-generating network expenditures.

Sales of Property, Plant, and Equipment: We had $73 million of proceeds related to the sale of property, plant, and equipment in 2016, compared to $3 million in 2015 and $33 million in 2014. The proceeds in 2016 were comprised of $54 million from the sale of buildings and land on the Schaumburg, IL campus and $19 million received from the sale of fixed assets. The proceeds in 2015 and 2014 were primarily comprised of sales of buildings and land.

Financing Activities

Net cash used for financing activities was $1.0 billion in 2016 compared to $2.4 billion in 2015 and $1.8 billion in 2014. Cash used for financing activities in 2016 was primarily comprised of: (i) $842 million used for purchases of common stock under our share repurchase program and (ii) $280 million of cash used for the payment of dividends, partially offset by $93 million of net proceeds from the issuance of common stock in connection with our employee stock option and employee stock purchase plans.

Cash used for financing activities in 2015 was primarily comprised of: (i) $3.2 billion used for purchases of common stock under our share repurchase program and (ii) $277 million of cash used for the payment of dividends, partially offset by: (i) $971 million of net proceeds from the issuance of the Senior Convertible Notes and (ii) $84 million of net proceeds from the issuance of common stock in connection with our employee stock option and employee stock purchase plans.

Cash used for financing activities in 2014 was primarily comprised of: (i) $2.5 billion used for purchases of our common stock under our share repurchase program, (ii) $465 million of cash used for the repayment of debt, and (iii) $318 million of cash used for the payment of dividends, partially offset by: (i) $1.4 billion of net proceeds from the issuance of debt, (ii) $87 million of net proceeds from the issuance of common stock in connection with our employee stock option and employee stock purchase plans, and (iii) $93 million of distributions received from discontinued operations.

Current and Long-Term Debt: We had outstanding long-term debt of $4.4 billion and $4.3 billion, including the current portions of $4 million, at December 31, 2016 and December 31, 2015, respectively.

On August 25, 2015, we entered into an agreement with Silver Lake Partners to issue $1.0 billion of 2% Senior Convertible Notes which mature in September 2020. Interest on these notes is payable semiannually. The notes are convertible anytime on or after two years from their issuance date, except in certain limited circumstances including, for example, if the volume weighted average price of the Company's stock exceeds $85 for ten consecutive trading days, then up to 20% of the notes may be transferred or converted to shares of Company stock. The notes are convertible based on a conversion rate of 14.5985 per $1,000 principal amount (which is equal to an initial conversion price of $68.50 per share). In the event of conversion, we intend to settle the principal amount of the Senior Convertible Notes in cash.

In connection with the completion of the acquisition of GDCL, we entered into a new term loan credit agreement (the "Term Loan Agreement"), under which we borrowed a term loan (the "Term Loan") with an initial principal amount of $675 million. Interest on the Term Loan was variable and indexed to LIBOR. We have repaid all amounts borrowed under the Term Loan as of December 31, 2016.

We have investment grade ratings on our senior unsecured long-term debt from the three largest U.S. national rating agencies. We believe that we will be able to maintain sufficient access to the capital markets. Any future disruptions, uncertainty, volatility in the capital markets, or deterioration in our credit ratings may result in higher funding costs for us and adversely affect our ability to access funds.

We may, from time to time, seek to retire certain of our outstanding debt through open market cash purchases, privately-negotiated transactions or otherwise. Such repurchases, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors.

Share Repurchase Program: Through actions taken on July 28, 2011, January 30, 2012, July 25, 2012, July 22, 2013, November 4, 2014, and August 3, 2016, the Board of Directors has authorized an aggregate share repurchase amount of up to $14.0 billion of our outstanding shares of common stock (the "share repurchase program"). The share repurchase program does not have an expiration date. As of December 31, 2016, we have used approximately $11.8 billion of the share repurchase authority, including transaction costs, to repurchase shares, leaving approximately $2.2 billion of authority available for future repurchases.

During 2016, we paid an aggregate of $842 million, including transaction costs, to repurchase 12.0 million shares at an average price of $70.28 per share. During 2015, we paid an aggregate of $3.2 billion, including transaction costs, to repurchase 48.0 million shares at an average price of $66.22. Shares repurchased in 2015 include 30.1 million shares repurchased under a modified "Dutch auction" tender offer at a tender price of $66.50 for an aggregate of $2.0 billion, including transaction costs. During 2014, we paid an aggregate of $2.5 billion, including transaction costs, to repurchase 39.4 million shares at an average price of $64.63.

Payment of Dividends: We paid cash dividends to holders of our common stock of $280 million in 2016, $277 million in 2015, and $318 million in 2014. Subsequent to quarter end, we paid an additional $77 million in cash dividends to holders of our common stock.

Credit Facilities

As of December 31, 2016, we had a $2.1 billion unsecured syndicated revolving credit facility (the "2014 Motorola Solutions Credit Agreement") scheduled to mature on May 29, 2019. We must comply with certain customary covenants, including maximum leverage ratio as defined in the 2014 Motorola Solutions Credit Agreement. We were in compliance with our financial covenants as of December 31, 2016. We did not borrow under the 2014 Motorola Solutions Credit Agreement during the twelve months ended December 31, 2016. No letters of credit were issued under the revolving credit facility as of December 31, 2016.

Contractual Obligations and Other Purchase Commitments

Summarized in the table and text below are our obligations and commitments to make future payments under long-term debt obligations, lease obligations, purchase obligations and tax obligations as of December 31, 2016.

	Payments Due by Period							
(in millions)	*Total*	*2017*	*2018*	*2019*	*2020*	*2021*	*Uncertain Timeframe*	*Thereafter*
Long-term debt obligations	$ 4,437	$ 4	$ 5	$ 5	$ 1,003	$ 400	$ —	$ 3,020
Lease obligations	481	62	58	52	49	42	—	218
Purchase obligations*	169	125	30	9	4	1	—	—
Tax obligations	68	29	—	—	—	—	39	—
Total contractual obligations	$ 5,155	$ 220	$ 93	$ 66	$ 1,056	$ 443	$ 39	$ 3,238

**Amounts included represent firm, non-cancelable commitments.*

Lease Obligations: We lease certain office, factory and warehouse space, land, information technology and other equipment, principally under non-cancelable operating leases. Our future minimum lease obligations, net of minimum sublease rentals, totaled $481 million. Rental expense, net of sublease income, was $84 million in 2016, $42 million in 2015, and $62 million in 2014.

Purchase Obligations: During the normal course of business, in order to manage manufacturing lead times and help ensure adequate component supply, we enter into agreements with contract manufacturers and suppliers that either allow them to procure inventory based upon criteria as defined by us or establish the parameters defining our requirements. In addition, we have entered into software license agreements which are firm commitments and are not cancelable. We had entered into firm, noncancelable, and unconditional commitments under such arrangements through 2017. The total payments expected to be made under these agreements are $169 million, of which $168 million relate to take or pay obligations from arrangements with suppliers for the sourcing of inventory supplies and materials. We do not anticipate the cancellation of any of our take or pay agreements in the future and estimate that purchases from these suppliers will exceed the minimum obligations during the agreement periods.

Tax Obligations: We have approximately $68 million of unrecognized income tax benefits relating to multiple tax jurisdictions and tax years. Based on the potential outcome of our global tax examinations, or the expiration of the statute of limitations for specific jurisdictions, it is reasonably possible that the unrecognized tax benefits will change within the next twelve months. The associated net tax impact on the effective tax rate, exclusive of valuation allowance changes, is estimated to be in the range of a $50 million tax charge to a $30 million tax benefit, with cash payments not expected to exceed $30 million.

Commitments Under Other Long-Term Agreements: We have entered into certain long-term agreements to purchase software, components, supplies and materials from suppliers which are not "take or pay" in nature. Most of the agreements extend for periods of one to three years (three to five years for software). Generally, these agreements do not obligate us to make any purchases, and many permit us to terminate the agreement with advance notice (usually ranging from 60 to 180 days). If we were to terminate these agreements, we generally would be liable for certain termination charges, typically based on work performed and supplier on-hand inventory and raw materials attributable to canceled orders. Our liability would only arise in the event we terminate the agreements for reasons other than "cause."

We outsource certain corporate functions, such as benefit administration and information technology-related services, under third-party contracts, the longest of which is expected to expire in 2019. Our remaining payments under these contracts are approximately $237 million over the remaining life of the contracts; however, these contracts can be terminated. Termination would result in a penalty substantially less than the remaining annual contract payments. We would also be required to find another source for these services, including the possibility of performing them in-house.

As is customary in bidding for and completing certain projects and pursuant to a practice we have followed for many years, we have a number of performance/bid bonds, standby letters of credit and surety bonds outstanding (collectively, referred to as "Performance Bonds"), primarily relating to projects with our government customers. These Performance Bonds normally have maturities of multiple years and are standard in the industry as a way to give customers a convenient mechanism to seek resolution if a contractor does not satisfy certain requirements under a contract. Typically, a customer can draw on the

Performance Bond only if we do not fulfill all terms of a project contract. If such an occasion occurred, we would be obligated to reimburse the institution that issued the Performance Bond for the amounts paid. In our long history, it has been rare for us to have a Performance Bond drawn upon. At December 31, 2016, outstanding Performance Bonds totaled approximately $2.2 billion, compared to $1.8 billion at December 31, 2015. Any future disruptions, uncertainty, or volatility in bank, insurance or capital markets, or a change in our credit ratings could adversely affect our ability to obtain Performance Bonds and may result in higher funding costs to obtain such Performance Bonds.

Off-Balance Sheet Arrangements: At December 31, 2016, we had no significant off-balance sheet arrangements other than operating leases and guarantees to third parties as described in Note 11 to the consolidated financial statements and our obligation to settle the embedded conversion option under the Senior Convertible Notes described in Note 4 to the consolidated financial statements.

Long-term Customer Financing Commitments

Outstanding Commitments: Certain purchasers of our products and services may request that we provide long-term financing (defined as financing with a term of greater than one year) in connection with the sale of equipment. These requests may include all or a portion of the purchase price of the products and services. Our obligation to provide long-term financing may be conditioned on the issuance of a letter of credit in favor of us by a reputable bank to support the purchaser's credit or a pre-existing commitment from a reputable bank to purchase the long-term receivables from us. We had outstanding commitments to provide long-term financing to third-parties totaling $125 million at December 31, 2016, compared to $112 million at December 31, 2015.

Outstanding Long-Term Receivables: We had non-current long-term receivables of $49 million at December 31, 2016, compared to $47 million at December 31, 2015. There were $2 million of allowances for losses in 2016 and $1 million of allowances for losses in 2015. These long-term receivables are generally interest bearing, with interest rates ranging from 0% to 11%.

Sales of Receivables

From time to time, we sell accounts receivable and long-term receivables to third-parties under one-time arrangements. We may or may not retain the obligation to service the sold accounts receivable and long-term receivables. Servicing obligations are limited to collection activities for sold accounts receivables and long-term receivables.

The following table summarizes the proceeds received from sales of accounts receivable and long-term receivables for the years ended December 31, 2016, 2015, and 2014:

Years ended December 31	**2016**	2015	2014
Accounts receivable sales proceeds	$ 51	$ 29	$ 50
Long-term receivables sales proceeds	289	196	124
Total proceeds from receivable sales	$ 340	$ 225	$ 174

At December 31, 2016, the Company had retained servicing obligations for $774 million of long-term receivables, compared to $668 million of long-term receivables at December 31, 2015. Servicing obligations are limited to collection activities related to the sales of accounts receivables and long-term receivables.

Adequate Internal Funding Resources

We believe that we have adequate internal resources available to fund expected working capital and capital expenditure requirements for the next twelve months as supported by the level of cash and cash equivalents in the U.S., the ability to repatriate funds from foreign jurisdictions, as well as cash provided by operations.

Other Contingencies

Potential Contractual Damage Claims in Excess of Underlying Contract Value: In certain circumstances, we enter into contracts with customers pursuant to which the damages that could be claimed by the customer for failed performance might exceed the revenue we receive from the contract. Contracts with these types of uncapped damages provisions are fairly rare, but individual contracts could still represent meaningful risk. There is a possibility that a claim by a counterparty to one of these contracts could result in expenses that are far in excess of the revenue received from the counterparty in connection with the contract.

Indemnification Provisions: We may provide indemnifications for losses that result from the breach of general warranties contained in certain commercial, intellectual property and divestiture agreements. Historically, we have not made significant payments under these agreements, nor have there been significant claims asserted against us. However, there is an increasing risk in relation to intellectual property indemnities given the current legal climate. In indemnification cases, payment by us is conditioned on the other party making a claim pursuant to the procedures specified in the particular contract, which procedures typically allow us to challenge the other party's claims. In some instances we may have recourse against third-parties for certain payments made by us. Further, our obligations under divestiture agreements for indemnification based on breach of representations and warranties are generally limited in terms of duration, typically not more than 18 months, and for amounts not in excess of a percentage of the contract value.

Legal Matters: We are a defendant in various lawsuits, claims, and actions, which arise in the normal course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our consolidated financial position, liquidity, or results of operations. However, an unfavorable resolution could have a material adverse effect on our consolidated financial position, liquidity, or results of operations in the periods in which the matters are ultimately resolved, or in the periods in which more information is obtained that changes management's opinion of the ultimate disposition.

Significant Accounting Policies

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period.

Management bases its estimates and judgments on historical experience, current economic and industry conditions and on various other factors that are believed to be reasonable under the circumstances. This forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Management believes the following significant accounting policies require significant judgment and estimates.

Revenue Recognition

Net sales consist of a wide range of activities including the delivery of stand-alone equipment or services, custom design and installation over a period of time, and bundled sales of equipment, software and services. We enter into revenue arrangements that may consist of multiple deliverables of our products and services due to the needs of our customers. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collectability of the sales price is reasonably assured. We recognize revenue from the sale of equipment, equipment containing both software and nonsoftware components that function together to deliver the equipment's essential functionality, and services in accordance with general revenue recognition accounting principles. We recognize revenue in accordance with software accounting guidance for the following types of sales transactions: (i) stand alone sales of software products or software upgrades, (ii) stand alone sales of software maintenance agreements, and (iii) sales of software bundled with equipment where the software is not essential to the functionality of that equipment.

Products

For equipment sales, in addition to the criteria mentioned above, revenue recognition occurs when title and risk of loss has transferred to the customer, objective evidence exists that customer acceptance provisions have been met, no significant obligations remain and allowances for discounts, price protection, returns and customer incentives can be reliably estimated. Recorded revenues are reduced by these allowances. We base our estimates of these allowances on historical experience taking into consideration the type of products sold, the type of customer, and the specific type of transaction in each arrangement. Where customer incentives cannot be reliably estimated, we defer revenue until the incentive has been finalized with the customer. We include shipping charges billed to customers in net revenue, and include the related shipping costs in cost of sales.

We sell software and equipment obtained from other companies. We establish our own pricing and retain related inventory risk, are the primary obligor in sales transactions with customers, and assume the credit risk for amounts billed to customers. Accordingly, we generally recognize revenue for the sale of products obtained from other companies based on the gross amount billed.

Long-Term Contracts

For long-term contracts that involve customization of equipment and/or software, we generally recognize revenue using the percentage of completion method based on the percentage of costs incurred to date compared to the total estimated costs to complete the contract ("Estimated Costs at Completion"). The components of estimated costs to complete a contract and management's process for reviewing Estimated Costs at Completion and progress toward completion are discussed further below. Contracts may be combined or segmented in accordance with the applicable criteria under contract accounting principles. In certain instances, when revenues or costs associated with long-term contracts cannot be reliably estimated or the contract contains other inherent uncertainties, revenues and costs are deferred until the project is complete and customer acceptance is obtained.

Total Estimated Costs at Completion include direct labor, material and subcontracting costs. Due to the nature of the work required to be performed under many of our long-term contracts, determining Estimated Costs at Completion is complex and subject to many variables. We have a standard and disciplined quarterly process in which management reviews the progress and performance of open contracts in order to determine the best estimate of Estimated Costs at Completion. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion, the project schedule, identified risks and opportunities, and the related changes in estimates of revenues and costs. The risks and opportunities include management's judgment about the ability and cost to achieve the project schedule, technical requirements, and other contract requirements. Management must make assumptions and estimates regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, and performance by subcontractors,

among other variables. Based on this analysis, any quarterly adjustments to net sales, cost of sales, and the related impact to operating income are recorded as necessary in the period they become known. These adjustments may result from positive project performance, and may result in an increase in operating income during the performance of individual contracts. Likewise, these adjustments may result in a decrease in operating income if Estimated Costs at Completion increase. Changes in estimates of net sales or cost of sales could affect the profitability of one or more of our contracts. The impact on operating earnings as a result of changes in Estimated Costs at Completion was not significant for the years 2016, 2015, and 2014. When estimates of total costs to be incurred on a contract exceed estimates of total revenue to be earned, a provision for the entire loss on the contract is recorded in the period the loss is determined.

Hardware and Software Services Support

Revenue under equipment and software support and maintenance agreements, which do not contain specified future software upgrades, is recognized ratably over the contract term.

Software and Licenses

Revenue from pre-paid perpetual licenses is recognized at the inception of the arrangement, presuming all other revenue recognition criteria are met. Revenue from non-perpetual licenses or term licenses is recognized ratably over the period of the license.

Multiple-Element Arrangements

Arrangements with customers may include multiple deliverables, including any combination of products, services and software. These multiple-element arrangements could also include an element accounted for as a long-term contract coupled with other products, services and software. For multiple-element arrangements that include products containing software that function together with the equipment to deliver its essential functionality, undelivered software elements that relate to the product's essential software, and undelivered non-software services, deliverables are separated into more than one unit of accounting when: (i) the delivered element(s) have value to the customer on a stand-alone basis and (ii) delivery of the undelivered element(s) is probable and substantially in our control.

In these arrangements, we allocate revenue to all deliverables based on their relative selling prices. We use the following hierarchy to determine the selling price to be used for allocating revenue to deliverables: (i) vendor-specific objective evidence ("VSOE") of fair value, (ii) third-party evidence ("TPE") of selling price, and (iii) best estimate of selling price ("ESP").

We determine VSOE based on our normal pricing and discounting practices for the specific product or service when that same product or service is sold separately. In determining VSOE, we require that a substantial majority of the selling prices for a product or service fall within a reasonably narrow pricing range, generally evidenced by the pricing rates of approximately 80% of such historical stand-alone transactions falling within plus or minus 15% of the median rate.

When VSOE does not exist, we attempt to determine TPE based on competitor prices for similar deliverables when sold separately. Generally, our go-to-market strategy for many of our products differs from that of our competitors and our offerings contain a significant level of customization and differentiation such that the comparable pricing of products with similar functionality sold by other companies cannot be obtained. Furthermore, we are unable to reliably determine what similar competitor products' selling prices are on a stand-alone basis. Therefore, we typically are not able to determine TPE.

When both VSOE and TPE are unavailable, we use ESP. We determine ESP by: (i) collecting all reasonably available data points including sales, cost and margin analysis of the product, and other inputs based on our normal pricing and discounting practices, (ii) making any reasonably required adjustments to the data based on market and Company-specific factors, and (iii) stratifying the data points, when appropriate, based on customer, magnitude of the transaction and sales volume.

We also consider the geographies in which the products or services are sold, major product and service groups, customer classification, and other environmental or marketing variables in determining VSOE, TPE, and ESP.

Once elements of an arrangement are separated into more than one unit of accounting, revenue is recognized for each separate unit of accounting based on the nature of the revenue as described above.

Our arrangements with multiple deliverables may also contain one or more software deliverables that are subject to software revenue recognition guidance. The revenue for these multiple-element arrangements is allocated to the software deliverable(s) and the non-software deliverable(s) based on the relative selling prices of all of the deliverables in the arrangement using the fair value hierarchy outlined above. In circumstances where we cannot determine VSOE or TPE for any of the deliverables in the arrangement, ESP is used for the purpose of allocating the arrangement consideration between software and non-software deliverables.

We allocate arrangement consideration to multiple software or software-related deliverables, including the sale of software upgrades or software support agreements to previously sold software, in accordance with software accounting guidance. For such arrangements, revenue is allocated to the deliverables based on the relative fair value of each element of the software, with fair value determined using VSOE. Where VSOE does not exist for the undelivered software element, revenue is deferred until either the undelivered element is delivered or VSOE is established, whichever occurs first. When the final undelivered software element is post contract support, revenue is recognized on a ratable basis over the remaining service period. When VSOE of a delivered element has not been established, but VSOE exists for the undelivered elements, we use the residual method to recognize revenue when the fair value of all undelivered elements is determinable. Under the residual method, the fair value of the undelivered elements is deferred and the remaining portion of the arrangement consideration is allocated to the delivered elements and is recognized as revenue.

Inventory Valuation

We record valuation reserves on our inventory for estimated excess or obsolescence. The amount of the reserve is equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about future demand and market conditions. On a quarterly basis, management performs an analysis based on future demand requirement estimates of the underlying inventory to identify reserves needed for excess and obsolescence. In addition, we adjust the carrying value of inventory if the current market value of that inventory is below our cost.

At December 31, 2016 and 2015, Inventories consisted of the following:

December 31	2016	2015
Finished goods	$ 151	$ 151
Work-in-process and production materials	253	287
	404	438
Less inventory reserves	(131)	(142)
	$ 273	$ 296

We balance the need to maintain strategic inventory levels to ensure competitive delivery performance to our customers against the risk of inventory obsolescence due to changes in technology and customer requirements. As reflected above, our inventory reserves represented 33% of the gross inventory balance at December 31, 2016, compared to 32% of the gross inventory balance at December 31, 2015. We have inventory reserves for excess inventory, pending cancellations of product lines due to technology changes, long-life cycle products, lifetime buys at the end of supplier production runs, business exits, and a shift of production to outsourced manufacturing.

If future demand or market conditions are less favorable than those projected by management, additional inventory writedowns may be required.

Income Taxes

We record deferred income tax assets and liabilities based on the estimated future tax effects of differences between the financial and tax bases of assets and liabilities based on currently enacted tax laws. The Company's deferred and other tax balances are based on management's interpretation of the tax regulations and rulings in numerous taxing jurisdictions. Income tax expense and liabilities recognized by the Company also reflect our best estimates and assumptions regarding, among other things, the level of future taxable income, the effect of the Company's various tax planning strategies and uncertain tax positions. Future tax authority rulings and changes in tax laws and projected levels of taxable income and future tax planning strategies could affect the actual effective tax rate and tax balances recorded by the Company. We evaluate deferred income tax asset balances on a quarterly basis to determine if valuation allowances are required by considering available evidence, including historical and projected taxable income and tax planning strategies that are both prudent and feasible. Tax related interest and penalties are classified as a component of interest expense.

Retirement Benefits

Our benefit obligations and net periodic pension cost (benefits) associated with our domestic noncontributory pension plans ("U.S. Pension Benefit Plans"), our foreign noncontributory pension plans ("Non-U.S. Plans"), as well as our domestic postretirement health care plan ("Postretirement Health Care Benefits"), are determined using actuarial assumptions. The assumptions are based on management's best estimates, after consulting with outside investment advisors and actuaries.

Accounting methodologies use an attribution approach that generally spreads the effects of individual events over the service lives of the participants in the plan, or estimated average lifetime when almost all of the plan participants are considered "inactive." Examples of "events" are plan amendments and changes in actuarial assumptions such as discount rate, expected long-term rate of return on plan assets, and rate of compensation increases.

There are various assumptions used in calculating the net periodic cost (benefit) and related benefit obligations. One of these assumptions is the expected long-term rate of return on plan assets. The required use of the expected long-term rate of return on plan assets may result in recognized pension income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns. We use a five-year, market-related asset value method of recognizing asset related gains and losses.

We use long-term historical actual return experience with consideration of the expected investment mix of the plans' assets, as well as future estimates of long-term investment returns, to develop our expected rate of return assumption used in calculating the net periodic pension cost and the net retirement healthcare expense. Our investment return assumption for the U.S. Pension Benefit Plans and Postretirement Healthcare Benefits Plan was 7.00% in both 2016 and 2015. Our investment return assumption for the Non-U.S. Plan was 5.90% in 2016 and 2015. At December 31, 2016, the pension plans, including the U.S. Pension Benefit Plans and Non-U.S. Plans investment portfolios were comprised of approximately 33% equity investments, while the Postretirement Health Care Benefits Plan was all comprised of approximately 37% equity investments .

A second key assumption is the discount rate. The discount rate assumptions used for pension benefits and postretirement health care benefits reflect, at December 31 of each year, the prevailing market rates for high-quality, fixed-income debt instruments that, if the obligation was settled at the measurement date, would provide the necessary future cash

flows to pay the benefit obligation when due. Our discount rates for measuring our U.S. pension benefit obligations were 4.42% and 4.73% at December 2016 and 2015, respectively. Our weighted average discount rates for measuring our Non-U.S. Plans were 2.54% and 3.57% at December 2016 and 2015, respectively. Our discount rates for measuring the Postretirement Health Care Benefits Plan obligation were 4.11% and 4.26% at December 31, 2016 and 2015, respectively.

Effective on January 1, 2016, we changed the method used to estimate the interest and service cost components of net periodic cost for defined benefit pension and Post retirement Health Care Benefit Plans. Historically, the interest and service cost components were estimated using a single weighted-average discount rate derived from the yield curve used to measure the projected benefit obligation at the beginning of the period. We have elected to use a full yield curve approach in the estimation of these components of net periodic cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligation to the relevant projected cash flows. We made this change to improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates and to provide a more precise measurement of interest and service costs. This change does not affect the measurement of total benefit obligations as the change in interest and service cost is completely offset in the actuarial loss reported in the period. We have concluded that this change is a change in estimate and, accordingly, will account for it prospectively beginning in 2016. The impact of the change in estimate is a reduction of the interest and service cost components within net periodic cost in 2016 by approximately $18 million for the U.S. Pension Benefit Plans, $4 million for the Non-U.S. Pension Benefit Plans, and $6 million for the Postretirement Health Care Benefits Plan compared to the prior year approach.

A final set of assumptions involves the cost drivers of the underlying benefits. The rate of compensation increase is determined based upon long-term plans for such increases. For the Non-U.S. defined benefit plan, we assumed a weighted average rate for future compensation increases of 0.46% and 0.41% for 2016 and 2015, respectively. During 2015, the Non-U.S. defined benefit plan within the United Kingdom was amended to close future benefit accruals to all participants effective December 31, 2015. As such, no compensation increases have been included in our estimates for the defined benefit plan within the United Kingdom. Benefits under the U.S. Pension Plans have been frozen, and therefore future compensation increases are no longer a relevant assumption in the calculation of the benefit obligation on those plans. Historically, the Company utilized health care cost trend rates to determine the accumulated benefit obligation and net periodic benefit. However, the Postretirement Health Care Benefits Plan was amended in 2014 such that all eligible participants would receive an annual subsidy for the purchase of their own health care coverage from private insurance companies and for the reimbursement of eligible health care expenses. As such, assumptions over increases in health care costs are no longer considered necessary to determine the accumulated postretirement benefit obligation.

Under relevant accounting rules, when almost all of the plan participants are considered inactive, the amortization period for certain unrecognized losses changes from the average remaining service period to the average remaining lifetime of the participant. As such, depending on the specific plan, we amortize gains and losses over periods ranging from eleven to thirty-four years. Prior service costs are being amortized over periods ranging from one to eight years. Benefits under all pension plans are valued based on the projected unit credit cost method.

Valuation and Recoverability of Goodwill

We assess the recorded amount of goodwill for recovery on an annual basis in the fourth quarter of each fiscal year. Goodwill is assessed more frequently if an event occurs or circumstances change that would indicate it is more-likely-than-not that the fair value of a reporting unit is below its carrying amount. We continually assess whether any such events and circumstances have occurred, which requires a significant amount of judgment. Such events and circumstances may include: adverse changes in macroeconomic conditions, adverse changes in the industry or market in which we transact, changes in cost factors negatively impacting earnings and cash flows, negative or declining overall financial performance, events affecting the carrying value or composition of a reporting unit, or a sustained decrease in share price, among others. Any such adverse event or change in circumstances could have a significant impact on the recoverability of goodwill and could have a material impact on our consolidated financial statements.

The goodwill impairment assessment is performed at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment (referred to as a "component"). A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and segment management regularly reviews the operating results of that component. When two or more components of an operating segment have similar economic characteristics, the components are aggregated and deemed a single reporting unit. An operating segment is deemed to be a reporting unit if all of its components are similar, if none of its components is a reporting unit, or if the segment comprises only a single component. Based on this guidance, we have determined that our Products and Services segments each meet the definition of a reporting unit. We performed a qualitative assessment of goodwill and determined that it was not more-likely-than-not that the fair value of each reporting unit was less than its carrying amount for the fiscal years 2016, 2015, and 2014. In performing this qualitative assessment we assessed relevant events and circumstances including macroeconomic conditions, industry and market conditions, cost factors, overall financial performance, changes in enterprise value, and entity-specific events. For fiscal years 2016, 2015, and 2014, we concluded it was more-likely-than-not that the fair value of each reporting unit exceeded its carrying value.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers." This new standard will replace most existing revenue recognition guidance

in U.S. GAAP. The core principle of the ASU is the recognition of revenue for the transfer of goods or services equal to the amount an entity expects to receive for those goods and services. This ASU requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and estimates and changes in those estimates. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers: Deferral of the Effective Date" that delayed the effective date of ASU 2014-09 by one year to January 1, 2018, as the Company's annual reporting period begins after December 15, 2017.

We have begun to analyze the impact of the new standard on our financial results based on an inventory of our current contracts with customers. We have obtained an understanding of the new standard and currently believe that we will retain much of the same accounting treatment as used to recognize revenue under current standards. Revenue on a significant portion of our contracts is currently recognized under percentage of completion accounting, applying a cost-to-cost method. We believe under the new standard we will continue to recognize revenue on these contracts using a cost-to-cost method based on the continuous transfer of control to the customer over time. Transfer of control in our contracts is demonstrated by creating a customized asset for our customers, in conjunction with contract terms which provide the right to receive payment for goods and services.

In addition, we understand that the standard may generally cause issuers to accelerate revenue recognition in contracts which were previously limited by current software revenue recognition rules. While we may have contracts which fall under these accounting rules in the current standard, we have not historically deferred significant amounts of revenue under these rules as many arrangements are single-element software arrangements or sales of software with a tangible product which falls out of the scope of the current software rules. Based on the contracts currently in place, we do not anticipate a significant acceleration of revenue upon applying the new standard to our current contracts under these fact patterns.

We continue to evaluate the impact of ASU No. 2014-09 on our financial results and prepare for the adoption of the standard on January 1, 2018, including readying our internal processes and control environment for new requirements, particularly around enhanced disclosures, under the new standard. The standard allows for both retrospective and modified retrospective methods of adoption. We are in the process of determining the method of adoption we will elect and the impact on our consolidated financial statements and footnote disclosures, and will continue to provide enhanced disclosures as we continue our assessment.

In February 2016, the FASB issued ASU No. 2016-02, "Leases," which amends existing guidance to require lessees to recognize assets and liabilities on the balance sheet for the rights and obligations created by long-term leases and to disclose additional quantitative and qualitative information about leasing arrangements. The ASU is effective for us January 1, 2019 and interim periods within that reporting period. The ASU requires a modified retrospective method upon adoption. We are in the process of assessing the impact of this ASU on our consolidated financial statements and footnote disclosures.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230) - Classification of Certain Cash Receipts and Cash Payments," which clarifies eight specific cash flow issues in an effort to reduce diversity in practice in how certain transactions are classified within the statement of cash flows. This ASU is effective for us January 1, 2018 with early adoption permitted. Upon adoption, the ASU requires a retrospective application unless it is determined that it is impractical to do so in which case it must be retrospectively applied at the earliest date practical. Upon adoption, we do not anticipate significant changes to our existing accounting policies or presentation of the Statement of Cash Flows.

In October 2016, the FASB issued ASU 2016-16, "Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory," as part of the Board's simplification initiative aimed at reducing complexity in accounting standards. This ASU eliminates the current application of deferring the income tax effect of intra-entity asset transfers, other than inventory, until the transferred asset is sold to a third party or otherwise recovered through use and will require entities to recognize tax expense when the transfer occurs. The guidance will be effective for us on January 1, 2018 and interim periods within that reporting period; early adoption is permitted. The ASU requires a modified retrospective application with a cumulative-effect adjustment recorded in retained earnings as of the beginning of the period of adoption. We are currently assessing the impact of this ASU on our consolidated financial statements and footnote disclosures.

We elected to adopt ASU No. 2016-09, "Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting," as of January 1, 2016. ASU 2016-09, which was issued by the FASB in March 2016, simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The impact of the prospective adoption of the provisions related to the recognition of excess tax benefits in income tax expense was a $5 million income tax benefit during the year ended December 31, 2016. Additionally, as a result of the adoption of this accounting standard, excess tax benefits on share-based compensation have been reported as a component of operating cash rather than within financing cash flows as previously presented, while the payment of withholding taxes on the settlement of share-based awards has been reported as a component of financing cash flows rather than within operating cash flows as previously presented. The change in presentation of withholding taxes within the condensed consolidated statements of cash flows has been adopted retrospectively, thereby increasing operating cash flows and reducing financing cash flows by $17 million, $16 million, and $48 million for the years ended December 31, 2016, 2015 and 2014. The presentation of excess tax benefits on share-based compensation has been adjusted prospectively within the condensed consolidated statement of cash flows, increasing operating cash flow and decreasing financing cash flow by $6 million for the year ended December 31, 2016.

We adopted ASU No. 2015-03, "Interest-Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs," effective January 1, 2016. Under this guidance, debt issuance costs related to a recognized debt liability are required to be presented in the balance sheet as a direct reduction from the carrying amount of such debt liability, consistent with

debt discounts. The recognition and measurement guidance for debt issuance costs are not affected by this guidance. We retrospectively adopted ASU 2015-03 effective January 1, 2016. As a result, debt issuance costs which were previously capitalized in other assets in the condensed consolidated balance sheet have been presented as a reduction to long-term debt. As of December 31, 2016 and December 31, 2015, $25 million and $41 million of debt issuance costs, respectively, have been presented as a component of long-term debt.

Forward-Looking Statements

Except for historical matters, the matters discussed in this Form 10-K are forward-looking statements within the meaning of applicable federal securities law. These statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and generally include words such as "believes," "expects," "intends," "aims," "estimates" and similar expressions. We can give no assurance that any future results or events discussed in these statements will be achieved. Any forward-looking statements represent our views only as of today and should not be relied upon as representing our views as of any subsequent date. Readers are cautioned that such forward-looking statements are subject to a variety of risks and uncertainties that could cause our actual results to differ materially from the statements contained in this Form 10-K. Forward-looking statements include, but are not limited to, statements under the following headings: (1) "Business," about: (a) industry growth and demand, including opportunities resulting from such growth, (b) future product development and the demand for new products, (c) customer spending, (d) the impact of our strategy and focus areas, (e) the impact from the loss of key customers, (f) competitive position and our ability to maintain a leadership position in our core products, (g) increased competition, (h) the impact of regulatory matters, (i) the impact from the allocation and regulation of spectrum, particularly with respect to broadband spectrum, (j) the firmness of each segment's backlog, (k) the competitiveness of the patent portfolio, (l) the impact of research and development, (m) the availability of materials and components, energy supplies and labor, and (n) the seasonality of the business; (2) "Properties," about the sufficiency of our manufacturing capacity and the consequences of a disruption in manufacturing; (3) "Legal Proceedings," about the ultimate disposition of pending legal matters and timing; (4) "Management's Discussion and Analysis," about: (a) the impact of the GDCL acquisition on our business, (b) the expected efficiencies of reorganizing our R&D and SG&A functions, (c) market growth/contraction, demand, spending and resulting opportunities, (d) impact of foreign exchange rate fluctuations, (e) our continued ability to reduce our operating expenses, (f) the growth of our Services segment and the resulting impact on consolidated gross margin, (g) the increase in public safety LTE revenues, (h) the decline in iDEN, (i) the return of capital to shareholders through dividends and/or repurchasing shares, (j) our ability to invest in capital expenditures and R&D, (k) the success of our business strategy and portfolio, (l) future payments, charges, use of accruals and expected cost-saving and profitability benefits associated with our reorganization of business programs and employee separation costs, (m) our ability and cost to repatriate funds, (n) future cash contributions to pension plans or retiree health benefit plans, (o) the liquidity of our investments, (p) our ability and cost to access the capital markets, (q) our ability to borrow and the amount available under our credit facilities, (r) our ability to settle the principal amount of the Senior Convertible Notes in cash, (s) our ability and cost to obtain Performance Bonds, (t) adequacy of internal resources to fund expected working capital and capital expenditure measurements, (u) expected payments pursuant to commitments under long-term agreements, (v) the ability to meet minimum purchase obligations, (w) our ability to sell accounts receivable and the terms and amounts of such sales, (x) the outcome and effect of ongoing and future legal proceedings, (y) the impact of the loss of key customers, and (z) the expected effective tax rate and deductibility of certain items; and (5) "Quantitative and Qualitative Disclosures about Market Risk," about: (a) the impact of foreign currency exchange risks, (b) future hedging activity and expectations of the Company, and (c) the ability of counterparties to financial instruments to perform their obligations.

Some of the risk factors that affect our business and financial results are discussed in "Item 1A: Risk Factors." We caution the reader that the risk factors discussed in "Item 1A: Risk Factors," and those described elsewhere in this report or in our other Securities and Exchange Commission filings, could cause our actual results to differ materially from those stated in the forward-looking statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

As of December 31, 2016, we have $4.4 billion of long-term debt, including the current portion of long-term debt, which is primarily priced at long-term, fixed interest rates. Of this total long-term debt amount, a $16 million Euro-denominated variable interest loan has a hedge that changes the interest rate characteristics from variable to fixed-rate. A hypothetical unfavorable movement of 10% in the interest rates would have an immaterial impact on the hedge's fair value.

Foreign Currency Risk

We use financial instruments to reduce our overall exposure to the effects of currency fluctuations on cash flows. Our policy prohibits speculation in financial instruments for profit on exchange rate price fluctuations, trading in currencies for which there are no underlying exposures, or entering into transactions for any currency to intentionally increase the underlying exposure. Instruments that are designated as part of a hedging relationship must be effective at reducing the risk associated with the exposure being hedged and are designated as part of a hedging relationship at the inception of the contract. Accordingly, changes in the market values of hedge instruments must be highly correlated with changes in market values of the underlying hedged items both at the inception of the hedge and over the life of the hedge contract.

Our strategy related to foreign exchange exposure management is to offset the gains or losses on the financial instruments against losses or gains on the underlying operational cash flows or investments based on our assessment of risk. We enter into derivative contracts for some of our non-functional currency cash, receivables, and payables, which are primarily

denominated in major currencies that can be traded on open markets. We typically use forward contracts and options to hedge these currency exposures. In addition, we enter into derivative contracts for some forecasted transactions, which are designated as part of a hedging relationship if it is determined that the transaction qualifies for hedge accounting under the provisions of the authoritative accounting guidance for derivative instruments and hedging activities. A portion of our exposure is from currencies that are not traded in liquid markets and these are addressed, to the extent reasonably possible, by managing net asset positions, product pricing and component sourcing.

At December 31, 2016, we had outstanding foreign exchange contracts totaling $717 million, compared to $494 million outstanding at December 31, 2015. Management does not believe these financial instruments should subject it to undue risk due to foreign exchange movements because gains and losses on these contracts should generally offset gains and losses on the underlying assets, liabilities and transactions.

The following table shows the five largest net notional amounts of the positions to buy or sell foreign currency as of December 31, 2016 and the corresponding positions as of December 31, 2015:

	Notional Amount	
Net Buy (Sell) by Currency	**2016**	2015
British Pound	**$ 246**	$ 62
Euro	**122**	99
Chinese Renminbi	**(108)**	(114)
Brazilian Real	**(56)**	(44)
Australian Dollar	**(51)**	(60)

Foreign exchange financial instruments that are subject to the effects of currency fluctuations, which may affect reported earnings, include derivative financial instruments and other monetary assets and liabilities denominated in a currency other than the functional currency of the legal entity holding the instrument. Derivative financial instruments consist primarily of currency forward contracts and options. Other monetary assets and liabilities denominated in a currency other than the functional currency of the legal entity consist primarily of cash, cash equivalents, short-term investments, as well as accounts payable and receivable. Accounts payable and receivable are reflected at fair value in the financial statements. Assuming the amounts of the outstanding foreign exchange contracts represent our underlying foreign exchange risk related to monetary assets and liabilities, a hypothetical unfavorable 10% movement in the foreign exchange rates, from current levels, would reduce the value of those monetary assets and liabilities by approximately $73 million. Our market risk calculation represents an estimate of reasonably possible net losses that would be recognized assuming hypothetical 10% movements in future currency market pricing and is not necessarily indicative of actual results, which may or may not occur. It does not represent the maximum possible loss or any expected loss that may occur, since actual future gains and losses will differ from those estimated, based upon, among other things, actual fluctuation in market rates, operating exposures, and the timing thereof. We believe, however, that any such loss incurred would be offset by the effects of market rate movements on the respective underlying derivative financial instruments transactions. The foreign exchange financial instruments are held for purposes other than trading.

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Item 8: Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

Motorola Solutions, Inc.:

We have audited the accompanying consolidated balance sheets of Motorola Solutions, Inc. and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Motorola Solutions, Inc. and Subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Motorola Solutions, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 21, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

KPMG LLP

Chicago, Illinois

February 21, 2017

Consolidated Statements of Operations

(In millions, except per share amounts)	*Years ended December 31* 2016	2015	2014
Net sales from products	$ 3,649	$ 3,676	$ 3,807
Net sales from services	2,389	2,019	2,074
Net sales	6,038	5,695	5,881
Costs of products sales	1,649	1,625	1,678
Costs of services sales	1,520	1,351	1,372
Costs of sales	3,169	2,976	3,050
Gross margin	2,869	2,719	2,831
Selling, general and administrative expenses	1,000	1,021	1,184
Research and development expenditures	553	620	681
Other charges	249	84	1,972
Operating earnings (loss)	1,067	994	(1,006)
Other income (expense):			
Interest expense, net	(205)	(173)	(126)
Gains (losses) on sales of investments and businesses, net	(6)	107	5
Other	(12)	(11)	(34)
Total other expense	(223)	(77)	(155)
Earnings (loss) from continuing operations before income taxes	844	917	(1,161)
Income tax expense (benefit)	282	274	(465)
Earnings (loss) from continuing operations	562	643	(696)
Earnings (loss) from discontinued operations, net of tax	—	(30)	1,996
Net earnings	562	613	1,300
Less: Earnings attributable to noncontrolling interests	2	3	1
Net earnings attributable to Motorola Solutions, Inc.	$ 560	$ 610	$ 1,299
Amounts attributable to Motorola Solutions, Inc. common stockholders:			
Earnings (loss) from continuing operations, net of tax	$ 560	$ 640	$ (697)
Earnings (loss) from discontinued operations, net of tax	—	(30)	1,996
Net earnings attributable to Motorola Solutions, Inc.	$ 560	$ 610	$ 1,299
Earnings (loss) per common share:			
Basic:			
Continuing operations	$ 3.30	$ 3.21	$ (2.84)
Discontinued operations	—	(0.15)	8.13
	$ 3.30	$ 3.06	$ 5.29
Diluted:			
Continuing operations	$ 3.24	$ 3.17	$ (2.84)
Discontinued operations	—	(0.15)	8.13
	$ 3.24	$ 3.02	$ 5.29
Weighted average common shares outstanding:			
Basic	169.6	199.6	245.6
Diluted	173.1	201.8	245.6
Dividends declared per share	$ 1.70	$ 1.43	$ 1.30

See accompanying notes to consolidated financial statements.

Consolidated Statements of Comprehensive Income

(In millions)	*Years ended December 31*		
	2016	2015	2014
Net earnings	**$ 562**	$ 613	$ 1,300
Other comprehensive income (loss), net of tax (Note 3):			
Foreign currency translation adjustments	**(228)**	(62)	(108)
Derivative instruments	**—**	—	1
Marketable securities	**3**	(47)	46
Defined benefit plans	**(226)**	98	493
Total other comprehensive income (loss), net of tax	**(451)**	(11)	432
Comprehensive income	**111**	602	1,732
Less: Earnings attributable to noncontrolling interest	**2**	3	1
Comprehensive income attributable to Motorola Solutions, Inc. common shareholders	**$ 109**	$ 599	$ 1,731

See accompanying notes to consolidated financial statements.

Consolidated Balance Sheets

(In millions, except par value)	*December 31* 2016	2015
ASSETS		
Cash and cash equivalents	**$ 1,030**	$ 1,980
Accounts receivable, net	**1,410**	1,362
Inventories, net	**273**	296
Other current assets	**755**	954
Current assets held for disposition	**—**	27
Total current assets	**3,468**	4,619
Property, plant and equipment, net	**789**	487
Investments	**238**	231
Deferred income taxes	**2,219**	2,278
Goodwill	**728**	420
Other assets	**1,021**	271
Non-current assets held for disposition	**—**	40
Total assets	**$ 8,463**	$ 8,346
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current portion of long-term debt	**$ 4**	$ 4
Accounts payable	**553**	518
Accrued liabilities	**2,111**	1,671
Total current liabilities	**2,668**	2,193
Long-term debt	**4,392**	4,345
Other liabilities	**2,355**	1,904
Stockholders' Equity		
Preferred stock, $100 par value	**—**	—
Common stock, $.01 par value:	**2**	2
Authorized shares: 600.0		
Issued shares: 12/31/16—165.5; 12/31/15—174.5		
Outstanding shares: 12/31/16—164.7; 12/31/15—174.3		
Additional paid-in capital	**203**	42
Retained earnings	**1,148**	1,716
Accumulated other comprehensive loss	**(2,317)**	(1,866)
Total Motorola Solutions, Inc. stockholders' equity (deficit)	**(964)**	(106)
Noncontrolling interests	**12**	10
Total stockholders' equity (deficit)	**(952)**	(96)
Total liabilities and stockholders' equity	**$ 8,463**	$ 8,346

See accompanying notes to consolidated financial statements.

Consolidated Statements of Stockholders' Equity

(In millions, except per share amounts)	*Shares*	*Common Stock and Additional Paid-in Capital*	*Accumulated Other Comprehensive Income (Loss)*	*Retained Earnings*	*Noncontrolling Interests*
Balance as of January 1, 2014	**255.5**	**$ 3,521**	**$ (2,287)**	**$ 2,425**	**$ 30**
Net earnings				1,299	1
Other comprehensive income			432		
Issuance of common stock and stock options exercised	4.4	86			
Share repurchase program	(39.4)	(2,546)			
Excess tax benefit from share-based compensation		5			
Share-based compensation expense		114			
Dividends declared				(314)	
Balance as of December 31, 2014	**220.5**	**$ 1,180**	**$ (1,855)**	**$ 3,410**	**$ 31**
Net earnings				610	3
Other comprehensive loss			(11)		
Issuance of common stock and stock options exercised	2	80			
Share repurchase program	(48)	(1,147)		(2,030)	
Tax shortfalls from share-based compensation		(155)			
Sale of controlling interest in subsidiary common stock					(24)
Share-based compensation expense		78			
Dividends declared				(274)	
Equity component of Senior Convertible Notes		8			
Balance as of December 31, 2015	**174.5**	**$ 44**	**$ (1,866)**	**$ 1,716**	**$ 10**
Net earnings				560	2
Other comprehensive loss			(451)		
Issuance of common stock and stock options exercised	3	93			
Share repurchase program	(12)			(842)	
Share-based compensation expense		68			
Dividends declared				(286)	
Balance as of December 31, 2016	**165.5**	**$ 205**	**$ (2,317)**	**$ 1,148**	**$ 12**

See accompanying notes to consolidated financial statements.

Consolidated Statements of Cash Flows

(In millions)	*Years ended December 31* 2016	2015	2014
Operating			
Net earnings attributable to Motorola Solutions, Inc.	$ 560	$ 610	$ 1,299
Earnings attributable to noncontrolling interests	2	3	1
Net earnings	562	613	1,300
Earnings (loss) from discontinued operations, net of tax	—	(30)	1,996
Earnings (loss) from continuing operations, net of tax	562	643	(696)
Adjustments to reconcile earnings (loss) from continuing operations to net cash provided by operating activities:			
Depreciation and amortization	295	150	173
Non-cash other charges	54	52	—
Non-U.S. pension curtailment gain	—	(32)	—
Loss on pension plan settlement	26	—	1,883
Gain on sale of building and land	—	—	(21)
Share-based compensation expense	68	78	94
Loss (gains) on sales of investments and businesses, net	6	(107)	(5)
Loss from the extinguishment of long-term debt	2	—	37
Deferred income taxes	213	160	(557)
Changes in assets and liabilities, net of effects of acquisitions, dispositions, and foreign currency translation adjustments:			
Accounts receivable	(6)	21	(62)
Inventories	6	16	(5)
Other current assets	(185)	92	(47)
Accounts payable and accrued liabilities	241	26	(72)
Other assets and liabilities	(117)	(78)	(1,359)
Net cash provided by (used for) operating activities from continuing operations	1,165	1,021	(637)
Investing			
Acquisitions and investments, net	(1,474)	(586)	(47)
Proceeds from sales of investments and businesses, net	670	230	3,403
Capital expenditures	(271)	(175)	(181)
Proceeds from sales of property, plant and equipment	73	3	33
Net cash provided by (used for) investing activities from continuing operations	(1,002)	(528)	3,208
Financing			
Repayment of debt	(686)	(4)	(465)
Net proceeds from issuance of debt	673	971	1,375
Issuance of common stock	93	84	87
Purchase of common stock	(842)	(3,177)	(2,546)
Excess tax benefit from share-based compensation	—	5	11
Payment of dividends	(280)	(277)	(318)
Distributions from discontinued operations	—	—	93
Net cash used for financing activities from continuing operations	(1,042)	(2,398)	(1,763)
Discontinued Operations			
Net cash provided by operating activities from discontinued operations	—	—	95
Net cash provided by investing activities from discontinued operations	—	—	4
Net cash used for financing activities from discontinued operations	—	—	(93)
Effect of exchange rate changes on cash and cash equivalents from discontinued operations	—	—	(6)
Net cash provided by discontinued operations	—	—	—
Effect of exchange rate changes on cash and cash equivalents from continuing operations	(71)	(69)	(79)
Net increase (decrease) in cash and cash equivalents	(950)	(1,974)	729
Cash and cash equivalents, beginning of period	1,980	3,954	3,225
Cash and cash equivalents, end of period	$ 1,030	$ 1,980	$ 3,954
Supplemental Cash Flow Information			
Cash paid during the period for:			
Interest, net	$ 191	$ 163	$ 128
Income and withholding taxes, net of refunds	66	105	105

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

(Dollars in millions, except as noted)

1. Summary of Significant Accounting Policies

Principles of Consolidation: The consolidated financial statements include the accounts of Motorola Solutions, Inc. (the "Company" or "Motorola Solutions") and all controlled subsidiaries. All intercompany transactions and balances have been eliminated.

The consolidated financial statements as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014, include, in the opinion of management, all adjustments (consisting of normal recurring adjustments and reclassifications) necessary to present fairly the Company's consolidated financial position, results of operations, statements of comprehensive income, and statements of stockholders' equity and cash flows for all periods presented.

Use of Estimates: The preparation of financial statements in conformity with United States ("U.S.") Generally Accepted Accounting Principles ("GAAP") requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

Revenue Recognition: Net sales consist of a wide range of activities including the delivery of stand-alone equipment or services, custom design and installation over a period of time, and bundled sales of equipment, software and services. The Company enters into revenue arrangements that may consist of multiple deliverables of its products and services due to the needs of its customers. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collectability of the sales price is reasonably assured. The Company recognizes revenue from the sale of equipment, equipment containing both software and nonsoftware components that function together to deliver the equipment's essential functionality, and services in accordance with general revenue recognition accounting principles. The Company recognizes revenue in accordance with software accounting guidance for the following types of sales transactions: (i) stand alone sales of software products or software upgrades, (ii) stand alone sales of software maintenance agreements, and (iii) sales of software bundled with equipment where the software is not essential to the functionality of that equipment.

Products

For equipment sales, in addition to the criteria mentioned above, revenue recognition occurs when title and risk of loss has transferred to the customer, objective evidence exists that customer acceptance provisions have been met, no significant obligations remain and allowances for discounts, price protection, returns and customer incentives can be reliably estimated. Recorded revenues are reduced by these allowances. The Company bases its estimates of these allowances on historical experience taking into consideration the type of products sold, the type of customer, and the specific type of transaction in each arrangement. Where customer incentives cannot be reliably estimated, the Company defers revenue until the incentive has been finalized with the customer. The Company includes shipping charges billed to customers in net revenue, and includes the related shipping costs in cost of sales.

The Company sells software and equipment obtained from other companies. The Company establishes its own pricing and retains related inventory risk, is the primary obligor in sales transactions with customers, and assumes the credit risk for amounts billed to customers. Accordingly, the Company generally recognizes revenue for the sale of products obtained from other companies based on the gross amount billed.

Long-Term Contracts

For long-term contracts that involve customization of equipment and/or software, the Company generally recognizes revenue using the percentage of completion method based on the percentage of costs incurred to date compared to the total estimated costs to complete the contract ("Estimated Costs at Completion"). The components of estimated costs to complete a contract and management's process for reviewing Estimated Costs at Completion and progress toward completion are discussed further below. Contracts may be combined or segmented in accordance with the applicable criteria under contract accounting principles. In certain instances, when revenues or costs associated with long-term contracts cannot be reliably estimated or the contract contains other inherent uncertainties, revenues and costs are deferred until the project is complete and customer acceptance is obtained.

Total Estimated Costs at Completion include direct labor, material and subcontracting costs. Due to the nature of the work required to be performed under many of the Company's long-term contracts, determining Estimated Costs at Completion is complex and subject to many variables. The Company has a standard and disciplined quarterly Estimated Costs at Completion process in which management reviews the progress and performance of open contracts. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion, the project schedule, identified risks and opportunities, and the related changes in estimates of revenues and costs. The risks and opportunities include management's judgment about the ability and cost to achieve the project schedule, technical requirements, and other contract requirements. Management must make assumptions and estimates regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, and performance by subcontractors, among other variables. Based on this analysis, any quarterly adjustments to net sales, cost of sales, and the related impact to operating income are recorded as necessary in the period they become known. These adjustments may result from positive project performance, and may result in an increase in operating income during the performance of individual contracts. Likewise, these

adjustments may result in a decrease in operating income if Estimated Costs at Completion increase. Changes in estimates of net sales or cost of sales could affect the profitability of one or more of our contracts. The impact on Operating earnings as a result of changes in Estimated Costs at Completion was not significant for the years 2016, 2015, and 2014. When estimates of total costs to be incurred on a contract exceed total estimates of revenue to be earned, a provision for the entire loss on the contract is recorded in the period the loss is determined.

Hardware and Software Services Support

Revenue under equipment and software maintenance agreements, which do not contain specified future software upgrades, is recognized ratably over the contract term.

Software and Licenses

Revenue from pre-paid perpetual licenses is recognized at the inception of the arrangement, presuming all other revenue recognition criteria are met. Revenue from non-perpetual licenses or term licenses is recognized ratably over the period of the license.

Multiple-Element Arrangements

Arrangements with customers may include multiple deliverables, including any combination of products, services and software. These multiple-element arrangements could also include an element accounted for as a long-term contract coupled with other products, services and software. For multiple-element arrangements that include products containing software that functions together with the equipment to deliver its essential functionality, undelivered software elements that relate to the product's essential software, and undelivered non-software services deliverables are separated into more than one unit of accounting when: (i) the delivered element(s) have value to the customer on a stand-alone basis and (ii) delivery of the undelivered element(s) is probable and substantially in the control of the Company.

In these arrangements, the Company allocates revenue to all deliverables based on their relative selling prices. The Company uses the following hierarchy to determine the selling price to be used for allocating revenue to deliverables: (i) vendor-specific objective evidence ("VSOE") of fair value, (ii) third-party evidence ("TPE") of selling price, and (iii) best estimate of selling price ("ESP").

The Company determines VSOE based on its normal pricing and discounting practices for the specific product or service when that same product or service is sold separately. In determining VSOE, the Company requires that a substantial majority of the selling prices for a product or service fall within a reasonably narrow pricing range, generally evidenced by the pricing rates of approximately 80% of such historical stand-alone transactions falling within plus or minus 15% of the median rate.

When VSOE does not exist, the Company attempts to determine TPE based on competitor prices for similar deliverables when sold separately. Generally, the Company's go-to-market strategy for many of its products differs from that of its competitors and its offerings contain a significant level of customization and differentiation such that the comparable pricing of products with similar functionality sold by other companies cannot be obtained. Furthermore, the Company is unable to reliably determine what similar competitor products' selling prices are on a stand-alone basis. Therefore, the Company is typically not able to determine TPE.

When both VSOE and TPE are unavailable, the Company uses ESP. The Company determines ESP by: (i) collecting all reasonably available data points including sales, cost and margin analysis of the product, and other inputs based on its normal pricing and discounting practices, (ii) making any reasonably required adjustments to the data based on market and Company-specific factors, and (iii) stratifying the data points, when appropriate, based on customer, magnitude of the transaction and sales volume.

The Company also considers the geographies in which the products or services are sold, major product and service groups, customer classification, and other environmental or marketing variables in determining VSOE, TPE, and ESP.

Once elements of an arrangement are separated into more than one unit of accounting, revenue is recognized for each separate unit of accounting based on the nature of the revenue as described above.

The Company's arrangements with multiple deliverables may also contain one or more software deliverables that are subject to software revenue recognition guidance. The revenue for these multiple-element arrangements is allocated to the software deliverable(s) and the non-software deliverable(s) based on the relative selling prices of all of the deliverables in the arrangement using the fair value hierarchy outlined above. In circumstances where the Company cannot determine VSOE or TPE of the selling price for any of the deliverables in the arrangement, ESP is used for the purpose of allocating the arrangement consideration between software and non-software deliverables.

The Company allocates arrangement consideration to multiple software or software-related deliverables, including the sale of software upgrades or software support agreements to previously sold software, in accordance with software accounting guidance. For such arrangements, revenue is allocated to the deliverables based on the relative fair value of each element, and fair value is determined using VSOE. Where VSOE does not exist for the undelivered software element, revenue is deferred until either the undelivered element is delivered or VSOE is established, whichever occurs first. When the final undelivered software element is post contract support, service revenue is recognized on a ratable basis over the remaining service period. When VSOE of a delivered element has not been established, but VSOE exists for the undelivered elements, the Company uses the residual method to recognize revenue when the fair value of all undelivered elements is determinable. Under the residual method, the fair value of the undelivered elements is deferred and the remaining portion of the arrangement consideration is allocated to the delivered elements and is recognized as revenue.

Cash Equivalents: The Company considers all highly-liquid investments purchased with an original maturity of three months or less to be cash equivalents. Restricted cash was $63 million at both December 31, 2016 and December 31, 2015.

Investments: Investments in equity and debt securities classified as available-for-sale are carried at fair value. When applicable, debt securities classified as held-to-maturity are carried at amortized cost. Equity securities that are restricted for more than one year or that are not publicly traded are carried at cost. Certain investments are accounted for using the equity method if the Company has significant influence over the issuing entity.

The Company assesses declines in the fair value of investments to determine whether such declines are other-than-temporary. This assessment is made considering all available evidence, including changes in general market conditions, specific industry and individual company data, the length of time and the extent to which the fair value has been less than cost, the financial condition and the near-term prospects of the entity issuing the security, and the Company's ability and intent to hold the investment until recovery. Other-than-temporary impairments of investments are recorded to Other within Other income (expense) in the Company's consolidated statements of operations in the period in which they become impaired.

Inventories: Inventories are valued at the lower of average cost (which approximates cost on a first-in, first-out basis) or market (net realizable value or replacement cost).

Property, Plant and Equipment: Property, plant and equipment are stated at cost less accumulated depreciation. Depreciation is recorded on a straight-line basis, based on the estimated useful lives of the assets (buildings and building equipment, five to forty years; machinery and equipment, two to ten years) and commences once the assets are ready for their intended use.

Goodwill and Intangible Assets: Goodwill is assessed for impairment at least annually at the reporting unit level. The Company performs its annual assessment of goodwill for impairment in the fourth quarter of each fiscal year. The annual assessment is performed using the two-step goodwill test which may also include the optional qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount prior to performing the two-step goodwill impairment test. If this is the case, the two-step goodwill impairment test is required. If it is more-likely-than-not that the fair value of a reporting unit is greater than its carrying amount, the two-step goodwill impairment test is not required.

If the two-step goodwill impairment test is performed, first, the fair value of each reporting unit is compared to its book value. Second, if the fair value of the reporting unit is less than its book value, the Company performs a hypothetical purchase price allocation based on the reporting unit's fair value to determine the fair value of the reporting unit's goodwill. Fair value is determined using a combination of present value techniques and market prices of comparable businesses.

Intangible assets are amortized on a straight line basis over their respective estimated useful lives ranging from one to ten years. The Company has no intangible assets with indefinite useful lives.

Impairment of Long-Lived Assets: Long-lived assets, which include intangible assets, held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of assets may not be recoverable. The Company evaluates recoverability of assets to be held and used by comparing the carrying amount of an asset (group) to future net undiscounted cash flows to be generated by the asset (group). If an asset (group) is considered to be impaired, the impairment to be recognized is equal to the amount by which the carrying amount of the asset (group) exceeds the asset's (group's) fair value calculated using a discounted future cash flows analysis or market comparable analysis. Assets held for sale, if any, are reported at the lower of the carrying amount or fair value less cost to sell.

Income Taxes: The Company records deferred income tax assets and liabilities based on the estimated future tax effects of differences between the financial and tax bases of assets and liabilities based on currently enacted tax laws. The Company's deferred and other tax balances are based on management's interpretation of the tax regulations and rulings in numerous tax jurisdictions. Income tax expense and liabilities recognized by the Company also reflect its best estimates and assumptions regarding, among other things, the level of future taxable income, the effect of the Company's various tax planning strategies, and uncertain tax positions. Future tax authority rulings and changes in tax laws, changes in projected levels of taxable income, and future tax planning strategies could affect the actual effective tax rate and tax balances recorded by the Company.

Sales and Use Taxes: The Company records taxes imposed on revenue-producing transactions, including sales, use, value added and excise taxes, on a net basis with such taxes excluded from revenue.

Long-term Receivables: Long-term receivables include trade receivables where contractual terms of the note agreement are greater than one year. Long-term receivables are considered impaired when management determines collection of all amounts due according to the contractual terms of the note agreement, including principal and interest, is no longer probable. Impaired long-term receivables are valued based on the present value of expected future cash flows discounted at the receivable's effective interest rate, or the fair value of the collateral if the receivable is collateral dependent. Interest income and late fees on impaired long-term receivables are recognized only when payments are received. Previously impaired long-term receivables are no longer considered impaired and are reclassified to performing when they have performed under a workout or restructuring for four consecutive quarters.

Foreign Currency: Certain of the Company's non-U.S. operations use their respective local currency as their functional currency. Those operations that do not have the U.S. dollar as their functional currency translate assets and liabilities at current rates of exchange in effect at the balance sheet date and revenues and expenses using rates that approximate those

in effect during the period. The resulting translation adjustments are included as a component of Accumulated other comprehensive income (loss) in the Company's consolidated balance sheets. For those operations that have the U.S. dollar as their functional currency, transactions denominated in the local currency are measured in U.S. dollars using the current rates of exchange for monetary assets and liabilities and historical rates of exchange for nonmonetary assets. Gains and losses from remeasurement of monetary assets and liabilities are included in Other within Other income (expense) within the Company's consolidated statements of operations.

Derivative Instruments: Gains and losses on hedges of existing assets or liabilities are marked-to-market and the result is included in Other within Other income (expense) within the Company's consolidated statements of operations. Certain financial instruments are used to hedge firm future commitments or forecasted transactions. Gains and losses pertaining to those instruments that qualify for hedge accounting are deferred until such time as the underlying transactions are recognized and subsequently recognized in the same line within the consolidated statements of operations as the hedged item. Gains and losses pertaining to those instruments that do not qualify for hedge accounting are recorded immediately in Other income (expense) within the consolidated statements of operations.

Earnings Per Share: The Company calculates its basic earnings (loss) per share based on the weighted-average number of common shares issued and outstanding. Net earnings (loss) attributable to Motorola Solutions, Inc. is divided by the weighted average common shares outstanding during the period to arrive at the basic earnings (loss) per share. Diluted earnings (loss) per share is calculated by dividing net earnings (loss) attributable to Motorola Solutions, Inc. by the sum of the weighted average number of common shares used in the basic earnings (loss) per share calculation and the weighted average number of common shares that would be issued assuming exercise or conversion of all potentially dilutive securities, excluding those securities that would be anti-dilutive to the earnings (loss) per share calculation. Both basic and diluted earnings (loss) per share amounts are calculated for earnings (loss) from continuing operations and net earnings attributable to Motorola Solutions, Inc. for all periods presented.

Share-Based Compensation Costs: The Company grants share-based compensation awards and offers an employee stock purchase plan. The amount of compensation cost for these share-based awards is generally measured based on the fair value of the awards as of the date that the share-based awards are issued and adjusted to the estimated number of awards that are expected to vest. The fair values of stock options and stock appreciation rights are generally determined using a Black-Scholes option pricing model which incorporates assumptions about expected volatility, risk free rate, dividend yield, and expected life. Performance based stock options, performance-contingent stock options, and market stock units vest based on market conditions and are therefore measured under a Monte Carlo simulation in order to simulate a range of possible future unit prices for Motorola Solutions over the performance period. Compensation cost for share-based awards is recognized on a straight-line basis over the vesting period.

Retirement Benefits: The Company records annual expenses relating to its pension benefit and postretirement plans based on calculations which include various actuarial assumptions, including discount rates, assumed asset rates of return, compensation increases, and turnover rates. The Company reviews its actuarial assumptions on an annual basis and makes modifications to the assumptions based on current rates and trends. The effects of the gains, losses, and prior service costs and credits are amortized either over the average service life or over the average remaining lifetime of the participants, depending on the number of active employees in the plan. The funded status, or projected benefit obligation less plan assets, for each plan, is reflected in the Company's consolidated balance sheets using a December 31 measurement date.

Recent Accounting Pronouncements: In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers." This new standard will replace most existing revenue recognition guidance in U.S. GAAP. The core principle of the ASU is the recognition of revenue for the transfer of goods or services equal to the amount an entity expects to receive for those goods and services. This ASU requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and estimates and changes in those estimates. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers: Deferral of the Effective Date" that delayed the effective date of ASU 2014-09 by one year to January 1, 2018, as the Company's annual reporting period begins after December 15, 2017.

The Company has begun to analyze the impact of the new standard on its financial results based on an inventory of the Company's current contracts with customers. The Company has obtained an understanding of the new standard and currently believes that it will retain much of the same accounting treatment as used to recognize revenue under current standards. Revenue on a significant portion of its contracts is currently recognized under percentage of completion accounting, applying a cost-to-cost method. Under the new standard the Company will continue to recognize revenue on these contracts using a cost-to-cost method based on the continuous transfer of control to the customer over time. Transfer of control in the Company's contracts is demonstrated by creating a customized asset for customers, in conjunction with contract terms which provide the right to receive payment for goods and services.

In addition, the standard may generally cause issuers to accelerate revenue recognition in contracts which were previously limited by software revenue recognition rules. While the Company may have contracts which fall under these accounting rules in the current standard, it has not historically deferred significant amounts of revenue under these rules as many arrangements are single-element software arrangements or sales of software with a tangible product which falls out of the scope of the current software rules. Based on the contracts currently in place, the Company does not anticipate a significant acceleration of revenue upon applying the new standard to its current contracts under these fact patterns.

The Company continues to evaluate the impact of ASU No. 2014-09 on our financial results and prepare for the adoption of the standard on January 1, 2018, including readying its internal processes and control environment for new requirements, particularly around enhanced disclosures, under the new standard. The standard allows for both retrospective and modified retrospective methods of adoption. The Company is in the process of determining the method of adoption it will elect and the impact on our consolidated financial statements and footnote disclosures, and will continue to provide enhanced disclosures as we continue our assessment.

In February 2016, the FASB issued ASU No. 2016-02, "Leases," which amends existing guidance to require lessees to recognize assets and liabilities on the balance sheet for the rights and obligations created by long-term leases and to disclose additional quantitative and qualitative information about leasing arrangements. The ASU is effective for the Company January 1, 2019 and interim periods within that reporting period. The ASU requires a modified retrospective method upon adoption. The Company is in the process of assessing the impact of this ASU on its consolidated financial statements and footnote disclosures.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230) - Classification of Certain Cash Receipts and Cash Payments," which clarifies eight specific cash flow issues in an effort to reduce diversity in practice in how certain transactions are classified within the statement of cash flows. This ASU is effective for the Company January 1, 2018 with early adoption permitted. Upon adoption, the ASU requires a retrospective application unless it is determined that it is impractical to do so in which case it must be retrospectively applied at the earliest date practical. Upon adoption, the Company does not anticipate significant changes to the Company's existing accounting policies or presentation of the Statement of Cash Flows.

In October 2016, the FASB issued ASU 2016-16, "Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory," as part of the Board's simplification initiative aimed at reducing complexity in accounting standards. This ASU eliminates the current application of deferring the income tax effect of intra-entity asset transfers, other than inventory, until the transferred asset is sold to a third party or otherwise recovered through use and will require entities to recognize tax expense when the transfer occurs. The guidance will be effective for the Company on January 1, 2018 and interim periods within that reporting period; early adoption is permitted. The ASU requires a modified retrospective application with a cumulative-effect adjustment recorded in retained earnings as of the beginning of the period of adoption. The Company is currently assessing the impact of this ASU on its consolidated financial statements and footnote disclosures.

The Company elected to adopt ASU No. 2016-09, "Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting," as of January 1, 2016. ASU 2016-09, which was issued by the FASB in March 2016, simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The impact of the prospective adoption of the provisions related to the recognition of excess tax benefits in income tax expense was a $5 million income tax benefit during the year ended December 31, 2016. Additionally, as a result of the adoption of this accounting standard, excess tax benefits on share-based compensation have been reported as a component of operating cash rather than within financing cash flows as previously presented, while the payment of withholding taxes on the settlement of share-based awards has been reported as a component of financing cash flows rather than within operating cash flows as previously presented. The change in presentation of withholding taxes within the condensed consolidated statements of cash flows has been adopted retrospectively, thereby increasing operating cash flows and reducing financing cash flows by $17 million, $16 million, and $48 million for the years ended December 31, 2016, 2015 and 2014. The presentation of excess tax benefits on share-based compensation has been adjusted prospectively within the condensed consolidated statement of cash flows, increasing operating cash flow and decreasing financing cash flow by $6 million for the year ended December 31, 2016.

The Company adopted ASU No. 2015-03, "Interest-Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs," effective January 1, 2016. Under this guidance, debt issuance costs related to a recognized debt liability are required to be presented in the balance sheet as a direct reduction from the carrying amount of such debt liability, consistent with debt discounts. The recognition and measurement guidance for debt issuance costs are not affected by this guidance. The Company retrospectively adopted ASU 2015-03 effective January 1, 2016. As a result, debt issuance costs which were previously capitalized in other assets in the condensed consolidated balance sheet have been presented as a reduction to long-term debt. As of December 31, 2016 and December 31, 2015, $25 million and $41 million of debt issuance costs, respectively, have been presented as a component of long-term debt.

2. Discontinued Operations

On October 27, 2014, the Company completed the sale of its Enterprise business to Zebra Technologies Corporation ("Zebra") for $3.45 billion in cash. Certain assets of the Enterprise business were excluded from the transaction and retained by the Company, including the Company's iDEN business. The historical financial results of the Enterprise business, excluding those assets and liabilities retained in the transaction, are reflected in the Company's consolidated financial statements and footnotes as discontinued operations for all periods presented.

The following table displays summarized activity in the Company's consolidated statements of operations for discontinued operations during the years ended 2015 and 2014.

Years ended December 31	2015	2014
Net sales	$ —	$ 1,904
Operating earnings	—	203
Gains (losses) on sales of investments and businesses, net	(24)	1,888
Earnings (loss) before income taxes	(24)	2,074
Income tax expense	6	78
Earnings (loss) from discontinued operations, net of tax	(30)	1,996

During the year ended December 31, 2016 the Company recognized no earnings from discontinued operations.

3. Other Financial Data

Statement of Operations Information

Other Charges (Income)

Other charges (income) included in Operating earnings (loss) consist of the following:

Years ended December 31	**2016**	2015	2014
Other charges (income):			
Intangibles amortization	$ **113**	$ 8	$ 4
Reorganization of businesses	**77**	71	64
Legal settlement	**—**	—	8
Building impairment	**17**	6	—
Non-U.S. pension curtailment gain	**—**	(32)	—
Settlement of pension plan	**26**	—	1,917
Impairment of corporate aircraft	**3**	31	—
Gain on sale of building and land	**—**	—	(21)
Acquisition-related transaction fees	$ **13**	$ —	$ —
	$ **249**	$ 84	$ 1,972

Other Income (Expense)

Interest expense, net, and Other both included in Other income (expense) consist of the following:

Years ended December 31	**2016**	2015	2014
Interest expense, net:			
Interest expense	$ (225)	$ (186)	$ (147)
Interest income	20	13	21
	$ (205)	$ (173)	$ (126)
Other:			
Loss from the extinguishment of long-term debt	$ (2)	$ —	$ (37)
Investment impairments	(4)	(6)	—
Foreign currency gain (loss)	46	(23)	(3)
Gain (loss) on derivative instruments	(56)	7	(4)
Gains on equity method investments	5	6	16
Realized foreign currency loss on acquisition	(10)	—	—
Other	9	5	(6)
	$ (12)	$ (11)	$ (34)

Earnings Per Common Share

Basic and diluted earnings per common share from both continuing operations and net earnings attributable to Motorola Solutions, Inc. is computed as follows:

	Amounts attributable to Motorola Solutions, Inc. common stockholders					
	Earnings (loss) from Continuing Operations			*Net Earnings*		
Years ended December 31	**2016**	2015	2014	**2016**	2015	2014
Basic earnings per common share:						
Earnings (loss)	$ **560**	$ 640	$ (697)	$ **560**	$ 610	$ 1,299
Weighted average common shares outstanding	**169.6**	199.6	245.6	**169.6**	199.6	245.6
Per share amount	$ **3.30**	$ 3.21	$ (2.84)	$ **3.30**	$ 3.06	$ 5.29
Diluted earnings per common share:						
Earnings (loss)	$ **560**	$ 640	$ (697)	$ **560**	$ 610	$ 1,299
Weighted average common shares outstanding	**169.6**	199.6	245.6	**169.6**	199.6	245.6
Add effect of dilutive securities:						
Share-based awards	**2.7**	2.1	—	**2.7**	2.1	—
Senior Convertible Notes	**0.8**	0.1	—	**0.8**	0.1	—
Diluted weighted average common shares outstanding	**173.1**	201.8	245.6	**173.1**	201.8	245.6
Per share amount	$ **3.24**	$ 3.17	$ (2.84)	$ **3.24**	$ 3.02	$ 5.29

In the computation of diluted earnings per common share from continuing operations and on a net earnings basis for the year ended December 31, 2016, the assumed exercise of 2.8 million options and the assumed vesting of 0.3 million RSUs were excluded because their inclusion would have been antidilutive. In the computation of diluted earnings per common share from continuing operations and on a net earnings basis for the year ended December 31, 2015, the assumed exercise of 2.7 million stock options and the assumed vesting of 0.3 million RSUs were excluded because their inclusion would have been antidilutive. For the year ended December 31, 2014, the Company recorded a net loss from continuing operations and, accordingly, the basic and diluted weighted average shares outstanding are equal because any increase to the basic shares would be antidilutive, including the assumed exercise of 6.3 million stock options and the assumed vesting of 1.1 million RSUs.

On August 25, 2015, the Company issued $1.0 billion of 2% Senior Convertible Notes (the "Senior Convertible Notes") which mature in September 2020. The notes are convertible based on a conversion rate of 14.5985 per $1,000 principal amount (which is equal to an initial conversion price of $68.50 per share). See discussion in Note 4. In the event of conversion, the Company intends to settle the principal amount of the Senior Convertible Notes in cash.

Because of the Company's intention to settle the par value of the Senior Convertible Notes in cash upon conversion, Motorola Solutions does not reflect any shares underlying the Senior Convertible Notes in its diluted weighted average shares outstanding until the average stock price per share for the period exceeds the conversion price. In this case, only the number of shares that would be issuable (under the treasury stock method of accounting for share dilution) will be included, which is based upon the amount by which the average stock price exceeds the conversion price of $68.50. For the year ended December 31, 2016, the dilutive impact of the Senior Convertible Notes was 0.8 million shares and 0.1 million for December 31, 2015.

Balance Sheet Information

Cash and Cash Equivalents

The Company's cash and cash equivalents were $1.0 billion at December 31, 2016 and $2.0 billion at December 31, 2015. Of these amounts, $63 million was restricted at both December 31, 2016 and December 31, 2015.

Accounts Receivable, Net

Accounts receivable, net, consist of the following:

December 31	2016	2015
Accounts receivable	$ 1,454	$ 1,390
Less allowance for doubtful accounts	(44)	(28)
	$ 1,410	$ 1,362

Inventories, Net

Inventories, net, consist of the following:

December 31	2016	2015
Finished goods	$ 151	$ 151
Work-in-process and production materials	253	287
	404	438
Less inventory reserves	(131)	(142)
	$ 273	$ 296

Other Current Assets

Other current assets consist of the following:

December 31	2016	2015
Available-for-sale securities	$ 46	$ 438
Costs and earnings in excess of billings	495	374
Tax-related refunds receivable	90	44
Other	124	98
	$ 755	$ 954

Property, Plant and Equipment, Net

Property, plant and equipment, net, consist of the following:

December 31	2016	2015
Land	$ 12	$ 17
Building	306	523
Machinery and equipment	1,921	1,585
	2,239	2,125
Less accumulated depreciation	(1,450)	(1,638)
	$ 789	$ 487

Depreciation expense for the years ended December 31, 2016, 2015, and 2014 was $182 million, $142 million and $169 million, respectively.

During the year ended December 31, 2015, the Company entered into an arrangement to sell its Penang, Malaysia manufacturing operations, including the land, building, equipment, inventory, and the transfer of employees to a contract manufacturer. The Company recognized an impairment loss of $6 million on the building within Other charges in its consolidated statements of operations and presented the assets as held for sale in its consolidated balance sheets as of December 31, 2015.

The sale of the Penang, Malaysia facility and manufacturing operations was completed on February 1, 2016. During the year ended December 31, 2016, the Company incurred a loss of $7 million on the sale of its Penang, Malaysia facility and manufacturing operations, which is included within Gains (losses) on sales of investments and businesses, net.

During the year ended December 31, 2015, the Company entered into an agreement to broker the sale of its corporate aircraft. The Company recognized an impairment loss of $31 million within Other charges based on the indicated market value of the aircraft and presented the aircraft as held for sale in its consolidated balance sheets as of December 31, 2015. During the year ended December 31, 2016, the sale of the corporate aircraft was completed.

The Company acquired property, plant and equipment, including network-related assets, with a fair value of $245 million in the acquisition of GDCL on February 19, 2016. See discussion in Note 14.

During the year ended December 31, 2016, Motorola Solutions relocated its global headquarters from Schaumburg, Illinois to Chicago, Illinois. The Company sold the remaining buildings and land on its Schaumburg, IL campus, and will continue optimize the Schaumburg campus for current space requirements. A building impairment loss of $17 million has been recognized in Other charges during the year ended December 31, 2016 related to the excess carrying value of the long-lived assets in relation to the selling price.

Investments

Investments consist of the following:

December 31, 2016	*Cost Basis*	*Investments*
Available-for-sale securities:		
Government, agency, and government-sponsored enterprise obligations	$ 51	$ 51
Corporate bonds	5	5
	56	56
Other investments	211	211
Equity method investments	17	17
	$ 284	$ 284
Less: current portion of available-for-sale securities		46
		$ 238

The cost basis is equal to the fair value for all of the Company's investments as of December 31, 2016.

December 31, 2015	*Cost Basis*	*Unrealized Gains*	*Unrealized Loss*	*Investments*
Available-for-sale securities:				
Government, agency, and government-sponsored enterprise obligations	$ 455	$ —	(11)	444
Corporate bonds	7	—	—	7
Common stock	—	6	—	6
	462	6	(11)	457
Other investments	203	—	—	203
Equity method investments	9	—	—	9
	674	6	(11)	669
Less: current portion of available-for-sale securities				438
				$ 231

In December 2015, the Company invested $401 million in United Kingdom treasury securities in order to partially offset the risk associated with fluctuations in the British Pound Sterling in the period before the closing of the purchase of GDCL. The investments were recorded within Other current assets in the Company's consolidated balance sheets. The Company liquidated these investments in February 2016 to partially fund the acquisition of GDCL. During the year ended December 31, 2016, the Company realized a loss of $19 million associated with the sale of the treasury securities, of which, $11 million was unrealized as of December 31, 2015.

The Company recognized losses on the sale of investments and businesses of $6 million for the year ended December 31, 2016 compared to gains on the sale of investments and business of $107 million and $5 million for the years ended

December 31, 2015 and 2014. During the years ended December 31, 2016 and 2015, the Company recorded investment impairment charges of $4 million and $6 million, respectively, representing other-than-temporary declines in the value of the Company's equity investment portfolio. There were no investment impairments recorded during the year ended December 31, 2014. Investment impairment charges are included in Other within Other income (expense) in the Company's consolidated statements of operations.

Other Assets

Other assets consist of the following:

December 31	2016	2015
Intangible assets, net (Note 14)	$ 821	$ 49
Non-current long-term receivables	49	47
Defined benefit plan assets	102	128
Other	49	47
	$ 1,021	$ 271

Accrued Liabilities

Accrued liabilities consist of the following:

December 31	2016	2015
Deferred revenue	$ 439	$ 390
Compensation	250	241
Billings in excess of costs and earnings	434	337
Tax liabilities	111	48
Dividend payable	77	71
Trade liabilities	180	135
Other	620	449
	$ 2,111	$ 1,671

Other Liabilities

Other liabilities consist of the following:

December 31	2016	2015
Defined benefit plans	$ 1,799	$ 1,512
Postretirement Health Care Benefit Plan	—	49
Deferred revenue	115	113
Unrecognized tax benefits	39	50
Deferred income taxes	121	12
Deferred consideration (Note 14)	72	—
Other	209	168
	$ 2,355	$ 1,904

Stockholders' Equity Information

Share Repurchase Program: Through actions taken on July 28, 2011, January 30, 2012, July 25, 2012, July 22, 2013, November 3, 2014, and August 3, 2016, the Board of Directors has authorized the Company to repurchase in the aggregate up to $14.0 billion of its outstanding shares of common stock (the "share repurchase program"). The share repurchase program does not have an expiration date. As of December 31, 2016, the Company had used approximately $11.8 billion of the share repurchase authority, including transaction costs, to repurchase shares, leaving $2.2 billion of authority available for future repurchases.

During 2016, the Company paid an aggregate of $842 million, including transaction costs, to repurchase 12.0 million shares at an average price of $70.28 per share. During 2015, the Company paid an aggregate of $3.2 billion, including transaction costs, to repurchase 48.0 million shares at an average price of $66.22. Shares repurchased in 2015 include 30.1 million shares repurchased under a modified "Dutch auction" tender offer at a tender price of $66.50 for an aggregate of $2.0 billion, including transaction costs. During 2014, the Company paid an aggregate of $2.5 billion, including transaction costs, to repurchase 39.4 million shares at an average price of $64.63.

Payment of Dividends: On November 3, 2016, the Company announced that its Board of Directors approved an increase in the quarterly cash dividend from $0.41 per share to $0.47 per share of common stock. During the years ended December 31, 2016, 2015, and 2014 the Company paid $280 million, $277 million, and $318 million, respectively, in cash dividends to holders of its common stock.

Accumulated Other Comprehensive Loss

The following table displays the changes in Accumulated other comprehensive loss, including amounts reclassified into income, and the affected line items in the consolidated statements of operations during the years ended December 31, 2016, 2015, and 2014:

	Years ended December 31		
	2016	2015	2014
Foreign Currency Translation Adjustments:			
Balance at beginning of period	$ (266)	$ (204)	$ (96)
Other comprehensive loss before reclassification adjustment	(227)	(82)	(58)
Tax benefit (expense)	(1)	20	9
Other comprehensive income before reclassification adjustment, net of tax	(228)	(62)	(49)
Reclassification adjustment into Earnings from discontinued operations	—	—	(75)
Tax expense	—	—	16
Reclassification adjustment into Earnings from discontinued operations, net of tax	—	—	(59)
Other comprehensive loss, net of tax	(228)	(62)	(108)
Balance at end of period	$ (494)	$ (266)	$ (204)
Derivative Instruments:			
Balance at beginning of period	$ —	$ —	$ (1)
Reclassification adjustment into Cost of sales	—	—	1
Reclassification adjustment into Cost of sales, net of tax	—	—	1
Other comprehensive income, net of tax	—	—	1
Balance at end of period	$ —	$ —	$ —
Available-for-Sale Securities:			
Balance at beginning of period	$ (3)	$ 44	$ (2)
Other comprehensive income before reclassification adjustment	—	(15)	72
Tax benefit (expense)	—	5	(26)
Other comprehensive income (loss) before reclassification adjustment, net of tax	—	(10)	46
Reclassification adjustment into Losses (Gains) on sales of investments and businesses	5	(61)	—
Tax expense (benefit)	(2)	24	—
Reclassification adjustment into Earnings from continuing operations, net of tax	3	(37)	—
Other comprehensive income, net of tax	3	(47)	46
Balance at end of period	$ —	$ (3)	$ 44
Defined Benefit Plans:			
Balance at beginning of period	$ (1,597)	$ (1,695)	$ (2,188)
Other comprehensive income (loss) before reclassification adjustment	(368)	108	(1,165)
Tax benefit	98	12	447
Other comprehensive income (loss) before reclassification adjustment, net of tax	(270)	120	(718)
Reclassification adjustment - Actuarial net losses into Selling, general, and administrative expenses	53	71	118
Reclassification adjustment - Prior service benefits into Selling, general, and administrative expenses	(27)	(62)	(57)
Reclassification adjustment - Non-U.S. pension curtailment gain into Other charges	—	(32)	—
Reclassification adjustment - Pension settlement loss into Other charges	26	—	1,883
Disposition of the Enterprise business retirement benefits into Earnings from discontinued operations, net of tax	—	—	(1)
Tax expense (benefit)	(8)	1	(732)
Reclassification adjustment into Net earnings	44	(22)	1,211
Other comprehensive income (loss), net of tax	(226)	98	493
Balance at end of period	$ (1,823)	$ (1,597)	$ (1,695)
Total Accumulated other comprehensive loss	$ (2,317)	$ (1,866)	$ (1,855)

4. Debt and Credit Facilities

Long-Term Debt

December 31	2016	2015
2.0% Senior Convertible Notes due 2020	$ 988	$ 969
3.5% senior notes due 2021	395	394
3.75% senior notes due 2022	746	745
3.5% senior notes due 2023	593	592
4.0% senior notes due 2024	588	587
6.5% debentures due 2025	117	118
7.5% debentures due 2025	345	345
6.5% debentures due 2028	36	36
6.625% senior notes due 2037	54	54
5.5% senior notes due 2044	396	396
5.22% debentures due 2097	91	90
Other long-term debt	52	29
	4,401	4,355
Adjustments for unamortized gains on interest rate swap terminations	(5)	(6)
Less: current portion	(4)	(4)
Long-term debt	$ 4,392	$ 4,345

On August 25, 2015, the Company entered into an agreement with Silver Lake Partners to issue $1.0 billion of 2% Senior Convertible Notes which mature in September 2020. Interest on these notes is payable semiannually. The notes are convertible anytime on or after two years from their issuance date, except in certain limited circumstances including, for example, if the volume weighted average price of the Company's stock exceeds $85 for ten consecutive trading days, then up to 20% of the notes may be transferred or converted to shares of Company stock. The notes are convertible based on a conversion rate of 14.5985 per $1,000 principal amount (which is equal to an initial conversion price of $68.50 per share). The value by which the Senior Convertible Notes exceeded their principal amount if converted as of December 31, 2016 was $202 million. In the event of conversion, the Company intends to settle the principal amount of the Senior Convertible Notes in cash.

The Company recorded a long-term debt liability associated with the Senior Convertible Notes by determining the fair value of an equivalent debt instrument without a conversion option. Using a discount rate of 2.4%, which was determined based on a review of relevant market data, the Company has calculated the debt liability to be $992 million, indicating an $8 million discount to be amortized over the expected life of the debt instrument. As of December 31, 2016, the remaining unamortized debt discount was $3 million, which will be amortized over one year as a component of interest expense compared to $7 million as of December 31, 2015. For the year ended December 31, 2016, total interest expense relating to both the contractual interest coupon and amortization of the debt discount was $24 million, compared to $8 million for the year December 31, 2015. The total of proceeds received in excess of the fair value of the debt liability of $8 million has been recorded within Additional paid-in capital.

Aggregate requirements for long-term debt maturities during the next five years are as follows: 2017—$4 million; 2018—$5 million; 2019—$5 million; 2020—$1 billion; and 2021—$400 million.

In connection with the completion of the acquisition of GDCL, the Company entered into a new term loan credit agreement (the "Term Loan Agreement"), under which the Company borrowed a term loan (the "Term Loan") with an initial principal amount of $675 million. Interest on the Term Loan is variable and indexed to LIBOR. No additional borrowings are permitted under the Term Loan Agreement and amounts borrowed and repaid or prepaid may not be re-borrowed. The Company has repaid all amounts borrowed under the Term Loan as of December 31, 2016.

Effective January 1, 2016, the Company retrospectively adopted ASU No. 2015-03, "Interest-Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs." Under this guidance, the Company has revised the presentation of debt issuance costs which were previously capitalized in other assets in the consolidated balance sheet to be presented as a reduction to long-term debt. As of December 31, 2016 and December 31, 2015, $25 million and $41 million, respectively, have been presented as a component of long-term debt.

Credit Facilities

As of December 31, 2016, the Company had a $2.1 billion unsecured syndicated revolving credit facility, which includes a $450 million letter of credit sub-limit, (the "2014 Motorola Solutions Credit Agreement") scheduled to mature on May 29, 2019. The Company must comply with certain customary covenants, including a maximum leverage ratio as defined in the 2014 Motorola Solutions Credit Agreement. The Company was in compliance with its financial covenants as of December 31, 2016. The Company did not borrow under the 2014 Motorola Solutions Credit Agreement during the twelve months ended December 31, 2016. No letters of credit were issued under the revolving credit facility as of December 31, 2016.

5. Risk Management

Foreign Currency Risk

The Company uses financial instruments to reduce its overall exposure to the effects of currency fluctuations on cash flows. The Company's policy prohibits speculation in financial instruments for profit on exchange rate fluctuations, trading in currencies for which there are no underlying exposures, or entering into transactions for any currency to intentionally increase the underlying exposure. Instruments that are designated as part of a hedging relationship must be effective at reducing the risk associated with the exposure being hedged and are designated as part of a hedging relationship at the inception of the contract. Accordingly, changes in the market values of hedge instruments must be highly correlated with changes in market values of the underlying hedged items both at the inception of the hedge and over the life of the hedge contract.

The Company's strategy related to foreign exchange exposure management is to offset the gains or losses on the financial instruments against gains or losses on the underlying operational cash flows or investments based on the Company's assessment of risk. The Company enters into derivative contracts for some of its non-functional currency cash, receivables, and payables, which are primarily denominated in major currencies that can be traded on open markets. The Company typically uses forward contracts and options to hedge these currency exposures. In addition, the Company has entered into derivative contracts for some forecasted transactions, which are designated as part of a hedging relationship if it is determined that the transaction qualifies for hedge accounting under the provisions of the authoritative accounting guidance for derivative instruments and hedging activities. A portion of the Company's exposure is from currencies that are not traded in liquid markets and these are addressed, to the extent reasonably possible, by managing net asset positions, product pricing and component sourcing.

At December 31, 2016, the Company had outstanding foreign exchange contracts with notional amounts totaling $717 million, compared to $494 million outstanding at December 31, 2015. The Company does not believe these financial instruments should subject it to undue risk due to foreign exchange movements because gains and losses on these contracts should generally offset gains and losses on the underlying assets, liabilities and transactions.

The following table shows the Company's five largest net notional amounts of the positions to buy or sell foreign currency as of December 31, 2016 and the corresponding positions as of December 31, 2015:

	Notional Amount	
Net Buy (Sell) by Currency	**2016**	2015
British Pound	$ **246**	$ 62
Euro	**122**	99
Chinese Renminbi	**(108)**	(114)
Brazilian Real	**(56)**	(44)
Australian Dollar	**(51)**	(60)

Interest Rate Risk

One of the Company's European subsidiaries has Euro-denominated loans. The interest on the Euro-denominated loans is variable. The Company has interest rate swap agreements in place which change the characteristics of interest rate payments from variable to maximum fixed-rate payments. The interest rate swaps are not designated as a hedge. As such, the changes in the fair value of the interest rate swaps are included in Other income (expense) in the Company's consolidated statements of operations. The fair value of the interest rate swaps liability was de minimus at December 31, 2016 and a liability position of $1 million at December 31, 2015.

Counterparty Risk

The use of derivative financial instruments exposes the Company to counterparty credit risk in the event of non-performance by counterparties. However, the Company's risk is limited to the fair value of the instruments when the derivative is in an asset position. The Company actively monitors its exposure to credit risk. As of December 31, 2016, all of the counterparties have investment grade credit ratings. As of December 31, 2016, the net aggregate credit risk with all counterparties was approximately $9 million.

Derivative Financial Instruments

The following tables summarize the fair values and location in the consolidated balance sheets of all derivative financial instruments held by the Company at December 31, 2016 and 2015:

	Fair Values of Derivative Instruments			
	Assets		*Liabilities*	
December 31, 2016	*Fair Value*	*Balance Sheet Location*	*Fair Value*	*Balance Sheet Location*
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	$ 9	Other assets	$ 32	Accrued liabilities
Total derivatives	$ 9		$ 32	

	Fair Values of Derivative Instruments			
	Assets		*Liabilities*	
December 31, 2015	*Fair Value*	*Balance Sheet Location*	*Fair Value*	*Balance Sheet Location*
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	$ 6	Other assets	$ 2	Accrued liabilities
Interest rate swap	—	Other assets	1	Accrued liabilities
Total derivatives	$ 6		$ 3	

The following table summarizes the effect of derivative instruments in the Company's consolidated statements of operations, including immaterial amounts related to discontinued operations, for the years ended December 31, 2016, 2015 and 2014:

	December 31			*Statement of*
Gain (Loss) on Derivative Instruments	**2016**	2015	2014	*Operations Location*
Interest rate swap	$ 1	$ 1	$ 1	Other income (expense)
Foreign exchange contracts	(57)	6	(5)	Other income (expense)
Total derivatives	$ (56)	$ 7	$ (4)	

The Company had no instruments designated as hedging instruments for the year ended December 31, 2016.

6. Income Taxes

Components of earnings (loss) from continuing operations before income taxes are as follows:

Years ended December 31	**2016**	2015	2014
United States	$ **651**	$ 725	$ (1,355)
Other nations	**193**	192	194
	$ **844**	$ 917	$ (1,161)

Components of income tax expense (benefit) are as follows:

Years ended December 31	2016	2015	2014
United States	$ 20	$ 71	$ 14
Other nations	31	30	67
States (U.S.)	18	13	11
Current income tax expense	69	114	92
United States	180	154	(503)
Other nations	36	(13)	(11)
States (U.S.)	(3)	19	(43)
Deferred income tax expense (benefit)	213	160	(557)
Total income tax expense (benefit)	$ 282	$ 274	$ (465)

Deferred tax balances that were recorded within Accumulated other comprehensive loss in the Company's consolidated balance sheets resulted from retirement benefit adjustments, currency translation adjustments, net gains and losses on derivative instruments and fair value adjustments to available-for-sale securities. The adjustments were charges of $87 million, benefits of $62 million, and charges of $286 million for the years ended December 31, 2016, 2015, and 2014, respectively.

The Company evaluates its permanent reinvestment assertions with respect to foreign earnings at each reporting period and, except for certain earnings that the Company intends to reinvest indefinitely due to the capital requirements of the foreign subsidiaries or due to local country restrictions, accrues for the U.S. federal and foreign income tax applicable to the earnings. The Company assessed its unremitted earnings position and concluded that certain of its non-U.S. subsidiaries' earnings continue to be permanently reinvested overseas. The Company intends to utilize the offshore earnings for working capital needs in its international operations. During 2016, the Company made no changes to its permanent reinvestment assertion. During 2015, the Company recorded a net tax benefit of $8 million related to the reversal of deferred tax liabilities due to the change in permanent reinvestment assertion. During 2014, the Company recorded a net tax benefit of $19 million related to the reversal of deferred tax liabilities related to undistributed foreign earnings due to the change in permanent reinvestment assertion.

Undistributed earnings that the Company intends to reinvest indefinitely, and for which no U.S. income taxes have been provided, aggregate to $1.6 billion at December 31, 2016. The Company currently has no plans to repatriate the foreign earnings permanently reinvested and therefore, the time and manner of repatriation is uncertain. If circumstances change and it becomes apparent that some or all of the permanently reinvested earnings will be remitted to the U.S. in the foreseeable future, an additional income tax charge may be necessary. However, given the uncertain repatriation time and manner at December 31, 2016, it is not practicable to estimate the amount of any additional income tax charge on the hypothetical distribution of permanently reinvested earnings. On a cash basis, these repatriations from the Company's non-U.S. subsidiaries could require the payment of additional taxes. The portion of earnings not reinvested indefinitely may be distributed without an additional charge given the U.S. federal and foreign income tax accrued on undistributed earnings and the utilization of available foreign tax credits.

Differences between income tax expense (benefit) computed at the U.S. federal statutory tax rate of 35% and income tax expense (benefit) as reflected in the consolidated statements of operations are as follows:

Years ended December 31	2016		2015		2014	
Income tax expense (benefit) at statutory rate	$ 295	35.0 %	$ 321	35.0 %	$ (406)	35.0 %
Tax on non-U.S. earnings	(25)	(3.0)%	(46)	(5.0)%	(27)	2.3 %
State income taxes, net of federal benefit	26	3.1 %	24	2.6 %	(30)	2.6 %
Recognition of previously unrecognized income tax benefits	(13)	(1.6)%	1	0.1 %	(29)	2.5 %
Other provisions	(2)	(0.4)%	14	1.6 %	9	(0.7)%
Valuation allowances	(7)	(0.8)%	(9)	(1.0)%	55	(4.7)%
Section 199 deduction	(15)	(1.7)%	(19)	(2.1)%	(12)	1.0 %
Tax on undistributed non-U.S. earnings	25	3.0 %	(7)	(0.8)%	(19)	1.6 %
Research credits	(2)	(0.2)%	(5)	(0.5)%	(6)	0.5 %
	$ 282	33.4 %	$ 274	29.9 %	$ (465)	40.1 %

Gross deferred tax assets were $3.1 billion and $3.5 billion at December 31, 2016 and 2015, respectively. Deferred tax assets, net of valuation allowances, were $3.0 billion at December 31, 2016 and $3.4 billion at December 31, 2015, respectively. Gross deferred tax liabilities were $900 million and $1.2 billion at December 31, 2016 and 2015, respectively.

Significant components of deferred tax assets (liabilities) are as follows:

December 31	**2016**	2015
Inventory	**$ 29**	$ 30
Accrued liabilities and allowances	**136**	136
Employee benefits	**693**	612
Capitalized items	**169**	357
Tax basis differences on investments	**7**	14
Depreciation tax basis differences on fixed assets	**74**	19
Undistributed non-U.S. earnings	**(27)**	(19)
Tax carryforwards	**927**	1,028
Business reorganization	**36**	20
Warranty and customer liabilities	**21**	20
Deferred revenue and costs	**122**	146
Valuation allowances	**(118)**	(129)
Deferred charges	**37**	41
Other	**(8)**	3
	$ 2,098	$ 2,278

At December 31, 2016 and 2015, the Company had valuation allowances of $118 million and $129 million, respectively, against its deferred tax assets, including $85 million and $98 million, respectively, relating to deferred tax assets for non-U.S. subsidiaries. The Company's valuation allowances for its non-U.S. subsidiaries had a net decrease of $13 million during 2016 and a net decrease of $97 million during 2015. The decrease in the valuation allowance relating to deferred tax assets of non-U.S. subsidiaries during 2016 relates to the expiration of net operating losses and the change in the value of net deferreds related to the Company's defined benefit plan in the United Kingdom. The decrease in the valuation allowance relating to deferred tax assets of non-U.S. subsidiaries during 2015 relates to the expiration of net operating losses, the release of a Singapore valuation allowance, and the change in the value of net deferreds related to the Company's defined benefit plan in the United Kingdom.

The Company's U.S. valuation allowance increased $2 million during 2016 while it did not change during 2015. The U.S. valuation allowance of $33 million as of December 31, 2016 primarily relates to state tax carryforwards. The Company believes that the remaining deferred tax assets are more-likely-than-not to be realizable based on estimates of future taxable income and the implementation of tax planning strategies.

Tax carryforwards are as follows:

December 31, 2016	*Gross Tax Loss*	*Tax Effected*	*Expiration Period*
United States:			
U.S. tax losses	$ 51	$ 18	2022-2033
Foreign tax credits	—	510	2018-2023
General business credits	—	115	2026-2036
Minimum tax credits	—	101	Unlimited
State tax losses	1,174	34	2017-2029
State tax credits	—	26	2018-2030
Non-U.S. Subsidiaries:			
Japan tax losses	98	30	2017-2021
Germany tax losses	53	15	Unlimited
United Kingdom tax losses	84	14	Unlimited
Singapore tax losses	40	7	Unlimited
Other subsidiaries tax losses	—	26	Various
Spain tax credits	—	23	Various
Other subsidiaries tax credits	—	8	Various
		$ 927	

The Company had unrecognized tax benefits of $68 million and $88 million at December 31, 2016 and December 31, 2015, respectively, of which approximately $50 million, if recognized, would affect the effective tax rate for both 2016 and 2015, net of resulting changes to valuation allowances.

A roll-forward of unrecognized tax benefits is as follows:

	2016	2015
Balance at January 1	$ 88	$ 96
Additions based on tax positions related to current year	—	2
Additions for tax positions of prior years	2	4
Reductions for tax positions of prior years	(15)	(9)
Settlements and agreements	(3)	(3)
Lapse of statute of limitations	(4)	(2)
Balance at December 31	$ 68	$ 88

The IRS has completed its examination of the Company's 2012 and 2013 tax years. The Company also has several state and non-U.S. audits pending. A summary of open tax years by major jurisdiction is presented below:

Jurisdiction	*Tax Years*
United States	2008-2016
China	2002-2016
France	2010-2016
Germany	2011-2016
India	1997-2016
Israel	2012-2016
Japan	2011-2016
Malaysia	2010-2016
Singapore	2015-2016
United Kingdom	2015-2016

Although the final resolution of the Company's global tax disputes is uncertain, based on current information, in the opinion of the Company's management, the ultimate disposition of these matters will not have a material adverse effect on the Company's consolidated financial position, liquidity or results of operations. However, an unfavorable resolution of the Company's global tax disputes could have a material adverse effect on the Company's consolidated financial position, liquidity, or results of operations in the periods, and as of the dates, on which the matters are ultimately resolved.

Based on the potential outcome of the Company's global tax examinations, the expiration of the statute of limitations for specific jurisdictions, or the continued ability to satisfy tax incentive obligations, it is reasonably possible that the unrecognized tax benefits will change within the next twelve months. The associated net tax impact on the effective tax rate, exclusive of valuation allowance changes, is estimated to be in the range of a $50 million tax charge to a $30 million tax benefit, with cash payments not to exceed $30 million.

At December 31, 2016, the Company had $26 million accrued for interest and $18 million accrued for penalties on unrecognized tax benefits. At December 31, 2015, the Company had $29 million and $24 million accrued for interest and penalties, respectively, on unrecognized tax benefits.

7. Retirement Benefits

Pension and Postretirement Health Care Benefits Plans

U.S. Pension Benefit Plans

The Company's noncontributory U.S. pension plan (the "Regular Pension Plan") provides benefits to U.S. employees hired prior to January 1, 2005, who became eligible after one year of service. In December 2008, the Company amended the Regular Pension Plan such that, effective March 1, 2009: (i) no participant shall accrue any benefit or additional benefit on or after March 1, 2009, and (ii) no compensation increases earned by a participant on or after March 1, 2009 shall be used to compute any accrued benefit.

In September 2014, the Company entered into a Definitive Purchase Agreement (the "Agreement") by and among the Company, The Prudential Insurance Company of America ("PICA"), Prudential Financial, Inc. and State Street Bank and Trust Company, as Independent Fiduciary of the Company's Regular Pension Plan. Under the Agreement, the Regular Pension Plan purchased from PICA a group annuity contract that requires PICA to pay and administer certain future annuity payments to approximately 30,000 of the Company's retirees. On December 3, 2014, the Company transfered $3.2 billion of plan assets to

PICA upon the close of the Agreement and then subsequently terminated the plan. During 2014, the Company established a new pension plan with substantially the same terms as the Regular Pension Plan (the "New Plan") to accommodate the Company's remaining active employees and non-retirees. Upon the establishment of the New Plan, the Company offered and paid out from plan assets the maximum of $1.0 billion of lump-sum distributions to certain participants who had accrued a pension benefit, had left the Company prior to June 30, 2014, and had not yet started receiving pension benefit payments. As a result of the actions taken to the Regular Pension Plan and the New Plan, the Company recorded a settlement loss of $1.9 billion in 2014 which is recorded in "Other charges" within the statement of operations.

The Company has an additional noncontributory supplemental retirement benefit plan, the Motorola Supplemental Pension Plan ("MSPP"), which provided supplemental benefits to individuals by replacing benefits that are lost by such individuals under the retirement formula due to application of the limitations imposed by the Internal Revenue Code. Effective January 1, 2007, eligible compensation was capped at the IRS limit plus $175,000 (the "Cap") or, for those already in excess of the Cap as of January 1, 2007, the eligible compensation used to compute such employee's MSPP benefit for all future years is the greater of: (i) such employee's eligible compensation as of January 1, 2007 (frozen at that amount) or (ii) the relevant Cap for the given year. The Company amended the MSPP (collectively the with the New Plan, the "U.S. Pension Benefit Plans") in December 2008 such that effective March 1, 2009: (i) no participant shall accrue any benefit or additional benefit on or after March 1, 2009, and (ii) no compensation increases earned by a participant on or after March 1, 2009 shall be used to compute any accrued benefit. Effective January 1, 2009, the MSPP was closed to new participants unless such participation was required under a prior contractual entitlement.

Postretirement Health Care Benefits Plan

Certain health care benefits are available to eligible domestic employees hired prior to January 1, 2002 and meeting certain age and service requirements upon termination of employment (the "Postretirement Health Care Benefits Plan"). As of January 1, 2005, the Postretirement Health Care Benefits Plan was closed to new participants.

During 2012, the Postretirement Health Care Benefits Plan was amended ("the Original Amendment") such that, as of January 1, 2013, retirees over the age of 65 are provided an annual subsidy to use toward the purchase of their own health care coverage from private insurance companies or for reimbursement of eligible health care expenses. During 2014, the Postretirement Health Care Benefits Plan was then further amended ("The New Amendment") to provide the annual subsidy discussed as part of the Original Amendment to all participants remaining under the plan effective March 1, 2015. Additionally, the New Amendment eliminated dental benefits that were previously provided under the plan.

During the year ended December 31, 2016, the Company made two amendments to the Postretirement Health Care Benefits Plan (the "Amendments"). As a result of the first Amendment, all eligible retirees under the age of 65 will be provided an annual subsidy per household, versus per individual, toward the purchase of their own health care coverage from private insurance companies and for the reimbursement of eligible health care expenses. The second amendment modified the annual subsidy such that all retirees over the age of 65 were entitled to one fixed rate subsidy, capped at $560 per participant.

The Amendments to the Postretirement Health Care Benefits Plan required remeasurement of the plan, resulting in a reduction in the Postretirement Benefit Obligation. A substantial portion of the decrease is related to a prior service credit and will be recognized as a credit to the condensed consolidated statements of operations over approximately five years, or the period in which the remaining employees eligible for the plan will qualify for benefits under the plan.

Non U.S. Pension Benefit Plans

The Company also provides defined benefit plans which cover non U.S. employees in certain jurisdictions, principally the United Kingdom and Germany (the "Non U.S. Pension Benefit Plans"). Other pension plans outside of the U.S. are not material to the Company either individually or in the aggregate.

In June 2015, the Company amended its Non U.S. defined benefit plan within the United Kingdom by closing future benefit accruals to all participants effective December 31, 2015. As a result, the Company recorded a curtailment gain of $32 million to Other Charges within the Company's consolidated statement of operations during 2015.

During the year ended December 31, 2016, the Company offered lump-sum settlements to certain participants in the Non-US defined benefit plan within the United Kingdom. The lump-sum settlements were targeted to certain participants who had accrued a pension benefit, but had not yet started receiving pension benefit payments. As a result of the actions taken, the company recorded a settlement loss of $26 million in 2016, which is recorded within "Other Charges" within the consolidated statement of operations.

Net Periodic Cost (Benefit)

The net periodic cost (benefit) for pension and Postretirement Health Care Benefits plans was as follows:

	U.S. Pension Benefit Plans			*Non U.S. Pension Benefit Plans*			*Postretirement Health Care Benefits Plan*		
Years ended December 31	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Service cost	**$ —**	$ —	$ —	**$ 11**	$ 12	$ 15	**$ —**	$ 1	$ 2
Interest cost	**182**	193	370	**55**	66	80	**4**	8	10
Expected return on plan assets	**(220)**	(212)	(381)	**(93)**	(103)	(90)	**(9)**	(9)	(10)
Amortization of:									
Unrecognized net loss	**37**	46	97	**11**	17	12	**5**	8	9
Unrecognized prior service benefit	**—**	—	—	**—**	(3)	(7)	**(27)**	(59)	(50)
Curtailment gain	**—**	—	—	**—**	(32)	—	**—**	—	—
Settlement loss	**—**	—	1,883	**26**	—	—	**—**	—	—
Net periodic cost (benefit)	**$ (1)**	$ 27	$ 1,969	**$ 10**	$ (43)	$ 10	**$ (27)**	$ (51)	$ (39)

The status of the Company's plans is as follows:

	U.S. Pension Benefit Plans		Non U.S. Pension Benefit Plans		Postretirement Health Care Benefits Plan	
	2016	2015	2016	2015	2016	2015
Change in benefit obligation:						
Benefit obligation at January 1	$ 4,304	$ 4,536	$ 1,815	$ 2,075	$ 192	$ 212
Service cost	—	—	11	12	—	1
Interest cost	182	193	55	66	4	8
Plan amendments	—	—	—	1	(70)	—
Settlements/curtailments	—	—	(103)	(5)	—	—
Actuarial loss (gain)	256	(319)	359	(151)	(27)	(12)
Foreign exchange valuation adjustment	—	—	(293)	(118)	—	—
Employee contributions	—	—	—	2	—	—
Expenses and tax payments	—	—	(7)	(5)	—	—
Benefit payments	(98)	(106)	(46)	(62)	(16)	(17)
Benefit obligation at December 31	$ 4,644	$ 4,304	$ 1,791	$ 1,815	$ 83	$ 192
Change in plan assets:						
Fair value at January 1	$ 3,130	$ 3,317	$ 1,696	$ 1,806	$ 143	$ 163
Return on plan assets	160	(84)	309	33	6	(6)
Company contributions	3	3	8	10	—	—
Settlements	—	—	(103)	—	—	—
Employee contributions	—	—	—	2	—	—
Foreign exchange valuation adjustment	—	—	(292)	(88)	—	—
Expenses and tax payments	—	—	(7)	(5)	—	—
Benefit payments	(98)	(106)	(46)	(62)	(13)	(14)
Fair value at December 31	$ 3,195	$ 3,130	$ 1,565	$ 1,696	$ 136	$ 143
Funded status of the plan	$ (1,449)	$ (1,174)	$ (226)	$ (119)	$ 53	$ (49)
Unrecognized net loss	2,054	1,777	559	453	75	104
Unrecognized prior service benefit	—	—	—	—	(67)	(24)
Prepaid pension cost	$ 605	$ 603	$ 333	$ 334	$ 61	$ 31
Components of prepaid (accrued) pension cost:						
Current benefit liability	$ (3)	$ —	$ —	$ —	$ —	$ —
Non-current benefit liability	(1,446)	(1,174)	(251)	(224)	—	(49)
Non-current benefit asset	—	—	25	105	53	—
Deferred income taxes	762	657	57	46	4	31
Accumulated other comprehensive loss	1,292	1,120	502	407	4	49
Prepaid pension cost	$ 605	$ 603	$ 333	$ 334	$ 61	$ 31

The benefit obligation and plan assets for the Company's U.S. Pension Benefit Plan and Postretirement Health Care Benefit Plan are measured as of December 31, 2016. The Company utilizes a five-year, market-related asset value method of recognizing asset related gains and losses.

Under relevant accounting rules, when almost all of the plan participants are considered inactive, the amortization period for certain unrecognized gains and losses changes from the average remaining service period to the average remaining lifetime of the participants. As such, depending on the specific plan, the Company amortizes gains and losses over periods ranging from eleven to thirty-four years. Prior service costs are amortized over periods ranging from one to eight years. Benefits under all pension plans are valued based on the projected unit credit cost method.

The net periodic cost for 2017 will include amortization of the unrecognized net loss and prior service costs for the U.S. Pension Benefit Plans and Non U.S. Pension Benefit Plans, currently included in Accumulated other comprehensive loss, of $44 million and $15 million, respectively. It is estimated that the 2017 net periodic expense for the Postretirement Health Care

Benefits Plan will include amortization of a net credit of $13 million, comprised of the unrecognized prior service gain and unrecognized actuarial loss, currently included in Accumulated other comprehensive loss.

Actuarial Assumptions

Certain actuarial assumptions such as the discount rate and the long-term rate of return on plan assets have a significant effect on the amounts reported for net periodic cost and the benefit obligation. The assumed discount rates reflect the prevailing market rates of a universe of high-quality, non-callable, corporate bonds currently available that, if the obligation were settled at the measurement date, would provide the necessary future cash flows to pay the benefit obligation when due. The long-term rates of return on plan assets represent an estimate of long-term returns on an investment portfolio consisting of a mixture of equities, fixed income, cash and other investments similar to the actual investment mix. In determining the long-term return on plan assets, the Company considers long-term rates of return on the asset classes (both historical and forecasted) in which the Company expects the plan funds to be invested.

Effective January 1, 2016, the Company changed the method used to estimate the interest and service cost components of net periodic cost for defined benefit pension and other post-retirement benefit plans. Historically, the interest and service cost components were estimated using a single weighted-average discount rate derived from the yield curve used to measure the projected benefit obligation at the beginning of the period. The Company has elected to use a full yield curve approach in the estimation of these components of net periodic cost by applying the specific spot rates along the yield curve used in the determination of the projected benefit obligation to the relevant projected cash flows. The Company made this change to improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates and to provide a more precise measurement of interest and service costs. This change does not affect the measurement of total benefit obligations as the change in interest and service cost is completely offset in the actuarial loss reported in the period. The Company has concluded that this change is a change in estimate and, therefore, has accounted for it prospectively beginning January 1, 2016. Based on the change in estimate, the Company experienced no reduction in service costs and a $28 million reduction in interest costs for the year ended December 31, 2016 compared to the prior approach. The overall reduction in the interest cost for the year ended December 31, 2016 is comprised of $18 million related to the U.S. Pension Benefit Plans, $4 million related to the Postretirement Health Care Benefit Plans, and $6 million related to the Non U.S. Pension Benefits Plan.

Weighted average actuarial assumptions used to determine costs for the plans at the beginning of the fiscal year were as follows:

	U.S. Pension Benefit Plans		*Non U.S. Pension Benefit Plans*		*Postretirement Health Care Benefits Plan*	
	2016	2015	***2016***	*2015*	**2016**	2015
Discount rate	**4.27%**	4.30%	**3.22%**	3.19%	**3.14%**	3.90%
Investment return assumption	**7.00%**	7.00%	**5.90%**	5.90%	**7.00%**	7.00%

Weighted average actuarial assumptions used to determine benefit obligations for the plans were as follows:

	U.S. Pension Benefit Plans		*Non U.S. Pension Benefit Plans*		*Postretirement Health Care Benefits Plan*	
	2016	2015	**2016**	2015	**2016**	2015
Discount rate	**4.42%**	4.73%	**2.54%**	3.57%	**4.11%**	4.26%
Future compensation increase rate	**n/a**	n/a	**0.46%**	0.41%	**n/a**	n/a

The accumulated benefit obligations for the plans were as follows:

	U.S. Pension Benefit Plans		*Non U.S. Pension Benefit Plans*	
December 31	**2016**	2015	**2016**	2015
Accumulated benefit obligation	**$ 4,644**	$ 4,304	**$ 1,785**	$ 1,809

In 2014, the Society of Actuaries ("SOA") released the "RP-2014 White Collar" mortality table which was utilized in calculating the 2014 projected benefit obligation. During 2016, the SOA issued an update, Mortality Improvement Scale MP-2016, which includes two additional years of mortality data and was utilized to calculate the 2016 projected benefit obligation.

Investment Policy

The individual plans have adopted an investment policy designed to meet or exceed the expected rate of return on plan assets assumption. To achieve this, the plans retain professional advisors and investment managers that invest plan assets into various classes including, but not limited to, equity and fixed income securities, cash, cash equivalents, hedge funds, infrastructure/utilities, insurance contracts, leveraged loan funds and real estate. The Company uses long-term historical actual return experience with consideration of the expected investment mix of the plans' assets, as well as future estimates of long-term investment returns, to develop its expected rate of return assumption used in calculating the net periodic cost. The individual plans have target mixes for these asset classes, which are readjusted periodically when an asset class weighting deviates from the target mix, with the goal of achieving the required return at a reasonable risk level.

The weighted-average asset allocations by asset categories for all pension and the Postretirement Health Care Benefits plans were as follows:

	All Pension Benefit Plans		*Postretirement Health Care Benefits Plan*	
December 31	**2016**	2015	**2016**	2015
Target Mix:				
Equity securities	**33%**	37%	**37%**	36%
Fixed income securities	**46%**	45%	**43%**	42%
Cash and other investments	**21%**	18%	**20%**	22%
Actual Mix:				
Equity securities	**34%**	37%	**37%**	37%
Fixed income securities	**47%**	44%	**43%**	41%
Cash and other investments	**19%**	19%	**20%**	22%

Within the equity securities asset class, the investment policy provides for investments in a broad range of publicly-traded securities including both domestic and foreign equities. Within the fixed income securities asset class, the investment policy provides for investments in a broad range of publicly-traded debt securities including: U.S. Treasury issues, corporate debt securities, mortgage and asset-backed securities, as well as foreign debt securities. In the cash and other investments asset class, investments may include, but are not limited to: cash, cash equivalents, commodities, hedge funds, infrastructure/utilities, insurance contracts, leveraged loan funds and real estate.

Cash Funding

The Company made $3 million of contributions to its U.S. Pension Benefit Plans during 2016, compared to $3 million contributed in 2015. The Company contributed $8 million to its Non U.S. Pension Benefit Plans during 2016, compared to $10 million contributed in 2015. The Company made no contributions to its Postretirement Health Care Benefits Plan in 2016 or 2015.

Expected Future Benefit Payments

The following benefit payments are expected to be paid:

Year	*U.S. Pension Benefit Plans*	*Non U.S. Pension Benefit Plans*	*Postretirement Health Care Benefits Plan*
2017	$ 114	$ 47	$ 8
2018	130	48	7
2019	146	49	7
2020	164	50	6
2021	188	51	6
2022-2026	1,241	270	26

Other Benefit Plans

Split-Dollar Life Insurance Arrangements

The Company maintains a number of endorsement split-dollar life insurance policies on now-retired officers under a plan that was frozen prior to December 31, 2004. The Company had purchased the life insurance policies to insure the lives of employees and then entered into a separate agreement with the employees that split the policy benefits between the Company and the employee. Motorola Solutions owns the policies, controls all rights of ownership, and may terminate the insurance policies. To effect the split-dollar arrangement, Motorola Solutions endorsed a portion of the death benefits to the employee and upon the death of the employee, the employee's beneficiary typically receives the designated portion of the death benefits

directly from the insurance company and the Company receives the remainder of the death benefits. It is currently expected that minimal cash payments will be required to fund these policies.

The net periodic pension cost for these split-dollar life insurance arrangements was $5 million for the years ended December 31, 2016, 2015 and 2014. The Company has recorded a liability representing the actuarial present value of the future death benefits as of the employees' expected retirement date of $58 million and $63 million as of December 31, 2016 and December 31, 2015, respectively.

Deferred Compensation Plan

The Company amended and reinstated its deferred compensation plan ("the Plan") effective June 1, 2013 to reopen the Plan to certain participants. Under the Plan, participants may elect to defer base salary and cash incentive compensation in excess of 401(k) plan limitations. Participants under the Plan may choose to invest their deferred amounts in the same investment alternatives available under the Company's 401(k) plan. The Plan also allows for Company matching contributions for the following: (i) the first 4% of compensation deferred under the Plan, subject to a maximum of $50,000 for board officers, (ii) lost matching amounts that would have been made under the 401(k) plan if participants had not participated in the Plan, and (iii) discretionary amounts as approved by the Compensation and Leadership Committee of the Board of Directors.

Defined Contribution Plan

The Company and certain subsidiaries have various defined contribution plans, in which all eligible employees may participate. In the U.S., the 401(k) plan is a contributory plan. Matching contributions are based upon the amount of the employees' contributions. The Company's expenses for material defined contribution plans for the years ended December 31, 2016, 2015 and 2014 were $26 million, $28 million and $31 million, respectively.

Under the 401(k) plan, the Company may make an additional discretionary 401(k) plan matching contribution to eligible employees. For the years ended December 31, 2016, 2015, and 2014 the Company made no discretionary matching contributions.

8. Share-Based Compensation Plans and Other Incentive Plans

The Company grants options and stock appreciation rights to acquire shares of common stock to certain employees, including executives, and to existing option holders of acquired companies in connection with the merging of option plans following an acquisition. Each option granted and stock appreciation right has an exercise price of no less than 100% of the fair market value of the common stock on the date of the grant. The awards have a contractual life of five to ten years and vest over two to three years. Stock options and stock appreciation rights assumed or replaced with comparable stock options or stock appreciation rights in conjunction with a change in control of the Company only become exercisable if the holder is also involuntarily terminated (for a reason other than cause) or resigns for good reason within 24 months of a change in control.

Restricted stock ("RS") and restricted stock unit ("RSU") grants consist of shares or the rights to shares of the Company's common stock which are awarded to employees, including executives, and non-employee directors. The grants are restricted such that they are subject to substantial risk of forfeiture and to restrictions on their sale or other transfer by the employee. Shares of RS and RSUs assumed or replaced with comparable shares of RS or RSUs in conjunction with a change in control will only have the restrictions lapse if the holder is also involuntarily terminated (for a reason other than cause) or resigns for good reason within 24 months of a change in control.

Performance-based stock options ("performance options") and market stock units ("MSUs") have been granted to the Company's executive officers. Performance options have a three year performance period and are granted as a target number of units subject to adjustment based on company performance. Each performance option granted has an exercise price of no less than 100% of the fair market value of the common stock on the date of the grant. The awards have a contractual life of ten years. Shares ultimately issued for performance option awards granted are based on the actual total shareholder return ("TSR") compared to the S&P 500 over the three year performance period based on a payout factor that corresponds to actual TSR results as established at the date of grant. Vesting occurs on the third anniversary of the grant date. Under the terms of the MSUs, vesting is conditioned upon continuous employment until the vesting date and the payout factor is at least 60% of the share price on the award date. The payout factor is the share price on vesting date divided by share price on award date, with a maximum of 200%. The share price used in the payout factor is calculated using an average of the closing prices on the grant or vesting date, and the 30 calendar days immediately preceding the grant or vesting date. Vesting occurs ratably over three years.

On August 24, 2015, in conjunction with the issuance of the Senior Convertible Notes, the Company approved a grant of performance-contingent stock options ("PCSOs") to certain executive officers. The total number of PCSOs granted is designed to represent approximately 1% of the fully-diluted equity of the Company. The PCSOs vest upon satisfaction of the following stock price hurdles which must be maintained for 10-consecutive trading days during the three-year period following the grant date: 20% of the total award will vest at an $85 stock price; an additional 30% of the total award will vest at a $102.50 stock price; and the final 50% of the total award will vest at a $120 stock price. If any stock price hurdles are not met during the three-year period, the corresponding portion of the options will not vest and will be forfeited. The awards have a seven-year term and a per share exercise price of $68.50.

The employee stock purchase plan allows eligible participants to purchase shares of the Company's common stock through payroll deductions of up to 20% of eligible compensation on an after-tax basis. Plan participants cannot purchase more than $25,000 of stock in any calendar year. The price an employee pays per share is 85% of the lower of the fair market value of

the Company's stock on the close of the first trading day or last trading day of the purchase period. The plan has two purchase periods, the first from October 1 through March 31 and the second from April 1 through September 30. For the years ended December 31, 2016, 2015 and 2014, employees purchased 0.9 million, 1.0 million and 1.4 million shares, respectively, at purchase prices of $57.60 and $64.69, $52.99 and $56.67, and $51.76 and $53.79, respectively.

Significant Assumptions Used in the Estimate of Fair Value

The Company calculates the value of each employee stock option, estimated on the date of grant, using the Black-Scholes option pricing model. The weighted-average estimated fair value of employee stock options granted during 2016, 2015 and 2014 was $13.09, $10.21 and $11.02, respectively, using the following weighted-average assumptions:

	2016	2015	2014
Expected volatility	**23.7%**	20.0%	21.7%
Risk-free interest rate	**1.4%**	1.6%	1.6%
Dividend yield	**2.9%**	2.9%	2.5%
Expected life (years)	**6.0**	6.0	5.2

The Company calculates the value of each performance option, MSU, and PCSO using the Monte Carlo Simulation, estimated on the date of grant. The fair value of performance options and MSUs granted during 2016 was $19.80 and $76.48, respectively. The Fair value of performance options, MSUs and PCSOs granted during 2015 were $17.42, $60.37 and $3.97, respectively. The following assumptions were used for the calculations.

	2016 Performance Options	*2015 Performance Options*	*2016 Market Stock Units*	*2015 Market Stock Units*	*2015 PCSOs*
Expected volatility of common stock	25.3%	21.0%	24.2%	19.3%	26.0%
Expected volatility of the S&P 500	19.8%	23.3%	N/A	N/A	N/A
Risk-free interest rate	1.7%	1.8%	1.1%	1.1%	1.5%
Dividend yield	2.8%	2.9%	2.8%	2.9%	3.1%
Expected life (years)	6.5	6.5	N/A	N/A	5

The Company uses the implied volatility for traded options on the Company's stock as the expected volatility assumption in the valuation of stock options, MSUs, and PCSOs. The selection of the implied volatility approach was based upon the availability of actively traded options on the Company's stock and the Company's assessment that implied volatility is more representative of future stock price trends than historical volatility. The Company uses the historical volatility as the expected volatility assumption in the valuation of performance options in order to calculate the correlation coefficients between the S&P 500 and the Company's stock, which can only be calculated using historical data.

The risk-free interest rate assumption is based upon the average daily closing rates during the year for U.S. Treasury notes that have a life which approximates the expected life of the grant. The dividend yield assumption is based on the Company's future expectation of dividend payouts. The expected life represents the average of the contractual term of the options and the weighted average vesting period for all option tranches.

The Company has applied forfeiture rates, estimated based on historical data, of 10%-40% to the stock option fair values calculated by the Black-Scholes option pricing model. These estimated forfeiture rates are applied to grants based on their remaining vesting term and may be revised in subsequent periods if actual forfeitures differ from these estimates.

The following table summarizes information about the total stock options outstanding and exercisable under all stock option plans, including performance options and PCSOs, at December 31, 2016 (in thousands, except exercise price and years):

	Options Outstanding			*Options Exercisable*		
Exercise price range	*No. of options*	*Wtd. avg. Exercise Price*	*Wtd. avg. contractual life (in yrs.)*	*No. of options*	*Wtd. avg. Exercise Price*	*Wtd. avg. contractual life (in yrs.)*
Under $30	542	$ 27	3	542	$ 27	3
$30-$40	1,947	39	3	1,947	39	3
$41-$50	33	45	4	34	45	4
$51-$60	998	55	6	976	54	6
$61-$70	3,100	67	8	654	66	7
$71-$80	664	72	9	41	74	1
	7,284			4,194		

As of December 31, 2016, the weighted average contractual life for options outstanding and exercisable was 6 and 4 years, respectively.

Current Year Activity

Total share-based compensation activity was as follows (in thousands, except exercise price):

	Stock Options		Performance Options*		Restricted Stock Units		Market Stock Units	
Shares in Thousands	*Number of Options Outstanding*	*Weighted Average Exercise Price of Shares*	*Number of Options Outstanding*	*Weighted Average Exercise Price of Shares*	*Number of Non-Vested Awards*	*Weighted Average Grant Date Fair Value*	*Number of Non-Vested Awards*	*Weighted Average Grant Date Fair Value*
Balance as of January 1, 2016	6,029	$ 51	2,042	$ 68	1,516	$ 59	84	$ 60
Granted	459	71	246	71	699	67	64	76
Releases/Exercised	(1,005)	57	—	—	(726)	59	(25)	60
Forfeited/Canceled	(265)	77	(222)	68	(156)	63	(7)	60
Balance as of December 31, 2016	5,218	$ 50	2,066	$ 69	1,333	$ 63	116	$ 69
Vested or expected to vest	4,418	47	—	—	726	59	25	60

* *Inclusive of PCSO awards*

At December 31, 2016 and 2015, 11.2 million and 12.0 million shares, respectively, were available for future share-based award grants under the current share-based compensation plan, covering all equity awards to employees and non-employee directors.

Total Share-Based Compensation Expense

Compensation expense for the Company's share-based compensation plans was as follows:

Years ended December 31	**2016**	2015	2014
Share-based compensation expense included in:			
Costs of sales	$ 9	$ 9	$ 10
Selling, general and administrative expenses	**45**	52	61
Research and development expenditures	**14**	17	23
Share-based compensation expense included in Operating earnings	**68**	78	94
Tax benefit	**21**	24	30
Share-based compensation expense, net of tax	**$ 47**	$ 54	$ 64
Decrease in basic earnings per share	**$ (0.28)**	$ (0.25)	$ (0.28)
Decrease in diluted earnings per share	**$ (0.27)**	$ (0.25)	$ (0.28)
Share-based compensation expense in discontinued operations	**$ —**	$ —	$ 20

At December 31, 2016, the Company had unrecognized compensation expense related to RS, RSUs, and MSUs of $50 million, net of estimated forfeitures, expected to be recognized over the weighted average period of approximately two years. The total fair value of RS, RSU and MSU shares vested during the years ended December 31, 2016, 2015, and 2014 was $54 million, $55 million, and $160 million, respectively. The aggregate fair value of outstanding RS, RSUs, and MSUs as of December 31, 2016 was $92 million.

At December 31, 2016, the Company had $12 million of total unrecognized compensation expense, net of estimated forfeitures, related to stock option plans including performance options and PCSO's that will be recognized over the weighted average period of approximately two years, and $3 million of unrecognized compensation expense related to the employee stock purchase plan that will be recognized over the remaining purchase period. Cash received from stock option exercises and the employee stock purchase plan was $93 million, $84 million, and $87 million for the years ended December 31, 2016, 2015, and 2014, respectively. The total intrinsic value of options exercised during the years ended December 31, 2016, 2015, and 2014 was $16 million, $15 million, and $38 million, respectively. The aggregate intrinsic value for options outstanding and exercisable as of December 31, 2016 was $200 million and $156 million, respectively, based on a December 31, 2016 stock price of $82.89 per share.

Motorola Solutions Incentive Plans

The Company's incentive plans provide eligible employees with an annual payment, calculated as a percentage of an employee's eligible earnings, in the year after the close of the current calendar year if specified business goals and individual performance targets are met. The expense for awards under these incentive plans for the years ended December 31, 2016, 2015 and 2014 was $114 million, $119 million and $53 million, respectively.

Long-Range Incentive Plan

The Long-Range Incentive Plan ("LRIP") rewards participating elected officers for the Company's achievement of specified business goals during the period, based on a single performance objective measured over a three year period. The expense for LRIP for the years ended December 31, 2016, 2015 and 2014 was $12 million, $12 million and $3 million, respectively.

9. Fair Value Measurements

The Company holds certain fixed income securities, equity securities and derivatives, which are recognized and disclosed at fair value in the financial statements on a recurring basis. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. Fair value is measured using the fair value hierarchy and related valuation methodologies as defined in the authoritative literature. This guidance specifies a hierarchy of valuation techniques based on whether the inputs to each measurement are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's assumptions about current market conditions. The prescribed fair value hierarchy and related valuation methodologies as they pertain to the Company are as follows:

Level 1—Quoted prices for identical instruments in active markets.

Level 2—Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations, in which all significant inputs are observable, in active markets.

Level 3—Valuations derived from valuation techniques, in which one or more significant inputs are unobservable.

Investments and Derivatives

The fair values of the Company's financial assets and liabilities by level in the fair value hierarchy as of December 31, 2016 and December 31, 2015 were as follows:

December 31, 2016	*Level 2*	*Total*
Assets:		
Foreign exchange derivative contracts	$ 9	$ 9
Available-for-sale securities:		
Government, agency, and government-sponsored enterprise obligations	51	51
Corporate bonds	5	5
Liabilities:		
Foreign exchange derivative contracts	$ 32	$ 32

December 31, 2015	*Level 1*	*Level 2*	*Total*
Assets:			
Foreign exchange derivative contracts	$ —	$ 6	$ 6
Available-for-sale securities:			
Government, agency, and government-sponsored enterprise obligations	—	444	444
Corporate bonds	—	7	7
Common stock and equivalents	6	—	6
Liabilities:			
Foreign exchange derivative contracts	$ —	$ 2	$ 2
Interest rate swap	—	1	1

Pension and Postretirement Health Care Benefits Plan Assets

The fair values of the various pension and postretirement health care benefits plans' assets by level in the fair value hierarchy as of December 31, 2016 and 2015 were as follows:

U.S. Pension Benefit Plans

December 31, 2016	*Level 1*	*Level 2*	*Total*
Common stock and equivalents	$ 95	$ —	$ 95
Commingled equity funds	1,096	493	1,589
Government, agency and government-sponsored enterprise obligations	—	125	125
Other government bonds	—	54	54
Corporate bonds	—	823	823
Mortgage-backed bonds	—	2	2
Commingled bond funds	261	58	319
Commingled short-term investment funds	183	—	183
Total investment securities	$ 1,635	$ 1,555	$ 3,190
Cash			5
Fair value plan assets			$ 3,195

December 31, 2015	*Level 1*	*Level 2*	*Total*
Common stock and equivalents	$ 89	$ —	$ 89
Commingled equity funds	—	1,541	1,541
Preferred stock	2	—	2
Government, agency and government-sponsored enterprise obligations	—	120	120
Other government bonds	—	70	70
Corporate bonds	—	862	862
Mortgage-backed bonds	—	2	2
Commingled short-term investment funds	—	435	435
Total investment securities	$ 91	$ 3,030	$ 3,121
Accrued income receivable			9
Fair value plan assets			$ 3,130

Non-U.S. Pension Benefit Plans

December 31, 2016	*Level 1*	*Level 2*	*Total*
Common stock and equivalents	$ 161	$ —	$ 161
Commingled equity funds	172	173	345
Government, agency, and government-sponsored enterprise obligations	—	823	823
Commingled bond funds	107	36	143
Commingled short-term investment funds	—	1	1
Total investment securities	440	1,033	1,473
Cash			45
Accrued income receivable			—
Insurance contracts			47
Fair value plan assets			$ 1,565

December 31, 2015	*Level 1*	*Level 2*	*Total*
Common stock and equivalents	$ 21	$ —	$ 21
Commingled equity funds	—	293	293
Government, agency, and government-sponsored enterprise obligations	—	811	811
Commingled bond funds	—	56	56
Commingled short-term investment funds	—	7	7
Total investment securities	$ 21	$ 1,167	$ 1,188
Cash			457
Accrued income receivable			2
Insurance contracts			49
Fair value plan assets			$ 1,696

Postretirement Health Care Benefits Plan

December 31, 2016	*Level 1*	*Level 2*	*Total*
Common stock and equivalents	$ 4	$ —	$ 4
Commingled equity funds	47	21	68
Government, agency, and government-sponsored enterprise obligations	—	5	5
Other government bonds	—	2	2
Corporate bonds	—	35	35
Commingled bond funds	11	3	14
Commingled short-term investment funds	8	—	8
Invested cash	—	—	—
Fair value plan assets	$ 70	$ 66	$ 136

December 31, 2015	*Level 1*	*Level 2*	*Total*
Common stock and equivalents	$ 4	$ —	$ 4
Commingled equity funds	—	71	71
Government, agency, and government-sponsored enterprise obligations	—	5	5
Other government bonds	—	3	3
Corporate bonds	—	40	40
Commingled short-term investment funds	—	14	14
Invested cash	—	6	6
Fair value plan assets	$ 4	$ 139	$ 143

At December 31, 2016, the Company had $309 million of investments in money market prime and government funds (Level 1) classified as Cash and cash equivalents in its consolidated balance sheet, compared to $1.3 billion at December 31, 2015. The money market funds had quoted market prices that are approximately at par.

Using quoted market prices and market interest rates, the Company determined that the fair value of long-term debt at December 31, 2016 was $4.5 billion (Level 2), consistent with the face value of $4.5 billion. Since considerable judgment is required in interpreting market information, the fair value of the long-term debt is not necessarily indicative of the amount which could be realized in a current market exchange.

All other financial instruments are carried at cost, which is not materially different from the instruments' fair values.

10. Long-term Financing and Sales of Receivables

Long-term Financing

Long-term receivables consist of receivables with payment terms greater than twelve months, long-term loans and lease receivables under sales-type leases. Long-term receivables consist of the following:

December 31	**2016**	2015
Long-term receivables	**63**	60
Less current portion	**(14)**	(13)
Non-current long-term receivables	**$ 49**	$ 47

The current portion of long-term receivables is included in Accounts receivable, net and the non-current portion of long-term receivables is included in Other assets in the Company's consolidated balance sheets. The Company recognized interest income on long-term receivables of $2 million, $2 million, and $1 million for the years ended December 31, 2016, 2015 and 2014.

Certain purchasers of the Company's products and services may request that the Company provide long-term financing (defined as financing with a term greater than one year) in connection with the sale of products and services. These requests may include all or a portion of the purchase price of the products and services. The Company's obligation to provide long-term financing may be conditioned on the issuance of a letter of credit in favor of the Company by a reputable bank to support the purchaser's credit or a pre-existing commitment from a reputable bank to purchase the long-term receivables from the Company. The Company had outstanding commitments to provide long-term financing to third-parties totaling $125 million at December 31, 2016, compared to $112 million at December 31, 2015.

Sales of Receivables

From time to time, the Company sells accounts receivable and long-term receivables to third-parties under one-time arrangements. The Company may or may not retain the obligation to service the sold accounts receivable and long-term receivables.

The following table summarizes the proceeds received from sales of accounts receivable and long-term receivables for the years ended December 31, 2016, 2015 and 2014.

Years ended December 31	**2016**	2015	2014
Accounts receivable sales proceeds	**$ 51**	$ 29	$ 50
Long-term receivables sales proceeds	**289**	196	124
Total proceeds from receivable sales	**$ 340**	$ 225	$ 174

At December 31, 2016, the Company had retained servicing obligations for $774 million of long-term receivables, compared to $668 million of long-term receivables at December 31, 2015. Servicing obligations are limited to collection activities of sold accounts receivables and long-term receivables.

Credit Quality of Financing Receivables and Allowance for Credit Losses

An aging analysis of financing receivables at December 31, 2016 and December 31, 2015 is as follows:

December 31, 2016	*Total Long-term Receivable*	*Past Due Over 90 Days*
Municipal leases secured tax exempt	$ 20	$ —
Commercial loans and leases secured	43	2
Long-term receivables, including current portion	$ 63	$ 2

December 31, 2015	*Total Long-term Receivable*	*Current Billed Due*	*Past Due Under 90 Days*	*Past Due Over 90 Days*
Municipal leases secured tax exempt	$ 35	$ —	$ —	$ —
Commercial loans and leases secured	25	1	1	1
Long-term receivables, including current portion	$ 60	$ 1	$ 1	$ 1

The Company uses an internally developed credit risk rating system for establishing customer credit limits. This system is aligned with and comparable to the rating systems utilized by independent rating agencies.

The Company's policy for valuing the allowance for credit losses is to review all customer financing receivables for collectibility on an individual receivable basis. For those receivables where collection risk is probable, the Company calculates the value of impairment based on the net present value of expected future cash flows from the customer.

The Company had a total of $2 million of financing receivables over 90 days past due as of December 31, 2016 in relation to one loan. As of December 31, 2016, the Company is not accruing interest on this loan, and the past due amount is adequately reserved.

11. Commitments and Contingencies

Lease Obligations

The Company leases certain office, factory and warehouse space, land, and information technology and other equipment under principally non-cancelable operating leases. Rental expense, net of sublease income, for the years ended December 31, 2016, 2015 and 2014 was $84 million, $42 million, and $62 million, respectively.

At December 31, 2016, future minimum lease obligations, net of minimum sublease rentals, for the next five years and beyond are as follows:

(in millions)	*2017*	*2018*	*2019*	*2020*	*2021*	*Beyond*
	$ 62	$ 58	$ 52	$ 49	$ 42	$ 218

Purchase Obligations

During the normal course of business, in order to manage manufacturing lead times and help ensure adequate component supply, the Company enters into agreements with contract manufacturers and suppliers that either allow them to procure inventory based upon criteria as defined by the Company or establish the parameters defining the Company's requirements. In addition, we have entered into software license agreements which are firm commitments and are not cancelable. As of December 31, 2016, the Company had entered into firm, noncancelable, and unconditional commitments under such arrangements through 2017. The Company expects to make total payments of $169 million under these arrangements as follows: $125 million in 2017, $30 million in 2018, $9 million in 2019, $4 million in 2020, and $1 million in 2021.

The Company outsources certain corporate functions, such as benefit administration and information technology related services, under various contracts, the longest of which is expected to expire in 2019. The remaining payments under these contracts are approximately $237 million over the remaining life of the contracts. However, these contracts can be terminated. Termination would result in a penalty substantially less than the remaining annual contract payments. The Company would also be required to find another source for these services, including the possibility of performing them in-house.

Legal Matters

The Company is a defendant in various lawsuits, claims, and actions that arise in the normal course of business. While the outcome of these matters is currently not determinable, the Company does not expect the ultimate disposition of these matters to have a material adverse effect on the Company's consolidated financial position, liquidity or results of operations. However, an unfavorable resolution could have a material adverse effect on the Company's consolidated financial position, liquidity, or results of operations in the periods in which the matters are ultimately resolved, or in the periods in which more information is obtained that changes management's opinion of the ultimate disposition.

Indemnifications

The Company is a party to a variety of agreements pursuant to which it is obligated to indemnify the other party with respect to certain matters. In indemnification cases, payment by the Company is conditioned on the other party making a claim pursuant to the procedures specified in the particular contract, which procedures typically allow the Company to challenge the other party's claims. In some instances, the Company may have recourse against third parties for certain payments made by the Company.

Some of these obligations arise as a result of divestitures of the Company's assets or businesses and require the Company to indemnify the other party against losses arising from breaches of representations and warranties and covenants and, in some cases, the settlement of pending obligations. The Company's obligations under divestiture agreements for indemnification based on breaches of representations and warranties are generally limited in terms of duration and to amounts not in excess of a percentage of the contract value. The Company had no accruals for any such obligations at December 31, 2016.

In addition, the Company may provide indemnifications for losses that result from the breach of general warranties contained in certain commercial and intellectual property agreements. Historically, the Company has not made significant payments under these agreements.

12. Information by Segment and Geographic Region

The Company conducts its business globally and manages it through the following two segments:

Products: The Products segment is comprised of Devices and Systems. Devices includes two-way portable and vehicle-mounted radios, accessories, software features, and upgrades. Systems includes the radio network core and central processing software, base stations, consoles, repeaters, and software applications and features. The primary customers of the Products segment are government, public safety and first-responder agencies, municipalities, and commercial and industrial customers who operate private communications networks and manage a mobile workforce. In 2016, the segment's net sales were $3.6 billion, representing 60% of the Company's consolidated net sales.

Services: The Services segment provides a full set of offerings for government, public safety and commercial communication networks including: (i) Integration services, (ii) Managed & Support services, and (iii) iDEN services. Integration services includes implementation, optimization, and integration of networks, devices, software, and applications. Managed & Support services includes a continuum of service offerings beginning with repair, technical support and hardware maintenance. More advanced offerings include network monitoring, software maintenance and cyber security services. Managed service offerings range from partial or full operation of customer owned networks to operation of Motorola Solutions owned networks. Services and SaaS offerings are provided across all radio network technologies, Command Center Consoles, and Smart Public Safety Solutions. iDEN services consists primarily of hardware and software maintenance services for our legacy iDEN customers. In 2016, the segment's net sales were $2.4 billion, representing 40% of the Company's consolidated net sales.

For the years ended December 31, 2016, 2015 and 2014, no single customer accounted for more than 10% of the Company's net sales.

Segment Information

The following table summarizes Net sales and Operating earnings by segment:

	Net Sales			*Operating Earnings (Loss)*		
Years ended December 31	**2016**	2015	2014	**2016**	2015	2014
Products	**$ 3,649**	$ 3,676	$ 3,807	**$ 734**	$ 704	$ (667)
Services	**2,389**	2,019	2,074	**333**	290	(339)
	$ 6,038	$ 5,695	$ 5,881	**1,067**	994	(1,006)
Total other expense				**(223)**	(77)	(155)
Earnings (loss) from continuing operations before income taxes				**$ 844**	$ 917	$ (1,161)

The following table summarizes the Company's capital expenditures and depreciation expense by segment:

	Capital Expenditures			*Depreciation Expense*		
Years ended December 31	**2016**	2015	2014	**2016**	2015	2014
Products	**$ 104**	$ 76	$ 87	**$ 68**	$ 82	$ 94
Services	**167**	99	94	**114**	60	75
	$ 271	$ 175	$ 181	**$ 182**	$ 142	$ 169

The Company's "chief operating decision maker" does not review or allocate resources based on segment assets.

Geographic Area Information

	Net Sales			*Assets*		
Years ended December 31	**2016**	2015	2014	**2016**	2015	2014
United States	**$ 3,566**	$ 3,473	$ 3,354	**$ 5,653**	$ 6,213	$ 8,468
United Kingdom	**528**	96	128	**2,300**	1,127	966
Other, net of eliminations	**1,944**	2,126	2,399	**510**	1,006	989
	$ 6,038	$ 5,695	$ 5,881	**$ 8,463**	$ 8,346	$ 10,423

13. Reorganization of Businesses

The Company maintains a formal Involuntary Severance Plan (the "Severance Plan"), which permits the Company to offer eligible employees severance benefits based on years of service and employment grade level in the event that employment is involuntarily terminated as a result of a reduction-in-force or restructuring. The Severance Plan includes defined formulas to calculate employees' termination benefits. In addition to the Involuntary Severance Plan, during the year ended December 31, 2016, the Company accepted voluntary applications to its Severance Plan from a defined subset of employees within the United States. Voluntary applicants received termination benefits based on the formulas defined in the Severance Plan. However, termination benefits, which are normally different based on employment level grade and capped at six months of salary, were equalized for all employment level grades and capped at a full year's salary.

The Company recognizes termination benefits based on formulas per the Severance Plan at the point in time that future settlement is probable and can be reasonably estimated based on estimates prepared at the time a restructuring plan is approved by management. Exit costs consist of future minimum lease payments on vacated facilities and other contractual terminations. At each reporting date, the Company evaluates its accruals for employee separation and exit costs to ensure the accruals are still appropriate. In certain circumstances, accruals are no longer needed because of efficiencies in carrying out the plans or because employees previously identified for separation resigned from the Company and did not receive severance, or were redeployed due to circumstances not foreseen when the original plans were approved. In these cases, the Company reverses accruals through the consolidated statements of operations where the original charges were recorded when it is determined they are no longer needed.

During 2016, 2015, and 2014 the Company continued to implement various productivity improvement plans aimed at achieving long-term, sustainable profitability by driving efficiencies and reducing operating costs. Both of the Company's segments were impacted by these plans. The employees affected were located in all geographic regions.

2016 Charges

During 2016, the Company recorded net reorganization of business charges of $140 million, including $43 million of charges in Costs of sales and $97 million of charges in Other charges in the Company's consolidated statements of operations. Included in the $140 million were charges of: (i) $120 million for employee separation costs, (ii) a $17 million building impairment charge, (iii) $5 million for exit costs, and (iv) $3 million for the impairment of the corporate aircraft, partially offset by $5 million of reversals of accruals no longer needed.

The following table displays the net charges incurred by segment:

Year ended December 31	2016
Products	$ 106
Services	34
	$ 140

The following table displays a rollforward of the reorganization of businesses accruals established for exit costs and employee separation costs from January 1, 2016 to December 31, 2016:

	Accruals at January 1	*Additional Charges*	*Adjustments*	*Amount Used*	*Accruals at December 31*
Exit costs	$ 9	$ 5	$ (1)	$ (6)	$ 7
Employee separation costs	51	120	(4)	(73)	94
	$ 60	$ 125	$ (5)	$ (79)	$ 101

Exit Costs

At January 1, 2016, the Company had $9 million accrual for exit costs. There were $5 million of additional charges in 2016. The $6 million used in 2016 reflects cash payments. The remaining accrual of $7 million, which was included in Accrued liabilities in the Company's consolidated balance sheets at December 31, 2016, primarily represents future cash payments for lease obligations that are expected to be paid over a number of years.

Employee Separation Costs

At January 1, 2016, the Company had an accrual of $51 million for employee separation costs. The 2016 additional charges of $120 million represent severance costs for approximately an additional 1,300 employees, of which 400 were direct employees and 900 were indirect employees. The adjustments of $4 million reflect reversals of accruals no longer needed. The $73 million used in 2016 reflects cash payments to severed employees. The remaining accrual of $94 million, which is included in Accrued liabilities in the Company's consolidated balance sheet at December 31, 2016, is expected to be paid, primarily within one year to: (i) severed employees who have already begun to receive payments and (ii) approximately 300 employees to be separated in 2017.

2015 Charges

During 2015, the Company recorded net reorganization of business charges of $117 million, including $9 million of charges in Costs of sales and $108 million of charges under Other charges in the Company's consolidated statements of operations. Included in the aggregate $117 million are charges of: (i) $74 million for employee separation costs, (ii) $31 million for the impairment of the corporate aircraft, (iii) $10 million for exit costs, and (iv) a $6 million building impairment charge, partially offset by $4 million of reversals of accruals no longer needed.

The following table displays the net charges incurred by segment:

Year ended December 31	2015
Products	$ 84
Services	33
	$ 117

The following table displays a rollforward of the reorganization of businesses accruals established for exit costs and employee separation costs, including those related to discontinued operations which were maintained by the Company after the sale of the Enterprise business, from January 1, 2015 to December 31, 2015:

	Accruals at January 1	*Additional Charges*	*Adjustments*	*Amount Used*	*Accruals at December 31*
Exit costs	$ —	$ 10	$ —	$ (1)	$ 9
Employee separation costs	57	74	(10)	(70)	51
	$ 57	$ 84	$ (10)	$ (71)	$ 60

Exit Costs

At January 1, 2015, the Company had no accrual for exit costs. There were $10 million of additional charges in 2015. The $1 million used in 2015 reflects cash payments. The remaining accrual of $9 million, which was included in Accrued liabilities in the Company's consolidated balance sheets at December 31, 2015, primarily represented future cash payments for lease obligations.

Employee Separation Costs

At January 1, 2015, the Company had an accrual of $57 million for employee separation costs. The additional 2015 charges of $74 million represent severance costs for approximately an additional 1,100 employees, of which 200 were direct employees and 900 were indirect employees. The adjustments of $10 million reflect $4 million of reversals of accruals no longer needed and $6 million of reversals of accruals held for employees separated from discontinued operations. The $70 million used in 2015 reflects cash payments to severed employees. The remaining accrual of $51 million, which was included in Accrued liabilities in the Company's consolidated balance sheet at December 31, 2015.

2014 Charges

During 2014, the Company recorded net reorganization of business charges of $73 million, including $9 million of charges in Costs of sales and $64 million of charges in Other charges in the Company's consolidated statements of operations. Included in the aggregate $73 million are charges of: (i) $67 million for employee separation costs and (ii) $7 million of charges for exit costs, partially offset by $1 million of reversals for accruals no longer needed.

The following table displays the net charges incurred by segment:

Year ended December 31	2014
Products	$ 48
Services	25
	$ 73

The following table displays a rollforward of the reorganization of businesses accruals established for exit costs and employee separation costs, including those related to discontinued operations which were maintained by the Company after the sale of the Enterprise business, from January 1, 2014 to December 31, 2014:

	Accruals at January 1	*Additional Charges*	*Adjustments*	*Amount Used*	*Accruals at December 31*
Exit costs	$ 6	$ 7	$ —	$ (13)	$ —
Employee separation costs	103	93	(4)	(135)	57
	$ 109	$ 100	$ (4)	$ (148)	$ 57

Exit Costs

At January 1, 2014, the Company had an accrual of $6 million for exit costs attributable to lease terminations. There were $7 million of additional charges in 2014. The $13 million used in 2014 reflects cash payments. There was no remaining accrual as of December 31, 2014.

Employee Separation Costs

At January 1, 2014, the Company had an accrual of $103 million for employee separation costs. The additional 2014 charges of $93 million represent severance costs, of which $26 million related to employees of the Enterprise business and were recorded within discontinued operations. The charges represent severance for approximately an additional 1,200 employees, of which 300 were direct employees and 900 were indirect employees. The adjustments of $4 million reflect reversals of accruals no longer needed. The $135 million used in 2014 reflects cash payments to these separated employees, including $50 million related to employees of the Enterprise business and included in cash flow from discontinued operations. The remaining accrual of $57 million was included in Accrued liabilities in the Company's consolidated balance sheet at December 31, 2014.

14. Intangible Assets and Goodwill

The Company accounts for acquisitions using purchase accounting with the results of operations for each acquiree included in the Company's consolidated financial statements for the period subsequent to the date of acquisition.

Guardian Digital Communications Limited Acquisition

On February 19, 2016, the Company completed the acquisition of GDCL, a holding company of Airwave Solutions Limited ("Airwave"), the largest private operator of a public safety network in the world. All of the outstanding equity of GDCL was acquired for the sum of £1, after which the Company invested into GDCL £698 million, net of cash acquired, or approximately $1.0 billion, to settle all third party debt. The Company will make a deferred cash payment of £64 million on November 15, 2018.

The acquisition of GDCL enables the Company to geographically diversify its global Managed & Support services offerings, while offering a proven service delivery platform to build on for providing innovative, leading, mission-critical communications solutions and services to customers. During the year ended December 31, 2016, the Company recorded $462 million within Net sales and $57 million within Net earnings from the operations of Airwave.

The acquisition of GDCL has been accounted for at fair value as of the acquisition date, based on the fair value of the total consideration transferred which has been attributed to all identifiable assets acquired and liabilities assumed and measured at fair value.

The total consideration for the acquisition of GDCL was approximately $1.1 billion, consisting of cash payments of $1.0 billion, net of cash acquired, and deferred consideration valued at fair value on the date of the acquisition of $82 million. The fair value of deferred consideration has been determined based on its net present value, calculated using a discount rate of 4.2%, which is reflective of the credit standing of the combined entity. The following table summarizes fair values of assets acquired and liabilities assumed as of the February 19, 2016 acquisition date:

Cash	$ 86
Accounts receivable, net	55
Other current assets	36
Property, plant and equipment, net	245
Deferred income taxes	82
Accounts payable	(18)
Accrued liabilities	(181)
Other liabilities	(289)
Goodwill	191
Intangible assets	875
Total consideration	$ 1,082
Net present value of deferred consideration payment to former owners	(82)
Net cash consideration at purchase	$ 1,000

Acquired intangible assets consist of $846 million of customer relationships and $29 million of trade names. All intangibles have a useful life of seven years, over which amortization expense will be recognized on a straight line basis.

The fair values of trade names and customer relationships were estimated using the income approach. Customer relationships were valued under the excess earnings method which assumes that the value of an intangible asset is equal to the present value of the incremental after-tax cash flows attributable specifically to the intangible asset. Trade names were valued under the relief from royalty method, which assumes value to the extent that the acquired company is relieved of the obligation to pay royalties for the benefits received from them.

The fair value of acquired Property, plant and equipment, primarily network-related assets, was valued under the replacement cost method, which determines fair value based on the replacement cost of new property with similar capacity, adjusted for physical deterioration over the remaining useful life.

Goodwill is calculated as the excess of the consideration transferred over the net assets recognized and represents the future economic benefits arising from the other assets acquired that could not be individually identified and separately recognized. Goodwill is not deductible for tax purposes.

Pro Forma Financial Information

The following table presents the unaudited pro forma combined results of operations of the Company and GDCL for the years ended December 31, 2016 and December 31, 2015 as if the acquisition of GDCL had occurred on January 1, 2016 and January 1, 2015, respectively, (in millions, except per share amounts):

Years ended December 31	*2016*	*2015*
Revenues	$ 6,109	$ 6,239
Earnings from continuing operations	586	(166)
Basic earnings per share from continuing operations	3.46	(0.83)
Diluted earnings per share from continuing operations	3.39	(0.82)

The Company did not adjust the effects of an $884 million goodwill impairment charge reported in the historic results of GDCL for the year ended December 31, 2015 on the basis that the goodwill impairment charge was not directly attributable to the acquisition of GDCL by the Company. However, this goodwill impairment charge should be highlighted as unusual and non-recurring.

The pro forma results are based on estimates and assumptions, which the Company believes are reasonable. They are not necessarily indicative of its consolidated results of operations in future periods or the results that actually would have been realized had we been a combined company during the periods presented. The pro forma results include adjustments primarily related to amortization of acquired intangible assets, depreciation, interest expense, and transaction costs expensed during the period.

Other Acquisitions

On November 18, 2014, the Company completed the acquisition of an equipment provider for a purchase price of $22 million. During the year ended December 31, 2015, the Company completed the purchase accounting for this acquisition, recognizing $6 million of goodwill and $12 million of identifiable intangible assets. These identifiable intangible assets were classified as completed technology to be amortized over five years.

During the year ended December 31, 2015, the Company completed the acquisitions of two providers of public safety software-based solutions for an aggregate purchase price of $50 million, recognizing an additional $31 million of goodwill, $22 million of identifiable intangible assets, and $3 million of acquired liabilities related to these acquisitions. The $22 million of identifiable intangible assets were classified as: (i) $11 million completed technology, (ii) $8 million customer-related intangibles, and (iii) $3 million of other intangibles. These intangible assets will be amortized over periods ranging from five to ten years.

On November 10, 2016, the Company completed the acquisition of Spillman Technologies, a provider of comprehensive law enforcement and public safety software solutions, for a gross purchase price of $217 million. As a result of the acquisition, the Company recognized $140 million of goodwill, $115 million of identifiable intangible assets, and $38 million of acquired liabilities. The identifiable intangible assets were classified as $49 million of completed technology, $59 million of customer-related intangibles, and $7 million of other intangibles and will be amortized over a period of seven to ten years. As of December 31, 2016, the purchase accounting is not yet complete. The final allocation may include: (i) changes in fair values of acquired goodwill and (ii) changes to assets and liabilities.

During the year ended December 31, 2016, the Company completed the acquisition of several software and service-based providers for a total of $30 million, recognizing $6 million of goodwill, $15 million of intangible assets, and $9 million of tangible net assets related to the these acquisitions. The $15 million of identifiable intangible assets were classified as: (i) $7 million of completed technology and (ii) $8 million of customer-related intangibles and will be amortized over a period of five years. As of December 31, 2016, the purchase accounting has not been completed for one acquisition which was purchased in late 2016. As such, an amount of $11 million has been recorded within Other Assets as of December 31, 2016. The purchase accounting is expected to be completed in the first quarter of 2017.

The results of operations for these acquisitions have been included in the Company's condensed consolidated statements of operations subsequent to the acquisition date. The pro forma effects of these acquisitions are not significant individually or in the aggregate.

Intangible Assets

Amortized intangible assets are comprised of the following:

December 31	2016 Gross Carrying Amount	2016 Accumulated Amortization	2015 Gross Carrying Amount	2015 Accumulated Amortization
Intangible assets:				
Completed technology	$ 116	$ 38	$ 60	$ 32
Patents	8	6	8	5
Customer-related	810	101	23	10
Other intangibles	49	17	20	15
	$ 983	$ 162	$ 111	$ 62

Amortization expense on intangible assets, which is included within Other charges in the consolidated statements of operations, was $113 million, $8 million, and $4 million for the years ended December 31, 2016, 2015, and 2014, respectively. As of December 31, 2016, future amortization expense is estimated to be $132 million in 2017, $130 million in 2018, $129 million in 2019, $126 million in 2020, and $125 million in 2021.

Amortized intangible assets, excluding goodwill, were comprised of the following by segment:

	2016 Gross Carrying Amount	2016 Accumulated Amortization	2015 Gross Carrying Amount	2015 Accumulated Amortization
Products	$ 178	$ 63	$ 89	$ 60
Services	805	99	22	2
	$ 983	$ 162	$ 111	$ 62

Goodwill

The following table displays a rollforward of the carrying amount of goodwill by segment from January 1, 2015 to December 31, 2016:

	Products	Services	Total
Balance as of January 1, 2015			
Aggregate goodwill	$ 264	$ 119	$ 383
Accumulated impairment losses	—	—	—
Goodwill, net of impairment losses	$ 264	$ 119	$ 383
Goodwill acquired	6	31	37
Balance as of December 31, 2015			
Aggregate goodwill	270	150	420
Accumulated impairment losses	—	—	—
Goodwill, net of impairment losses	$ 270	$ 150	$ 420
Goodwill acquired	46	291	337
Foreign currency translation	—	(29)	(29)
Balance as of December 31, 2016			
Aggregate goodwill	316	412	728
Accumulated impairment losses	—	—	—
Goodwill, net of impairment losses	$ 316	$ 412	$ 728

The Company conducts its annual assessment of goodwill for impairment in the fourth quarter of each year. The goodwill impairment assessment is performed at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment. The Company has determined that the Products segment and Services segment each meet the definition of a reporting unit.

The Company performed a qualitative assessment to determine whether it was more-likely-than-not that the fair value of each reporting unit was less than its carrying amount for the fiscal years 2016, 2015, and 2014. In performing this qualitative assessment the Company assessed relevant events and circumstances including macroeconomic conditions, industry and market conditions, cost factors, overall financial performance, changes in share price, and entity-specific events. For fiscal years

2016, 2015, and 2014, the Company concluded it was more-likely-than-not that the fair value of each reporting unit exceeded its carrying value. Therefore, the two-step goodwill impairment test was not required and there was no impairment of goodwill.

15. Valuation and Qualifying Accounts

The following table presents the valuation and qualifying account activity for the years ended December 31, 2016, 2015, and 2014:

	Balance at January 1	*Charged to Earnings*	*Used*	*Adjustments**	*Balance at December 31*
2016					
Allowance for doubtful accounts	$ 28	$ 44	$ (26)	$ (2)	$ 44
Inventory reserves	142	20	(33)	2	131
2015					
Allowance for doubtful accounts	35	9	(17)	1	28
Inventory reserves	131	24	(13)	—	142
2014					
Allowance for doubtful accounts	53	19	(35)	(2)	35
Inventory reserves	125	24	(15)	(3)	131

* *Adjustments include translation adjustments*

16. Quarterly and Other Financial Data (unaudited)

	2016				2015			
	1st	*2nd*	*3rd*	*4th*	*1st*	*2nd*	*3rd*	*4th*
Operating Results								
Net sales	$ 1,193	$ 1,430	$ 1,532	$ 1,883	$ 1,223	$ 1,368	$ 1,422	$ 1,682
Costs of sales	691	754	770	955	675	720	737	844
Gross margin	502	676	762	928	548	648	685	838
Selling, general and administrative expenses	234	240	247	277	256	254	259	252
Research and development expenditures	135	138	137	142	159	156	153	152
Other charges	33	74	37	106	14	(16)	42	44
Operating earnings	100	224	341	403	119	254	231	390
Earnings from continuing operations*	17	107	192	243	87	150	126	277
Net earnings*	17	107	192	243	74	142	115	279
Per Share Data (in dollars)								
Earnings (loss) from Continuing operations*:								
Basic earnings (loss) per common share	$ 0.10	$ 0.62	$ 1.15	$ 1.47	$ 0.40	$ 0.72	$ 0.63	$ 1.58
Diluted earnings (loss) per common share	0.10	0.61	1.13	1.43	0.40	0.72	0.63	1.56
Net earnings*:								
Basic earnings per common share	$ 0.10	$ 0.62	$ 1.15	$ 1.47	$ 0.34	$ 0.68	$ 0.58	$ 1.60
Diluted earnings per common share	0.10	0.61	1.13	1.43	0.34	0.68	0.57	1.57
Dividends declared	$ 0.41	$ 0.41	$ 0.41	$ 0.47	$ 0.34	$ 0.34	$ 0.34	$ 0.41
Dividends paid	0.41	0.41	0.41	0.41	0.34	0.34	0.34	0.34
Stock prices								
High	$ 76.11	$ 76.32	$ 78.32	$ 84.00	$ 70.00	$ 62.53	$ 69.61	$ 72.45
Low	$ 60.36	$ 63.08	$ 64.77	$ 71.29	$ 62.41	$ 57.14	$ 56.79	$ 65.24

* *Amounts attributable to Motorola Solutions, Inc. common shareholders.*

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures.

Under the supervision and with the participation of our senior management, including our chief executive officer and chief financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as of the end of the period covered by this annual report (the "Evaluation Date"). Based on this evaluation, our chief executive officer and chief financial officer concluded as of the Evaluation Date that our disclosure controls and procedures were effective such that the information relating to Motorola Solutions, including our consolidated subsidiaries, required to be disclosed in our Securities and Exchange Commission ("SEC") reports (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to Motorola Solutions' management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting.

Motorola Solutions' management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Rule 13a-15(f) of the Exchange Act. Under the supervision and with the participation of our senior management, including our chief executive officer and chief financial officer, we assessed the effectiveness of our internal control over financial reporting as of December 31, 2016, using the criteria set forth in the *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management has concluded that our internal control over financial reporting is effective as of December 31, 2016.

On February 19, 2016 the Company completed the acquisition of Gaurdian Digital Communications Limited. As permitted for recently acquired businesses, management has excluded the acquired business from its assessment of internal control over financial reporting. The excluded Gaurdian Digital Communications Limited business represents total assets and total revenues of 13.5% and 7.6% related to the consolidated financial statements amounts, as of and for the year ended December 31, 2016.

The Company's independent registered public accounting firm, KPMG LLP, has issued a report on the Company's internal control over financial reporting. The report on the audit of internal control over financial reporting appears in this Form 10-K.

Changes in Internal Control Over Financial Reporting.

There have been no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2016, that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

We previously were in the process of a multi-year phased upgrade and consolidation of our enterprise resource planning ("ERP") systems into a single global platform across our businesses. With the sale of the Enterprise business which included the transfer of our existing ERP system to Zebra, we have entered into transition service agreements which require us to operate in a shared information technology environment with Zebra until 2017. We are completing the design phase for the initial release of our future ERP system and have begun system integration testing. Phase one will allow us to cease using the Zebra transition services agreement and includes the replacement of regional systems supporting our product based business and the current indirect procurement system. Phase one is scheduled to go live in the second quarter of 2017.

Item 9B. Other Information

None.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

Motorola Solutions, Inc.:

We have audited Motorola Solutions, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Motorola Solutions, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting in Item 9A: Controls and Procedures. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.
We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Motorola Solutions, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Motorola Solutions, Inc. acquired Guardian Digital Communications Limited during 2016, and management excluded from its assessment of the effectiveness of Motorola Solutions, Inc.'s internal control over financial reporting as of December 31, 2016, Guardian Digital Communications Limited's internal control over financial reporting associated with total assets representing 13.5% of consolidated assets, and total net sales representing 7.6% of consolidated net sales, included in the consolidated financial statements of Motorola Solutions, Inc. and Subsidiaries as of and for the year ended December 31, 2016. Our audit of internal control over financial reporting of the Motorola Solutions, Inc. also excluded an evaluation of the internal control over financial reporting of Guardian Digital Communications Limited.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Motorola Solutions, Inc. and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016, and our report dated February 21, 2017 expressed an unqualified opinion on those consolidated financial statements.

KPMG LLP

Chicago, Illinois

February 21, 2017

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) *1. Financial Statements*

See Part II, Item 8 hereof.

2. Financial Statement Schedules and Independent Auditors' Report

All schedules omitted are inapplicable or the information required is shown in the consolidated financial statements or notes thereto.

3. Exhibits

Exhibits required to be attached by Item 601 of Regulation S-K are listed in the Exhibit Index attached hereto, which is incorporated herein by this reference. Exhibit numbers 10.6 through 10.58, listed in the attached Exhibit Index, are management contracts or compensatory plans or arrangements required to be filed as exhibits to this form by Item 15(b) hereof.

(b) *Exhibits:*

See Item 15(a)3 above.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The response to this Item required by Item 401 of Regulation S-K, with respect to directors, incorporates by reference the information under the caption "2017 Director Nominees" of Motorola Solutions' Proxy Statement for the 2017 Annual Meeting of Stockholders (the "Proxy Statement") and, with respect to executive officers, is contained in Part I hereof under the caption "Executive Officers of the Registrant" and, with respect to the audit committee, incorporates by reference the information under the caption "Corporate Governance - Committees of the Board" and "Audit Committee Matters - Report of Audit Committee" of the Proxy Statement.

The response to this Item required by Item 405 of Regulation S-K incorporates by reference the information under the caption "Security Ownership Information-Section 16 (a) Beneficial Ownership Reporting Compliance" of the Proxy Statement.

The response to this Item also incorporates by reference the information under the caption "Important Dates for the 2018 Annual Meeting - Recommending a Director Candidate to the Governance and Nominating Committee" of the Proxy Statement.

Motorola Solutions has adopted a code of ethics, the Motorola Solutions Code of Business Conduct (the "Code"), that applies to all employees, including the Company's principal executive officer, principal financial officer and controller (principal accounting officer). The Code is posted on Motorola Solutions' Internet website, www.motorolasolutions.com/investors, and is available free of charge, upon request to Investor Relations, Motorola Solutions, Inc., Corporate Offices, 500 W. Monroe Street, Chicago, Illinois 60661, E-mail: investors@motorolasolutions.com. Any amendment to, or waiver from, the Code applicable to executive officers will be posted on our Internet website within four business days following the date of the amendment or waiver. Motorola Solutions' Code of Business Conduct applies to all of the Company's employees worldwide, without exception, and describes employee responsibilities to the various stakeholders involved in our business. The Code goes beyond the legal minimums by implementing the values we share as employees of Motorola Solutions—our key beliefs—uncompromising integrity and constant respect for people. The Code places special responsibility on managers and prohibits retaliation for reporting issues.

Item 11. Executive Compensation

The response to this Item incorporates by reference the information under the captions "Director Compensation - Determining Director Compensation - How the Directors are Compensated," "Compensation Discussion and Analysis," "Compensation and Leadership Committee Report," "Compensation and Leadership Committee Interlocks and Insider Participation," and under "Named Executive Officer Compensation," the following subsections: "2016 Summary Compensation Table," "Grants of Plan-Based Awards in 2016," "Outstanding Equity Awards at 2016 Fiscal Year-End," "Option Exercises and Stock Vested in 2016," "Nonqualified Deferred Compensation in 2016," "Retirement Plans," "Pension Benefits in 2016," "Employment Contracts," and "Termination of Employment and Change in Control Arrangements," of the Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The response to this Item incorporates by reference the information under the captions "Equity Compensation Plan Information" and "Security Ownership Information" of the Proxy Statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The response to this Item incorporates by reference the relevant information under the caption "Corporate Governance - Related Person Transaction Policy and Procedures" and "Independent Directors" of the Proxy Statement.

Item 14. Principal Accounting Fees and Services

The response to this Item incorporates by reference the information under the caption "Audit Committee Matters - Independent Registered Public Accounting Firm Fees" and "Audit Committee Matters - Audit Committee Pre-Approval Policies" of the Proxy Statement.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors

Motorola Solutions, Inc.:

We consent to the incorporation by reference in the registration statements on Form S-8 (Nos. 033-59285, 333-51847, 333-36308, 333-53120, 333-60560, 333-60612, 333-87728, 333-105107, 333-123879, 333-133736, 333-142845, 333-160137, and 333-204324) and S-3 (Nos. 333-76637, 333-36320, 333-206451, and 333-208332) of Motorola Solutions, Inc. of our reports dated February 21, 2017, with respect to the consolidated balance sheets of Motorola Solutions, Inc. and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016, and the effectiveness of internal control over financial reporting as of December 31, 2016, which reports appear in the December 31, 2016 annual report on Form 10-K of Motorola Solutions, Inc.

Our report dated February 21, 2017, on the effectiveness of internal control over financial reporting as of December 31, 2016, contains an explanatory paragraph that states Motorola Solutions, Inc. acquired Guardian Digital Communications Limited during 2016, and management excluded from its assessment of the effectiveness of Motorola Solutions, Inc.'s internal control over financial reporting as of December 31, 2016, Guardian Digital Communications Limited's internal control over financial reporting associated with total assets representing 13.5% of consolidated assets, and total net sales representing 7.6% of consolidated net sales, included in the consolidated financial statements of Motorola Solutions, Inc. and Subsidiaries as of and for the year ended December 31, 2016. Our audit of internal control over financial reporting of Motorola Solutions, Inc. also excluded an evaluation of the internal control over financial reporting of Guardian Digital Communications Limited.

KPMG LLP

Chicago, Illinois

February 21, 2017

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Motorola Solutions, Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MOTOROLA SOLUTIONS, INC.

By: /S/ GREGORY Q. BROWN
Gregory Q. Brown
Chairman and Chief Executive Officer

February 21, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Motorola Solutions, Inc. and in the capacities and on the dates indicated.

Signature	*Title*	*Date*
/S/ GREGORY Q. BROWN Gregory Q. Brown	Chairman and Chief Executive Officer and Director (Principal Executive Officer)	February 21, 2017
/S/ GINO A. BONANOTTE Gino A. Bonanotte	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 21, 2017
/S/ JOHN K. WOZNIAK John K. Wozniak	Corporate Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 21, 2017
/S/ KENNETH C. DAHLBERG Kenneth C. Dahlberg	Director	February 21, 2017
/S/ KENNETH D. DENMAN Kenneth D. Denman	Director	February 21, 2017
/S/ EGON P. DURBAN Egon P. Durban	Director	February 21, 2017
/S/ MICHAEL V. HAYDEN Michael V. Hayden	Director	February 21, 2017
/S/ CLAYTON M. JONES Clayton M. Jones	Director	February 21, 2017
/S/ JUDY C. LEWENT Judy C. Lewent	Director	February 21, 2017
/S/ GREGORY K. MONDRE Gregory K. Mondre	Director	February 21, 2017
/S/ ANNE R. PRAMAGGIORE Anne R. Pramaggiore	Director	February 21, 2017
/S/ SAMUEL C. SCOTT III Samuel C. Scott III	Director	February 21, 2017

EXHIBIT INDEX

2.1	Master Acquisition Agreement, dated April 14, 2014, by and between Motorola Solutions, Inc. and Zebra Technologies, Inc. (incorporated by reference to Exhibit 2.1 to Motorola Solutions' Current Report on Form 8-K filed on April 16, 2014 (File No. 1-7221)).
2.2	Share Purchase Agreement, dated December 3, 2015, by and between Motorola Solutions, Inc., Motorola Solutions Overseas Limited, and Guardian Digital Communications Holdings Limited (incorporated by reference to Exhibit 1.1 to Motorola Solutions' Current Report on 8-K filed on December 3, 2015 (File 1-17221)).
3.1 (a)	Restated Certificate of Incorporation of Motorola, Inc., as amended through May 5, 2009 (incorporated by reference to Exhibit 3(i)(b) to Motorola, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended July 4, 2009 (File No. 1-7221)).
3.1 (b)	Certificate of Amendment to the Restated Certificate of Incorporation of Motorola, Inc., effective January 4, 2011, as filed with the Secretary of State of the State of Delaware (incorporated by reference to Exhibit 3.1 to Motorola Solutions' Current Report on Form 8-K filed on January 10, 2011 (File No. 1-7221)).
3.1 (c)	Certificate of Ownership and Merger merging Motorola Name Change Corporation into Motorola, Inc., effective January 4, 2011, as filed with the Secretary of State of the State of Delaware (incorporated by reference to Exhibit 3.2 to Motorola Solutions' Current Report on Form 8-K filed on January 10, 2011 (File No. 1-7221)).
3.2	Amended and Restated Bylaws of Motorola Solutions, Inc. as of November 13, 2014 (incorporated by reference to Exhibit 3.1 to Motorola Solutions' Current Report on Form 8-K filed on November 14, 2014 (File No. 1-7221)).
4.1 (a)	Senior Indenture, dated as of May 1, 1995, between The Bank of New York Mellon Trust Company, N.A. (as successor Trustee to JPMorgan Chase Bank (as successor in interest to Bank One Trust Company) and BNY Midwest Trust Company (as successor in interest to Harris Trust and Savings Bank) and Motorola, Inc. (incorporated by reference to Exhibit 4(d) of the Registrant's Registration Statement on Form S-3 dated September 25, 1995 (Registration No. 33-62911)).
4.1 (b)	Instrument of Resignation, Appointment and Acceptance, dated as of January 22, 2001, among Motorola, Inc., Bank One Trust Company, N.A. and BNY Midwest Trust Company (as successor in interest to Harris Trust and Savings Bank) (incorporated by reference to Exhibit 4.2(b) to Motorola, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2000 (File No. 1-7221)).
4.1 (c)	Indenture dated as of August 19, 2014 between Motorola Solutions, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee. (incorporated by reference to Exhibit 4.1 to Motorola Solutions' Current Report on Form 8-K filed on August 19, 2014 (File No. 1-7221)).
4.1 (d)	Indenture dated as of August 25, 2015 between Motorola Solutions, Inc. and The Bank of New York Mellon Trust Company, N.A., as Trustee, related to 2% Convertible Senior Notes Due 2020 (incorporated by reference to Exhibit 10.1 to Motorola Solutions' Current Report on Form 8-K filed on August 26, 2015 (File No. 1-7221)).
	Certain instruments defining the rights of holders of long-term debt of Motorola, Inc. and of all its subsidiaries for which consolidated or unconsolidated financial statements are required to be filed are being omitted pursuant to paragraph (b)(4)(iii)(A) of Item 601 of Regulation S-K. Motorola Solutions agrees to furnish a copy of any such instrument to the Commission upon request.
10.1	Amended and Restated Master Separation and Distribution Agreement among Motorola Mobility Holdings, Inc. (f/k/a Motorola SpinCo Holdings Corporation), Motorola Mobility, Inc. and Motorola, Inc. effective as of July 31, 2010 (incorporated by reference to Exhibit 2.1 to Amendment No. 1 to the Form 10 Registration Statement filed on August 31, 2010 by Motorola Mobility Holdings, Inc. (formerly Motorola SpinCo Holdings Corporation) (File No. 1-34805)).
10.2	Amended and Restated Intellectual Property License Agreement between Motorola Mobility, Inc. and Motorola, Inc. effective as of July 31, 2010 (incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Form 10 Registration Statement filed on August 31, 2010 by Motorola Mobility Holdings, Inc. (formerly Motorola SpinCo Holdings Corporation (File No. 1-34805)).
10.3	Amended and Restated Exclusive License Agreement between Motorola Trademark Holdings, LLC and Motorola, Inc. effective as of July 30, 2010 (incorporated by reference to Exhibit 10.3 to Amendment No. 3 to the Form 10 Registration Statement filed on November 12, 2010 by Motorola Mobility Holdings, Inc. (File No. 1-34805)).
10.4	Tax Sharing Agreement among Motorola Mobility Holdings, Inc. (f/k/a Motorola SpinCo Holdings Corporation), Motorola Mobility, Inc. and Motorola, Inc. effective as of July 31, 2010 (incorporated by reference to Exhibit 10.4 to Amendment No. 1 to the Form 10 Registration Statement filed on August 31, 2010 by Motorola Mobility Holdings, Inc. (formerly Motorola SpinCo Holdings Corporation) (File No. 1-34805)).
10.5	Amended and Restated Employee Matters Agreement among Motorola Mobility Holdings, Inc. (f/k/a Motorola SpinCo Holdings Corporation), Motorola Mobility, Inc. and Motorola, Inc. effective as of July 31, 2010 (incorporated by reference to Exhibit 10.7 to Amendment No. 2 to the Form 10 Registration Statement filed on October 8, 2010 by Motorola Mobility Holdings, Inc. (formerly Motorola SpinCo Holdings Corporation (File No. 1-34805)).
10.6	Motorola Solutions Omnibus Incentive Plan of 2015, effective May 18, 2015 (an amendment and restatement of the Motorola Solutions Omnibus Incentive Plan of 2006) (incorporated by reference to Exhibit 10.1 to Motorola Solutions' Current Report on Form 8-K filed on May 21, 2015 (file No. 1-7221)).
10.7	Form of Motorola Solutions, Inc. Performance Option Award Agreement for grants to Section 16 Officers on or after March 9, 2015 (incorporated by reference to Exhibit 10.1 to Motorola Solutions' Current Report on Form 8-K filed on March 11, 2015 (File No. 1-7221)).
10.8	Form of Performance Option Award Agreement (non-CEO) (incorporated by reference to Exhibit 10.3 to Motorola Solutions' Current Report on Form 8-K filed on August 26, 2015 (File No. 1-7221)).

10.9 Form of Motorola Solutions, Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options for grants to Section 16 Officers on or after May 6, 2013 (incorporated by reference to Exhibit 10.2 to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2013 (File No. 1-7221)).

10.10 Form of Motorola Solutions Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants on or after February 3, 2014 (incorporated by reference to Exhibit 10.9 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2013 (File No. 1-7221)).

10.11 Form of Motorola Solutions Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants on or after January 4, 2011 (incorporated by reference to Exhibit 10.11 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.12 Form of Motorola, Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants from August 1, 2009 to January 3, 2011 (incorporated by reference to Exhibit 10.1 to Motorola Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended July 4, 2009 (File No. 1-7221)).

10.13 Form of Motorola, Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants from May 6, 2008 to August 1, 2009 (incorporated by reference to Exhibit 10.54 to Motorola Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2008 (File No. 1-7221)).

10.14 Form of Motorola, Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants from February 11, 2007 to May 4, 2008 (incorporated by reference to Exhibit 10.37 to Motorola Inc.'s Current Report on Form 8-K filed on February 15, 2007 (File No. 1-7221)).

10.15 Form of Motorola Solutions Stock Option Consideration Agreement for grants on or after February 3, 2014 (incorporated by reference to Exhibit 10.14 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2013 (File No. 1-7221)).

10.16 Form of Motorola Solutions Stock Option Consideration Agreement for grants from January 4, 2011 to February 2, 2014 (incorporated by reference to Exhibit 10.15 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.17 Form of Motorola, Inc. Stock Option Consideration Agreement for grants from May 6, 2008 to January 3, 2011 (incorporated by reference to Exhibit 10.56 to Motorola Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2008 (File No. 1-7221)).

10.18 Form of Motorola, Inc. Stock Option Consideration Agreement for grants from February 27, 2007 to May 5, 2008 (incorporated by reference to Exhibit 10.4 to Motorola Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2006 (File No. 1-7221)).

10.19 Form of Motorola Solutions, Inc. Market Stock Unit Agreement for grants to Section 16 Officers on or after March 9, 2015 (incorporated by reference to Exhibit 10.2 to Motorola Solutions' Current Report on Form 8-K filed on March 11, 2015 (File No. 1-7221)).

10.20 Form of Motorola Solutions, Inc. Restricted Stock Unit Agreement relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants to Section 16 Officers on or after May 6, 2013 (incorporated by reference to Exhibit 10.1 to Motorola Inc's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2013 (File No. 1-7221)).

10.21 Form of Motorola Solutions, Inc. Restricted Stock Unit Agreement relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants to Appointed Vice Presidents and Elected Officers on or after February 3, 2014 (incorporated by reference to Exhibit 10.19 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2013 (File No. 1-7221)).

10.22 Motorola Solutions, Inc. Amended Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options and Addendum A to Motorola Solutions, Inc. Award Document-Terms and Conditions Related to Employee Stock Appreciation Rights, relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for a grant on February 22, 2011 to Gregory Q. Brown. (incorporated by reference to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended April 2, 2011 (File No. 1-7221)).

10.23 Form of Motorola Solutions Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options for Gregory Q. Brown, relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grant on February 1, 2011 pursuant to the terms of the Employment Agreement dated August 27, 2008, as amended, by and between Motorola, Inc. and Gregory Q. Brown (incorporated by reference to Exhibit 10.24 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.24 Form of Motorola Solutions Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options for Gregory Q. Brown, relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants on or after January 4, 2011 (incorporated by reference to Exhibit 10.25 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.25 Form of Motorola, Inc. Award Document-Terms and Conditions Related to Employee Nonqualified Stock Options for Gregory Q. Brown, relating to the Motorola Solutions Omnibus Incentive Plan of 2006 for grants from May 7, 2009 to January 3, 2011 (incorporated by reference to Exhibit 10.13 to Motorola, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2009 (File No. 1-7221)).

10.26 Form of Motorola Solutions, Inc. Performance Option Award Agreement for grants to Gregory Q. Brown on or after March 9, 2015 (incorporated by reference to Exhibit 10.3 to Motorola Solutions' Current Report on Form 8-K filed on March 11, 2015 (File No. 1-7221)).

10.27 Form of Performance Option Award Agreement (CEO) (incorporated by reference to Exhibit 10.4 to Motorola Solutions' Current Report on Form 8-K filed on August 26, 2015 (File No. 1-7221)).

10.28 Form of Motorola Solutions Stock Option Consideration Agreement for Gregory Q. Brown for grants on or after January 4, 2011 under the Motorola Solutions Omnibus Incentive Plan of 2006 (incorporated by reference to Exhibit 10.27 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010)(File No. 1-7221)).

10.29 Form of Motorola, Inc. Stock Option Consideration Agreement for Gregory Q. Brown for grants from May 7, 2009 to January 3, 2011 under the Motorola Solutions Omnibus Incentive Plan of 2006 (incorporated by reference to Exhibit 10.14 to Motorola, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2009 (File No. 1-7221)).

10.30 Form of Motorola, Inc. Stock Option Consideration Agreement for Gregory Q. Brown for grants from January 31, 2008 to May 6, 2009 under the Motorola Solutions Omnibus Incentive Plan of 2006 (incorporated by reference to Exhibit 10.10 to Motorola, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2007 (File No. 1-7221)).

10.31 Form of Motorola Solutions, Inc. Restricted Stock Unit Award Agreement for Gregory Q. Brown under the Motorola Solutions Omnibus Incentive Plan of 2006 for grants on or after January 4, 2011 (incorporated by reference to Exhibit 10.32 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.32 Form of Motorola Solutions, Inc. Market Stock Unit Agreement for grants to Gregory Q. Brown on or after March 9, 2015 (incorporated by reference to Exhibit 10.4 to Motorola Solutions' Current Report on Form 8-K filed on March 11, 2015 (File No. 1-7221)).

10.33 Form of Motorola Solutions Deferred Stock Units Agreement between Motorola Solutions, Inc. and its non-employee directors, relating to the deferred stock units issued in lieu of cash compensation to directors under the Motorola Solutions Omnibus Incentive Plan of 2006, for acquisitions on or after January 1, 2012 (incorporated by reference to Exhibit 10.37 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2011 (File No. 1-7221)).

10.34 Form of Motorola Solutions Deferred Stock Units Agreement between Motorola Solutions, Inc. and its non-employee directors, relating to the deferred stock units issued in lieu of cash compensation to directors under the Motorola Solutions Omnibus Incentive Plan of 2006, for acquisitions on or after January 4, 2011 (incorporated by reference to Exhibit 10.37 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.35 Form of Motorola Solutions Deferred Stock Units Award between Motorola Solutions, Inc. and its non-employee directors under the Motorola Solutions Omnibus Incentive Plan of 2006 or any successor plan for grants on or after January 1, 2012 (incorporated by reference to Exhibit 10.40 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2011 (File No. 1-7221)).

10.36 Form of Motorola Solutions Deferred Stock Units Award between Motorola Solutions, Inc. and its non-employee directors under the Motorola Solutions Omnibus Incentive Plan of 2006 or any successor plan for grants from January 4, 2011 to December 31, 2011 (incorporated by reference to Exhibit 10.39 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.37 Form of Deferred Stock Units Award between Motorola, Inc. and its non-employee directors under the Motorola Solutions Omnibus Incentive Plan of 2006 or any successor plan for grants from February 11, 2007 to January 3, 2011(incorporated by reference to Exhibit 10.9 to Motorola, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2006 (File No. 1-7221)).

10.38 Motorola Omnibus Incentive Plan of 2003, as amended through May 4, 2009 (incorporated by reference to Exhibit 10.6 to Motorola, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2009 (File No. 1-7221)).

10.39 Motorola Omnibus Incentive Plan of 2000, as amended through May 4, 2009 (incorporated by reference to Exhibit 10.8 to Motorola, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2009 (File No. 1-7221)).

10.40 Form of Deferred Stock Units Agreement between Motorola, Inc. and its non-employee directors, relating to the deferred stock units issued in lieu of cash compensation to directors under the Motorola Omnibus Incentive Plan of 2003 or any successor plan, for acquisitions from January 1, 2006 to February 11, 2007 (incorporated by reference to Exhibit No. 10.25 to Motorola, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2005 (File No. 1-7221)).

10.41 Motorola Non-Employee Directors Stock Plan, as amended and restated on May 6, 2003 (incorporated by reference to Exhibit 10.20 to Motorola, Inc.'s Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2003 (File No. 1-7221)).

10.42 Motorola Solutions Executive Officer Short Term Incentive Plan dated January 17, 2013 (effective January 1, 2013) (incorporated by reference to Exhibit 10.50 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2012 (File No. 1-7221)).

10.43 Motorola Solutions Executive Officer Short Term Incentive Plan Term Sheet (incorporated by reference to Exhibit 10.51 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2012 (File No. 1-7221)).

10.44 Motorola Solutions Long Range Incentive Plan (LRIP), as Amended and Restated January 26, 2012 (incorporated by reference to Exhibit 10.53 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2011 (File No. 1-7221)).

10.45 Motorola Solutions Long Range Incentive Plan (LRIP), as Amended and Restated February 11, 2015 (incorporated by reference to Exhibit 10.5 to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2015 (File No. 1-7221)).

10.46 2016-2018 Performance Measures under the Motorola Solutions Long Range Incentive Plan (LRIP), as Amended and Restated February 18, 2016 (incorporated by reference to Exhibit No. 10.1 to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended on April 2, 2016 (File No. 1-7221)).

10.47 2015-2017 Performance Measures under the Motorola Solutions Long Range Incentive Plan (LRIP), as Amended and Restated February 11, 2015 (incorporated by reference to Exhibit 10.6 to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended on April 4, 2015 (File No. 1-7221)).

10.48 2014-2016 Performance Measures under the Motorola Solutions Long Range Incentive Plan (LRIP), as Amended and Restated January 26, 2012 (incorporated by reference to Exhibit No. 10.55 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2013 (File No. 1-7221)).

10.49 Motorola Solutions Management Deferred Compensation Plan (As Amended and Restated Effective as of June 1, 2013) (incorporated by reference to Exhibit 10.1 to Motorola Solutions' Current Report on Form 8-K filed on June 5, 2013 (File No. 1-7221)).

10.50 Motorola Solutions Management Deferred Compensation Plan, as amended and restated effective as of December 1, 2010, as amended January 4, 2011 (incorporated by reference to Exhibit 10.57 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 1-7221)).

10.51 Motorola Solutions, Inc. 2011 Senior Officer Change in Control Severance Plan, as amended and restated November 13, 2014 (incorporated by reference to Exhibit No. 10.54 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2014 (File No. 1-7221)).

10.52 Motorola Solutions, Inc. 2011 Executive Severance Plan, as amended and restated November 13, 2014 (incorporated by reference to Exhibit No. 10.55 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2014 (File No. 1-7221)).

10.53 Arrangement for directors' fees for non-employee directors (description incorporated by reference from the information under the caption "How the Directors are Compensated" of Motorola Solutions' Proxy Statement for the Annual Meeting of Stockholders to be held on May 16, 2016 ("Motorola Solutions' Proxy Statement")).

10.54 Description of Insurance covering non-employee directors and their spouses (including a description incorporated by reference from the information under the caption "Director Retirement Plan and Insurance Coverage" of the Motorola Solutions' Proxy Statement (incorporated by reference to Exhibit 10.57 to Motorola Solutions' Annual Report on Form 10-K for the fiscal year ended December 31, 2015 (File No. 1-7221)).

10.55 Employment Agreement dated August 27, 2008 by and between Motorola, Inc. and Gregory Q. Brown (incorporated by reference to Exhibit 10.1 to Motorola, Inc.'s Current Report on Form 8-K filed on August 29, 2008 (File No. 1-7221)).

10.56 Amendment made on December 15, 2008 to the Employment Agreement dated August 27, 2008 by and between Motorola, Inc. and Gregory Q. Brown (incorporated by reference to Exhibit No. 10.50 to Motorola, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2008 (File No. 1-7221)).

10.57 Second Amendment, dated May 28, 2010, to the Employment Agreement dated August 27, 2008, as amended, by and between Motorola, Inc. and Gregory Q. Brown (incorporated by reference to Exhibit 10.1 to Motorola, Inc.'s Current Report on Form 8-K filed on May 28, 2010 (File No. 1-7221)).

10.58 Third Amendment, dated March 10, 2014, to the Employment Agreement dated August 27, 2008, as amended, by and between Motorola Solutions, Inc. and Gregory Q. Brown (incorporated by reference to Exhibit 10.1 to Motorola Solutions Current Report on Form 8-K filed on March 13, 2014 (File No. 1-7221)).

10.59 Revolving Credit Agreement dated as of May 29, 2014 among Motorola Solutions, Inc., JPMorgan Chase Bank, N.A., as administrative agent, and the several lenders and agents party thereto (incorporated by reference to Exhibit 10.1 to Motorola Solutions Current Report on Form 8-K filed on June 2, 2014 (File No. 1-7221)).

10.60 Term Loan Credit Agreement, dated February 18, 2016, by and among Motorola Solutions, Inc., Lloyds Bank PLC, as administrative agent, and the several lenders and agents party thereto (incorporated by reference to Exhibit 10.2 to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended on April 2, 2016 (File No. 1-7221)).

10.61 Definitive Purchase Agreement by and among Motorola Solutions, Inc., The Prudential Insurance Company of America, Prudential Financial, Inc., and State Street Bank and Trust Company, as Independent Fiduciary of the Motorola Solutions Pension Plan, dated as of September 22, 2014 (incorporated by reference to Exhibit 10.1 to Motorola Solutions' Quarterly Report on Form 10-Q for the fiscal quarter ended September 27, 2014 (File No. 1-7221))**

10.62 Revised and Amended Aircraft Time Sharing Agreement as of October 1, 2015, by and between Motorola Solutions, Inc. and Gregory Q. Brown (incorporated by reference to Exhibit 10.4 to Motorola Solutions', Quarterly Report on Form 10-Q for the fiscal quarter ended October 3, 2015 (File No. 1-7221)).

10.63 Investment Agreement by and among Motorola Solutions, Inc., Silver Lake Partners IV, L.P. and Silver Lake Partners IV Cayman (AIV II), L.P., dated as of August 4, 2015 (incorporated by reference to Exhibit 10.1 to Motorola Solutions' Current Report on Form 8-K filed on August 5, 2015 (file No. 1-7221)).

*12 Statement regarding Computation of Ratio of Earnings to Fixed Charges.

*21 Subsidiaries of Motorola Solutions, Inc.

23 Consent of Independent Registered Public Accounting Firm, see page 96 of the Annual Report on Form 10-K of which this Exhibit Index is a part.

*31.1 Certification of Gregory Q. Brown pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

*31.2	Certification of Gino A. Bonanotte pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
*32.1	Certification of Gregory Q. Brown pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
*32.2	Certification of Gino A. Bonanotte pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Scheme Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith

** Confidential treatment has been requested for portions of this agreement

AMENDMENT NO. SIX

AMENDMENT, dated as of _____ (together with the exhibits attached hereto, this "Amendment"), between Nassau County, a municipal corporation having its principal office at 1550 Franklin Avenue, Mineola, New York 11501 (the "County"), acting for and on behalf of the Nassau County Police Department, having its principal office at 1490 Franklin Avenue, Mineola, New York 11501, and (ij) Motorola, Inc., having its principal office at 5 Paragon Drive Suite 200, Montvale, New Jersey 07645 (the "Contractor").

WI TNE SSE T H:

WHEREAS, pursuant to County contract number CFPW05000024 between the County and the Contractor, executed. on behalf of the County on June 30, 2005 and the amendments entered into thereafter (the "Original Agreement") the Contractor performs certain services for the County in connection with the Nassau County Police Department Land Mobile Radio Modernization Project, which services are more fully described in the Original Agreement (the services contemplated by the Original Agreement, the "Services"); and

WHEREAS, the term of the Original Agreement is from June 30, 2005 to December 31, 2013 or Final acceptance, whichever is sooner ("Original Term"); and

WHEREAS, the maximum amount that the County agreed to reimburse the Contractor as full compensation for Services under the Original Agreement was Forty Seven Million, One Hundred Thirty-Six Thousand Four Hundred Thirty Eight Dollars ($47,136,438.00) (the "Maximum Amount");

WHEREAS, the County and the Contractor desire to increase the Maximum Amount to provide for the development of a new radio site; and

WHEREAS, the County and the Contractor desire to change the distribution of payment to insure the coordination of the installation of the system with the Final Acceptance of the radio system; and

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Amendment, the parties agree as follows:

1. Maximum Amount. (a) The Maximum Amount in the Original Agreement shall be increased by One Hundred Forty-Four Thousand Thirty One Dollars and 00/100 cents ($144,031.00), so that the Maximum Amount that the County shall pay to the Contractor as full consideration for all Services provided under the Amended Agreement shall be Forty Seven Million, Two Hundred Eighty Thousand Four Hundred Sixty Nine Dollars and 00/100 cents ($47,280,469.00) (the "Amended Maximum Amount").

(b) Pursuant to Section 30, Amendment, contained in the Original. Agreement, Change Order

No. 21 is attached hereto as Exhibit A setting for the Amended Maximum Amount as stated supra in paragraph 1(a).

2. Payment Terms. (a) The amounts paid by the County to the Contractor under Section 4 (a) the Original Agreement is hereby amended as described in Change Order No. 21, attached hereto as Exhibit A.

3. Full Force and Effect. All the terms and conditions of the Original Agreement not expressly amended by this Amendment shall remain in full force and effect and govern the relationship of the parties for the term of the Original Agreement.

REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written

MOTOROLA, INC.

By: _____

Name: Roy Kirchner

Title: MSSSI Vice President

Date: 2/08/2017

NASSAU COUNTY

By: _____

Name: _____

Title: County Executive

□ Deputy County Executive

Date: _____

PLEASE EXECUTE IN BLUE INK

STATE OF ~~NEW YORK~~ NEWJERSEY)
)ss.:
COUNTY OF BERGEN)

On the 8th day of February in the year 2017 before me personally came Roy Kirchner to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Ocean; that he or she is the MSSSI Vice President of Motorola Solutions, Inc., the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

NOTARY PUBLIC
PARALEE A. RESTIVO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 10/18/2021

STATE OF NEW YORK)
)ss.:
COUNTY OF NASSAU)

On the _____ day of _____ in the year 201_____ before me personally came _____ to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of _____; that he or she is a Deputy County Executive of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

_____
NOTARY PUBLIC

NASSAU COUNTY, NEW YORK UPDATED JANUARY 9, 2017

4TH PRECINCT DATA SITE MOVE STATEMENT OF WORK

MOTOROLA SOLUTIONS

The design, technical, pricing, and other information ("Information") furnished with this submission is proprietary and/or trade secret information of Motorola Solutions, Inc. ("Motorola Solutions") and is submitted with the restriction that it is to be used for evaluation purposes only. To the fullest extent allowed by applicable law, the Information is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the Information without the express written permission of Motorola Solutions.

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SECTION 1

STATEMENT OF WORK

OVERVIEW

This Statement of Work (SOW) describes the deliverables to be furnished to Nassau County as part of the **4th Precinct, Data Site Equipment Move**. The tasks described herein will be performed by Motorola Solutions, its subcontractors, and Nassau County to implement the solution described herein. It describes the actual work involved, identifies the standards to be followed, and clarifies the responsibilities for both Motorola Solutions and Nassau County during the project implementation.

Nassau County is currently constructing a new stationhouse at the 4th Precinct. This proposal is to facilitate the move of the existing RDLAP Data and Microwave system to the new building. This solution will minimize the down-time of the site. The down-time is estimated to be no more than five (5) days.

The work will entail:

- Site development and grounding of the new equipment location.
- Verification, testing and decommissioning of the existing site equipment.
- Reconfiguration of the existing microwave system to prepare for outdoor mounting.
- Mounting of the Microwave unit.
- Installation of the Ice Shield for Microwave outdoor unit (ODU).
- Reinstallation of the existing Ice Shield for Coax Cable.
- Reinstallation of the site equipment including new coaxial cable runs.
- Coax grounding and a final verification of the site equipment.
- Installation of the UPS for Data Site backup power.
- Ground Testing.
- Verification, testing, and reactivation of the Data Site and Microwave Equipment.

Grounding of the new equipment room and a new ground connection for the Tower Site will be included. This grounding will be run in conduit provided by Nassau County which shall be installed by other Nassau County Contractors. The conduit runs shall be no smaller than a 2-inch diameter and shall terminate at an accessible portion of the primary building Water Main. Appropriate pull strings shall be available for the cable runs to all points of termination. This shall be at some point where the Main has no rubber bushings or grommets and extends, finally to County Water facilities.

Upon completion of the grounding, Motorola Solutions will perform a Megger Three Point Ground Test to certify adequate grounding at the site.

There is no provision in this SOW for any conduit installation.

Assumptions:

- No mandatory union workers or mandatory minority workers are required for this work.
- It is the responsibility of the County to ensure the new equipment location be available for development before the shutdown of the old equipment location.
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All work to be completed utilizing Motorola Solutions preferred vendors/contractors.

- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco] will be borne by Nassau County or site owner.
- Site will have adequate electrical service for the equipment.
- Nassau County will allow the installation of one Out Door Unit (ODU) at the base of the existing tower.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of Nassau County.
- No core drilling will be required, if there is a requirement for core drilling, Nassau County will absorb the cost of the drilling as an addition the cost of this project.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola Solutions will seek excusable delays rather than risk job site safety.
- Site access will be provided to Motorola Solutions' vendor for the duration of the project.
- Access will include all occupied areas of the building and the equipment areas of the building. If access to evidential storage areas is required, a sworn representative of the police department will be present for the duration of the vendors work time in said area.
- The site will have adequate room for installation of proposed equipment, based on applicable codes and Motorola's R56 standards.
- Assumes that at least two (2) 4-inch conduits will be provided from the new equipment room to the edge of the existing tower foundation.
- It is assumed that conduits/pull strings will be provided in the conduits to pull the lines from the tower all the way to the equipment.
- Assumes that others will be handling the HeliNet antenna.
- It is assumed that the existing lines will be removed as part of this scope after the new lines have been installed.
- Assumes that the new equipment room is +/- 500 sq/ft. Motorola does not expect to be provided with 500 sq/ft for it's equipment, this is the maximum size of the room Motorola will ground. Motorola expects sufficient room for two racks with adequate space in front and back for a technician to work on equipment; as well as space for the UPS unit.
- Cable tray installation within equipment room is assumed to be +/- 20 feet of 18-inch wide cable tray.
- For electrical work assumes two (2) 20AMP dual pole circuits for the microwave pulled from the main panel by the County to the microwave rack. County is to provide adequate space in the main panel to allow for quantity five (5) other 20 AMP breakers to be used by Motorola to feed the surge protector (provided/installed by Motorola), as well as the UPS sub panel (provided/installed) by Motorola. The circuits required for the OP820 will be pulled from this sub panel by Motorola.
- Assumes that there will be convenience outlets installed by others for the dehydrator.

SYSTEM INSTALLATION

Install Fixed Network Equipment

Motorola Solutions Responsibilities:

- Motorola Solutions will install the equipment at the 4th precinct. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, Federal Aviation Administration (FAA), and FCC standards and regulations.

- Bond the supplied equipment to the site ground system in accordance with Motorola Solutions' R56 standards.

Nassau County Responsibilities:

- Provide access to the site, as necessary.

Completion Criteria:

- Fixed Network Equipment installation completed.

Fixed Network Equipment Installation Complete

- All fixed network equipment installed and accepted by Nassau County.

System Installation Acceptance (Milestone)

- All equipment installations are completed and accepted by Nassau County.

Acceptance Testing

Nassau County Responsibilities:

- Provide access/escort to the sites.
- Witness tests.

Perform Equipment Testing

Motorola Solutions Responsibilities:

- Test individual components of the system to verify compliance to the equipment specifications.
- Repeat any failed test(s) once Motorola Solutions (or Nassau County) has completed the corrective action(s).
- Prepare documentation of component tests to be delivered as part of the final documentation package.

Nassau County Responsibilities:

- Witness tests if desired.

Completion Criteria:

- Successful completion of equipment testing.

System Acceptance Test Procedures/System Acceptance

- Nassau County approves the completion of all the required tests. The system is considered accepted.

FINALIZE

Resolve Punchlist

Motorola Solutions Responsibilities:

- Work with Nassau County to resolve punchlist items documented during the Acceptance Testing phase.

Nassau County Responsibilities:

- Assist Motorola Solutions with resolution of identified punchlist items by providing support, such as access to the sites, equipment and system, and approval of the resolved punchlist item(s).

Nassau County Responsibilities:

- Receive and approve all documentation provided by Motorola Solutions.

Completion Criteria:

- All required documentation is provided and approved by Nassau County.

Final Acceptance (Milestone)

- All deliverables completed, as contractually required.
- Final System Acceptance received from Nassau County.

MOTOROLA SOLUTIONS

CHANGE ORDER

[co# 21]

Change Order No.	#21
Date:	4-26-2017
Project Name:	NY-02I133C - Nassau County NY Public Safety Communications System
Customer Name:	Nassau County NY
Customer Project Mgr:	Chris Gabriel (CRG002)

The purpose of this Change Order is to: *(highlight the key reasons for this Change Order)*

This Change Order addresses the need to relocate equipment from the old 4th Pct to the new 4th Pct. Building (to be constructed by Customer) and resets the Final Acceptance date for the 8th Pct (previous order) due to construction delays of the new precinct garage

Contract # CFPW05000024 **Contract Date:** 06/30/2005

In accordance with the terms and conditions of the contract identified above between [Nassau County NY] and Motorola Solutions, Inc., the following changes are approved:

Contract Price Adjustments

Original Contract Value:	**$41,610,219,00**
Previous Change Order amounts for Change Order numbers 1 through 20	**$47,136,437.60**
This Change Order:	**$ 144,031.00**
New Contract Value:	**$47,280,468.60**

Completion Date Adjustments

Original Completion Date:	March 2017
Current Completion Date prior to this Change Order:	March 2017
New Completion Date:	3-31-18

MOTOROLA SOLUTIONS

CHANGE ORDER

[co# 21]

Changes in Equipment: *(additions, deletions or modifications)* Include attachments if needed

See attached additions

Changes in Services: *(additions, deletions or modifications)* Include attachments if needed

See attached SOW

Schedule Changes: *(describe change or N/A)*

Final Acceptance for 4th Pct 09-30-17
Final Acceptance for the 8th Pct 03-31-18

Pricing Changes: *(describe change or N/A)*

See below and attached

Customer Responsibilities: *(describe change or N/A)*

See attached SOW

Payment Schedule for this Change Order:
(describe new payment terms applicable to this change order)

See attached

Unless amended above, all other terms and conditions of the Contract shall remain in full force. If there are any inconsistencies between the provisions of this Change Order and the provisions of the Contract, the provisions of this Change Order will prevail.

IN WITNESS WHEREOF the parties have executed this Change Order as of the last date signed below.

Motorola Solutions, Inc.		**Customer**	
By:		By:	
Printed Name:	CHRIS GARCIA	Printed Name:	
Title:	PM	Title:	
Date:	4-26-17	Date:	

Reviewed by: _____ Date: _____
Motorola Solutions

E-84-16

Contract ID#: CEPW05-000024

CF (Capital) Contract Details

Department: POLICE

CF

SERVICE Motorola Radio Project

NIFS ID #: CLPD16-000003 NIFS Entry Date: 4-2-16 Term: from: June 30, 2005 to: Completion

New ☐ / Renewal ☐	
Amendment	☐
Time Extension	☐
Addl. Funds	☒
Blanket Resolution RES#	☐

1) Mandated Program:	Yes ☐	No ☒
2) Comptroller Approval Form Attached:	Yes ☐	No ☒
3) CSEA Agreement § 32 Compliance Attached:	Yes ☐	No ☒
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☒
5) Insurance Required	Yes ☐	No ☒

Agency Information

Contractor	
Name: Motorola Solutions, Inc.	Vendor ID# 361115800
Address 1301 East Algonquin Road Schaumburg, IL 60196	Contact Person Courtney Hanson
	Phone (847) 576-6090

Contact Department
Department Contact Chief Edmund Horgan/ PCO Jane Gonzalez
Address 1490 Franklin Ave Mineola, NY 11501
Phone (516) 573-8608

Routing Slip

	Department	NIFS Entry (Dept) NIFS Appvl (Dept. Head) Contractor Registered	☑ ☐	4/2/16	
	DPW (Capital Only)	CP Capital Fund Approval	☐	4/4/16	
	OMB	NIFS Approval (Contractor Registered)	☑	4/4/16	Yes ☑ No ☐ Not required if blanket resolution
4/4/16	County Attorney	CA RS & Insurance Verification	☑	4/4/16	
4/4/16	County Attorney	CA Approval as to form	☑	4/4/16	
	Legislative Affairs	Rec'd Original Contract to CA	☐		
	County Attorney	NIFS Approval	☐		
	Comptroller	NIFS Approval	☐		
	County Executive	Notarization Filed with Clerk of the Leg.	☐		

* To follow

PR5254 (1/06)

RECEIVED
NASSAU COUNTY
CLERK OF THE LEGISLATURE
2016 APR -4 P 5:01

Contract ID#: CFPW05-000024

Department: POLICE

Contract Summary

Description: Additional encumbrance for final system acceptance in accordance with milestone 12C.

Purpose: To encumbrance additional funds construct/re-site a new radio tower at the NCPD 8th Precinct

Method of Procurement: ~~The County issued an RFP on November 29, 2010 resulting in four vendors submitting a sealed proposal. All proposer's were invited to meet the selection committee and view a story board.~~ Change Order 20: $636,158.00

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Costs and Technical Evaluation Teams which operated independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.,

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500MHz and will provide the capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system, though Motobridge (an IP based soft switched radio network), will provide interoperability with the County's current Department of Public Works ADACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems. The adoption of MCC 7500 IP based console technology increased the capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis: Construct/re-site 8th Precinct radio tower not to exceed $636,158.00

Change in Contract from Prior Procurement: N/A

Recommendation: Approve as submitted

Advisement Information

BUDGET CODES	
Fund:	CAP
Control/Project:	50680
Resp:	PWCAP
Object:	00004
Transaction:	109

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	XXXXXXX
County	$
Federal	$
State	$
Capital	$ 636,158.00
Other	$
TOTAL	$ 636,158.00

LINE	INDEX/OBJECT CODE	AMOUNT
1		$
2		$
3		$
4	PWCAPCAP/50680/00004	$ 636,158.00
5		$
6		$
	TOTAL	$ 636,158.00

RENEWAL	
% Increase	
% Decrease	

Document Prepared By: DI Robert Torres

Date: 03/29/2016

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date
Date	Date	(For Office Use Only) E #:

NIFA

Nassau County Interim Finance Authority

Contract Approval Request Form (As of January 1, 2015)

1. **Vendor:** Motorola Solutions, Inc.

2. **Dollar amount requiring NIFA approval:** $ 636,158.00

Amount to be encumbered: $ 636,158.00

This is a ___ New Contract ___ Advisement ✓ Amendment

If new contract - $ amount should be full amount of contract
If advisement – NIFA only needs to review if it is increasing funds above the amount previously approved by NIFA
If amendment - $ amount should be full amount of amendment only

3. **Contract Term:** 6/30/2005 to termination

Has work or services on this contract commenced? ✓ Yes ___ No

If yes, please explain: This is an ongoing radio project construction contract.

4. **Funding Source:**

___ General Fund (GEN)
✓ Capital Improvement Fund (CAP)
___ Other

___ Grant Fund (GRT)
Federal % ___
State % ___
County % 100

Is the cash available for the full amount of the contract? ✓ Yes ___ No
If not, will it require a future borrowing? ___ Yes ___ No

Has the County Legislature approved the borrowing? ___ Yes ___ No ___ N/A

Has NIFA approved the borrowing for this contract? ___ Yes ___ No ___ N/A

5. **Provide a brief description (4 to 5 sentences) of the item for which this approval is requested:**

Re-site/construct existing 500mhz radio tower at 8th Precinct.

6. **Has the item requested herein followed all proper procedures and thereby approved by the:**

Nassau County Attorney as to form ___ Yes ___ No ___ N/A
Nassau County Committee and/or Legislature ___ Yes ___ No ___ N/A

Date of approval(s) and citation to the resolution where approval for this item was provided:

7. **Identify all contracts (with dollar amounts) with this or an affiliated party within the prior 12 months:**

4/6/15 - CAPD1500009 $2,253677

AUTHORIZATION

To the best of my knowledge, I hereby certify that the information contained in this Contract Approval Request Form and any additional information submitted in connection with this request is true and accurate and that all expenditures that will be made in reliance on this authorization are in conformance with the Nassau County Approved Budget and not in conflict with the Nassau County Multi-Year Financial Plan. I understand that NIFA will rely upon this information in its official deliberations.

Loraine Dallas — 4/4/16

Signature | Title | Date

Print Name

COMPTROLLER'S OFFICE

To the best of my knowledge, I hereby certify that the information listed is true and accurate and is in conformance with the Nassau County Approved Budget and not in conflict with the Nassau County Multi-Year Financial Plan.

Regarding funding, please check the correct response:

_____ I certify that the funds are available to be encumbered pending NIFA approval of this contract.

If this is a capital project:

_____ I certify that the bonding for this contract has been approved by NIFA.

_____ Budget is available and funds have been encumbered but the project requires NIFA bonding authorization

Signature | Title | Date

Print Name

NIFA

Amount being approved by NIFA: _____

Signature | Title | Date

Print Name

NOTE: All contract submissions MUST include the County's own routing slip, current NIFS printouts for all relevant accounts and relevant Nassau County Legislature communication documents and relevant supplemental information pertaining to the item requested herein.

NIFA Contract Approval Request Form MUST be filled out in its entirety before being submitted to NIFA for review.

NIFA reserves the right to request additional information as needed.

George Maragos
Comptroller

OFFICE OF THE COMPTROLLER
240 Old Country Road
Mineola, New York 11501

COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

Attach this form along with all personal, professional or human services contracts, contract renewals, extensions and amendments.

CONTRACTOR NAME: Motorola Solutions, Inc.

CONTRACTOR ADDRESS: 1301 East Algonquin Road
Schaumburg, IL 60196

FEDERAL TAX ID #: 361115800

Instructions: **Please check the appropriate box ("☑") after one of the following roman numerals, and provide all the requested information.**

I. ☐ The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids. The contract was awarded after a request for sealed bids was published in _____ [newspaper] on _____ [date]. The sealed bids were publicly opened on _____ [date]. _____ [#] of sealed bids were received and opened.

II. ☐ The contractor was selected pursuant to a Request for Proposals.
The Contract was entered into after a written request for proposals was issued on _____ [date]. Potential proposers were made aware of the availability of the RFP by advertisement in _____ [newspaper], posting on industry websites, via email to interested parties and by publication on the County procurement website. Proposals were due on _____ [date]. _____ [state #] proposals were received and evaluated. The evaluation committee consisted of: three members of the Comptroller's Office and one member of the County Executive's Office. The proposals were scored and ranked. As a result of the scoring and ranking, the highest-ranking proposer was selected.

III. ☑ This is a renewal, extension or amendment of an existing contract.
The contract was originally executed by Nassau County on June 30, 2005 [date]. This is a renewal or extension pursuant to the contract, or an amendment within the scope of the contract or RFP (copies of the relevant pages are attached). The original contract was entered into after A written request for proposal was issued on July 6, 2004. RFP was posted on County website. Ten potential proposers requested. Two responded and were received and evaluated. Proposals were scored and ranked by a [describe procurement method, i.e., RFP, three proposals evaluated, etc.] Attach a copy of the most recent evaluation of the contractor's performance for any contract to be renewed or extended. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to continue to contract with the county. selection committee. Highest ranked was selected (Motorola). Contract was originally executed by Nassau County on 6/30/05. This amendment is within the scope of that contract.

IV. ☐ Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.

☐ **A.** The contract has been awarded to the proposer offering the lowest cost proposal; **OR:**

☐ **B.** The attached memorandum contains a detailed explanation as to the reason(s)why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

V. ☐ Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.

☐ **A.** There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.

☐ **B.** The memorandum explains that the contractor's selection was dictated by the terms of a federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).

☐ **C.** Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no._____, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.

☐ D. Pursuant to General Municipal Law Section 119-o, the department is purchasing the services required through an inter-municipal agreement.

VI. ☐ This is a human services contract with a not-for-profit agency for which a competitive process has not been initiated. Attached is a memorandum that explains the reasons for entering into this contract without conducting a competitive process, and details when the department intends to initiate a competitive process for the future award of these services. For any such contract, where the vendor has previously provided services to the county, attach a copy of the most recent evaluation of the vendor's performance. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to contract with the county.

In certain limited circumstances, conducting a competitive process and/or completing performance evaluations may not be possible because of the nature of the human services program, or because of a compelling need to continue services through the same provider. In those circumstances, attach an explanation of why a competitive process and/or performance evaluation is inapplicable.

Instructions with respect to Sections VII, VIII and IX: **All Departments must check the box for VII. Then, check either box Section VIII or IX, as applicable.**

VII. ☐ This is a public works contract for the provision of architectural, engineering or surveying services. The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No. 928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.

VIII. ☑ Participation of Minority Group Members and Women in Nassau County Contracts. The selected contractor has agreed that it has an obligation to utilize best efforts to hire MWBE sub-contractors. Proof of the contractual utilization of best efforts as outlined in Exhibit "EE" may be requested at any time, from time to time, by the Comptroller's Office prior to the approval of claim vouchers.

IX. ☐ Department MWBE responsibilities. To ensure compliance with MWBE requirements as outlined in Exhibit "EE", Department will require vendor to submit list of sub-contractor requirements prior to submission of the first claim voucher, for services under this contract being submitted to the Comptroller.

X. ☑ Vendor will not require any sub-contractors.

In addition, if this is a contract with an individual or with an entity that has only one or two employees: ☐ a review of the criteria set forth by the Internal Revenue Service, *Revenue Ruling No.* 87-41, 1987-1 C.B. 296, attached as Appendix A to the Comptroller's Memorandum, dated February 13, 2004, concerning independent contractors and employees indicates that the contractor would not be considered an employee for federal tax purposes.

Department Head Signature

4/4/16
Date

NOTE: Any information requested above, or in the exhibit below, may be included in the county's "staff summary" form in lieu of a separate memorandum.

COUNTY OF NASSAU

POLITICAL CAMPAIGN CONTRIBUTION DISCLOSURE FORM

1. Has the vendor or any corporate officers of the vendor provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator? If yes, to what campaign committee?

None

2. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

The undersigned further certifies and affirms that the contribution(s) to the campaign committees identified above were made freely and without duress, threat or any promise of a governmental benefit or in exchange for any benefit or remuneration.

Vendor: Motorola Solutions, Inc.

Dated: 4/1/2016

Signed:

Print Name: David R. White, Jr.

Title: MSSSI Vice President

Rev. 3-2016

COUNTY OF NASSAU

LOBBYIST REGISTRATION AND DISCLOSURE FORM

1. Name, address and telephone number of lobbyist(s)/lobbying organization. The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term "lobbyist" does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

None

2. List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

None

3. Name, address and telephone number of client(s) by whom, or on whose behalf, the lobbyist is retained, employed or designated:

None

4. Describe lobbying activity conducted, or to be conducted, in Nassau County, and identify client(s) for each activity listed. **See page 4 for a complete description of lobbying activities.**

None

5. The name of persons, organizations or governmental entities before whom the lobbyist expects to lobby:

None

6. If such lobbyist is retained or employed pursuant to a written agreement of retainer or employment, you must attach a copy of such document; and if agreement of retainer or employment is oral, attach a written statement of the substance thereof. If the written agreement of retainer or employment does not contain a signed authorization from the client by whom you have been authorized to lobby, separately attach such a written authorization from the client.

None

7. Has the lobbyist/lobbying organization or any of its corporate officers provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator? If yes, to what campaign committee?

None

I understand that copies of this form will be sent to the Nassau County Department of Information Technology ("IT") to be posted on the County's website.

I also understand that upon termination of retainer, employment or designation I must give written notice to the County Attorney within thirty (30) days of termination.

VERIFICATION: The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

The undersigned further certifies and affirms that the contribution(s) to the campaign committees listed above were made freely and without duress, threat or any promise of a governmental benefit or in exchange for any benefit or remuneration.

Dated: 4/1/2016

Signed:

Print Name: David R. White, Jr.

Title: MSSSI Vice President

The term <u>lobbying</u> shall mean any attempt to influence: any determination made by the Nassau County Legislature, or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including by not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions, department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission, with respect to the zoning, use, development or improvement of real property subject to County regulation, or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

The term "lobbying" or "lobbying activities" <u>does not include</u>: Persons engaged in drafting legislation, rules, regulations or rates; persons advising clients and rendering opinions on proposed legislation, rules, regulations or rates, where such professional services are not otherwise connected with legislative or executive action on such legislation or administrative action on such rules, regulations or rates; newspapers and other periodicals and radio and television stations and owners and employees thereof, provided that their activities in connection with proposed legislation, rules, regulations or rates are limited to the publication or broadcast of news items, editorials or other comment, or paid advertisements; persons who participate as witnesses, attorneys or other representatives in public rule-making or rate-making proceedings of a County agency, with respect to all participation by such persons which is part of the public record thereof and all preparation by such persons for such participation; persons who attempt to influence a County agency in an adjudicatory proceeding, as defined by § 102 of the New York State Administrative Procedure Act.

* SEE ATTACHED FORM 10-K AND PROXY STATEMENT EXCERPTS FOR THIS PUBLICALLY-TRADED CORPORATION

* Motorola Solutions, Inc. ("Motorola") is a publicly traded corporation and, as such, for privacy and security reasons, Motorola will only provide publicly available information found in the Motorola 10-K. 10-K is attached.

No owners hold 10% or greater ownership in Motorola.

PRINCIPAL QUESTIONNAIRE FORM

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD

1. Principal Name _____

   Date of birth ____/____/____

   Home address _____

   City/state/zip _____

   Business address _____

   City/state/zip _____

   Telephone _____

   Other present address(es) _____

   City/state/zip _____

   Telephone _____

   List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)

   President ____/____/____ Treasurer ____/____/____

   Chairman of Board ____/____/____ Shareholder ____/____/____

   Chief Exec. Officer ____/____/____ Secretary ____/____/____

   Chief Financial Officer ____/____/____ Partner ____/____/____

   Vice President ____/____/____ _____ ____/____/____

   (Other)

3. Do you have an equity interest in the business submitting the questionnaire? YES ___ NO ___ If Yes, provide details.

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire? YES ___ NO ___ If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or not-for-profit organization other than the one submitting the questionnaire? YES ___ NO ___; If Yes, provide details.

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer? YES ___ NO ___ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency.
Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:

   a. Been debarred by any government agency from entering into contracts with that agency?
   YES _____ NO ____ If Yes, provide details for each such instance.

   b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause? YES ____ NO ___ If Yes, provide details for each such instance.

   c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards? YES ___ NO ___ If Yes, provide details for each such instance.

   d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract? YES ____ NO ___ If Yes, provide details for each such instance.

8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated? If 'Yes', provide details for each such instance. (Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.)

   a) Is there any felony charge pending against you? YES ___ NO ___ If Yes, provide details for each such charge.

   b) Is there any misdemeanor charge pending against you? YES ____ NO ___ If Yes, provide details for each such charge.

   c) Is there any administrative charge pending against you? YES ____ NO ___ If Yes, provide details for each such charge.

   d) In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? YES ___ NO ___ If Yes, provide details for each such conviction.

e) In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?
YES ___ NO ___ If Yes, provide details for each such conviction.

f) In the past 5 years, have you been found in violation of any administrative or statutory charges? YES ____ NO.___ If Yes, provide details for each such occurrence.

9. In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5? YES ____ NO ___ If Yes, provide details for each such investigation.

10. In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer? YES ____ NO ___ If Yes; provide details for each such investigation.

11. In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held? YES ____ NO ___ If Yes; provide details for each such instance.

12. For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges? YES ____ NO ___ If Yes, provide details for each such year.

CERTIFICATION

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

I, David R. White, Jr., being duly sworn, state that I have read and understand all the items contained in the foregoing pages of this questionnaire and the following pages of attachments; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this questionnaire and before the execution of the contract; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this questionnaire as additional inducement to enter into a contract with the submitting business entity.

Sworn to before me this 1stday of April 20 16

Paralee A. Restivo
Notary Public

PARALEE A. RESTIVO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 10/18/2016

Motorola Solutions, Inc.
Name of submitting business

David R. White, Jr.
Print name

D. R. White
Signature

MSSSI Vice President
Title

4 / 1 / 2016
Date

10-K 1 msi201510-k.htm 10-K

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2015
or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File number 1-7221

MOTOROLA SOLUTIONS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	36-1115800
(State of Incorporation)	(I.R.S. Employer Identification No.)

1303 East Algonquin Road, Schaumburg, Illinois 60196
(Address of principal executive offices)
(847) 576-5000
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $.01 Par Value per Share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant as of July 2, 2015 (the last business day of the Registrant's most recently completed second quarter) was approximately $10.8 billion.

The number of shares of the registrant's Common Stock, $.01 par value per share, outstanding as of February 1, 2016 was 174,337,851.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be delivered to stockholders in connection with its Annual Meeting of Stockholders to be held on May 16, 2016, are incorporated by reference into Part III.

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We may be unable to obtain components and parts that are verified to be Democratic Republic of Congo ("DRC") Conflict Free, which could result in reputational damage if we disclose that our products include minerals that have been identified as "not found to be DRC conflict free" or if we disclose that we are unable to determine whether such minerals are included in our products.

The Dodd-Frank Wall Street Reform and Consumer Protection Act included disclosure requirements regarding the use of tin, tantalum, tungsten and gold (which are defined as "conflict minerals") in our products and if the origin of these materials were from the DRC or an adjoining country. If the minerals originated from the DRC or an adjoining country then a company must disclose the measures it has taken to exercise due diligence and chain of custody to prevent the sourcing of such minerals that have been found to be financing conflict in the DRC. There is a limited pool of suppliers who can provide verifiable DRC Conflict Free components and parts, particularly since our supply chain is complex. As a result, we may be required to publicly disclose that we are not currently able to determine if the products we manufactured in 2015 are DRC Conflict Free. For future reporting years, if the industry systems that we are relying on are not mature enough for us to make a definitive Conflict Free determination, we may have to declare our products as "not found to be DRC conflict free," or such other definitional standard as determined by the SEC and/or the judicial system and we may face reputational challenges with our customers, other stockholders and the activist community as a result. In addition, the European Union is in the process of drafting conflict minerals legislation which may have an impact on our reporting obligations and compliance programs in Europe.

Item 1B: Unresolved Staff Comments

None.

Item 2: Properties

Motorola Solutions' principal executive offices are located at 1303 East Algonquin Road, Schaumburg, Illinois 60196. Motorola Solutions also operates manufacturing facilities and sales offices in other U.S. locations and in many other countries.

As of December 31, 2015, we: (i) owned 10 facilities (manufacturing, sales, service, and office), seven of which were located in North America and three of which were located in other countries; (ii) leased 154 facilities, 66 of which were located in North America and South America and 88 of which were located in other countries; and (iii) primarily utilized four major facilities for the manufacturing and distribution of our products, located in: Penang, Malaysia; Schaumburg, Illinois; Elgin, Illinois; and Berlin, Germany. Motorola Solutions sold its Penang, Malaysia facility and manufacturing operations to Sanmina Corporation ("Sanmina") on February 1, 2016.

We generally consider the productive capacity of our manufacturing facilities to be adequate and sufficient for our requirements. The extent of utilization of each manufacturing facility varies throughout the year.

In 2015, a substantial portion of our products were manufactured in our owned facilities in Malaysia and Illinois. Approximately 25% of our manufacturing, based on volume, is done by a small number of non-affiliated electronics manufacturing suppliers and distribution and logistics services providers, most of which are outside the U.S. We rely on these third-party providers in order to enhance our ability to lower costs and deliver products that meet demand. If manufacturing in Malaysia, Illinois, or by third-parties were disrupted, our overall productive capacity could be significantly reduced.

Item 3: Legal Proceedings

We are a defendant in various lawsuits, claims, and actions, which arise in the normal course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on our consolidated financial position, liquidity, or results of operations. However, an unfavorable resolution could have a material adverse effect on our consolidated financial position, liquidity, or results of operations in the periods in which the matters are ultimately resolved, or in the periods in which more information is obtained that changes management's opinion of the ultimate disposition.

Item 4: Mine Safety Disclosures

Not applicable.

Executive Officers of the Registrant

The following are the persons who were the executive officers of Motorola Solutions, their ages, and their current titles as of February 22, 2016 and the positions they have held during the last five years with the Company:

Gregory Q. Brown; age 55; Chairman and Chief Executive Officer since May 3, 2011; President and Chief Executive Officer from January 2011 to May 2011.

Gino A. Bonanotte; age 51; Executive Vice President and Chief Financial Officer since November 13, 2013; Corporate Vice President and Acting Chief Financial Officer from August 2013 to November 2013; Corporate Vice President, Finance, Sales and Field Operations, from October 2012 to August 2013; and Corporate Vice President, Finance, Product and Business Operations and Americas Field Operations from September 2010 to October 2012.

Bruce W. Brda; age 53; Executive Vice President, Products & Services since January 4, 2016; Executive Vice President, Systems & Products from May 2015 to January 2016; Senior Vice President, Systems & Products from December 2014 to May 2015;

Senior Vice President, Government Solutions from March 2014 to December 2014; Senior Vice President, Global Solutions & Services from January 2013 to March 2014; Senior Vice President, Global Services from July 2011 to January 2013; and Senior Vice President and General Manager, Advanced Services from January 2011 to July 2011.

NOTICE OF
2015 ANNUAL MEETING
OF STOCKHOLDERS AND PROXY STATEMENT

MOTOROLA SOLUTIONS

SECURITY OWNERSHIP INFORMATION

Management and Directors

The following table sets forth information as of the close of business on March 2, 2015 (except where otherwise noted), regarding the beneficial ownership of shares of Common Stock by each director and nominee for director of the Company, the persons named in the Summary Compensation Table, and all current directors, nominees and Section 16 Officers of the Company as a group. Except for Mr. Brown, who owns 1.4% of the outstanding Common Stock, each other director, nominee and named executive officer ("NEO") owns less than 1% of the outstanding Common Stock based on 213,288,177 shares of Common Stock outstanding on March 2, 2015. All current directors, nominees, NEOs and current executive officers as a group own 1.8% of the outstanding Common Stock.

Name	Shares Owned[1]	Shares Under Exercisable Options and SARs[2]	Stock Units[3]	Total Shares Beneficially Owned[4][5]
Gregory Q. Brown	451,474	2,477,533	41,985	2,970,993[6]
Gino A. Bonanotte	6,012	41,754	3,513	51,279
Mark S. Hacker	9,886	33,211	2,509	45,606
Mark F. Moon	28,332	335,553	3,513	367,398
Robert C. Schassler	0	37,659	1,882	39,541
Kenneth C. Dahlberg	8,388	0	4,569	12,957
David W. Dorman	10,300	0	53,766	64,066
Michael V. Hayden	0	0	11,892	11,892
Clayton M. Jones	0	0	0	0
Judy C. Lewent	18,455	3,571	6,059	28,085
Anne R. Pramaggiore	0	0	6,958	6,958
Samuel C. Scott	5,034	3,571	28,490	37,095[7]
Bradley E. Singer	0	0	6,140	6,140
All current directors, nominees, NEOs and current executive officers as a group (14 persons)	562,108	3,114,575	223,272	3,899,956[8]

(1) Includes shares over which the person currently holds or shares voting and/or investment power but excludes the shares listed under "Shares Under Exercisable Options and SARs" and "Stock Units."

(2) Includes shares under options and SARs exercisable on March 2, 2015 and which may become exercisable within 60 days thereafter (assuming all performance measures are satisfied).

(3) Includes stock units which are deemed to be beneficially owned on March 2, 2015 or within 60 days thereafter (assuming all performance measures are satisfied). Stock units are not deemed beneficially owned until the restrictions on the units have lapsed. Each stock unit is intended to be the economic equivalent of one share of Common Stock.

(4) Unless otherwise indicated, each person has sole voting and investment power over the shares reported.

(5) Includes the shares listed under "Shares Under Exercisable Options" and units listed under "Stock Units."

(6) Mr. Brown's holdings under "Total Shares Beneficially Owned" include: 266,775 shares subject to exercisable stock settled stock appreciation rights ("SARs"). The number of shares subject to the stock settled SARs, assumes the exercise of 134,297 shares of stock settled SARs at an exercise price of $40.33 and the exercise of 471,398 stock settled SARs at an exercise price of $38.04, on March 2, 2015. The closing price of the Company stock on March 2, 2015 was $68.89. Mr. Brown has shared voting and investment power over 83,220 shares, included under "Total Shares Beneficially Owned". He disclaims beneficial ownership over 81,000 shares held in a trust of which his wife is trustee and 2,220 shares held by his wife, except to the extent of his pecuniary interest in these shares.

(7) Mr. Scott does not have investment power over 2,038 of these shares.

(8) All directors, nominees and current executive officers as a group have sole voting and investment power over 3,772,713 of these shares and shared voting and/or investment power over 127,243 of these shares.

No directors, nominees or current executive officers have pledged shares of Common Stock pursuant to any loan or arrangement.

Principal Stockholders

The following table sets forth information with respect to any person who is known to be the beneficial owner of more than 5% of Common Stock as of December 31, 2014.

Name and Address	Number of Shares of Motorola Solutions, Inc. and Nature of Beneficial Ownership	Percent of Outstanding Shares[1]
Orbis Investment Management Limited Orbis House, 25 Front Street Hamilton, Bermuda HM11	18,161,243[2] shares of Common Stock	8.5%
BlackRock, Inc. 40 East 52nd Street New York, NY 10022	18,051,444[3] shares of Common Stock	8.5%
ValueAct Capital Master Fund, L.P. and related entities One Letterman Dr., Building D, Fourth Floor San Francisco, California 94129	17,588,576[4] shares of Common Stock	8.2%
Capital Research Global Investors 333 South Hope Street, 55th Floor Los Angeles, CA 90071	11,597,115[5] shares of Common Stock	5.4%

(1) The percentage calculations set forth above are based on 213,268,177 shares of Common Stock outstanding as of March 2, 2015 rather than the percentages set forth on various stockholders' Schedule 13D and 13G filings.

(2) Solely based on information in a Schedule 13G dated February 17, 2015 filed with the SEC jointly by Orbis Investment Management Limited, Orbis Asset Management Limited, and Orbis Investment Management (U.S.) LLC whose address is 600 Montgomery Street, Suite 3800, San Francisco, CA 94111 (collectively "Orbis"). The Schedule 13G indicates that as of December 31, 2014, Orbis was the beneficial owner with shared voting power as to 18,161,243 shares and shared dispositive power as to 18,161,243 shares.

(3) Solely based on information in a Schedule 13G/A Amendment No. 1 dated January 12, 2015 filed with the SEC by BlackRock, Inc. The Schedule 13G/A indicates that as of December 31, 2014, BlackRock, Inc., as the parent holding company, was the beneficial owner with sole voting power as to 15,332,013 shares and sole dispositive power as to 18,051,444 shares.

(4) Solely based on information in a Schedule 13D/A Amendment No. 6 dated November 6, 2014 filed with the SEC jointly by ValueAct Capital Master Fund, L.P., VA Partners I, LLC, ValueAct Capital Management, L.P., ValueAct Capital Management, LLC, ValueAct Holdings, L.P. and ValueAct Holdings GP, LLC (collectively "ValueAct"). The Schedule 13D/A indicates that as of November 4, 2014, ValueAct was the beneficial owner with shared voting power as to 17,588,576 shares and shared dispositive power as to 17,588,576 shares.

(5) Solely based on information in a Schedule 13G/A Amendment No. 1 dated February 11, 2015 filed with the SEC by Capital Research Global Investors, a division of Capital Research and Management Company. The Schedule 13G/A indicates that as of December 31, 2014, Capital Research Global Investors was the beneficial owner with sole voting power and sole dispositive power as to 11,597,115 shares.

Section 16(a) Beneficial Ownership Reporting Compliance

Each director and certain officers of the Company are required to report to the SEC, by a specified date, his or her transactions related to our Common Stock. Based solely on a review of the copies of reports furnished to the Company or written representations that no other reports were required, the Company believes that, during the 2014 fiscal year, all filing requirements applicable to its officers and directors were complied with on a timely basis.

Business History Form

The contract shall be awarded to the responsible proposer who, at the discretion of the County, taking into consideration the reliability of the proposer and the capacity of the proposer to perform the services required by the County, offers the best value to the County and who will best promote the public interest.

In addition to the submission of proposals, each proposer shall complete and submit this questionnaire. The questionnaire shall be filled out by the owner of a sole proprietorship or by an authorized representative of the firm, corporation or partnership submitting the Proposal.

NOTE: All questions require a response, even if response is "none" or "not-applicable." No blanks.

(USE ADDITIONAL SHEETS IF NECESSARY TO FULLY ANSWER THE FOLLOWING QUESTIONS).

Date: April 1, 2016

1) Proposer's Legal Name: Motorola Solutions, Inc.

2) Address of Place of Business: 123 Tice Blvd, Ste 202, Woodcliff Lake, NJ 07677

List all other business addresses used within last five years:
5 Paragon Drive, Montvale, NJ 07645

3) Mailing Address (if different): _____

Phone : 201-949-5500

Does the business own or rent its facilities? rent

4) Dun and Bradstreet number: 00-132-5463

5) Federal I.D. Number: 36-1115800

6) The proposer is a (check one): ____ Sole Proprietorship ____ Partnership ____
Corporation X Other (Describe) _____

7) Does this business share office space, staff, or equipment expenses with any other business?
Yes X No ___ If Yes, please provide details: In some locations around the world Motorola rents office space in a building that is shared with other entities but, to the best of our knowledge, office space, staff, equipment, and expenses are not shared.

8) Does this business control one or more other businesses? Yes X No ___ If Yes, please provide details: Motorola acknowledges that it owns numerous legal entities, attached is the active subsidiary list, dated 2/16/16.

MSI Active Subsidiaries as of 2/16/2016

Name
Clarigo Technology (Shanghai) Co., Ltd.
CRISNet, Inc.
Dansk Beredskabskommunikation A/S
Emergency CallWorks, Inc.
InfoPower, Inc.
Ino Servicos Especializados de Telecomunicacoes, Ltda
Invisix, Inc.
MeshNetworks, Inc.
Motorola Card, Inc.
Motorola Cyprus Holding Limited
Motorola Electronica de Puerto Rico, Inc.
Motorola International Network Ventures, Inc.
Motorola Iridium Network Investments, Inc.
Motorola Maroc SA
Motorola Nigeria Limited
Motorola Sistem Çözümleri Ticaret ve Servis Limited Şirketi
Motorola SMR, Inc.
Motorola Solutions (China) Co. Ltd.
Motorola Solutions (China) Investment Co. Ltd.
Motorola Solutions (Oman) LLC
Motorola Solutions (Thailand) Limited
Motorola Solutions Arabia, Inc.
Motorola Solutions Argentina S.A.
Motorola Solutions Asia Limited
Motorola Solutions Asia Pacific Limited
Motorola Solutions Australia Pty. Limited
Motorola Solutions Austria GmbH
Motorola Solutions Belgium S.A.
Motorola Solutions Bulgaria EOOD
Motorola Solutions Canada Inc.
Motorola Solutions Chile S.A.
Motorola Solutions Closed Joint Stock Company
Motorola Solutions Colombia Limitada
Motorola Solutions Costa Rica S.A.
Motorola Solutions Credit Company LLC
Motorola Solutions Czech Republic s.r.o.
Motorola Solutions Danmark A/S
Motorola Solutions de Mexico, S.A.
Motorola Solutions de Puerto Rico, Inc.
Motorola Solutions del Ecuador S.A.
Motorola Solutions Egypt
Motorola Solutions El Salvador S.A.
Motorola Solutions Espana S.A.
Motorola Solutions Finance EMEA Limited
Motorola Solutions Foundation
Motorola Solutions France SAS
Motorola Solutions Funding Corporation
Motorola Solutions Germany GmbH
Motorola Solutions Hellas A.E. (Motorola Solutions Hellas Industrial and Commercial Societe Anonyme)
Motorola Solutions Holding S.a.r.l.
Motorola Solutions Holdings (Malaysia) Sdn. Bhd.
Motorola Solutions Holdings, LLC
Motorola Solutions India Private Limited

Motorola Solutions International Capital LLC
Motorola Solutions International Holding Limited
Motorola Solutions Israel Limited
Motorola Solutions Italia S.P.A.
Motorola Solutions Japan Limited
Motorola Solutions Korea, Inc.
Motorola Solutions Lebanon SARL
Motorola Solutions Logistics Germany GmbH
Motorola Solutions Ltda
Motorola Solutions Malaysia Sdn. Bhd.
Motorola Solutions Netherlands B.V.
Motorola Solutions New Zealand Limited
Motorola Solutions Norway AS
Motorola Solutions Overseas Limited
Motorola Solutions Pakistan (Private) Limited
Motorola Solutions Pension Trustees Limited
Motorola Solutions Peru S.A.
Motorola Solutions Philippines, Inc.
Motorola Solutions Polska Sp.z.o.o.
Motorola Solutions Portugal, Lda
Motorola Solutions Romania S.R.L.
Motorola Solutions Sales and Services, Inc.
Motorola Solutions Services Limited
Motorola Solutions Services Nigeria Limited
Motorola Solutions Singapore Pte. Ltd.
Motorola Solutions South - Israel Limited
Motorola Solutions South Africa (Proprietary) Limited
Motorola Solutions Sweden AB
Motorola Solutions Switzerland AG (Motorola Solutions Switzerland SA) (Motorola Solutions Switzerland Limited)
Motorola Solutions Systems Polska Sp.z.o.o.
Motorola Solutions Taiwan, Ltd.
Motorola Solutions U.S. Holdco One, Inc.
Motorola Solutions U.S. Holdco Two, Inc.
Motorola Solutions UK Acquisition Company Limited

Motorola Solutions UK Limited
Motorola Solutions UK One LP
Motorola Solutions UK Two LP
Motorola Solutions Ukraine LLC
Motorola Solutions USFGMD, Inc.
Motorola Solutions Venezuela, C.A.
Motorola Solutions Vietnam Limited Liability Company
Motorola SudAmerica Holdings, Inc.
Motorola Telecommunications Bangladesh Private Limited
MV I LLC
Network Ventures I, Inc.
PT Motorola Solutions Indonesia
Public Engines, Inc.
Software Corporation of America, Inc.
TCS Insurance Company of Ireland Limited
TETRON Sicherheitsnetz Einrichtungs- und BetriebsgmbH
Twisted Pair Solutions UK, Inc.
Twisted Pair Solutions, Inc.
Vertex Standard (Suzhou) Co., Ltd.
Vertex Standard LMR, Inc.

Vertex Standard Trademark Holding LLC
Vertex Standard USA, Inc.
Winphoria Networks Holdings, Inc.

9) Does this business have one or more affiliates, and/or is it a subsidiary of, or controlled by, any other business? Yes ___ No X If Yes, provide details.

10) Has the proposer ever had a bond or surety cancelled or forfeited, or a contract with Nassau County or any other government entity terminated? Yes ___ No X If Yes, state the name of bonding agency, (if a bond), date, amount of bond and reason for such cancellation or forfeiture; or details regarding the termination (if a contract).

11) Has the proposer, during the past seven years, been declared bankrupt? Yes ___ No X If Yes, state date, court jurisdiction, amount of liabilities and amount of assets

12) In the past five years, has this business and/or any of its owners and/or officers and/or any affiliated business, been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency? And/or, in the past 5 years, have any owner and/or officer of any affiliated business been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency, where such investigation was related to activities performed at, for, or on behalf of an affiliated business.
Yes ___ No X If Yes, provide details for each such investigation.

13) In the past 5 years, has this business and/or any of its owners and/or officers and/or any affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies? And/or, in the past 5 years, has any owner and/or officer of an affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies, for matters pertaining to that individual's position at or relationship to an affiliated business. Yes ___ No X If Yes, provide details for each such investigation.

14) Has any current or former director, owner or officer or managerial employee of this business had, either before or during such person's employment, or since such employment if the charges pertained to events that allegedly occurred during the time of employment by the submitting business, and allegedly related to the conduct of that business:

a) Any felony charge pending? Yes ___ No X If Yes, provide details for each such charge.

b) Any misdemeanor charge pending? Yes ___ No X If Yes, provide details for each such charge.

c) In the past 10 years, you been convicted, after trial or by plea, of any felony and/or any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? Yes ___ No X

If Yes, provide details for each such conviction _____

d) In the past 5 years, been convicted, after trial or by plea, of a misdemeanor? Yes ___ No X If Yes, provide details for each such conviction. _____

e) In the past 5 years, been found in violation of any administrative, statutory, or regulatory provisions? Yes ___ No X If Yes, provide details for each such occurrence. _____

15) In the past (5) years, has this business or any of its owners or officers, or any other affiliated business had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held? Yes ____ No X ; If Yes, provide details for each such instance. _____

16) For the past (5) tax years, has this business failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges? Yes ___ No X If Yes, provide details for each such year. Provide a detailed response to all questions checked 'YES'. If you need more space, photocopy the appropriate page and attach it to the questionnaire. _____

Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

17) Conflict of Interest:

a) Please disclose any conflicts of interest as outlined below. **NOTE: If no conflicts exist, please expressly state "No conflict exists."**

(i) Any material financial relationships that your firm or any firm employee has that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflict exists.

(ii) Any family relationship that any employee of your firm has with any County public servant that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflict exists.

(iii) Any other matter that your firm believes may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflicts exists.

b) Please describe any procedures your firm has, or would adopt, to assure the County that a conflict of interest would not exist for your firm in the future.

See attached page.

Business History Form - 17. B.

Motorola Solutions has a robust process for avoiding or addressing conflicts of interest. Starting with the company's Code of Business Conduct, the process also integrates the company's various ethics policies, including a policy specifically tailored to conflicts of interest. The process is put in action through a comprehensive communications plan that includes live and on-line training for employees. Employee awareness is further bolstered via in-person briefings, written communications, and campus television announcements. Motorola Solutions regularly reinforces the importance of compliance, particularly in the area of conflicts of interest and anti-corruption and provides coaching and on-line tools to assist in employees in their efforts. Finally, the company's policy governing our business dealings with North American governmental entities and officials requires that all employees and board members comply with applicable laws and provide notice to the company as required in order to facilitate disclosures.

A. Include a resume or detailed description of the Proposer's professional qualifications, demonstrating extensive experience in your profession. Any prior similar experiences, and the results of these experiences, must be identified.

Should the proposer be other than an individual, the Proposal **MUST** include:

i) Date of formation; September 25, 1928

ii) Name, addresses, and position of all persons having a financial interest in the company, including shareholders, members, general or limited partner; See attached.

iii) Name, address and position of all officers and directors of the company; See attached.

iv) State of incorporation (if applicable); Delaware

v) The number of employees in the firm; U.S. 6,065

vi) Annual revenue of firm; $900,000,000

vii) Summary of relevant accomplishments See attachment

viii) Copies of all state and local licenses and permits. NYS Vendor # 1000031408

B. Indicate number of years in business. 87 Years

C. Provide any other information which would be appropriate and helpful in determining the Proposer's capacity and reliability to perform these services.

D. Provide names and addresses for no fewer than three references for whom the Proposer has provided similar services or who are qualified to evaluate the Proposer's capability to perform this work.

Company Massachusetts State Police

Contact Person Blair Sutherland

Address 470 Worcester Road

City/State Framingham, MA 01702

Telephone 508-641-1082

Fax # not on file

E-Mail Address not on file

Company Connecticut State Police

Contact Person Paul Zito

Address 111 Country Club Road

City/State Middletown, CT 06457

Telephone 860-685-8280

Fax # not on file

E-Mail Address not on file

Company Morris County Department of Public Safety

Contact Person Dave DeCoons

Address P.O. Box 900

City/State Morristown, NJ 07963

Telephone 973-285-2945

Fax # not on file

E-Mail Address not on file

A.

ii.) See List of Executive Committee and Board of Directors. Motorola Solutions, Inc. ("Motorola") is a publicly traded corporation (NYSE symbol MSI) with hundreds of thousands of shareholders and, as such Motorola is unable to provide specific information on all owners.

iii.) Motorola Solutions, Inc. 1303 E. Algonquin Road, Schaumburg, IL 60196

Effective: April 1, 2016

Executive Committee

Gregory Q. Brown	Chairman and Chief Executive Officer
Gino A. Bonanotte	Executive Vice President and Chief Financial Officer
Bruce Brda	Executive Vice President, Products & Services
Eduardo Conrado	Executive Vice President, Chief Strategy & Innovation Officer
Mark S. Hacker	Executive Vice President, General Counsel & Chief Administrative Officer
Jack Molloy	Executive Vice President, Worldwide Sales
Kristin Kruska	Vice President & Corporate Secretary

Board of Directors

Gregory Q. Brown
Kenneth C. Dahlberg
Egon P. Durban
General Michael V. Hayden
Clayton M. Jones
Judy C. Lewent
Gregory K. Mondre
Anna R. Pragaggiore
Samuel C. Scott III
Bradley E. Singer

A. vii) Summary of relevant accomplishments

500 MHz County-Wide Radio project (2006)
Inwood Radio Tower (2012)
800 MHz County-Wide Radio project (2013)

CERTIFICATION

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

I, David R. White, Jr., being duly sworn, state that I have read and understand all the items contained in the foregoing pages of this questionnaire and the following pages of attachments; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this questionnaire and before the execution of the contract; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this questionnaire as additional inducement to enter into a contract with the submitting business entity.

Sworn to before me this 1st day of April 2016

Paralee A. Restivo
Notary Public

PARALEE A. RESTIVO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 10/18/2016

Name of submitting business: Motorola Solutions, Inc.

By: David R. White, Jr.
Print name

Signature

MSSSI Vice President
Title

4 / 1 / 2016
Date

COUNTY OF NASSAU

CONSULTANT'S, CONTRACTOR'S AND VENDOR'S DISCLOSURE FORM

1. Name of the Entity: Motorola Solutions, Inc.

Address: 123 Tice Blvd, Ste 202

City, State and Zip Code: Woodcliff Lake, NJ 07677

2. Entity's Vendor Identification Number: 36-1115800

3. Type of Business: _X_ Public Corp ____ Partnership ____ Joint Venture

____ Ltd. Liability Co ____ Closely Held Corp _____ Other (specify)

4. List names and addresses of all principals; that is, all individuals serving on the Board of Directors or comparable body, all partners and limited partners, all corporate officers, all parties of Joint Ventures, and all members and officers of limited liability companies (attach additional sheets if necessary):

See Attached List.

5. List names and addresses of all shareholders, members, or partners of the firm. If the shareholder is not an individual, list the individual shareholders/partners/members. If a Publicly held Corporation, include a copy of the 10K in lieu of completing this section.

https://www.sec.gov/Archives/edgar/data/68505/000006850516000017/msi201510-k.htm

4. Motorola Solutions, Inc. 1303 E. Algonquin Road, Schaumburg, IL 60196

Effective: April 1, 2016

Executive Committee

Gregory Q. Brown	Chairman and Chief Executive Officer
Gino A. Bonanotte	Executive Vice President and Chief Financial Officer
Bruce Brda	Executive Vice President, Products & Services
Eduardo Conrado	Executive Vice President, Chief Strategy & Innovation Officer
Mark S. Hacker	Executive Vice President, General Counsel & Chief Administrative Officer
Jack Molloy	Executive Vice President, Worldwide Sales
Kristin Kruska	Vice President & Corporate Secretary

Board of Directors

Gregory Q. Brown
Kenneth C. Dahlberg
Egon P. Durban
General Michael V. Hayden
Clayton M. Jones
Judy C. Lewent
Gregory K. Mondre
Anna R. Pragaggiore
Samuel C. Scott III
Bradley E. Singer

6. List all affiliated and related companies and their relationship to the firm entered on line 1. above (if none, enter "None"). Attach a separate disclosure form for each affiliated or subsidiary company that may take part in the performance of this contract. Such disclosure shall be updated to include affiliated or subsidiary companies not previously disclosed that participate in the performance of the contract.

Motorola acknowledges that it owns numerous legal entities, attached is the active subsidiary list, dated 2/16/16.

7. List all lobbyists whose services were utilized at any stage in this matter (i.e., pre-bid, bid, post-bid, etc.). If none, enter "None." The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term "lobbyist" does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

(a) Name, title, business address and telephone number of lobbyist(s):

None

MSI Active Subsidiaries as of 2/16/2016

Name
Clarigo Technology (Shanghai) Co., Ltd.
CRISNet, Inc.
Dansk Beredskabskommunikation A/S
Emergency CallWorks, Inc.
InfoPower, Inc.
Ino Servicos Especializados de Telecomunicacoes, Ltda
Invisix, Inc.
MeshNetworks, Inc.
Motorola Card, Inc.
Motorola Cyprus Holding Limited
Motorola Electronica de Puerto Rico, Inc.
Motorola International Network Ventures, Inc.
Motorola Iridium Network Investments, Inc.
Motorola Maroc SA
Motorola Nigeria Limited
Motorola Sistem Çözümleri Ticaret ve Servis Limited Şirketi
Motorola SMR, Inc.
Motorola Solutions (China) Co. Ltd.
Motorola Solutions (China) Investment Co. Ltd.
Motorola Solutions (Oman) LLC
Motorola Solutions (Thailand) Limited
Motorola Solutions Arabia, Inc.
Motorola Solutions Argentina S.A.
Motorola Solutions Asia Limited
Motorola Solutions Asia Pacific Limited
Motorola Solutions Australia Pty. Limited
Motorola Solutions Austria GmbH
Motorola Solutions Belgium S.A.
Motorola Solutions Bulgaria EOOD
Motorola Solutions Canada Inc.
Motorola Solutions Chile S.A.
Motorola Solutions Closed Joint Stock Company
Motorola Solutions Colombia Limitada
Motorola Solutions Costa Rica S.A.
Motorola Solutions Credit Company LLC
Motorola Solutions Czech Republic s.r.o.
Motorola Solutions Danmark A/S
Motorola Solutions de Mexico, S.A.
Motorola Solutions de Puerto Rico, Inc.
Motorola Solutions del Ecuador S.A.
Motorola Solutions Egypt
Motorola Solutions El Salvador S.A.
Motorola Solutions Espana S.A.
Motorola Solutions Finance EMEA Limited
Motorola Solutions Foundation
Motorola Solutions France SAS
Motorola Solutions Funding Corporation
Motorola Solutions Germany GmbH
Motorola Solutions Hellas A.E. (Motorola Solutions Hellas Industrial and Commercial Societe Anonyme)
Motorola Solutions Holding S.a.r.l.
Motorola Solutions Holdings (Malaysia) Sdn. Bhd.
Motorola Solutions Holdings, LLC
Motorola Solutions India Private Limited

Motorola Solutions International Capital LLC
Motorola Solutions International Holding Limited
Motorola Solutions Israel Limited
Motorola Solutions Italia S.P.A.
Motorola Solutions Japan Limited
Motorola Solutions Korea, Inc.
Motorola Solutions Lebanon SARL
Motorola Solutions Logistics Germany GmbH
Motorola Solutions Ltda
Motorola Solutions Malaysia Sdn. Bhd.
Motorola Solutions Netherlands B.V.
Motorola Solutions New Zealand Limited
Motorola Solutions Norway AS
Motorola Solutions Overseas Limited
Motorola Solutions Pakistan (Private) Limited
Motorola Solutions Pension Trustees Limited
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Motorola Solutions Polska Sp.z.o.o.
Motorola Solutions Portugal, Lda
Motorola Solutions Romania S.R.L.
Motorola Solutions Sales and Services, Inc.
Motorola Solutions Services Limited
Motorola Solutions Services Nigeria Limited
Motorola Solutions Singapore Pte. Ltd.
Motorola Solutions South - Israel Limited
Motorola Solutions South Africa (Proprietary) Limited
Motorola Solutions Sweden AB
Motorola Solutions Switzerland AG (Motorola Solutions Switzerland SA) (Motorola Solutions Switzerland Limited)
Motorola Solutions Systems Polska Sp.z.o.o.
Motorola Solutions Taiwan, Ltd.
Motorola Solutions U.S. Holdco One, Inc.
Motorola Solutions U.S. Holdco Two, Inc.
Motorola Solutions UK Acquisition Company Limited

Motorola Solutions UK Limited
Motorola Solutions UK One LP
Motorola Solutions UK Two LP
Motorola Solutions Ukraine LLC
Motorola Solutions USFGMD, Inc.
Motorola Solutions Venezuela, C.A.
Motorola Solutions Vietnam Limited Liability Company
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Motorola Telecommunications Bangladesh Private Limited
MV I LLC
Network Ventures I, Inc.
PT Motorola Solutions Indonesia
Public Engines, Inc.
Software Corporation of America, Inc.
TCS Insurance Company of Ireland Limited
TETRON Sicherheitsnetz Einrichtungs- und BetriebsgmbH
Twisted Pair Solutions UK, Inc.
Twisted Pair Solutions, Inc.
Vertex Standard (Suzhou) Co., Ltd.
Vertex Standard LMR, Inc.

Vertex Standard Trademark Holding LLC
Vertex Standard USA, Inc.
Winphoria Networks Holdings, Inc.

(b) Describe lobbying activity of each lobbyist. **See below for a complete description of lobbying activities.**

None

(c) List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

None

8. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

Dated: 4/1/2016

Signed: [signature]

Print Name: David R. White, Jr.

Title: MSSSI Vice President

The term lobbying shall mean any attempt to influence: any determination made by the Nassau County Legislature, or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including by not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions, department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission, with respect to the zoning, use, development or improvement of real property subject to County regulation, or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

RULES RESOLUTION NO. – 2016

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AMENDMENT TO A PERSONAL SERVICES AGREEMENT BETWEEN THE COUNTY OF NASSAU, ACTING ON BEHALF OF THE NASSAU COUNTY POLICE DEPARTMENT AND MOTOROLA, INC.

WHEREAS, the County has negotiated an amendment to a personal services agreement with Motorola, Inc., to provide services in connection with a Land Mobile Modernization Project, a copy of which is on file with the Clerk of the Legislature, now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said agreement with Motorola, Inc.

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY): 06/11/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Services Central, Inc. Chicago IL Office 200 East Randolph Chicago IL 60601 USA	CONTACT NAME: PHONE (A/C, No, Ext): (866) 283-7122 FAX (A/C, No): (800) 363-0105 E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	Liberty Mutual Fire Ins Co	23035
INSURER B:	Liberty Insurance Corporation	42404
INSURER C:	Lloyd's Syndicate No. 4711	AA1120090
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
Motorola Solutions, Inc.
Attn Karen Napier
1303 East Algonquin Road
Schaumburg IL 60196 USA

COVERAGES **CERTIFICATE NUMBER: 570058028949** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC OTHER:	Y		TB2641005169075	07/01/2015	07/01/2016	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$3,000,000 $250,000 $10,000 $3,000,000 $3,000,000 $3,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS HIRED AUTOS SCHEDULED AUTOS NON-OWNED AUTOS			AS2-641-005169-015	07/01/2015	07/01/2016	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$3,000,000
	UMBRELLA LIAB [ ] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED RETENTION						EACH OCCURRENCE AGGREGATE	
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WA7640005169085 All Other States	07/01/2015	07/01/2016	X PER STATUTE [ ] OTH-ER	
B				WC7641005169095 WI	07/01/2015	07/01/2016	E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000
C	E&O-MPL -Primary			QK1504174	07/01/2015	07/01/2016	Each Claim Policy Aggregate	$3,000,000 $3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: Communications System Purchase Agreement - Addendum #1 - Countywide 800 MHz Astro 25 Trunking System. Nassau County is included as Additional Insured with respect to the General Liability policy.

CERTIFICATE HOLDER

Nassau County
1490 Franklin Ave.
Mineola NY 11501 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central Inc

Holder Identifier :

Certificate No : 570058028949

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The ACORD name and logo are registered marks of ACORD

AMENDMENT NO. FIVE

AMENDMENT, dated as of April 1, 2016 (together with the exhibits attached hereto, this "Amendment"), between Nassau County, a municipal corporation having its principal office at 1550 Franklin Avenue, Mineola, New York 11501 (the "County"), acting for and on behalf of the Nassau County Police Department, having its principal office at 1490 Franklin Avenue, Mineola, New York 11501, and (ij) Motorola, Inc., having its principal office at 5 Paragon Drive Suite 200, Montvale, New Jersey 07645 (the "Contractor").

WI TNE SSE T H:

WHEREAS, pursuant to County contract number CFPW05000024 between the County and the Contractor, executed. on behalf of the County on June 30, 2005 and the amendments entered into thereafter (the "Original Agreement") the Contractor performs certain services for the County in connection with the Nassau County Police Department Land Mobile Radio Modernization Project, which services are more fully described in the Original Agreement (the services contemplated by the Original Agreement, the "Services"); and

WHEREAS, the term of the Original Agreement is from June 30, 2005 to December 31, 2013 or Final acceptance, whichever is sooner ("Original Term"); and

WHEREAS, the maximum amount that the County agreed to reimburse the Contractor as full compensation for Services under the Original Agreement was Forty-Six Million Five Hundred Thousand Two Hundred Eighty Dollars ($46,500,280.00) (the "Maximum Amount");

WHEREAS, the County and the Contractor desire to increase the Maximum Amount to provide for the development of a new radio site; and

WHEREAS, the County and the Contractor desire to change the distribution of payment to insure the coordination of the installation of the system with the Final Acceptance of the radio system; and

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Amendment, the parties agree as follows:

1. Maximum Amount. (a) The Maximum Amount in the Original Agreement shall be increased by Six Hundred Thirty-Six Thousand One Hundred Fifty Eight Dollars ($636,158.00), so that the Maximum Amount that the County shall pay to the Contractor as full consideration for all Services provided under the Amended Agreement shall be Forty Seven Million, One Hundred Thirty-Six Thousand Four Hundred Thirty Eight Dollars ($47,136,438.00).

(b) Pursuant to Section 30, Amendment, contained in the Original. Agreement, Change Order No. 20 is attached hereto as Exhibit A setting for the Amended Maximum Amount as stated supra in paragraph l(a).

2. Payment Terms. (a) The amounts paid by the County to the Contractor under Section 4 (a) the Original Agreement is hereby amended as described in Change Order No. 20, attached hereto as Exhibit A.

3. Full Force and Effect. All the terms and conditions of the Original Agreement not expressly amended by this Amendment shall remain in full force and effect and govern the relationship of the parties for the term of the Original Agreement.

REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written

MOTOROLA, INC.

By: _____

Name: David R. White, Jr.

Title: MSSSI Vice President

Date: 4/1/2016

NASSAU COUNTY

By: _____

Name: _____

Title: County Executive

□ Deputy County Executive

Date: _____

PLEASE EXECUTE IN BLUE INK

STATE OF NEW ~~YORK~~ JERSEY
)ss.:
COUNTY OF BERGEN)

On the 1ST day of April in the year 2016 before me personally came David R. White, Jr. to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Orange, NY; that he or she is the MSSSI Vice President of Motorola Solutions, Inc., the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

Paralee A. Restivo
NOTARY PUBLIC

PARALEE A. RESTIVO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 10/18/2016

STATE OF NEW YORK)
)ss.:
COUNTY OF NASSAU)

On the _____ day of _____ in the year 201_____ before me personally came _____ to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of _____; that he or she is a Deputy County Executive of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

_____
NOTARY PUBLIC

MOTOROLA SOLUTIONS

CHANGE ORDER

[co# 20]

Changes in Equipment: *(additions, deletions or modifications)* Include attachments if needed

ADD – see attached list

Changes in Services: *(additions, deletions or modifications)* Include attachments if needed

ADD – see attached SOW

Schedule Changes: *(describe change or N/A)*

Final Acceptance already obtained this contract with punch list. New Final Acceptance 12-13-16

Pricing Changes: *(describe change or N/A)*

ADD - **636,157.60 to value of contract**

Customer Responsibilities: *(describe change or N/A)*

See attached SOW

Payment Schedule for this Change Order:
(describe new payment terms applicable to this change order)

10% of Contract Price – Upon Contract Award;
35% of Contract Price – Upon Equipment Ship Acceptance;
40% of Contract Price – Upon Equipment Installation Acceptance;
15% of Contract Price – Upon Final Acceptance. Motorola reserves the right to make partial shipments of equipment and to request payment upon shipment of such equipment. In addition, Motorola reserves the right to invoice for installations or civil work completed on a site-by-site basis, when applicable.

Unless amended above, all other terms and conditions of the Contract shall remain in full force. If there are any inconsistencies between the provisions of this Change Order and the provisions of the Contract, the provisions of this Change Order will prevail.

IN WITNESS WHEREOF the parties have executed this Change Order as of the last date signed below.

Motorola Solutions, Inc.		**Customer**	
By:		By:	
Printed Name:		Printed Name:	
Title:		Title:	
Date:		Date:	

Reviewed by: _____ Date: 3-16-16
Motorola Solutions Project Manager

MOTOROLA SOLUTIONS

CHANGE ORDER
[co# 20]

Change Order No.	20
Date:	03-18-2016
Project Name:	NY-02I133C - Nassau County NY Public Safety Communications System
Customer Name:	Nassau County NY
Customer Project Mgr:	Chris Gabriel (CRG002)

The purpose of this Change Order is to: *(highlight the key reasons for this Change Order)*

Replace tower at the 8th Pct as result of new building being constructed

Contract # CFPW05000024 **Contract Date:** 06/30/2005

In accordance with the terms and conditions of the contract identified above between [Nassau County NY] and Motorola Solutions, Inc., the following changes are approved:

Contract Price Adjustments

Original Contract Value:	**$41,210,619,00**
Previous Change Order amounts for Change Order numbers 1 through 19	**$46,500,280.00**
This Change Order:	**$ 636,157.60**
New Contract Value:	**$47,136,437.60**

Completion Date Adjustments

Original Completion Date:	N/A
Current Completion Date prior to this Change Order:	N/A
New Completion Date:	12-31-16

PROPOSAL TO
NASSAU COUNTY, NEW YORK

SECTION 3
STATEMENT OF WORK

8TH PRECINCT TOWER MOVE **MARCH 17, 2016**

AMENDED MARCH 17, 2016

Inclusion of the 25 foot section of the radio tower and all associated work to complete.

MOTOROLA

The design, technical, pricing, and other information ("Information") furnished with this submission is proprietary information of Motorola Solutions, Inc. ("Motorola") and is submitted with the restriction that it is to be used for evaluation purposes only. To the fullest extent allowed by applicable law, the information is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the Information without the express written permission of Motorola.

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SECTION 3

STATEMENT OF WORK

3.1 OVERVIEW

This Statement of Work (SOW) describes the deliverables to be furnished to Nassau County as part of the 8th precinct move. The tasks described herein will be performed by Motorola, its subcontractors, and Nassau County to implement the solution described herein. It describes the actual work involved, identifies the standards to be followed, and clarifies the responsibilities for both Motorola and Nassau County during the project implementation.

Nassau County is moving forward with plans to demolish the existing 8th precinct building and construct a new building. Currently, the existing radio communication equipment is located in a room within the building to be demolished. In addition, the monopole that the existing radio antennas are mounted on needs to be removed to facilitate the demolition of the existing building and the construction of the new building. The building to be constructed will include a new communications room that will ultimately house the radio communication equipment.

Motorola and the NCPD have determined that the primary offering is the selected option to move forward. The primary offering includes replacement of the existing 125 foot monopole tower with a new 125 foot monopole that is capable of expansion to 150 feet (this expansion is included in this project scope). The primary offering of the new tower will have the least amount of impact on site down time while equipment is relocated, estimated at three days off the air.

Motorola is proposing a 6-foot x 16-foot shelter to temporarily house the site equipment during construction. Motorola will set the shelter in place on a gravel base at the site and set up the shelter. Upon completion of the construction, Motorola will transport the shelter to a location identified by Nassau County for storage of the shelter, within 50 miles of the original location.

3.2 CONTRACT

3.2.1 Contract Award (Milestone)

- Nassau County and Motorola execute the contract and both parties receive all the necessary documentation.

3.2.2 Contract Administration

Motorola Responsibilities:

- Assign a Project Manager as the single point of contact with authority to make project decisions.
- Assign resources necessary for project implementation.
- Set up the project in the Motorola information system.
- Schedule the project kickoff meeting with Nassau County.

Nassau County Responsibilities:

- Assign a Project Manager as the single point of contact responsible for Nassau County-signed approvals.

- Assign other resources necessary to ensure completion of project tasks for which Nassau County is responsible.

Completion Criteria:

- Motorola internal processes are set up for project management.
- Both Motorola and Nassau County assign all required resources.
- Project kickoff meeting is scheduled.

3.2.3 Project Kickoff

Motorola Responsibilities:

- Conduct a project kickoff meeting during the Contract Design Review (CDR) phase of the project.
- Ensure key project team participants attend the meeting.
- Introduce all project participants attending the meeting.
- Review the roles of the project participants to identify communication flows and decision-making authority between project participants.
- Review the overall project scope and objectives with Nassau County.
- Review the resource and scheduling requirements with Nassau County.
- Review the Project Schedule with Nassau County to address upcoming milestones and/or events.
- Review the teams' interactions (Motorola and Nassau County), meetings, reports, milestone acceptance, and Nassau County's participation in particular phases.

Nassau County Responsibilities:

- Nassau County's key project team participants attend the meeting.
- Review Motorola and Nassau County responsibilities.

Completion Criteria:

- Project kickoff meeting completed.
- Meeting notes identify the next action items.

3.3 CONTRACT DESIGN REVIEW

3.3.1 Review Contract Design

Motorola Responsibilities:

- Meet with Nassau County project team.
- Review the operational requirements and the impact of those requirements on various equipment configurations.
- Establish a defined baseline for the system design and identify any special product requirements and their impact on system implementation.
- Review the System Design, Statement of Work, and Project Schedule, and update the contract documents accordingly.
- Submit design documents to Nassau County for approval. These documents form the basis of the system, which Motorola will manufacture, build and install.
- Finalize site plans:
  - Conduct site evaluations to capture site details of the system design and to determine site readiness.

  - Determine each site's ability to accommodate proposed equipment based upon physical capacity.
  - If applicable, test existing equipment with which Motorola equipment will interface.
- Prepare Site Evaluation Report that summarizes findings of above-described site evaluations.

Nassau County Responsibilities:

- Nassau County's key project team participants attend the meeting.
- Make timely decisions, according to the Project Schedule.
- Nassau County is responsible for any site acquisition and zoning for the site.

Completion Criteria:

- Complete Design Documentation, which may include updated System Description, Equipment List, system drawings, or other documents applicable to the project.
- Incorporate any deviations from the proposed system into the contract documents accordingly.
- The system design is "frozen" in preparation for subsequent project phases such as Order Processing and Manufacturing.
- If required, a Change Order is executed in accordance with all material changes resulting from the Design Review to the contract.

3.3.2 Design Approval (Milestone)

- Nassau County executes a Design Approval milestone document.

3.4 ORDER PROCESSING

3.4.1 Process Equipment List

Motorola Responsibilities:

- Validate Equipment List by checking for valid model numbers, versions, compatible options to main equipment, and delivery data.
- Enter order into Motorola's Customer Order Fulfillment (COF) system.
- Create Ship Views, to confirm with Nassau County the secure storage location(s) to which the equipment will ship. Ship Views are the mailing labels that carry complete equipment shipping information, which direct the timing, method of shipment, and ship path for ultimate destination receipt.
- Create equipment orders.
- Reconcile the equipment list(s) to the Contract.
- Procure third-party equipment if applicable.

Nassau County Responsibilities:

- Approve shipping location(s).
- Complete and provide Tax Certificate information verifying tax status of shipping location.

Completion Criteria:

- Verify that the Equipment List contains the correct model numbers, version, options, and delivery data.
- Trial validation completed.
- Bridge the equipment order to the manufacturing facility.

3.5 MANUFACTURING

3.5.1 Manufacture Equipment

Motorola Responsibilities:

- Manufacture the Equipment necessary based on equipment order.

Nassau County Responsibilities:

- None.

Completion Criteria:

- The Equipment is shipped to either the field.

3.5.2 Ship Acceptance (Milestone)

- All equipment shipped to the field.

3.6 CIVIL WORK AT 8TH PRECINCT SITE – NEW TOWER

3.6.1 Site Scope Summary

- Engineering services for site drawings and regulatory approvals – Included.
- Site acquisition services – Not included.
- Zoning Services – Not included.
- Permitting – Included.
- Temporary Shelter Power – 25 feet, Electrical service type – Aboveground/Temporary 200-amp - 120/240-volt, single-phase from Nassau County-provided demark.
- New monopole to be used for antennas – 125-foot monopole (extended to 150 feet in this scope).
- New monopole foundation size – 32 cubic yard, Type – drilled pier (assumes normal soil conditions pending formal GeoTech survey).

3.6.2 Motorola Responsibilities

Site Engineering

- Prepare site construction drawings showing the layout of various new and existing site components.
- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Perform a boundary and topographic survey for the property on which the communication site is located or will be located.
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as-built information.
- Conduct flood plain analysis of the site location.
- Perform construction staking around the site to establish reference points for proposed construction.
- Perform NEPA Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 CFR

Chapter 1, subsection 1.1307 that may potentially be impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus require additional documentation, submittals, or work. Regional Environmental Review (RER) report submittals if required by FEMA have not been included. Perform Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction.

- Conduct up to 40-foot deep soil boring test at tower location and prepare geotechnical report of soil conditions at the location of monopole tower foundation.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Check tower erection for plumbness, linearity and alignment after installation.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the "Site Plans" and document any deviations or violations.
- Perform a Phase I Environmental Site Assessment (ESA), to identify obvious and reasonably likely on-site and/or off-site potential sources of contamination and prepare a report summarizing observations, findings, and conclusions for each site assessed. This study does not include Phase II assessments, risk/cost evaluations, and permitting assistance that may be required if risk factors are indicated.

Permitting

- Prepare, submit and track application for local permit fees (zoning, electrical, building, etc.), prepare FAA filings and procure information necessary for filing.
- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.

Mobilization/Demobilization

- Provide one-time mobilization costs for the construction crews for the main construction effort and a return mobilization during the cutover phase of the project. Any additional remobilizations due to interruptions/delays that are out of Motorola's control will result in additional costs.

Site Preparation

- Cut and remove existing asphalt pavement as required to facilitate the installation of the new monopole foundation. Includes asphalt patching as might be required around the new pad (up to 100 square feet of asphalt).
- Supply and install straw bale sediment barriers to control soil erosion during excavation activities.
- Supply and install gravel to make a level foundation for temporary shelter.

Temporary Shelter Installation

To support the existing communication equipment during precinct demolition/construction Motorola is proposing to supply and install a refurbished 6-foot x 16-foot shelter. Shelter is a precast concrete shelter equipped with air conditioning, grounding, electrical distribution, surge protection, cable management and portable generator receptacle and manual transfer switch (to facilitate the use of a portable generator in the event power is lost). See the attached shelter specification summary included with Motorola's proposal. The following scope of work is related to the delivery, set up and decommissioning of the proposed temporary shelter.

- Supply, off-load, and set temporary shelter on gravel foundation. Temporary shelter to be set within 5 feet of new monopole in order to avoid the need for ice bridge.
- Provide for connection of power from Nassau County-supplied power demark (200A, 120/240V, 1Ph) to be located within 25 conductor feet of where the temporary shelter will be set.

- Provide for grounding of temporary shelter in accordance with Motorola R56 guidelines and standards.
- Provide for start-up and testing of temporary shelter.
- Provide for disconnect, pick-up and delivery of shelter to Nassau County-selected location within 50 miles of the 8th precinct.

New Monopole

Motorola is proposing to supply and install a new 125-foot H monopole that will be extended to 150-foot H. New monopole to be installed and new antennas and related cabling installed to temporary shelter before the existing monopole is dismantled. Installation of new monopole includes:

- Supply new 125-foot H monopole (including 25-foot extension).
- Construct drilled pier type monopole foundation including excavation, rebar and concrete (not to exceed 32 cubic yards). Foundation to be designed and constructed so that it can support the loading of the pole being extended to 150-foot H in the future. Assumes normal soil conditions pending a formal geotechnical survey.
- Erect new 125-foot monopole tower and 25-foot extension.
- Provide for grounding of the new tower in accordance with Motorola R56 guidelines and standards.
- Provide slurry holding tank (drilled pier foundation).

Temporary Construction Fencing

- Motorola to supply temporary fencing around the temporary shelter/new monopole to provide protection during the demolition/construction of the precinct (Rental for 12 months).

Existing Monopole

- Once installation of new monopole is complete, new antennas/cable are installed and communication equipment has been relocated to the temporary shelter Motorola will move forward with the dismantling of the existing pole. Includes:
  - Removal of existing antennas and related cabling and turning over to Nassau County for further handling
  - Dismantle and store on-site the existing monopole for further handling by Nassau County.

Antenna and Transmission Line Installation

- Supply and install new antennas. To be installed on the new monopole and connected to the equipment to be relocated to the temporary shelter. Includes mounts, cabling and grounding. Also includes re-cabling to new equipment room once room is complete and communication equipment is moved from the temporary shelter into the new room.
- Perform sweep tests on transmission lines (for temporary install and for permanent install once room construction is completed).

New Communication Room Build-Out

Once the new room construction is completed and is "White Space" ready, Motorola to provide the following:

Electrical

- Supply and install one (1) 200-amp rated utility distribution panel with capacity for thirty (30) circuits. Panel to be fed from the emergency power demark/disconnect (200A, 120/240V, 1 Ph) to be provided by Nassau County that will be terminated in the new communication room within 5 feet of where new utility panel will be installed.

- Supply and install a primary Type 1 surge protector on the new utility panel to protect the equipment from surges.
- Supply and install new 7.5KW UPS. New UPS to be powered from the new utility panel.
- Supply and install one (1) 300-amp breaker critical circuit panel with capacity for forty-two (42) circuits and connect to new UPS.
- Supply and install 8-foot long outlet bars made from 2 channel wire mold panel (8 inches wide) above the communication equipment rack locations. Wire mold to be supported on threaded bars of the cable tray using insulated standoffs. To include installation of thirty-two (32) simplex outlets in the wire mold.
- Supply and install thirty-two (32) 20-amp breakers in the critical circuit panel and wire to the outlets in the wire mold installed above the equipment rack locations.

Cable Management

- Supply and install 18-inch-wide cable runway (up to 25 linear feet) inside the existing room above the communication equipment racks.
- Supply and install cable port boots at the new 6-inch conduit sleeves/stubs to be provided by Nassau County.
- Extend Nassau County-provided 6-inch conduits (2) from stub up to new monopole to be installed. Assumes Nassau County-provided conduits to be stubbed up within 20 feet of where new monopole will be located.

Grounding

- Supply and install two (2) copper ground buss bar(s).
- External Ground Bar (EGB) – To be mounted outside where conduit/cabling penetrate the building.
- Master Ground Bar (MGB) – To be installed in the new communication room near cable entry point.
- Supply and install new perimeter ground bus (halo) and bond to new MGB.
- Bond new MGB to Nassau County-provided main building grounding point/conductor to be extended into the new communication room within 10 feet of where the new MGB will be installed.
- Providing for bonding of all ancillary equipment and cable ladder to the perimeter ground bus.

Alarms

- Supply and install one (1) Telco board (48 inch x 96 inch) for mounting of punch down block and any existing Telco equipment.
- Supply and install sensors for alarming (Fire, Smoke, Hi/Lo temp, door intrusion), punch block, and wiring of contact closures to alarm block

R56 Safety Equipment/Signage

- Supply and install one (1) wall-mounted 10-pound CO2 fire extinguisher and one (1) wall-mounted 20-pound ABC fire extinguisher.
- Supply and install "No smoking" EME signage at the site.
- Supply and install one (1) eye wash station and one (1) first aid kit.

3.6.3 Nassau County Responsibilities

- Provide 200 amp, 120/240V, 1 PH service disconnect within 20 feet of where the new shelter will be set. Electrical components should be installed in weatherproof enclosures.
- Provide two (2) 6-inch UG PVC conduit stub-ups from new communication room to within 20 feet of where new monopole is to be installed.

- Provide for the construction of the new Communication room (it is understood that the new room will located in new precinct in close proximity to where new monopole is to be installed). To include:
  - "White Space Ready Room" – minimum dimensions = 12-foot L X 12-footW X 9-footH.
  - Finished walls, floor and ceiling.
  - Provide emergency power (supported by building generator) demark/disconnect (200A, 120/240V, 1 Ph) to be installed on the wall in the new communication room within 5 feet of where new utility panel will be installed. To include isolation transformer if required to reestablish the neutral ground bond.
  - Provide single point of ground from main building ground – to be extended into the room and located within 10 feet of where the room master ground bar (MGB) will be installed.
- If required, prepare and submit Electromagnetic Energy (EME) plans for the site (as a licensee) to demonstrate compliance with FCC RF Exposure guidelines.
- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is Nassau County's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, Nassau County shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fueling both during the construction/installation effort and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), Nassau County will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708.
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.
- Provide a right of entry letter from the site owner for Motorola to conduct field investigations.
- Maintain existing access road in order to provide clear and stable entry to the site 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.
- Conduct all the testing and documentation (balloon tests, photo simulations, zoning application, expert testimony, zoning drawings etc.) required for the zoning the proposed new tower sites.
- Provide additional temporary space for staging of the construction equipment during the construction of new site facilities (tower, shelter, generator, fuel tank, etc.).
- Confirm that there is adequate utility service to support the new equipment and ancillary equipment.
- Confirm that the existing generator is sufficient to support the new equipment and ancillary equipment loads.
- If required, remove or relocate any existing facilities, equipment, and utilities to create space for new site facilities and equipment.
- If required, provide any physical improvements (walls, roofing, flooring, painting, etc.) necessary to house the equipment in the existing room.
- Supply required standby generator power to support the additional proposed equipment. This power source shall be adequate to back up all radio equipment, future equipment growth, and ancillary equipment such as, but not limited to, interior lighting, tower lighting and HVAC.
- Secure power connection to the room, associated permitting, and installation of a meter and disconnect within 50 feet of the proposed shelter location.

3.6.4 Assumptions:

- No mandatory union workers or mandatory minority workers are required for this work.
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All work to be completed utilizing Motorola preferred vendors/contractors.
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco] will be borne by Nassau County or site owner.
- Removal of existing monopole (monopole to be relocated) is not required and is excluded.
- Site will have adequate electrical service for the temporary shelter. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of Nassau County.
- A maximum of 30 days will be required for obtaining approved building permits from time of submission, and a maximum of 60 days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- In absence of geotechnical reports, foundations and subsurface conditions for tower design are based on Presumptive Sand soil parameters, as defined by EIA-222-G. Also, rock coring, piling, extensive dewatering of foundations, permanent casings or hazardous material removal has not been included.
- For zoning approvals, a maximum of 60 days will be required from time of submittal with attendance at maximum of two (2) required planning meetings.
- The new tower location will pass the FAA hazard study, zoning, FCC and environmental permitting.
- The restoration of the site surroundings by fertilizing, seeding and strawing the disturbed areas will be adequate.
- Tower and foundation sizing is based on the tower loading requirements as a result of the RF Antenna System design and the Microwave Antenna System design (i.e. - dish sizes and locations obtained from paper path studies). If after physical path studies, the dish sizes and locations change, then Motorola will then review the impact to tower structure and foundations and revise applicable costs.
- If as a result of NEPA studies, any jurisdictional authority should determine that a proposed communications facility "may have a significant environmental impact", the environmental impact studies or field testing and evaluation related to such determination have not been included.
- For new towers greater than 200 feet in overall height, FAA obstruction lighting has been included. Painting or dual lighting of any new towers has not been included.
- The site location can be finalized and lease agreement can be reached with the property owner within 60 calendar days after the start of the site acquisition effort.
- A waiver to zoning requirements like setbacks, tower height limitations, etc. can be obtained.
- The soil resistivity at the site is sufficient to achieve resistance of ten (10) ohms or less. Communications site grounding will be designed and installed per Motorola's Standards and Guidelines for Communications Sites (R56).
- Underground utilities are not present in the construction area, and as such no relocation will be required.

- Spoils from the tower foundations can be dispersed on the property and will not be required to be transported to a dump location.
- Foundations for the shelter, generator and fuel tank are based "normal soil" conditions as defined by TIA/EIA 222-F. Footings deeper than 30 inches, raised piers, rock coring, dewatering, or hazardous material removal have not been included.
- Alarming at existing sites will be limited to new component installations and will have to be discussed and agreed to on a site-by-site basis.
- The site will have adequate room for installation of proposed equipment, based on applicable codes and Motorola's R56 standards.

3.6.5 Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Nassau County.

3.7 SYSTEM INSTALLATION

3.7.1 Install Fixed Network Equipment

Motorola Responsibilities:

- Once the tower, antennas, and temporary shelter are in place and ready for equipment, Motorola will uninstall the equipment from its current location at the 8th precinct and reinstall it in the temporary shelter. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, Federal Aviation Administration (FAA), and FCC standards and regulations.
- Bond the supplied equipment to the site ground system in accordance with Motorola's R56 standards.
- When the new equipment room is ready in the new building, Motorola will uninstall equipment from the temporary shelter and reinstall the equipment in its permanent location.

Nassau County Responsibilities:

- Provide access to the sites, as necessary.

Completion Criteria:

- Fixed Network Equipment installation completed.

3.7.2 Install Microwave Equipment

Motorola Responsibilities

- Motorola will be responsible for relocation of the microwave link at 8th precinct.
- On site path survey.
- Network System Engineer.
- Transmission engineering and license modification.
- Field installation and optimization of the new path.

Nassau County Responsibilities:

- Provide access to the sites, as necessary.

Completion Criteria

- Microwave Equipment installation completed.

3.7.3 Fixed Network Equipment Installation Complete

- All fixed network equipment installed and accepted by Nassau County.

3.7.4 System Installation Acceptance (Milestone)

- All equipment installations are completed and accepted by Nassau County.

3.8 AUDIT AND ACCEPTANCE TESTING

3.8.1 Perform R56 Audit

Motorola Responsibilities:

- Perform R56 site installation quality audits, verifying proper physical installation and operational configurations.
- Create site evaluation report to verify site meets or exceeds requirements, as defined in Motorola's Standards and Guidelines for Communication Sites (R56).

Nassau County Responsibilities:

- Provide access/escort to the sites.
- Witness tests.

Completion Criteria:

- All R56 audits completed successfully.

3.8.2 Perform Equipment Testing

Motorola Responsibilities:

- Test individual components of the system to verify compliance to the equipment specifications.
- Repeat any failed test(s) once Motorola (or Nassau County) has completed the corrective action(s).
- Prepare documentation of component tests to be delivered as part of the final documentation package.

Nassau County Responsibilities:

- Witness tests if desired.

Completion Criteria:

- Successful completion of equipment testing.

3.8.3 System Acceptance Test Procedures/System Acceptance (Milestone)

- Nassau County approves the completion of all the required tests. he system is considered accepted.

3.9 FINALIZE

3.9.1 Resolve Punchlist

Motorola Responsibilities:

- Work with Nassau County to resolve punchlist items, documented during the Acceptance Testing phase.

Nassau County Responsibilities:

- Assist Motorola with resolution of identified punchlist items by providing support, such as access to the sites, equipment and system, and approval of the resolved punchlist item(s).

3.9.2 Finalize Documentation

Motorola Responsibilities:

- Provide updated site drawings on a Compact Disk (CD). The documentation will include the following:
  - Site layout.
  - Equipment Rack Face Layouts.

Drawings are created utilizing Microsoft Visio design software and will be delivered in Adobe PDF format. All other system manual documents converted from native format to Adobe PDF format to be included on the System Manual CD.

Nassau County Responsibilities:

- Receive and approve all documentation provided by Motorola.

Completion Criteria:

- All required documentation is provided and approved by Nassau County.

3.9.3 Final Acceptance (Milestone)

- All deliverables completed, as contractually required.
- Final System Acceptance received from Nassau County.

3.10 PROJECT ADMINISTRATION

3.10.1 Project Status Meetings

Motorola Responsibilities:

- Project Manager, or designee, will attend project status meetings with Nassau County. It is estimated that these meetings will be held once a month during the time when the Motorola portion of the project is active.
- Record the meeting minutes and supply the report.
- The agenda will include the following:
  - Overall project status compared to the Project Schedule.
  - Product or service related issues that may affect the Project Schedule.
  - Status of the action items and the responsibilities associated with them, in accordance with the Project Schedule.
  - Any miscellaneous concerns of either Nassau County or Motorola.

Nassau County Responsibilities:

- Attend meetings.
- Respond to issues in a timely manner.

Completion Criteria:

- Completion of the meetings and submission of meeting minutes.

3.10.2 Project Schedule

A schedule will be developed based on final scope and submit during the CDR phase of the Project. The work schedule will be based on the availability of the 8th precinct site and Nassau County's construction schedule for the new building.

Once the new tower and temporary equipment installation are in place, it is expected that this project will be dormant until the white space is ready for Motorola to build out the new communications room in the new 8th precinct building.

3.10.3 Progress Milestone Submittal

Motorola Responsibilities:

- Submit progress (non-payment) milestone completion certificate/documentation.

Nassau County Responsibilities:

- Approve milestone, which will signify confirmation of completion of the work associated with the scheduled task.

Completion Criteria:

- Nassau County approval of the Milestone Completion document(s).

3.10.4 Change Order Process

Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.

3.10.4.1 Example - Change Order Form

MOTOROLA SOLUTIONS

CHANGE ORDER

[type co# here]

Change Order No. _____

Date: _____

Project Name: _____

Customer Name: _____

Customer Project Mgr: _____

The purpose of this Change Order is to: *(highlight the key reasons for this Change Order)*

Contract # REQUIRED **Contract Date:** _____

In accordance with the terms and conditions of the contract identified above between

[enter customer name] and Motorola Solutions, Inc., the following changes are approved:

Contract Price Adjustments

Original Contract Value:	$
Previous Change Order amounts for Change Order numbers [ ] through [ ]	$
This Change Order:	$
New Contract Value:	$

Completion Date Adjustments

Original Completion Date:	
Current Completion Date prior to this Change Order:	
New Completion Date:	

Changes in Equipment: *(additions, deletions or modifications)* Include attachments if needed
Changes in Services: *(additions, deletions or modifications)* Include attachments if needed
Schedule Changes: *(describe change or N/A)*
Pricing Changes: *(describe change or N/A)*
Customer Responsibilities: *(describe change or N/A)*
Payment Schedule for this Change Order: (describe new payment terms applicable to this change order)

Unless amended above, all other terms and conditions of the Contract shall remain in full force. If there are any inconsistencies between the provisions of this Change Order and the provisions of the Contract, the provisions of this Change Order will prevail.

IN WITNESS WHEREOF the parties have executed this Change Order as of the last date signed below.

Motorola Solutions, Inc.		**Customer**	
By:	_____	By:	_____
Printed Name:	_____	Printed Name:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____

Reviewed by: _____ Date: _____
Motorola Solutions Project Manager

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4.3 NYS Pricing Detail 4-5

MOTOROLA

DATE: 02/19/15
QUOTE: PGS_021915_00
CUST #: 1000206484

State of New York Contract

Security Systems Solution
group #77201

SHIP TO: NCPD
ATTN: Robert Torres

PHONE
FAX

ULTIMATE
DESTINATION: Nassau County PD
ATTN: R. Torres

PHONE: 516-573-7500
FAX

VENDOR #: 361115800
VENDOR: MOTOROLA, INC.
128 Tice Blvd, Suite 202
Woodcliff Lake, NJ 07677
ATTN: Phil Schram
PHONE: 516-996-6051
FAX

CONTRACT LINE No.	Part Number	APC	DESCRIPTION	QTY	LIST UNIT PRICE	Ext UNIT PRICE	NY State Discount	DISC UNIT PRICE	DISC EXTENDED PRICE
2270	DSBA8067DIN	351	OMNI, EXPOSED DIPOLE ARRAY, 6 DBD, 400-520 MHZ, PIM RATED	1	$ 2,284.00	$ 2,284.00	20%	$ 1,827.20	$ 1,827.20
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	15	$ 3.50	$ 52.50	20%	$ 2.80	$ 42.00
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	2	$ 28.50	$ 57.00	20%	$ 22.80	$ 45.60
2475	TDN9289	351	221213 CABLE WRAP WEATHERPROOFING	2	$ 22.00	$ 44.00	20%	$ 17.60	$ 35.20
2572	L3617	351	7/8IN HELIAX VIRTUAL AIR FOAM FILLED CORREGATED CABLE (AVA5-50FX)/FOOT	150	$ 8.40	$ 1,260.00	20%	$ 6.72	$ 1,008.00
2584	DDN1077	351	7-16IN DIN FEMALE CONNECTOR EZ-FIT FOR 7/8IN CABLE (MOTOROLA SPECIFIC)	2	$ 39.75	$ 79.50	20%	$ 31.80	$ 63.60
2580	DSSG7806B2A	351	SG78-0682A GROUNDING KIT FOR 7/8 IN COAXIAL CABLE	4	$ 22.50	$ 90.00	20%	$ 18.00	$ 72.00
2591	DSL5SGRIP	351	L5SGRIP 7/8" SUPPORT HOIST GRIP	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2589	MDN6817	351	42396A-S 7/8" CABLE HANGER STAINLESS, 10 PK	5	$ 32.50	$ 162.50	20%	$ 26.00	$ 130.00
2192	DSVHF50DMAPGR	207	RF SPD, 100-512MHZ, DC BLOCK HIGH POWER DIN MALE ANT, DIN FEMALE EQUIP	1	$ 160.00	$ 160.00	20%	$ 128.00	$ 128.00
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	25	$ 3.50	$ 87.50	20%	$ 2.80	$ 70.00
2533	DDN1088	351	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2270	DSBA8067DIN	351	OMNI, EXPOSED DIPOLE ARRAY, 6 DBD, 400-520 MHZ, PIM RATED	1	$ 2,284.00	$ 2,284.00	20%	$ 1,827.20	$ 1,827.20
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	15	$ 3.50	$ 52.50	20%	$ 2.80	$ 42.00
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	2	$ 28.50	$ 57.00	20%	$ 22.80	$ 45.60
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2533	DDN1088	351	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
					$ -	$ -		$ -	$ -
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	15	$ 3.50	$ 52.50	20%	$ 2.80	$ 42.00
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	2	$ 28.50	$ 57.00	20%	$ 22.80	$ 45.60
2475	TDN9289	351	221213 CABLE WRAP WEATHERPROOFING	2	$ 22.00	$ 44.00	20%	$ 17.60	$ 35.20
2572	L3617	351	7/8IN HELIAX VIRTUAL AIR FOAM FILLED CORREGATED CABLE (AVA5-50FX)/FOOT	250	$ 8.40	$ 2,100.00	20%	$ 6.72	$ 1,680.00
2584	DDN1077	351	7-16IN DIN FEMALE CONNECTOR EZ-FIT FOR 7/8IN CABLE (MOTOROLA SPECIFIC)	2	$ 39.75	$ 79.50	20%	$ 31.80	$ 63.60
2580	DSSG7806B2A	351	SG78-0682A GROUNDING KIT FOR 7/8 IN COAXIAL CABLE	6	$ 22.50	$ 135.00	20%	$ 18.00	$ 108.00
2591	DSL5SGRIP	351	L5SGRIP 7/8" SUPPORT HOIST GRIP	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2589	MDN6817	351	42396A-S 7/8" CABLE HANGER STAINLESS, 10 PK	9	$ 32.50	$ 292.50	20%	$ 26.00	$ 234.00
2192	DSVHF50DMAPGR	207	RF SPD, 100-512MHZ, DC BLOCK HIGH POWER DIN MALE ANT, DIN FEMALE EQUIP	1	$ 160.00	$ 160.00	20%	$ 128.00	$ 128.00
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	50	$ 3.50	$ 175.00	20%	$ 2.80	$ 140.00
2533	DDN1088	351	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	15	$ 3.50	$ 52.50	20%	$ 2.80	$ 42.00
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2192	DSVHF50DMAPGR	207	RF SPD, 100-512MHZ, DC BLOCK HIGH POWER DIN MALE ANT, DIN FEMALE EQUIP	1	$ 160.00	$ 160.00	20%	$ 128.00	$ 128.00
2518	L1705	351	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT	50	$ 3.50	$ 175.00	20%	$ 2.80	$ 140.00
2533	DDN1088	351	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2531	DDN1090	351	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE	1	$ 28.50	$ 28.50	20%	$ 22.80	$ 22.80
2227	DSA4200070512	351	UPS, APS 20KVA/18KW 208/240V, EXT MBB, ISO XFMR, 7 MIN RUN AT FULL	1	$32,925.00	$ 32,925.00	20%	$ 26,340.00	$ 26,340.00

MOTOROLA

State of New York Contract

Security Systems Solution
group #77201

DATE 02/19/15
QUOTE PGS_021915_03
CUST # 1600206484

SHIP TO NCPD
ATTN: Robert Torres

PHONE
FAX

ULTIMATE
DESTINATION:Nassau County PD
ATTN: R. Torres

PHONE: 516-573-7500
FAX

VENDOR #: 361115800
VENDOR: MOTOROLA, INC.
123 Tice Blvd, Suite 202
Woodcliff Lake, NJ 07677
ATTN: Phil Schiara
PHONE: 518-966-6051
FAX:

CONTRACT LINE No.	Part Number	APC	DESCRIPTION	QTY	LIST UNIT PRICE	Ext UNIT PRICE	NY State Discount	DISC UNIT PRICE	DISC EXTENDED PRICE
					$ -	$ -		$ -	$ -
NA	DQVALMONT307862-01	207	125-foot monopole tower (with additional 25' Extension)	1	$ 62,736.00	$ 62,736.00	10%	$ 56,462.40	$ 56,462.40
NA	DSMSBWIREMOLD	207	8' MSB WIREMOLD HORIZONTAL POWER POLE	1	$ 1,880.00	$ 1,880.00	7%	$ 1,748.40	$ 1,748.40
NA	DS8TH150FT	207	DISH, LINES AND CONNECTORS 150FT	1	$ 11,212.00	$ 11,212.00	7%	$ 10,427.16	$ 10,427.16
NA	DS8TH250FT	207	DISH, LINES AND CONNECTORS 250FT	1	$ 8,228.00	$ 8,228.00	7%	$ 7,652.04	$ 7,652.04

EQUIPMENT TOTAL $ 114,689.60

PROJECT SERVICES

Service	Program Management, Engineering, Equipment Installation, Documentation	1	$ 540,882.00	$ 540,882.00	0%	$ 540,882.00	$ 540,882.00

TOTAL PROJECT $ 655,571.60

Less System Incentive $ (19,424.00)

Total Sytem and Installation $ 636,157.60

Notes:

Terms and prices are quoted from the NY State Contract; Security Systems Solution group #77201
The equipment, project work detail, services, and billing milestones of this quote are subject to the Proposal "8th Precinct Tower Move"
Dated October 27, 2015
Purchase Order must reference: Proposal "8th Precinct Tower Move" Dated October 27, 2015
Pricing supersedes and replaces Pricing detail from Proposal "8th Precinct Tower Move" Dated October 27, 2015

This Quote is valid through June 30, 2015

CPD13000016

Contract ID#: _____

Department: Police Department

E-115-13

CF (Capital)
Contract Details

SERVICES Motorola Radio Project

NIFS ID #: CFPW050000024 NIFS Entry Date 6/20/2005 Term:

New ☐ Renewal ☐	
Amendment	☒
Time Extension	☐
Addl. Funds	☐
Blanket Resolution ☐ RES#	

1) Mandated Program:	Yes ☐	No ☐
2) Comptroller Approval Form Attached:	Yes ☒	No ☐
3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☐
5) Insurance Required	Yes ☒	No ☐

Agency Information

Vendor	
Name Motorola, Inc.	Vendor ID# 361115800-01
Address 5 Paragon Drive Suite 200 Montvale, NJ 07645 Email-philip.schram@motorola.com	Contact Person Philip Schram Phone (516)996-6051

County Department	
Department Contact Deputy Chief Edmund J. Horace	
Address 1490 Franklin Avenue, Mineola	
Phone (516) 573-7932/573-7180	

Routing Slip

Date Out	Office & Person	Routing Description		Date In	Action Taken	Date Out
	Department	*NIFS Entry (Dept)* *NIFS Appvl (Dept. Head)* *Contractor Registered*	☐ ☐			
	DPW (Capital Only)	*CF Capital Fund Approval*	☐	5/15/13		
	OMB	*Contractor Registered* *NIFS Approval*	☑	5/15/13		
5/15/13	County Attorney	*CA RE & Insurance Verification*	☑	5/15/13		
	County Attorney	*CA Approval as to form*	☒	5/17/13		
	Legislative Affairs	*Fw'd Original Contract to CA*	☐	5/21/13		
	County Attorney	*NIFS Approval*	☐			
	Comptroller	*NIFS Approval*	☐			
	County Executive	*Notarization* *Filed with Clerk of the Leg.*	☐ ☐	5/24/13		

RECEIVED
NASSAU COUNTY
CLERK OF THE LEGISLATIVE BODIES
2013

PRCF1205 (3/06)

Contract ID#: _____

Department: Police Department

Contract Summary

Description: Contract Amendment to contract number CFPW05000024

Purpose: The purpose of this contract amendment is to incorporate the following change orders into the contract:
Change Order 17: To authorize and document the development of a new radio site in Inwood due to the County being required to remove its equipment from the Far Rockaway Power Plant in September 2012 as a result of the decommissioning of the facility. This change order authorizes development of this new site, installation of transmit/receive and supporting microwave equipment removed from the Far Rockaway site and addition of a building and tower.
Change Order 18: This change order constitutes Final Acceptance of the 500MHz radio system and sets forth the extension of the 24th site options schedule until September 30, 2013.

Method of Procurement: Change Order 17: $1,828,638 Change Order 18: No cost

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Cost and Technical Evaluation Teams, which operated completely independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems .The adoption of MCC 7500 IP based console technology increased capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis:

Change Order	Contract Increase
17 – Development of new radio site	$ 1,828,638
18 – Final Acceptance & Extension of 24th site options	$ -0-
Totals	**$1,828,638**

Total amount of the Motorola Radio Contract CFPW05000024 is now Forty Six Million Five Hundred Thousand Two Hundred Eighty ($46,500,280) Dollars.

Change in Contract from Prior Procurement: See above

Recommendation: Approve as submitted.

Advisement Information

Budgetary Codes	
Fund:	
Control:	
Resp:	
Object:	
Transaction:	

Revenue Contract	
Revenue Contract ☐	
County	$
Federal	$
State	$
Capital	$
Other	$
TOTAL	$

Item	Appropriation Code	Amount
1	50590/PWCAPCAP/00003	$ 1,828,638
2		$
3		
APPROVED	J. Gonzalez 5/15/13	$
5		$
[illegible] SECTION		$
	TOTAL	$1,828,638

Renewal	
% Increase	
% Decrease	

Document Prepared By: PCOS Jane A. Gonzalez Date: 4/17/2013

PRCF1205 (3/06)

Contract ID#: _____

Department: Police Department

I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date 5/24/13
Date	Date	(For Office Use Only) E #:

PRCF1205 (3/06)

POLICE DEPARTMENT, COUNTY OF NASSAU, N.Y.
PURCHASE REQUEST

INSTRUCTIONS: PDON 118 - REV. 1/98

See full instructions on back of form. Forward original and one copy to Personnel and Accounting Bureau (Through Official Channels) and retain one copy.

FROM	DATE	PAGE NO.	COMMAND REQUEST NO.
Communications Bureau (Radio Office)	4/17/2013	1 OF 1	46-2013

IF REQUEST IS FOR EQUIPMENT; ARE SUPPLIES, INSTALLATION, TRAINING, MANUALS OR A SERVICE CONTRACT REQUIRED? ☐ YES ☐ NO IF YES, ORDER SIMULTANEOUSLY AND FORWARD TO P.A.B. WITH THIS REQUEST

DOES REQUEST REQUIRE A MATERIAL SAFETY DATA SHEET FROM VENDOR ☐ YES ☐ NO — C.O. INITIALS

CHECK THE APPROPRIATE BOX IF THIS REQUEST IS FOR ANY EQUIPMENT LISTED TO THE RIGHT. THE CORRESPONDING SUPERVISOR MUST APPROVE THE PURCHASE:

- ☐ COMPUTER EQUIPMENT - C. O., INFORMATION SYSTEMS BUREAU
- ☐ PERSONAL PROTECTIVE EQUIPMENT - CHAIRMAN, SUBSTANCES AND MATERIALS COMMITTEE
- ☒ COMMUNICATIONS EQUIPMENT - C. O., COMMUNICATIONS BUREAU
- ☐ VIDEO EQUIPMENT - C. O., PUBLIC INFORMATION OFFICE
- ☐ ELECTRONICS EQUIPMENT - C. O., ELECTRONICS SQUAD

CERTIFICATION OF CORRESPONDING C.O. [signature] TITLE DCO - CB DATE 4/12/13

SHIPPING ADDRESS (If billing address is different than shipping, record under Description.)

Nassau County Police Department
Deputy Chief Edmund J. Horace
1490 Franklin Avenue
Mineola, New York 11501

SUGGESTED VENDOR (Name and Address)

Motorola
Att: Phillip Schram
6 Paragon Drive Suite 200
Montvale, NJ 07645

Tele. No. (800 no. if avail.) 516-996-6051 FAX No. (if avail.)

QTY	UNIT	ITEM/SERVICE DESCRIPTION (Description must be detailed or form will be returned. Include catalog name, number and page.)	NO. ON HAND	USEFUL LIFE	LIST PRICE	EXTENDED LIST PRICE
1	ea	To encumber funds for development of new radio site as per Change Order 17 (part of Amendment 4) of the Motorola Radio			$1,828,638.0	$1,828,638.00
		Capital Project 50590 - CFPW050000024				

IF URGENT, CHECK HERE AND BELOW STATE REASON AND DATE NEEDED BY: ☒

IS A BLANKET ORDER AVAILABLE FOR ITEMS IN THIS PURCHASE REQUEST? ☐ YES ☒ NO

STANDARD BLANKET ORDER NO. AND EXPIRATION DATE

TOTAL COST $1,828,638.00

LIMITED BLANKET ORDER NO. | STATE CONTRACT ☐ YES ☐ NO | STATE CONTRACT NO. (If known) | CAPITAL PROJECT NO. 50590 | IF GRANT, GIVE NAME

FOR USE BY P.A.B.
- ☐ DELIVERY ORDER
- ☐ REQUISITION
- ☐ L. P. O.
- ☐ CNTR. ADV.
- ☐ OTHER

SPECIFIC JUSTIFICATION

To encumber funds to authorize the development of a new radio site in Inwood due to the County being required to remove its equipment from the Far Rockaway Power Plant as a result of decommissioning of the facility. Development of new site, installation of transmit/receive and supporting microwave equipment removed from Far Rockaway & addition of a building and tower.

INDIVIDUAL TO CONTACT FOR FURTHER	RANK	NAME	COMMAND	TELEPHONE NO.
	DC	Edmund J. Horace	COS	573-7500

ENDORSED

COMMAND C.O. [signature] DIVISION C.O. OFFICE CHIEF [signature]

FOR USE BY OFFICE OF COMMISSIONER OF POLICE ☒ APPROVED ☐ DISAPPROVED SIGNATURE C.O.P. [signature]

FUND | RESP | OBJ

DATE RECEIVED AT P.A.B. | REASON RETURNED | ☐ NOT INCLUDED IN BUDGET REQUEST

DATE ORDER TYPED IN P.A.B. | REFER DOCUMENT | ☐ FUNDS AVAILABLE AND APPROVED FOR PROCESSING ☐ RESUBMIT FUNDS UNAVAILABLE | SIGNATURE C.O., PERSONNEL AND ACCOUNTING BUREAU

RULES RESOLUTION NO. - 2013

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AMENDMENT TO A PERSONAL SERVICE AGREEMENT BETWEEN THE COUNTY OF NASSAU, ACTING ON BEHALF OF THE NASSAU COUNTY POLICE DEPARTMENT, AND MOTOROLA, INC.

WHEREAS, the County has negotiated an amendment to a personal services agreement with Motorola, Inc., to provide services in connection with the Land Mobile Radio Modernization Project, a copy of which is on file with the Clerk of the Legislature; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said amendment to an agreement with Motorola, Inc.

AMENDMENT NO. FOUR

AMENDMENT, dated as of _____May 7th, _____, 2013 (together with the exhibit attached hereto, this "Amendment"), between (i) Nassau County, a municipal corporation having its principal office at 1550 Franklin Avenue, Mineola, New York 11501 (the "County"), acting for and on behalf of the Nassau County Police Department, having its principal office at 1490 Franklin Avenue, Mineola, New York 11501, and (ii) Motorola, Inc., having its principal office at 5 Paragon Drive Suite 200, Montvale, New Jersey 07645 (the "Contractor").

WITNESSETH:

WHEREAS, pursuant to County contract number CFPW05000024 between the County and the Contractor, executed on behalf of the County on June 30, 2005 and the amendments entered into thereafter (the "Original Agreement") the Contractor performs certain services for the County in connection with the Nassau County Police Department Land Mobile Radio Modernization Project, which services are more fully described in the Original Agreement (the services contemplated by the Original Agreement, the "Services"); and

WHEREAS, the term of the Original Agreement is from June 30, 2005 to December 31, 2013 or Final acceptance, whichever is sooner ("Original Term"); and

WHEREAS, the maximum amount that the County agreed to reimburse the Contractor as full compensation for Services under the Original Agreement was Forty-Four Million Six Hundred Seventy One Thousand Six Hundred Forty Two Dollars ($44,671,642.00) (the "Maximum Amount");

WHEREAS, the County and the Contractor desire to increase the Maximum Amount to provide for the development of a new radio site; and

WHEREAS, the County and the Contractor desire to change the distribution of payment to insure the coordination of the installation of the system with the Final Acceptance of the radio system; and

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Amendment, the parties agree as follows:

1. Maximum Amount. (a) The Maximum Amount in the Original Agreement shall be increased by One Million Eight Hundred Twenty Eight Thousand Six Hundred Thirty Eight Dollars ($1,828,638.00), so that the Maximum Amount that the County shall pay to the Contractor as full consideration for all Services provided under the Amended Agreement shall be Forty Six Million, Five Hundred Thousand Two Hundred Eighty Dollars ($46,500,280.00).

(b) Pursuant to Section 30, Amendment, contained in the Original Agreement, Change Order No. 17 is attached hereto as Exhibit A setting for the Amended Maximum Amount as stated supra in paragraph 1(a).

2. Payment Terms. (a) The amounts paid by the County to the Contractor under Section 4(a) the Original Agreement is hereby amended as described in Change Order No. 17, attached hereto as Exhibit A, and Change Order No. 18, attached hereto as Exhibit B.

3. Full Force and Effect. All the terms and conditions of the Original Agreement not expressly amended by this Amendment shall remain in full force and effect and govern the relationship of the parties for the term of the Original Agreement.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written.

MOTOROLA, INC.

By: _____
Name: David R. White Jr.
Title: MSSSI Vice President
Date: May 7, 2013

NASSAU COUNTY

By: _____
Name: _____
Title: Deputy County Executive
Date: _____

PLEASE EXECUTE IN BLUE INK

STATE OF NEW ~~YORK~~ JERSEY)
)ss.:
COUNTY OF ~~NASSAU~~ PASSAIC)

On the 7th day of May in the year 2013 before me personally came David R. White Jr. to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Orange; that he or she is the Vice President of Motorola Solutions, Inc., the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

NOTARY PUBLIC Christina Albanese

Christina Albanese
Notary Public
New Jersey
My Commission Expires 8-17-14

STATE OF NEW YORK)
)ss.:
COUNTY OF NASSAU)

On the _____ day of _____ in the year 2013 before me personally came _____ to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of _____; that he or she is a **Deputy County Executive** of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

NOTARY PUBLIC

EXHIBIT A

Nassau County Public Safety Communications System
Motorola Change Order # 017

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 017
Change Order Name: Inwood Site
Date of Change Order: 04/12/2013
Pricing Valid until: 05/12/2013

Changes Requested:

Addition of Inwood Site, Relocation of Far Rockaway Transmit/Receive Equipment
The County was required by National Grid to vacate the Far Rockaway Power Plant transmit/receive site effective September, 2012 as a result of an announced decommissioning of that facility. The County was required to remove the fully operational 500MHz transmit/receive and supporting equipment located at the site. Since being notified, the County and Motorola have worked to locate a new replacement site that also addressed the County's preference to utilize County owned property. The parties have identified a County owned parcel in the immediate vicinity of Inwood.

This Change Order authorizes development of this new site, installation of transmit/receive and supporting microwave equipment removed from the Far Rockaway site and addition of building and tower as per the attached Statement of Work Dated 10/05/2012.

Reason for Change
This Change Order memorializes the County's authorization to building a new replacement radio site in Inwood

Current Contract Billing Milestones (as per Change Order 16)
Table 1 details remaining billing milestones based on Change Order 16. The combination of Brookville (SUNY) construction and FNE installation with the holdback agreed upon in Change Order 16 stands at $2,302,440.08.

Table 1 – Remaining Contract Billing Milestones Per Change Order 16

Milestone Description	Milestone Description	Original Milestone $		SUNY Hold Back $ After CO16
Milestone 2C Brookville (SUNY) site construction completed.	No change	$143,343.75		
Milestone 5b Brookville (SUNY) FNE Installation	No change	$159,096.33		
	12C) Holdback - Final System Acceptance upon completion of SUNY site or option election (no later than December 2012 as per CO16)			$2,000,000.00
TOTAL				$2,302,440.08

Nassau County Public Safety Communications System
Motorola Change Order # 017

Table 2 - Revised Contract Billing Milestones Resulting From Acceptance of Change Order 17

Milestone Description	Billing Milestone $ Per Change Order 17	Revised Billing Milestone Description	Revised Billing Milestone $ per Change Order 17	Billing Date
Milestone 2C Brookville (SUNY) site construction completed.	$143,343.75	No Change from CO16	No Change from CO16	No Change from CO16
Milestone 5b Brookville (SUNY) FNE Installation	$159,096.33	No Change from CO16	No Change from CO16	No Change from CO16
12C) Holdback - Final System Acceptance upon completion of SUNY site	$2,000,000.00	No Change from CO16	No Change from CO16	No Change from CO16
New	N/A	Milestone 13A Shipment of Inwood Equipment	$240,949.00	Upon milestone completion
New	N/A	Milestone 13B Inwood site Construction Complete	$1,240,978.00	Upon milestone completion
New	N/A	Milestone 13C Inwood FNE/Microwave Installation Complete	$346,711.00	Upon Milestone Completion

Current Contract Value:	**$ 44,671,642.00**
Net Change in Contract Value:	**$ 1,828,638.00**
Revised Contract Value:	**$ 46,500,280.00**

Schedule Impact: Anticipated Final Acceptance date Inwood site 12/31/2013 based on a Notice to Proceed with site work at Inwood granted on or before 5/1/2013.

Operational Impact: This change order will allow the Far Rockaway site to be replaced by the Inwood site. Cutover of the new site will cause interruption in microwave loop operation which will affect level of redundancy for alignment duration. Motorola Solutions will coordinate times for site cutover so as to minimize effect of the work.

Payment Terms: Please see Table 2 above which details revised billing milestones.

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)

NCPD Authorized Representative

Date: 5/15/13

NCPW Authorized Representative

Motorola Project Manager
PAUL RADOMSKI

Motorola Authorized Representative
David R. White, Jr., MSSSI V. President

Date: 5/7/2013

EXHIBIT B

Nassau County Public Safety Communications System
Motorola Change Order # 018

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 018
Change Order Name: SUNY Milestone Extension
Date of Change Order: 04/15/2013
Pricing Valid until: N/A

Changes Requested:

Extension of 24th Site Options Schedule as per Change Order 16
On 12-3-2010, Nassau County and Motorola executed a Change Order to the contract with respect to the final site deliverable, a Receive only site originally to be located in the Brookville area. Previously, Motorola and Nassau had diligently pursued multiple alternative sites in the area, all of which had been rejected by the landowners. Motorola coverage prediction tools and initial coverage testing subsequently indicated contractual radio coverage requirements would be met without this receive only site and this fact was later confirmed during final coverage testing. Conditional acceptance of the system was granted by the County, which allowed Nassau County to begin using the 500 MHz radio system for public safety communications without the completion of the 24th site. Change order #16 revised payment milestones as shown in table 1 below. This payment schedule provided a final payment of **$2,302,440.00** pending the resolution of the 24th receive only radio site deliverable. A **$2,000,000.00** component of the final payment was not originally tied solely to the 24th site but was tied to the rest of the project and has already been invoiced. The parties further agreed to a revised plan to address the 24th site deliverable. Nassau County agreed that Motorola would use a proposed water tank that was scheduled to be built at the SUNY Old Westbury campus. However, if this water tank was not constructed and a no fee license agreement to locate required radio equipment on the tank was not completed within 24 months of the execution of change order #16, Motorola would install the radio equipment at the Bethpage site or refund the cost of the equipment and services for this 24th site. The 24 month period has since expired without completion of the water tank and the parties agree to extend that option period, until September 30th 2013 for the two payment milestones (2C and 5B) directly related to the Brookville site. Signature of this Change Order will constitute Final Acceptance of the original project by the County. The actual 24th site options themselves remain unchanged. If the SUNY water tank is not constructed and a no fee license agreement to locate required radio equipment on the tank is not completed by September 30th, 2013, Motorola will install the radio equipment at the Bethpage site or credit Nassau with the cost of the equipment and services for the 24th site in the amount of $518,936.62 – as detailed in table 1. This credit is to be used for the purchase of additional services or equipment from Motorola.

Table 1- Alternative credit in lieu of Brookville (SUNY) or Bethpage Site	
Milestone 2C Brookville (SUNY) site construction completed.	$143,343.75
Milestone 5b Brookville (SUNY) FNE Installation	$159,096.33
Brookville Shelter	$98,860.00
Brookville Fixed Network Equipment	$82,725.00
Brookville Site Equipment	$34,911.54
TOTAL CREDIT	**$518,936.62**

Reason for Change
This Change Order constitutes Final Acceptance of the system and sets forth the extension of the 24th site options schedule until September 30th 2013, as detailed above.

Nassau County Public Safety Communications System
Motorola Change Order # 018

Table 2 - Revised Contract Billing Milestones Resulting From Execution of Change Order 18

Milestone Description	Billing Milestone $ Per CO 18	Revised Billing Milestone Description	Revised Billing Milestone $ per Change Order 18	Billing Date
Milestone 2C Brookville (SUNY) site construction completed.	$143,343.75	No Change from Change Order 17	No Change	Upon milestone completion or election of credit option by Sept. 30th, 2013
Milestone 5b Brookville (SUNY) FNE Installation	$159,096.33	No Change from Change Order 17	No Change	Upon milestone completion or election of credit option by Sept. 30th, 2013
12C) Holdback - Final System Acceptance upon completion of SUNY site	N/A	No Change	No Change	Invoiced 4-15-13 based upon Change Order 16 provision
New	N/A	Milestone 13A Shipment of Inwood Equipment	$240,949.00	Upon milestone completion as per Change Order #17
New	N/A	Milestone 13B Inwood site Construction Complete	$1,240,978.00	Upon milestone completion as per Change Order #17
New	N/A	Milestone 13C Inwood FNE/Microwave Installation Complete	$346,711.00	Upon milestone completion as per Change Order #17

Current Contract Value:	**$ 46,500,280.00**
Net Change in Contract Value:	**$ 0.00**
Revised Contract Value:	**$ 46,500,280.00**

Schedule Impact: Anticipated date 24th site resolution only 12/31/2013 based on a Notice to Proceed with site work granted on or before 5/1/2013.

Operational Impact: This change order will allow the development of a 24th site (Receive Only) to be added to the system. Depending on the final location and configuration, cutover of the new site may cause interruption in microwave loop operation which will affect level of redundancy for alignment duration. Motorola Solutions will coordinate times for site cutover so as to minimize effect of the work.

Payment Terms: Please see Table 2 above which details revised billing milestones.
There will be no increase in the performance bond as a result of this change order.
All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By (Signatures)

NCPD Authorized Representative

Motorola Project Manager

NCPW Authorized Representative

Motorola Authorized Representative
David R. White, Jr. MSSSI Vice President

Date: 5/15/13

Date: 5/7/2013

FAR ROCKAWAY, NEW YORK OCTOBER 5, 2012

500 MHZ SITE RELOCATION

MOTOROLA

The design, technical, and cost information furnished with this proposal is proprietary information of Motorola Solutions, Inc. (Motorola). Such information is submitted with the restriction that it is to be used only for the evaluation of the proposal, and is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the proposal, without the express written permission of Motorola Solutions, Inc.

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SECTION 1

STATEMENT OF WORK

1.1 CHANGE ORDER AWARD (MILESTONE)

- The Customer and Motorola execute the change order and both parties receive all the necessary documentation.

1.2 DESIGN REVIEW

1.2.1 Review Contract Design

Motorola Responsibilities:

- Meet with the Customer project team.
- Review the Statement of Work, Schedule, and Acceptance Test Plans, and update the documents accordingly.
- Submit design documents to the Customer for approval. These documents form the basis of the system, which Motorola will manufacture, assemble, stage, and install.
- Prepare equipment layout plans for new shelter.

Customer Responsibilities:

- The Customer's key project team participants attend the meeting.
- Make timely decisions, according to the Project Schedule.
- Frequency Licensing and Interference:
- As mandated by FCC, the Customer, as the licensee, has the ultimate responsibility for providing all required radio licensing or licensing modifications for the system prior to system staging. This responsibility includes paying for FCC licensing and frequency coordination fees.
- Provide the FCC "call sign" station identifier for each site prior to system staging.

Completion Criteria:

- Complete Design Documentation, which may include updated Statement of Work, Equipment List, site drawings, or other documents applicable to the project.
- Incorporate any deviations from the proposed system into the contract documents accordingly.
- The system design is "frozen" in preparation for subsequent project phases such as Order Processing and Manufacturing.
- A Change Order is executed in accordance with all material changes resulting from the Design Review to the contract.

1.2.2 Design Approval (Milestone)

- The Customer executes a Design Approval milestone document.

1.2.3 Design Considerations

Motorola has included coverage prediction maps (INFORMATION PURPOSES ONLY) for the proposed Inwood site that NCPD has identified as the Far Rockaway replacement. Motorola has

previously met and received contractual system coverage acceptance. Based on the proximity to the original site and the proposed tower/antennas heights, coverage should be similar to what was previously provided by the Far Rockaway site. However, as coverage conditions may change throughout the simulcast system based upon site placement, Motorola cannot guarantee original coverage and further testing or guarantees are not proposed in this scope.

Final tower height and antenna placement is predicated on FAA/FCC approval.

1.3 CIVIL WORK

1.3.1 Site Development at Inwood Raw Land Site

Inwood raw land site located at the corner of Bayview and Alemada Avenues in Inwood, NY. Proposing new 180-foot H self supported tower and 12-foot X 24-foot shelter with 70KW natural gas fueled outdoor generator within 50-foot X 100-foot fenced in compound.

1.3.1.1 Site Scope Summary

- Site acquisition services – Not included.
- Zoning Services – Not included.
- Permitting – Not Included.
- New fenced compound/expansion size – 50-foot x 100-foot.
- New Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.
- New shelter size – 12-foot x 24-foot.
- New generator size – 70 kW, Type – Outdoor (Natural Gas).
- New tower to be used for antennas – 180-foot self-supported tower.
- New tower foundation size – 182.1 cubic yard, Type – Pier and pad.

Motorola Responsibilities

Site Preparation

- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
- Provide for site clearing (shrubs, small trees, etc.) as required to create the new compound area (not to exceed 1000 square feet).
- Cut and remove existing asphalt pavement (not to exceed 4000 square feet), including loading and hauling to an approved disposal facility.
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 6600 square feet).
- Supply and install gravel surfacing to a depth of 6 inches, underlain with geotextile fabric within the new fenced in site compound area, and a 3-foot path around it (not to exceed 5000 square feet).
- Provide silt fence around the compound to control soil erosion (not to exceed 150 linear feet).
- Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 150 linear feet). To be connected to existing fencing on two sides of the new compound.
- Perform site touchup (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

New Tower Installation

- Construct a 45-foot x 45-foot reinforced pier and pad type tower foundations including excavation, rebar and concrete (not to exceed 182 cubic yards).
- Supply and erect a new 180-foot H self supported tower on new foundation.
- Provide and install a lighting system for the tower in accordance with the applicable chapters of FAA Advisory Circular AC 70/7460-1G.
- Provide for grounding of new tower.

New Shelter Installation

- Construct a reinforced concrete foundation necessary for a 12-foot x 24-foot shelter. To include the following:
  - 15-foot x 30-foot x 12-inch thick concrete pad with reinforcement 5 feet below grade (1 foot above ground water level). Install six (6) reinforced concrete piers 8-feet tall x 36-inches diameter on top of slab for shelter. Install six (6) 18-inch reinforced concrete piers for stairs/landing. Two (2) of the piers will be 4.5 feet tall and four (4) of the piers will be 8 feet tall.
- Fabrication and installation of a 4-foot 6-inch x 5-foot shelter entrance platform/landing, including stairs, railings and steel grating.
- Supply and install one (1) prefabricated concrete shelter 12-foot x 24-foot onto new foundation pad.
- Supply and install one (1) freestanding 24-inch-wide cable/ice bridge from the new shelter to the new tower (up to 30 linear feet).
- Provide for grounding of new shelter and ice-bridge.

New Generator Installation

- Construct a reinforced concrete foundation pad necessary for the proposed 70 kW generator. To include the following
  - 16-foot x 20-foot x 12-inch thick concrete pad with reinforcement 5 feet below grade (1 foot above ground water level). Install six (6) reinforced concrete piers 8 feet tall x 18 inches diameter on top of slab for generator platform. Install four (4) 12-foot reinforced concrete piers for stairs/landing. Two (2) of the piers will be 4.5 feet tall and two (2) of the piers will be 8 feet tall.
- Fabrication and installation of a 10-foot 2-inch x 18-foot generator support platform including platform/landing and stairs, railings and steel grating).
- Supply and install one (1) standby natural gas power generator (70 kW) onto the new pad, including interconnection wiring between the generator, transfer switch, and site electrical service mains.
- Provide for grounding of new generator

Site Utilities

- Supply and install 120/240V, 300A, single phase site electric service. To include:
  - All trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 150 cable feet of the shelter.
  - Multimeter backboard based on a 6 gang meter bank.
  - Furnishing and install a 100KVA, single phase isolation transformer.
  - Local utility company (LIPA) connection fees (estimated cost).
  - All required grounding.
- Supply and install natural gas service feed for new generator. To include the following:

- Provide and install gas service riser at shelter. Includes pressure testing of system prior to meter set by National Grid.
- Provide trenching and back fill for installation of U/G natural gas service piping from riser/meter location at shelter to new generator (assumed at 50 feet).
- Local utility company (Key Span) connection fees (estimated cost).
- All required grounding.

Site Dewatering

- Due to the existing high water table as noted during the geotech survey, dewatering of areas to be excavated for installation of new foundations is anticipated. Includes providing the following:
  - Excavation of water recharge pit to receive water to be pumped during dewatering activities.
  - Tower Foundation Dewatering (area to be excavated is approximately 60-feet x 60-feet x 6-feet deep): Install eight (8) 4-foot diameter drainage rings with crushed stone around tower foundation. Install 2-inch electric pumps with float control (one per drainage ring to pump water to recharge pit). Install manifold system to direct water to recharge pit.
  - Shelter Foundation Dewatering (area to be excavated is approximately 25-feet x 25-feet x 6-feet deep): Install modified de-watering system as described above.
  - Generator Foundation Dewatering (area to be excavated is approximately 25-feet x 25-feet x 6-feet deep): Install modified de-watering system as described above.
  - Generator Rental to Power Water Pumps: Supply 50KW generator to power water pumps. Supply man to re-fuel generator as needed. Generator is assumed to be running 24 hours a day, 7 days per week. Generator to be supplied for one month. Includes labor and materials to install cable and sub- panel to power eight (8) pumps.

Subsurface Soil Improvements

- Provide subsurface soil improvements based on geotech survey/report recommendations. To include excavating an additional one foot below the bottom of the actual site component foundations (tower, shelter and generator), installing a reinforced geotextile fabric over the excavated area, and covering with a 1-foot thick lift of stone in order to achieve a working mat upon which to construct the foundations.

Site Grounding

- Supply and install a perimeter grounding system around the compound and proposed new site components. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards. Due to existing unsuitable soils at the proposed site the new ground system will need to be engineered for the specific site soil conditions. Includes additional engineering, labor, trenching and materials (Two (2) 10-foot Terradyne Rods, Terrafil, Polyplastic Test Well and Cover, and (25) 5/8-inch x 10-feet Copper Ground Rods) to provide the site specific/engineered system.

Antenna and Transmission Line Installation

- Supply and install the following antennas, MW dishes and related cabling on the proposed new tower:
  - Six (6) antenna(s) for the RF system.
  - Two (2) GPS antenna(s).
  - Two (2) 6-foot microwave dishes. Includes supplying and installing ice shields above the new dishes.
  - Up to 1100 linear feet of 7/8-inch transmission line.
  - Up to 400 linear feet of EW63 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.

- Perform alignment of each of two (2) microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six whole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Provide for grounding of new antennas and transmission lines.

Soil Disposal

- Remove and properly dispose of all left over excavated soils from the site. Includes trucking (not to exceed 250 cu-yds).

Customer Responsibilities

- Assist Motorola with permitting for sites as owner/lessee.
- As applicable, coordinate, prepare, submit, and pay for all building and zoning permits, land use approvals and inspections that might be required to complete the scope of work proposed.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fueling both during the construction/installation effort and on an ongoing basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- Secure clear and unencumbered title, MOU, or Lease Agreement with the property owner.
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.
- Provide a right of entry letter from the site owner for Motorola to conduct field investigations.
- Provide clear and stable access road to the site 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.
- Conduct all the testing and documentation (balloon tests, photo simulations, zoning application, expert testimony, zoning drawings etc.) required for the zoning the proposed new tower sites.
- Provide additional temporary space for the staging the construction equipment during the construction of new site facilities (tower, shelter, generator, fuel tank etc.).
- If required, prepare and submit EME plans for the site (as a licensee) to demonstrate compliance with FCC RF Exposure guidelines. [Note: Should the customer desire guidance with this task, Motorola is able to recommend resources. Additionally, Appendix A of Motorola's Standards and Guidelines for Communication Sites (R56) discusses Electromagnetic Energy and provides a basic methodology for structuring an FCC compliant program. If the customer does not have a copy of Motorola's Standards and Guidelines for Communication Sites (R56) v 2005, one will be provided.]

Assumptions

- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- Nassau County will provide a Tax Exempt Certificate to Motorola and Pyramid Network Services.
- This is a Prevailing Rate project
- All work to be completed utilizing Motorola preferred vendors.
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco] will be borne by the Customer or site owner.

- Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal.
- Site is being constructed at a location where hazardous materials are not present. Testing and removal of hazardous materials encountered during site investigations or construction will be the responsibility of the Customer.
- All soils that will be excavated are assumed to be clean. Removal and appropriate disposal of contaminated soils and backfill with clean soil is not included. If contaminated soils are encountered during excavations Nassau County will be responsible for their appropriate disposal and will provide clean soil for back fill.
- Water resulting from dewatering activities will be discharged into recharge pit to be excavated at the site and will not be removed from the site or discharged into the bay.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- The new tower location will pass the FAA hazard study, zoning, FCC and environmental permitting.
- The restoration of the site surroundings by fertilizing, seeding and strawing the disturbed areas will be adequate. Additional landscaping or aesthetic improvements (decorative fencing, tree plantings, stealth towers etc.) will not be required.
- Tower and foundation sizing is based on the tower loading requirements as a result of the RF Antenna System design and the Microwave Antenna System design (i.e. - dish sizes and locations obtained from paper path studies). If after physical path studies, the dish sizes and locations change, then Motorola will then review the impact to tower structure and foundations and revise applicable costs.
- If as a result of NEPA studies, any jurisdictional authority should determine that a proposed communications facility "may have a significant environmental impact", the environmental impact studies or field testing and evaluation related to such determination have not been included.
- Painting of the new tower is excluded.
- The soil resistivity at the proposed sites is not sufficient to achieve a resistance of 10 Ohms or less. A grounding design will be completed by Alltec Corp and will be incorporated into the Construction Drawings. Site grounding will be designed and installed per Motorola's Standards and Guidelines for Communication Sites (R-56 Dated 9/1/05 Rev-B)
- The site location can be finalized and lease agreement can be reached with the property owner within 60 calendar days after the start of the site acquisition effort.
- A waiver to zoning requirements like setbacks, tower height limitations, etc. can be obtained.
- Underground utilities are not present in the construction area, and as such no relocation will be required.

1.3.2 Site Development Acceptance (Milestone)

- All site developments completed and accepted by the Customer.

1.4 SYSTEM INSTALLATION

1.4.1 Install Fixed Network Equipment

Motorola has identified the scope for installation, but has not included price for installation of the equipment within its base price. Motorola assumes that the Customer will use existing Motorola

resources already supporting the system to perform the installation. Motorola has provided an optional price for installation should it be determined that additional resources are required for the installation.

Motorola Responsibilities:

- Receive and inventory new antennas and lines.
- Install existing equipment from Far Rockaway site according to system drawings.

  Interference:

  - Motorola is not responsible for interference caused or received by the Motorola provided equipment except for interference that is directly caused by the Motorola-provided transmitter(s) to the Motorola-provided receiver(s). Should the customer system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.
- Bond the supplied equipment to the site ground system in accordance with Motorola's R56 standards.

Customer Responsibilities:

- Provide access to the sites, as necessary.

Completion Criteria:

- Fixed Network Equipment installation completed and ready for optimization.

1.4.2 Fixed Network Equipment Installation Complete

- All fixed network equipment installed and accepted by the Customer.

1.4.3 System Installation Acceptance (Milestone)

- All equipment installations are completed and accepted by the Customer.

1.5 SYSTEM OPTIMIZATION

1.5.1 Optimize System FNE

Motorola Responsibilities:

- Verify that all equipment is operating properly and that all electrical and signal levels are set accurately.
- Check forward and reflected power for all radio equipment, after connection to the antenna systems, to verify that power is within tolerances.
- Verify communication interfaces between devices for proper operation.
- Test and optimize the simulcast system.

Customer Responsibilities:

- Provide access/escort to the sites.

Completion Criteria:

- System FNE optimization is complete.

1.5.2 Link Verification

Motorola Responsibilities:

- Perform test to verify site link performance, prior to the interconnection of the Motorola-supplied equipment to the link equipment.

Customer Responsibilities:

- None.

1.5.3 Completion Criteria:

- Link verification successfully completed.

1.5.4 Optimization Complete

- System optimization is completed.

1.6 AUDIT AND ACCEPTANCE TESTING

1.6.1 Perform R56 Audit

Motorola Responsibilities:

- Perform R56 site-installation quality audits, verifying proper physical installation and operational configurations.
- Create site evaluation report to verify site meets or exceeds requirements, as defined in Motorola's Standards and Guidelines for Communication Sites (R56).

Customer Responsibilities:

- Provide access/escort to the sites.
- Witness tests if desired.

Completion Criteria:

- All R56 audits completed successfully.

1.6.2 Perform Equipment Testing

Motorola Responsibilities:

- Test individual components of the system to verify compliance to the equipment specifications.
- Repeat any failed test(s) once Motorola (or the Customer) has completed the corrective action(s).
- Prepare documentation of component tests to be delivered as part of the final documentation package.

Customer Responsibilities:

- Witness tests if desired.

Completion Criteria:

- Successful completion of equipment testing.

1.6.3 System Acceptance Test Procedures (Milestone)

- Customer approves the completion of all the required tests.

1.7 FINALIZE

1.7.1 Cutover

Motorola Responsibilities:

- Once the site has been optimized and tested, it will be turned on live in the system.

Customer Responsibilities:

- None.

Completion Criteria:

- Successful turn on of the Inwood site.

1.7.2 Resolve Punchlist

Motorola Responsibilities:

- Work with the Customer to resolve punchlist items, documented during the Acceptance Testing phase, in order to meet all the criteria for final system acceptance.

Customer Responsibilities:

- Assist Motorola with resolution of identified punchlist items by providing support, such as access to the sites, equipment and system, and approval of the resolved punchlist item(s).

Completion Criteria:

- All punchlist items resolved and approved by the Customer.

1.7.3 Transition to Service/Project Transition Certificate

Motorola Responsibilities:

- Review the items necessary for transitioning the project to warranty support and service.
- Provide a Customer Support Plan detailing the warranty and post-warranty support, if applicable, associated with the Contract equipment.
- Provide additional information regarding post-warranty support, included in the Warranty/Post-Warranty section of this document.
- Motorola's Standard Commercial Warranty will apply to the equipment included in this proposal. Motorola's Standard Commercial Warranty covers on-site response during normal business hours and provides the repair or replacement of defective hardware. Please note that any tower or tower lighting service not covered by manufacturer's warranty will be considered above contract and will be billed on a Time and Materials basis.

Customer Responsibilities:

- Participate in the Transition Service/Project Transition Certificate (PTC) process.

Completion Criteria:

- All service information has been delivered and approved by the Customer.

1.7.4 Finalize Documentation

Motorola Responsibilities:

- Provide updated site drawing electronically via email. The documentation will include the following:
  - Site Floor Plans.
  - Antenna Network Drawings for Site.
  - Functional Acceptance Test Plan Test Sheets and Results.
  - Line sweep test results.

  Drawings are created utilizing AutoCAD design software and will be delivered in Adobe PDF format. All other system manual documents converted from native format to Adobe PDF format to be included on the System Manual CD.

Customer Responsibilities:

- Receive and approve all documentation provided by Motorola.

Completion Criteria:

- All required documentation is provided and approved by the Customer.

1.7.5 Final Acceptance (Milestone)

- All deliverables completed, as contractually required.
- Final System Acceptance received from the Customer.

1.8 PROJECT ADMINISTRATION

1.8.1 Project Status Meetings

Motorola Responsibilities:

- Once a month, or as agreed at the Design Review, the Motorola Project Manager, or designee, will attend all project status meetings with the Customer.
- Record the meeting minutes and supply the report.
- The agenda will include the following:
  - Overall project status compared to the Project Schedule.
  - Product or service related issues that may affect the Project Schedule.
  - Status of the action items and the responsibilities associated with them, in accordance with the Project Schedule.
  - Any miscellaneous concerns of either the Customer or Motorola.

Customer Responsibilities:

- Attend meetings.
- Respond to issues in a timely manner.

Completion Criteria:

- Completion of the meetings and submission of meeting minutes.

1.8.2 Progress Milestone Submittal

Motorola Responsibilities:

- Submit progress (non-payment) milestone completion certificate/documentation.

Customer Responsibilities:

- Approve milestone, which will signify confirmation of completion of the work associated with the scheduled task.

Completion Criteria:

- The Customer approval of the Milestone Completion document(s).

1.8.3 Change Order Process

- Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.

1.8.4 Schedule

A high level preliminary Milestone Schedule is provided in Table 1-1 below. A detailed schedule based on final scope will be developed and submit during the Contract Design Review phase of the Project. The work schedule is based on the following:

- The site is available for Motorola to begin work at Contract.
- All site approvals including permits received at week 4.
- Shelter delivery estimated at 12 weeks ARO.
- NCPD assistance is required for coordinating and expediting LIPA and National Grid connections. Previous experience has shown that these are long lead time items and can cause project delays.

Table 1-1: Preliminary Project Schedule

ITEM	PROJECT MILESTONES	WEEK
1	Contract Signed	0
2	Contract Design Review	2
3	Permits Received	4
4	Civil work (dewatering/foundations/trenching/backfill/site cleanup, fencing, etc); Electrical and Grounding; Plumbing	5-12
5	Shelter/Generator Set	13
6	Final Electrical Connection/LIPA Connection	14
7	Final Plumbing Connection; Natural Gas Connection by National Grid	14
8	Tower Work	15-17
9	UPS Start Up	15

ITEM	PROJECT MILESTONES	WEEK
10	FAA/FCC Notifications	17
11	FNE Installed	17
12	Site Acceptance	18
13	Documentation	19
14	Final Acceptance	20

1.9 COVERAGE MAPS

Motorola has provided coverage maps in the order listed below on the following pages.

1. Nassau County, NY Inwood Transmit
2. Nassau County, NY Inwood Receive

SECTION 2

PRICING

Equipment	$240,949.00
• Shelter, Antennas, cable	
System Integration Services	$1,587,689.00
• Civil, Foundation, Tower, labor	
Total Change Order	**$1,828,638.00**

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Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth, TX 76137

Aeronautical Study No.
2012-ABA-5579-OE
Prior Study No.
2012-ABA-4359-OE

Issued Date: 01/29/2013

Robert Baumeister
Pyramid Network Services, LLC (RB)
6519 Towpath Road
East Syracuse, NY 13057

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Antenna Tower Inwood - Revised
Location:	Inwood, NY
Latitude:	40-36-50.07N NAD 83
Longitude:	73-45-34.08W
Heights:	9 feet site elevation (SE)
	181 feet above ground level (AGL)
	190 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is marked/lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, paint/red lights - Chapters 3(Marked),4,5(Red),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part I)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

See attachment for additional condition(s) or information.

This determination expires on 07/29/2014 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before February 28, 2013. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted in triplicate to the Manager, Airspace Regulations & ATC Procedures Group, Federal Aviation Administration, Airspace Regulations & ATC Procedures Group, 800 Independence Ave, SW, Room 423, Washington, DC 20591.

This determination becomes final on March 10, 2013 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Airspace Regulations & ATC Procedures Group via telephone -- 202-267-8783 - or facsimile 202-267-9328.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact Robert Alexander, at (718) 553-4546. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2012-AEA-5579-OE.

Signature Control No: 176944410-182055043 (DNH)
John Page
Manager, Obstruction Evaluation Group

Attachment(s)
Additional Information
Frequency Data
Map(s)

cc: FCC

Additional information for ASN 2012-AEA-5579-OE

Proposal: To construct a(n) Antenna Tower to a height of 181 feet above ground level, 190 feet above mean sea level.

Location: The structure will be located 1.79 nautical miles southeast of John F Kennedy Int'l (JFK) Airport reference point.

Part 77 Obstruction Standard(s) Exceeded:

Section 77.17 (a) (5) a height that affects an Airport Surface by penetrating

Section 77.19 (a) Horizontal Surface by 26 feet as applied to JFK.

Preliminary FAA study indicates that the above mentioned structure would:

have no effect on any existing or proposed arrival, departure, or en route instrument flight rules (IFR) operations or procedures.

have no physical or electromagnetic effect on the operation of air navigation and communications facilities.

have no effect on any airspace and routes used by the military.

PUBLIC NOTICE: The proposal was circularized for public on November 14, 2012 and no comments were received.

AERONAUTICAL STUDY RESULTS:

The proposed structure would not affect any plans on file.

The structure would not interfere with any airport traffic patterns.

The structure would not adversely affect any present or future VFR or IFR terminal procedure. The structure is operationally shielded by an existing stack ORS# 36-000563, a 270 AMSL stack.

The structure would not affect any VFR or IFR enroute procedure.

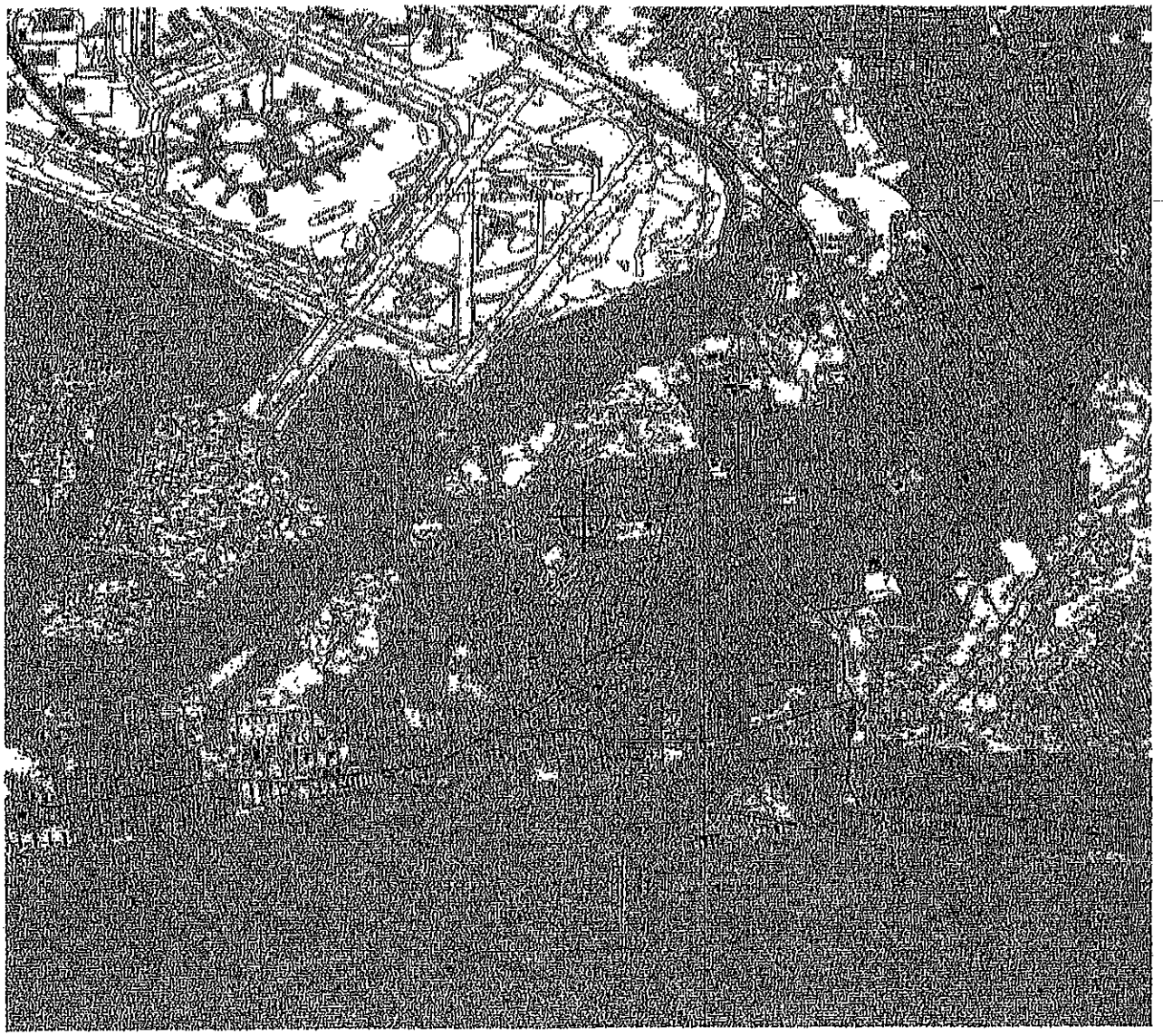
The structure would not have a cumulative impact on any existing or planned airport.

The structure would exceed obstruction standards and shall be obstruction marked and lighted in accordance with FAA AC 70/7460-1K, Chapters 3, 4, 5 and 12.

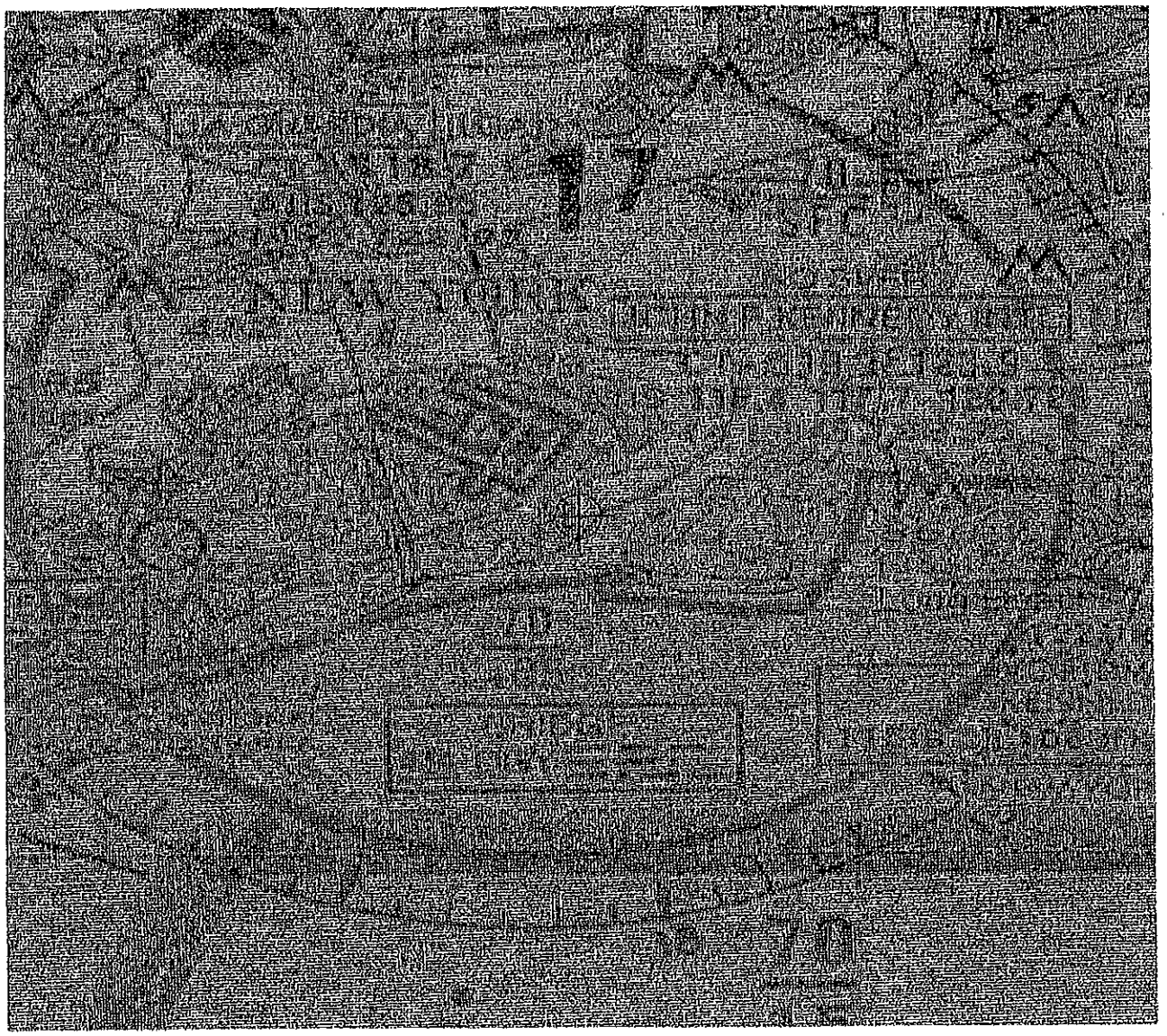
Frequency Data for ASN 2012-AEA-5579-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
478	501	MHz	80	W
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

TOPO Map for ASN 2012-AEA-5579-OE



Sectional Map for ASN 2012-AEA-5579-OE



CAPITAL PROJECT

STATE ENVIRONMENTAL QUALITY REVIEW
NASSAU COUNTY LAND--MOBILE RADIO SYSTEM MODERNIZATION
PROJECT NO. 50590
NEGATIVE DECLARATION RESOLUTION

NCPC FILE NO. 5-2007

WHEREAS, in accordance with §1611 of the County Charter and acting in an advisory capacity to the NASSAU COUNTY POLICE DEPARTMENT, the NASSAU COUNTY PLANNING COMMISSION, is required to review certain proposed actions of the COUNTY under SEQRA, and

WHEREAS, on December, the NASSAU COUNTY POLICE DEPARTMENT submitted to the NASSAU COUNTY PLANNING COMMISSION a Part I Full Environmental Assessment ("FEAF"), relative to the modernization and upgrading of the County Wide Land Mobile Radio System, and

WHEREAS, the NASSAU COUNTY POLICE DEPARTMENT classified this action as an UNLISTED action, pursuant to Part 617 of Title 6 NYCRR and §1611 of the Nassau County Government Law; and

WHEREAS, the proposed project entails the renovation and modernization of the Nassau County Public Safety Land Mobile Radio System to provide increased coverage, and to provide interoperability with surrounding Local, State and Federal public safety officials. In addition the modernization of the system will provide double redundancy in case of failure of a single component of the system; and

WHEREAS, the NASSAU COUNTY PLANNING COMMISSION has reviewed the submitted Part I FEAF, completed the Part II

WHEREAS, that on February 15, 2007 the NASSAU COUNTY PLANNING COMMISSION adopted a NEGATIVE DECLARATION for this capitol project.

WHEREAS, the NASSAU COUNTY PLANNING COMMISSION finds that:

1. The proposed action is intended to improve the Police Department's ability to provide proper public safety services to the residents of Nassau County

2. The proposed action will take place on existing buildings and on existing towers and will only involve minimal new construction. The proposed action will not result in a substantial adverse change in existing air quality, ground or surface water quality or quantity at the site.

3. The proposed action will generate only one or two vehicular trips per month at each site and will not adversely affect the traffic or noise level, will not affect solid waste production, and will not result in erosion, flooding, leaching or drainage problems.

4. The proposed action will not result in the removal or destruction of large quantities of vegetation or fauna. As the project will be located on existing buildings and towers the action will not interfere with the movement of any resident or migratory fowl or any other migratory fish or wildlife species, nor will it impact on significant habitat area or result in any other significant adverse effect to natural resources.

5. The proposed action will not impair the character of quality of important historical, archeological, architectural or aesthetic resources of the County as there are no such resources within the project site. The proposed action will not be substantially discernable from the existing facilities by users of surrounding important historical, archeological, architectural or aesthetic resources.

6. The proposed action will not result in major changes in use of either the quantity or type of energy.

7. The proposed action calls for the use of an existing buildings and towers and the upgrading of existing towers. Accordingly, the proposed action will not result in a substantial change in use or intensity of land, including cultural or recreational resource, or its capacity to support existing uses.

8. The proposed action will not result in a material demand for other actions that would result in any of the above consequences.

9. The proposed action will not change two or more elements in the environment, which when considered together could result in a substantial adverse impact on the environment.

10. When considered cumulatively with other actions, the proposed action will not have a significant effect on the environment or meet one of the above criteria

NOW THEREFORE BE IT RESOLVED that the NASSAU COUNTY PLANNING COMMISSION hereby determines that the proposed action will not have an adverse impact on the environment and a Draft Environmental Impact Statement (DEIS) is not required with the issuance of the NEGATIVE DECLARATION

RESOLVED that the POLICE DEPARTMENT shall be notified of this determination.

The foregoing resolution was offered
ON MOTION of Second Vice-Chair Lewis,
seconded by Commissioner Cuomo.

Upon roll call the vote was as follows:

Jeffrey Greenfield, Chairman	AYE
Michael Bellissimo, Vice-Chairman	AYE
Neal Lewis, Vice-Chairman	AYE
Lewis J. Yevoli	Excused
Mona G. Rankin	AYE
Leonard Shapiro	AYE
Amy Hagedorn	AYE
Philip Cuomo	AYE
Oscar Holt III	Excused

The Chairman declared the resolution duly adopted.

Resolution of Nassau County Planning Commission
Adopted: February 15, 2007

STATE OF NEW YORK)
) SS:
COUNTY OF NASSAU)

I, PATRICIA BOURNE, Executive Commissioner, of the Nassau County Planning Commission, do hereby certify that I have compared the preceding with the original resolution passed by the Planning Commission of Nassau County, New York, on February 15, 2007 on file in my office and recorded in the record of proceedings of the Planning Commission of the County of Nassau and do hereby certify the same to be a correct transcript therefrom and of the whole said original.

I further certify that the resolution herein above mentioned was passed by the concurring affirmative vote of the Planning Commission of the County of Nassau.

IN WITNESS WHEREOF, I have hereunto set my hand,
this 20 day of March in the year of two thousand and seven.

PATRICIA BOURNE, EXECUTIVE COMMISSIONER OF PLANNING
NASSAU COUNTY PLANNING COMMISSION

State Environmental Quality Review (SEQR)

NEGATIVE DECLARATION

Notice of Determination of Non-Significance

Project Number NCPC SEQRA-File No. 5-2007 Date: 2/15/07

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Nassau County Planning Commission acting on behalf of Nassau County Police Department as Lead Agency for the has determined that the proposed action described below will not have a significant effect on the environment and a Draft Environmental Impact Statement will not be prepared.

Name of Action: Land- Mobile Radio System Modernization, Project No.50590

SEQRA Status: Type I ☐

Unlisted √

Conditioned Negative Declaration: ☐ Yes

√ No

Description of Action:

The proposed action involves the modernization of the Nassau County public safety radio system under capitol project # 50590. The action entails the replacement and upgrading of all existing public safety radio system facilities through out Nassau and Suffolk Counties and the Borough of Queens. Additionally the project will involve the installation of several new public safety radio system facilities.

Location:

The action will be undertaken at several locations trough out Nassau and Suffolk Counties and the Borough of Queens. See the attached Civil Site Matrix in Attachment A.

Reasons supporting this determination:

Completion of the Full Environmental Assessment Form Parts II, and the visual addendum have identified no significant adverse environmental impacts.

Determination of Significance

The environmental criteria set forth in §617.7 (c) are considered to be indicators of significant adverse environmental impacts. Using these thresholds the NCPC finds the following factors as its basis for the

NEGATIVE DECLARATION determination:

1. The project is intended to improve the Police Department's ability to provide proper public safety services to the residents of Nassau County

2. The proposed action will take place on existing buildings and on existing towers and will only involve minimal new construction. The proposed action will not result in a substantial adverse change in existing air quality, ground or surface water quality or quantity at the site.

3. The proposed action will generate only one or two vehicular trips per month at each site and will not adversely affect the traffic or noise level, will not affect solid waste production, and will not result in erosion, flooding, leaching or drainage problems.

4. The proposed action will not result in the removal or destruction of large quantities of vegetation or fauna. As the project will be on existing buildings and towers the action will not interfere with the movement of any resident or migratory fowl or any other migratory fish or wildlife species, nor will it impact on significant habitat area or result in any other significant adverse effect to natural resources.

5. The proposed action will not impair the character of quality of important historical, archeological, architectural or aesthetic resources of the County as there are no such resources within the project site. The proposed action will not be substantially discernable from the existing facilities by users of surrounding important historical, archeological, architectural or aesthetic resources.

6. The proposed action will not result in major changes in use of either the quantity or type of energy.

7. The proposed action calls for the use of an existing buildings and towers and the upgrading of existing towers. Accordingly, the proposed action will not result in a substantial change in use or intensity of land, including cultural or recreational resource, or its capacity to support existing uses.

8. The proposed action will not result in a material demand for other actions that would result in any of the above consequences.

9. The proposed action will not change two or more elements in the environment, which when considered together could result in a substantial adverse impact on the environment.

10. When considered cumulatively with other actions, the proposed action will not have a significant effect on the environment or meet one of the above criteria

Accordingly, based on the aforementioned findings the proposed action provides a suitable balance of social, economic and environmental factors. The Nassau County Planning Commission therefore determines that the proposed action will not have an adverse impact on the environment and a Draft Environmental Impact Statement (DEIS) is not required with the issuance of the NEGATIVE DECLARATION.

SEQRA Negative Declaration

Edmund Horace, Deputy Inspector

Name and Title of Responsible Officer in Lead Agency

Signature of Responsible Officer

Donald J. Holm, Planner III

Name and Title of Preparer

Signature of Preparer

For Further Information:

Contact Person: Edmund Horace

Address: Nassau County Police Department
1490 Franklin Avenue
Mineola, New York 11501

Telephone Number: (516) 573-7932

For Unlisted Actions a copy must be filed with the lead agency and the Planning Commission

Applicant:

Other Involved Agencies: Nassau County Department of Public Works

For Type I Actions and Conditioned Negative Declarations, a copy must be sent to:

Environmental Notice Bulletin at: enb@gw.dec.state.ny.us

ENB, NYS Department of Environmental Conservation
50 Wolf Road
Room 538, Albany, NY 12233-1750

County Executive, c/o County Clerk

For Type I Actions and Conditioned Negative Declarations, a copy must be sent to:

Environmental Notice Bulletin at: enb@gw.dec.state.ny.us

ENB, NYS Department of Environmental Conservation
50 Wolf Road
Room 538, Albany, NY 12233-1750

County Executive, c/o County Clerk

U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

OMB No. 1660-0008
Expires March 31, 2012

SECTION A - PROPERTY INFORMATION

For Insurance Company Use:

A1. Building Owner's Name Nassau County

Policy Number

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
31 Alameda Avenue

Company NAIC Number

City Inwood State NY ZIP Code 11096

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
Town of Hempstead NY tax map 40 - L - 2

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) non-residential

A5. Latitude/Longitude: Lat. 40 - 36 - 60.1N Long. 73 - 45 - 34.1W Horizontal Datum: ☐ NAD 1927 ☒ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number ____

A8. For a building with a crawlspace or enclosure(s):
- a) Square footage of crawlspace or enclosure(s) ____ sq ft
- b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade ____
- c) Total net area of flood openings in A8.b ____ sq in
- d) Engineered flood openings? ☐ Yes ☐ No

A9. For a building with an attached garage:
- a) Square footage of attached garage ____ sq ft
- b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade ____
- c) Total net area of flood openings in A9.b ____ sq in
- d) Engineered flood openings? ☐ Yes ☐ No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number	B2. County Name	B3. State
Town of Hempstead 360358C0282G	Nassau	NY

B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	B7. FIRM Panel Effective/Revised Date	B8. Flood Zone(s)	B9. Base Flood Elevation(s) (Zone AO, use base flood depth)
282	G		9/11/2009	AE	11 feet - NAVD 88

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in item B9.
☐ FIS Profile ☒ FIRM ☐ Community Determined ☐ Other (Describe) ____

B11. Indicate elevation datum used for BFE in item B9: ☐ NGVD 1929 ☒ NAVD 1988 ☐ Other (Describe) ____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date ____ ☐ CBRS ☐ OPA

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☒ Construction Drawings* ☐ Building Under Construction* ☐ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.

Benchmark Utilized GPS Vertical Datum NAVD88

Conversion/Comments ____

		Check the measurement used.	
a)	Top of bottom floor (including basement, crawlspace, or enclosure floor) 12.5 proposed	☒ feet	☐ meters (Puerto Rico only)
b)	Top of the next higher floor	☐ feet	☐ meters (Puerto Rico only)
c)	Bottom of the lowest horizontal structural member (V Zones only)	☐ feet	☐ meters (Puerto Rico only)
d)	Attached garage (top of slab)	☐ feet	☐ meters (Puerto Rico only)
e)	Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	☐ feet	☐ meters (Puerto Rico only)
f)	Lowest adjacent (finished) grade next to building (LAG)	☐ feet	☐ meters (Puerto Rico only)
g)	Highest adjacent (finished) grade next to building (HAG)	☐ feet	☐ meters (Puerto Rico only)
h)	Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	☐ feet	☐ meters (Puerto Rico only)

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. *I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.* ☐
Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No

Certifier's Name Charles E Lent License Number 50049

Title owner Company Name Infinity Surveying PLLC

Address 11 Herbert Drive City Latham State NY ZIP Code 12110

Signature Date 09/11/2012 Telephone 518-690-0790

STATE OF NEW YORK CHARLES E LENT PLS 050049 LICENSED LAND SURVEYOR

IMPORTANT: In these spaces, copy the corresponding information from Section A.	For Insurance Company Use:
Building Street Address (Including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 31 Alameda Avenue	Policy Number
City InwoodState NY ZIP Code 11096	Company NAIC Number

SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments Elevation determined by RTK GPS and are presented in NAVD88 datum

This Elevation Certificate prepared for a proposed building

Signature Date 09/11/2012

☐ Check here if attachments

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge.*

Property Owner's or Owner's Authorized Representative's Name

Address City State ZIP Code

Signature Date Telephone

Comments

☐ Check here if attachments

SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 and G9.

G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)

G2. ☐ A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G3. ☐ The following information (Items G4-G9) is provided for community floodplain management purposes.

G4. Permit Number	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy Issued

G7. This permit has been issued for: ☐ New Construction ☐ Substantial Improvement

G8. Elevation of as-built lowest floor (including basement) of the building: _____ ☐ feet ☐ meters (PR) Datum _____

G9. BFE or (in Zone AO) depth of flooding at the building site: _____ ☐ feet ☐ meters (PR) Datum _____

G10. Community's design flood elevation _____ ☐ feet ☐ meters (PR) Datum _____

Local Official's Name Title

Community Name Telephone

Signature Date

Comments

☐ Check here if attachments

Howard S. Weitzman
Comptroller

OFFICE OF THE COMPTROLLER
240 Old Country Road
Mineola, New York 11501

COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

Attach this form along with all personal, professional or human services contracts, contract renewals, extensions and amendments.

CONTRACTOR NAME: MOTOROLA, INC.

CONTRACTOR ADDRESS: 5 Paragon Drive Suite 200, Montvale, NJ 07645

FEDERAL TAX ID #: 361115800-01

Instructions: **Please check the appropriate box ("☑") after one of the following roman numerals, and provide all the requested information.**

I. ☐ The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids. The contract was awarded after a request for sealed bids was published in_____ [newspaper] on _____ [date]. The sealed bids were publicly opened on _____ [date]. _____ [#] of sealed bids were received and opened.

II. ☐ The contractor was selected pursuant to a Request for Proposals.
The Contract was entered into after a written request for proposals was issued on _____ [date]. Potential proposers were made aware of the availability of the RFP by_____ [newspaper advertisement, posting on website, mailing, etc.]. _____ [#] of potential proposers requested copies of the RFP. Proposals were due on _____ [date]. _____[#] proposals were received and evaluated. The evaluation committee consisted of:_____

_____ [list members]. The proposals were scored and ranked. As a result of the scoring and ranking (attached), the highest-ranking proposer was selected.

III. This is a renewal, extension or amendment of an existing contract.

The contract was originally executed by Nassau County on June 30, 2005. This is an amendment within the scope of, that contract (copies of the relevant pages of the contract are attached). The original contract was entered into after a written request for proposal was issued on July 6, 2004. Potential proposers were made aware of the availability of the RFP by posting on the county website. Ten (10) potential proposers requested copies of the RFP, two (2) vendors responded. Proposals were due on September 15, 2004. Two (2) proposals were received and evaluated. The evaluation committee consisted of:

Technical Evaluation Team: Deputy Inspector Edmund J. Horace NCPD Chairperson, Chief Peter Meade Fire Com, Sergeant Thomas Golder NCPD, Sergeant Michael Doyle Garden City PD, Detective Kenneth Strigaro NCPD, Police Officer Charles Seich NCPD, Mr. William Ango DPW.

Cost Evaluation Team: Deputy Chief George Gudmundsen NCPD Chairperson, Sergeant James Bartscherer NCPD, Mr. Frank Ryan Dept of Purchase, Mr. Paul Borderick OMB.

Contract Selection Committee: Chief Stephen McDonald NCPD Chairperson, Ms Helena Williams Deputy County Executive, Mr. Timothy Driscoll Deputy County Executive, Mr. Peter Gerbasi DPW, Deputy Chief Robert McGuigan NCPD, Deputy Inspector Edmund Horace NCPD, Police Officer Charles Seich NCPD.

The proposals were scored and ranked by the Contract Selection Committee. As a result of the scoring and ranking, the highest-ranking proposer was selected.

IV. ☐ Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.

☐ **A.** The contract has been awarded to the proposer offering the lowest cost proposal; **OR:**

☐ **B.** The attached memorandum contains a detailed explanation as to the reason(s)why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

V. ☐ Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.

☐ **A.** There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.

☐ **B.** The memorandum explains that the contractor's selection was dictated by the terms of a federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).

☐ **C.** Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no._____, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.

☐ **D.** Pursuant to General Municipal Law Section 119-o, the department is purchasing the services required through an inter-municipal agreement.

VI. ☐ This is a human services contract with a not-for-profit agency for which a competitive process has not been initiated. Attached is a memorandum that explains the reasons for entering into this contract without conducting a competitive process, and details when the department intends to initiate a competitive process for the future award of these services. For any such contract, where the vendor has previously provided services to the county, attach a copy of the most recent evaluation of the vendor's performance. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to contract with the county.

In certain limited circumstances, conducting a competitive process and/or completing performance evaluations may not be possible because of the nature of the human services program, or because of a compelling need to continue services through the same provider. In those circumstances, attach an explanation of why a competitive process and/or performance evaluation is inapplicable.

VII. ☐ This is a public works contract for the provision of architectural, engineering or surveying services. The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No.928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.

In addition, if this is a contract with an individual or with an entity that has only one or two employees:

☐ a review of the criteria set forth by the Internal Revenue Service, *Revenue Ruling No.* 87-41, 1987-1 C.B. 296, attached as Appendix A to the Comptroller's Memorandum, dated February 13, 2004, concerning independent contractors and employees indicates that the contractor would not be considered an employee for federal tax purposes.

Department Head Signature

5/9/13
Date

NOTE: Any information requested above, or in the exhibit below, may be included in the county's "staff summary" form in lieu of a separate memorandum.

MOTOROLA SOLUTIONS

BOARD OF DIRECTORS

Motorola Solutions Board of Directors

Learn more about the Motorola Solutions Board of Directors and find their bios here. For information on the Committee Charters and other Governance Documents, please visit the Motorola Solutions Investor Relations page.

Gregory Q. Brown, 52
Chairman and Chief Executive Officer, Motorola Solutions, Inc.

David W. Dorman, 59
Lead Independent Director of the Board, Motorola Solutions, Inc., and former chairman and CEO of AT&T

William J. Bratton, 65
Chief Executive Officer, Bratton Group LLC

Kenneth C. Dahlberg, 66
Former Chairman and Chief Executive Officer, Science Applications International Corporation

General Michael V. Hayden, 67
Principal, Chertoff Group; Retired United States Air Force General; former Director of the National Security Agency; former Director of the Central Intelligence Agency; and a former Principal Deputy Director of National Intelligence

Judy C. Lewent, 64
Former Executive Vice President & Chief Financial Officer, Merck & Co., Inc.

Anne R. Pramaggiore, 54
President and Chief Executive Officer, Commonwealth Edison Company

Samuel C. Scott III, 68
Former Chairman, President and Chief Executive Officer,
Corn Products International

Bradley E. Singer, 46
Partner with ValueAct Capital and a former CFO at Discovery
Communications and American Tower

Dr. John A. White, 73
Distinguished Professor of Industrial Engineering and Former
Chancellor, University of Arkansas

Contract ID#: CFPW050000024

Department: Police Department

E-183-10

CF (Capital)
Contract Details

SERVICE Motorola Radio Project

NIFS ID #: CLPD10000014 NIFS Entry Date 6/20/2005 Term:

New ☐ Renewal ☐	
Amendment	☒
Time Extension	☒
Addl. Funds	☐
Blanket Resolution ☐ RES# _____	

1) Mandated Program:	Yes ☐	No ☐
2) Comptroller Approval Form Attached:	Yes ☒	No ☐
3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☐
5) Insurance Required	Yes ☒	No ☐

Agency Information

Vendor	
Name Motorola, Inc.	Vendor ID# 361115800-01
Address 5 Paragon Drive Suite 200 Montvale, NJ 07645 Email- Stephanie.Walsh@motorola.com	Contact Person Stephanie Walsh Phone (201) 447-7525 (908)769-4231

County Department
Department Contact Inspector Edmund J. Horace & Lieutenant Thomas Golder
Address 1490 Franklin Avenue, Mineola
Phone (516) 573-7932/573-7180 3-8640

Routing Slip

DATE Rec'd	DEPARTMENT	Internal Verification	DATE Appr'd	SIGNATURE	Leg. Approval Required
	Department	*NIFS Entry (Dept)* ☐ *NIFS Appvl (Dept. Head)* ☐ *Contractor Registered* ___		11.18.10	
	DPW (Capital Only)	*CF Capital Fund Approval* ☑	12/2/10		
	OMB	*Contractor Registered* ___ *NIFS Approval* ☐	11/18/10		Yes ☐ No ☐ Not required for Blanket Res.
11/19/10	County Attorney	*CA RE & Insurance Verification* ☑	11/19/10		
	County Attorney	*CA Approval as to form* ☑	11/22/10		Yes ☒ No ☐
	Legislative Affairs	*Fw'd Original Contract to CA* ☐	12/6/10		
	County Attorney	*NIFS Approval* ☐			
	Comptroller	*NIFS Approval* ☑	2/7/11		
	County Executive	*Notarization* ☐ *Filed with Clerk of the Leg.* ☐	12/6/10		

Contract ID#: _____

Department: Police Department

Contract Summary

Description: Contract Amendment to contract number CFPW05000024

Purpose: The purpose of this contract amendment is to incorporate the following change orders into the contract:
Change Order 13: To authorize and document the return of 438 excess XTS5000 portable radios with associated carry cases and the shipment of replacement equipment. The reason for this change is that equipment needs have changed since the contract was signed in 2005.
Change Order 14: To revise the Coverage Acceptance Test Plan (CATP).
Change Order 15: To modify the fence that encloses the tower and shelters in the rear of the new Public Safety Center at 1194 Prospect Ave. The Fire Marshall requires the fence to be moved to allow obstruction free egress from all building exits currently enclosed by the compound fence. This also allows for better space flexibility for (future) phase three construction and insures that the Radio Tower Area is fully secured with fence around entire perimeter.
Change Order 16: To modify contract language regarding payment milestones, warranty, and extending the TERM for two years until December 31, 2013, or upon Final Acceptance, whichever is sooner.

Method of Procurement: Change Order 13: No Cost Change Order 14: No cost Change Order 15: Radio Project 50590 Ancillary funds. Change Order 16: No cost

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Cost and Technical Evaluation Teams, which operated completely independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems .The adoption of MCC 7500 IP based console technology increased capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis:

Change Order	Contract Increase	Funds Used
13 – Exchange of radios	$ -0-	
14 – CATP	$ -0-	
15 – Fence at new PSC	$ 32, 936.00	Ancillary
16 – Modify contract term & payment milestones	$ -0-	
Totals	**$ 32,936.00**	

The total amount of the Radio Capital Project 50590 remains the same since the ancillary funds have already been allocated as a part of the project.

Total amount of the Motorola Radio Contract CFPW05000024 is now Forty Four Million Six Hundred Seventy One Thousand Six Hundred Forty Two ($44,671,642) Dollars. This amount includes One Million ($1,000,000) Dollars that was paid with funds from DPW Capital Project 90230P as documented on CLPD090000001 Line 3 for partial payment of the radio tower constructed at the new Public Safety Center. Thus, the current amount of the PD Radio Capital Project 50590 allocated to the Motorola Radio Contract 050000024 is Forty Three Million Six Hundred Seventy One Thousand Six Hundred Forty Two ($43,671,642) Dollars.

Change in Contract from Prior Procurement: See above

Recommendation: Approve as submitted.

Contract ID#: _____

Department: Police Department

Advisement Information

BUDGET CODES	
Fund:	
Control:	
Resp:	
Object:	
Transaction:	

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	XXXXXX
County	$
Federal	$
State	$
Capital	$
Other	$
TOTAL	$

LINE	INDEX/OBJECT CODE	AMOUNT
1	50590/PWCAPCAP/00003	$ 32,936.00
2		$
3		
4		$
5		$
6		$
	TOTAL	$32,936.00

RENEWAL	
% Increase	
% Decrease	

Document Prepared By: PCOS Jane A. Gonzalez **Date:** 9/15/2010

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date 12/6/10
Date 2/10/11	Date 2/7/11	(For Office Use Only) E #:

E-183-10

RULES RESOLUTION NO 241 2010

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AMENDMENT TO A PERSONAL SERVICE AGREEMENT BETWEEN THE COUNTY OF NASSAU ACTING ON BEHALF OF THE POLICE DEPARTMENT AND MOTOROLA INC.

Passed by the Rules Committee
Nassau County Legislature
By Voice Vote on 12/13/10
VOTING:
ayes 7 nayes 0 abstained 0 recused 0
Legislators present: 7

WHEREAS, the County has negotiated an amendment to a personal service agreement with Motorola, Inc. in relation to the implementation of a radio system, a copy of which is on file with the Clerk of the Legislature; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said amendment with Motorola, Inc.

RULES RESOLUTION NO. – 2010

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AMENDMENT TO A PERSONAL SERVICE AGREEMENT BETWEEN THE COUNTY OF NASSAU ACTING ON BEHALF OF THE POLICE DEPARTMENT AND MOTOROLA INC.

WHEREAS, the County has negotiated an amendment to a personal service agreement with Motorola, Inc. in relation to the implementation of a radio system, a copy of which is on file with the Clerk of the Legislature; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said amendment with Motorola, Inc.

George Maragos
Comptroller

OFFICE OF THE COMPTROLLER
240 Old Country Road
Mineola, New York 11501

COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

Attach this form along with all personal, professional or human services contracts, contract renewals, extensions and amendments.

CONTRACTOR NAME: Motorola, Inc.

CONTRACTOR ADDRESS: 5 Paragon Drive, Suite 200, Montvale, NJ 07645

FEDERAL TAX ID #: 361115800-01

Instructions: **Please check the appropriate box ("☑") after one of the following roman numerals, and provide all the requested information.**

I. ☐ The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids. The contract was awarded after a request for sealed bids was published in_____ [newspaper] on _____ [date]. The sealed bids were publicly opened on _____ [date]. _____ [#] of sealed bids were received and opened.

II. ☐ The contractor was selected pursuant to a Request for Proposals.
The Contract was entered into after a written request for proposals was issued on _____ [date]. Potential proposers were made aware of the availability of the RFP by_____ [newspaper advertisement, posting on website, mailing, etc.]. _____ [#] of potential proposers requested copies of the RFP. Proposals were due on _____ [date]. _____[#] proposals were received and evaluated. The evaluation committee consisted of:_____

_____

_____ [list members]. The proposals were scored and ranked. As a result of the scoring and ranking (attached), the highest-ranking proposer was selected.

III. X This is a renewal, extension or amendment of an existing contract.

The contract was originally executed by Nassau County on June 30, 2005. This is a renewal or extension pursuant to the contract, or an amendment within the scope of the contract or RFP (copies of the relevant pages are attached). The original contract was entered into after a written request for proposal was issued on July 6, 2004. Potential proposers were made aware of the availability of the RFP by posting on the county website. Ten (10) potential proposers requested copies of the RFP, two (2) vendors responded. Proposals were due on September 15, 2004. Two (2) proposals were received and evaluated.

The evaluation committee consisted of:

Technical Evaluation Team: Deputy Inspector Edmund J. Horace NCPD Chairperson, Chief Peter Meade Fire Com, Sergeant Thomas Golder NCPD, Sergeant Michael Doyle Garden City PD, Detective Kenneth Strigaro NCPD, Police Officer Charles Seich NCPD, Mr. William Ango DPW.

Cost Evaluation Team: Deputy Chief George Gudmundsen NCPD Chairperson, Sergeant James Bartscherer NCPD, Mr. Frank Ryan Dept of Purchase, Mr. Paul Borderick OMB.

Contract Selection Committee: Chief Stephen McDonald NCPD Chairperson, Ms Helena Williams Deputy County Executive, Mr. Timothy Driscoll Deputy County Executive, Mr. Peter Gerbasi DPW, Deputy Chief Robert McGuigan NCPD, Deputy Inspector Edmund Horace NCPD, Police Officer Charles Seich NCPD.

The proposals were scored and ranked by the Contract Selection Committee. As a result of the scoring and ranking, the highest-ranking proposer was selected.

IV. ☐ Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.

☐ **A.** The contract has been awarded to the proposer offering the lowest cost proposal; **OR:**

☐ **B.** The attached memorandum contains a detailed explanation as to the reason(s)why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

V. ☐ Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.

☐ **A.** There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.

☐ **B.** The memorandum explains that the contractor's selection was dictated by the terms of a

federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).

☐ **C.** Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no._____, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.

☐ **D.** Pursuant to General Municipal Law Section 119-o, the department is purchasing the services required through an inter-municipal agreement.

VI. ☐ This is a human services contract with a not-for-profit agency for which a competitive process has not been initiated. Attached is a memorandum that explains the reasons for entering into this contract without conducting a competitive process, and details when the department intends to initiate a competitive process for the future award of these services. For any such contract, where the vendor has previously provided services to the county, attach a copy of the most recent evaluation of the vendor's performance. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to contract with the county.

In certain limited circumstances, conducting a competitive process and/or completing performance evaluations may not be possible because of the nature of the human services program, or because of a compelling need to continue services through the same provider. In those circumstances, attach an explanation of why a competitive process and/or performance evaluation is inapplicable.

VII. ☐ This is a public works contract for the provision of architectural, engineering or surveying services. The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No.928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.

<u>In addition</u>, if this is a contract with an individual or with an entity that has only one or two employees:

☐ a review of the criteria set forth by the Internal Revenue Service, *Revenue Ruling No.* 87-41, 1987-1 C.B. 296, attached as Appendix A to the Comptroller's Memorandum, dated February 13, 2004, concerning independent contractors and employees indicates that the contractor would not be considered an employee for federal tax purposes.

Department Head Signature

11-18-10

Date

<u>NOTE:</u> Any information requested above, or in the exhibit below, may be included in the county's "staff summary" form in lieu of a separate memorandum.

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY): 06/09/2010

PRODUCER — Serial # 0363

AON RISK SERVICES CENTRAL, INC.
CHICAGO IL OFFICE
1000 NORTH MILWAUKEE AVENUE
GLENVIEW, ILLINOIS 60025
ATTN: INSURANCE VERIFICATION CENTER
PH: 1-800-4-VERIFY/ FAX: 1-847-953-5341

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

MOTOROLA INC. AND ITS SUBSIDIARIES
1303 EAST ALGONQUIN ROAD
SCHAUMBURG IL 60196 USA

COMPANIES AFFORDING COVERAGE

COMPANY A: LIBERTY MUTUAL FIRE INSURANCE COMPANY
COMPANY B: LIBERTY INSURANCE CORPORATION
COMPANY C:
COMPANY D:

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY	TB2-641-005169-070	7/1/2010	7/1/2011	GENERAL AGGREGATE	$ 1,000,000
	[X] COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	$ INCLUDED
	[ ] CLAIMS MADE [X] OCCUR				PERSONAL & ADV INJURY	$ 1,000,000
	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	$ 1,000,000
					FIRE DAMAGE (Any one fire)	$ 250,000
					MED EXP (Any one person)	$ 10,000
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT	$
	ANY AUTO					
	ALL OWNED AUTOS				BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	HIRED AUTOS				BODILY INJURY (Per accident)	$
	NON-OWNED AUTOS					
					PROPERTY DAMAGE	$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY:	
					EACH ACCIDENT	$
					AGGREGATE	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	UMBRELLA FORM				AGGREGATE	$
	OTHER THAN UMBRELLA FORM					$
B	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	WA7-64D-005169-080 (ALL OTHER STATES)	7/1/2010	7/1/2011	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
B	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: [X] INCL [ ] EXCL	WC7-641-005169-090 (OR & WI)			EL EACH ACCIDENT	$ 1,000,000
					EL DISEASE - POLICY LIMIT	$ 1,000,000
					EL DISEASE - EA EMPLOYEE	$ 1,000,000
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

RE: AMENDMENT TO AGREEMENT BETWEEN THE COUNTY OF NASSAU AND MOTOROLA, INC. - E911 DIGITAL RECORDING SYSTEM. NASSAU COUNTY IS LISTED AS AN ADDITIONAL INSURED WITH RESPECT TO THE GENERAL LIABILITY POLICY.

CERTIFICATE HOLDER

NASSAU COUNTY
ATTN: KIM KRAMER
POLICE DEPARTMENT
1490 FRANKLIN AVE.
MINEOLA NY 11501 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central, Inc.

COUNTY OF NASSAU

INTER-DEPARTMENTAL MEMO

DATE: November 30, 2010

TO: Commissioner Shila Shah-Gavnoudias: Nassau County Department of Public Works

FROM: Inspector Edmund J. Horace: Nassau County Police Department

SUBJECT: **MOTOROLA RADIO PROJECT - CHANGE ORDER REQUESTS**

As per Motorola Radio Contract CFPW05000024, Section 30b, the Radio Contract Change Order Review Board must approve all change orders. The Radio Contract Change Order Review Board consists of the Commissioner of Police of Nassau County, or his designee, and the Commissioner of Public Works of Nassau County, or her designee

Attached are two (2) change orders, numbers fourteen (14) and sixteen (16) regarding Motorola Radio Contract Number CFPW05000024 initiated on June 30, 2005.

Change Order Fourteen (14) revises the Coverage Acceptance Test Plan (CATP) and also authorizes Motorola to revise contract milestones extending the Final Acceptance Date to on or before December 31, 2011. The Coverage Acceptance Test Plan (CATP) is revised to allow coverage testing to be conducted in two phases, South Zone and North Zone. This allows independent coverage testing of the South Zone system, which is currently completed, prior to the completion of the North Zone system. Current technology will be used to facilitate automated collection and archiving of test data. Revisions to contract milestones are necessary due to delays caused by additional demands from site landlords, site acquisitions and building permits.

There is no cost increase involved in the implementation of Change Order Fourteen (14).

Change Order Sixteen (16) allows the legacy radio system to be operated from the new Public Safety Center and includes revised contract milestones. The change order is required to modify and correct contract language to meet current County requirements and allow use of the 500 MHz system without the receive-only site in the Brookville area.

There is no cost increase involved in the implementation of Change Order Sixteen (16).

As project manager of the 500 MHz Radio Project, I recommend these change orders be implemented and request your approval. Please sign the change order requests where indicated and return to me. If you have any questions regarding this request I can be contacted at 573-7932 or via e-mail ehorace@pdcn.org. Thank you for your assistance.

Edmund J. Horace
Inspector

DOCUMENT: N:\Admin\New System Radio Project\Motorola Contract\Change Orders\Motorola-Change Order 14 and 15\Motorola-Change Orders 14 & 16 to DPW.doc

COUNTY OF NASSAU

INTER-DEPARTMENTAL MEMO

DATE: November 30, 2010

TO: Inspector Edmund J. Horace: Nassau County Police Department

FROM: Commissioner Shila Shah-Gavnoudias: Nassau County Department of Public Works

SUBJECT: **MOTOROLA RADIO PROJECT - CHANGE ORDER REQUESTS**

As per Motorola Radio Contract CFPW05000024, Section 30b, the Radio Contract Change Order Review Board must approve all change orders. The Radio Contract Change Order Review Board consists of the Commissioner of Police of Nassau County or his designee and the Commissioner of Public Works of Nassau County or his designee.

I hereby give my approval of Motorola Change Orders Number Fourteen (14) and Sixteen (16).

Shila Shah-Gavnoudias
Commissioner

DOCUMENT: N:\Admin\New System Radio Project\Motorola Contract\Change Orders\Motorola-Change Order 14 and 15\Motorola-Change Orders 14,16-DPW to Horace.doc

Nassau County Public Safety Communications System
Motorola Change Order # 014

02

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 014
Change Order Name: Exhibit G Revisions
Date of Change Order: 11/23/10
Pricing Valid until: N/A

Change Requested:
This Change Order revises the attached contract Exhibit G Coverage Acceptance Test Plan (CATP).

Reason for Change: Exhibit G is revised to allow coverage testing to be conducted in two phases, South Zone and North Zone. This allows independent coverage testing of the South Zone system, which is currently completed, prior to the completion of the North Zone system. Current technology will be used to facilitate automated collection and archiving of test data.

Cost Impact: **Total: $ 0.00**

Current Contract Value:	**$ 44,638,708.00**
Net Change in Contract Value:	**$ 0.00**
Revised Contract Value:	**$ 44,638,708.00**

Schedule Impact:
None

Operational Impact:
Early CATP of the South Zone system allows for a significant portion of the coverage testing to be completed while the North Zone is still under construction.

Payment Terms:
No change.

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)

NCPD Authorized Representative

Motorola Project Manager

NCPW Authorized Representative

Motorola Authorized Representative

Date: 12-3-10

Date: 11-23-2010

Exhibit G—Coverage Acceptance Test Plan

Objective:

The attached Coverage Acceptance Test Plan (CATP) shall be used to verify the adequacy of the performance of the radio system being implemented in this Contract.

References:

The following documents provide additional requirements and background information concerning this topic:

Nassau County Police Department Land Mobile Radio System Modernization Project Request for Proposals, PD0625-0441, Dated July 7, 2004

Motorola responses to TET questions

Background:

The County has provided the requirements for the CATP in Sections 12 and 20 of the RFP.

The attached document takes precedence over any previous documentation.

Requirement:

See attached document.

Nassau County Public Safety Communications System Coverage Acceptance Test Plan

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Exhibit G—Coverage Acceptance Test Plan

This document is the final Coverage Acceptance Test Plan (CATP) for the Nassau County Public Safety Communications System (NCPSCS) and supersedes and replaces Sections 12 and 20, and Annex F of the Nassau County Request for Proposals (RFP) PD0625-0441.

1 PURPOSE

The CATP shall measure the voice coverage performance of the NCPSCS, specifically, the radio frequency (RF) coverage provided by the digital simulcast system and the various interoperability systems that shall be installed under this project. The Contractor and the County shall conduct the Coverage Acceptance Test (CAT) in accordance with procedures identified in this CATP.

The CAT shall be composed of the tests listed in Appendix A. The Contractor and the County agree that the results of the tests identified in Appendix A shall be compiled, evaluated, and scored separately.

2 COVERAGE PERFORMANCE GUARANTEE

The Contractor shall guarantee radio frequency (RF) coverage performance in accordance with the requirements stated in Section 4.2 of this document.

If the RF coverage performance of the digital simulcast trunked radio system supplied by the Contractor fails to meet the coverage requirements stated in this document, the Contractor shall modify, or otherwise cause, the system(s) to meet the minimum requirements of this document at no cost to the County. The Contractor shall notify the County of all proposed modifications to the system design to resolve coverage failure issues. The County shall review and approve all modifications to the system and site level equipment and engineering services prior to the implementation of the new design by the Contractor. The design services, equipment, installation, optimization work and administrative services required to complete this task shall be incorporated into the approved system design at no cost to the County.

If the System does not fulfill the requirements of the Coverage Acceptance Tests, the Contractor shall correct the defects at no additional cost to the County as soon as practicable. These corrective actions shall include, but not be limited to, the following, design and implementation actions: (i) developing a previously unidentified RF site, (ii) converting an existing receive only site to a transmit/receive site, (iii) modification of a sites antenna system, (iv) installation of in-building radio system, and (v) modification or addition to any piece of hardware or software that would be required to correct the coverage failure.

If corrections to the system are required, any coverage tests shall be repeated, as necessary, for any portion of the system that was impacted by the failure as determined by The County

3 TYPES OF TESTS

The CATP consists of the following six (6) types of tests:

- *Bit Error Rate (BER)*—The BER is an automated test based on the BER of the talk-out signal. The BER test provides an accurate, repeatable, objective, and cost-effective

method to verify voice coverage performance for the digital portion of the NCPSCS simulcast systems.

- *Receiver Signal Strength Indication (RSSI)*—The RSSI test is an automated test based on the signal strength of the talk-out signal. Like the BER test, the RSSI test provides an accurate, repeatable, objective, and cost-effective method to verify analog voice coverage performance for the NCPSCS simulcast systems. Consistent with Appendix A, all RSSI testing is for informational purposes only. The RSSI data may be used to optimize the digital and analog simulcast systems
- *Manual-Delivered Audio Quality (M-DAQ): Random In-Building Testing*—The M-DAQ test provides an evaluation of voice coverage performance under typical operating conditions within the specified defined service area (DSA). The in-building portion of the DAQ test provides an evaluation of the voice coverage and clarity performance inside randomly selected buildings within the coverage area. A DAQ of 3.0 is the minimum acceptable level for passing the M-DAQ based tests.
- *Automated-Delivered Audio Quality (A-DAQ): Portable Outdoor Testing*— The A-DAQ provides an automated test which compares the audio of the transmit and receive portion of a standard spoken phrase. This test procedure has been proven to be a repeatable, objective and cost-effective method to verify the DAQ quality of an audio signal. The test shall evaluate the voice coverage performance under typical operating conditions within the specified defined service area (DSA) using a portable radio. This automated test may be conducted concurrently with other automated test, such as the BER test. A DAQ of 3.0 is the minimum acceptable level for passing the A-DAQ based tests.
- *Manual-Delivered Audio Quality (M-DAQ): Critical Building— An additional DAQ test shall be* accomplished for the pre-selected group of critical buildings identified in Appendix C. The test provides an evaluation of in-building voice coverage and clarity performance under typical operating conditions within each of these buildings. This test is more thorough than the random in-building test in that it requires a more comprehensive set of test points. A DAQ of 3.0 is the minimum acceptable level for passing the M-DAQ based tests.
- *Interoperability Testing*—The interoperability tests shall document the as-built coverage of the interoperability communications system identified in Appendix A. The purpose of the test shall be to delineate the coverage limits of each of the interoperability systems. Consistent with Appendix A, all Interoperability Testing is for informational purposes only. The Interoperability test shall collect RSSI data to measure the systems performance.

All of these tests are based on the standards established in TSB-88-B.

4 TEST METRICS

4.1 Defined Service Area (DSA)

The DSA defines the area by which a specific test shall be bounded. Four (4) DSAs have been identified for the CATP. Appendix A specifies the test for each DSA.

4.1.1 County ($DSA_{(C)}$)

This DSA is the geographic land mass within the jurisdictional boundary of Nassau County.

4.1.2 Plus 3 ($DSA_{(+3)}$)

The $DSA_{(+3)}$ of the NCPSCS is defined to be the geographic land mass beginning at the Nassau County jurisdictional boundary and extending three (3) miles, excluding water, beyond this boundary.

4.1.3 County Jurisdiction over Water ($DSA_{(WATER)}$)

The $DSA_{(Water)}$ including the area from the Nassau County land mass to the County's jurisdictional boundary in the waterways.

4.1.4 NYMAC – Suffolk County ($DSA_{(S)}$)

The DSA_S defines the area where the New York Metropolitan Area Committee (NYMAC) interoperability system installed in Suffolk County shall operate.

4.2 Coverage Requirements

Appendix A details each of the individual tests that shall be completed for a successful CATP.

The CAT shall verify that the service area reliability is 97 percent or greater within the $DSA_{(c)}$, $DSA_{(Water)}$ and $DSA_{(+3)}$ for BER portable outdoor coverage testing and shall not have any adjacent failed tiles as described in Section 4.6.3.

The CAT shall verify that the service area reliability is 95 percent or greater within the DSA_C for BER simulated portable in-building coverage testing and shall not have any adjacent failed tiles as described in Section 4.6.3.

The CAT shall verify that the service reliability is 97 percent or greater within the $DSA_{(c)}$ $DSA_{(Water)}$, and $DSA_{(+3)}$ for DAQ portable outdoor coverage and shall not have any adjacent failed tiles as described in Section 4.6.3.

The CAT shall verify that the service reliability is 95% or greater within the $DSA_{(C)}$ for DAQ portable random in-building coverage

The CAT requires all tests to be conducted in a manner to yield a statistical confidence level of 99 percent utilizing a Z-factor of 2.33 as per section 8.4 of TSB-88B.

The CAT shall verify that all critical buildings, identified in Appendix C, have a service area reliability of 95 percent, or greater, in-building DAQ coverage No specific building loss value shall be considered for these buildings.

The Contractor shall document the as-built coverage of the analog overlay system and NYMAC stations by accomplishing RSSI testing within DSA_S and DSA_C.

The Contractor guarantees that the installed system shall meet the requirements identified within this exhibit. The Contractor shall provide, at no cost to the County, approved corrective actions to resolve any issues that caused the CATP failure.

4.3 Test Preparation

The CATP testing identified in Appendix A may be tested independently or simultaneously.

4.3.1 Test Start

Prior to commencement of coverage testing, the Contractor shall certify to the County, in writing, that the system has passed the System Acceptance Test Plan (SATP) (Section 20 of the RFP) and the Operational Test (Section 20.1.2 of the RFP). The contractor may submit for approval by the County a partial SATP that will verify the proper operation of the equipment and sub-systems comprising the NCPSCS required to complete the CATP. The SATP shall prove that the installed equipment necessary to complete the CAT is 100 percent operational, and that all components have been aligned, adjusted, and are ready for the CAT.

The Operational Test shall provide a burn-in period of thirty (30) days for the installed equipment. The County reserves the right to waive this thirty (30) day burn-in period. This test shall ensure that the installed system is performing within stable and nominal parameters. If any major failure occurs during the 30-day test period, that test shall be terminated, corrective action will be taken and approved, and the entire thirty (30) calendar day test period may be reinitiated at the County's discretion. An emergency or major failure is defined as those failures that significantly degrade the performance of the NCPSCS or compromise the public safety mission of the Department (e.g., failure of a site, loss of more than 25 percent of capacity at any site, failure of simulcast control equipment, failure of dispatch and multisite control equipment), or the availability of the RF channels in both zones is less than 99.99% over a 24-hour period (0000 to 2359 hours).

The Contractor shall submit the written test results of the full or partial SATP to the County for approval and authorization to start the CAT. Audits shall be required on those pieces of equipment, at a minimum, that require the following types of tests:

- The transmit frequency using a frequency counter or service monitor
- The power into the antenna system using a power meter
- The antenna installation using a frequency-domain reflectometer (FDR).

4.3.2 Test Maps The Contractor, with the County's approval, will provide grid maps for testing defined in Appendix A.

4.3.3 Test Grid

4.3.3.1 Types of Test Areas

4.3.3.1.1 Grid

The test grid shall extend over the areas described in Section 4.1. This grid shall be composed of tiles and sub-tiles. Contractor will provide ESRI Shape Files, or compatible, showing the final test grid for the County's review and approval.

4.3.3.1.2 Tile

A tile shall bind an area of approximately 0.5 by 0.5 mile. A tile that contains any portion of the DSA_{+3} shall be counted as a testable tile.

4.3.3.1.3 Sub-Tile for $DSA_{(c)}$

Each tile shall be divided into sub-tiles of approximately 0.167 by 0.167 miles (880 by 880 feet) for the BER drive test phase of the CATP.

The sub-tile shall be linked to a tile's boundary established in the test grid.

4.3.3.1.4 Tile for $DSA_{(s)}$

Each tile shall be approximately 1.0 by 1.0 miles for the drive test phase of the CATP. The tile size may be smaller depending on the test equipment and methodology that will be used.

4.3.4 Test Drive

4.3.4.1 Overview

A test drive plan shall be developed by the Contractor and approved by the County to gather a collection of test points that shall be evenly distributed, as possible, throughout a DSA and provide a statistically accurate determination of radio coverage performance. The plan may be modified on a daily basis to incorporate driving issues (i.e. road construction) that may be encountered.

4.3.4.2 Requirements

The Contractor shall run multiple tests simultaneously on each test run to minimize the number of test runs. The same drive plan shall be used for all tests identified in Appendix A, to the maximum extent possible.

The locations of each critical building shall be identified on the test grid.

A County representative may exempt certain tiles to be tested for the random in-building testing. The test team may select the random building to be tested within each tile.

The drive plan maps shall be supplied to the drive test teams. The test grid shall overlay a street map to provide reference points for the drive team.

The drive team may be composed of at least one representative from the County and at least one representative from the Contractor.

The drive plan shall not collect data from a tile/sub-tile more than once. . In addition, the route should pass through the central portion of the grid to the maximum extent possible. So that when a tile/sub-tile is under test, data collection must begin and end within the same grid. A 25ft. to 50ft. grid buffer is suggested to ensure a test begins and ends within a grid, eliminating any GPS inaccuracy.

A maximum of nine sub-tiles and a minimum of six sub-tiles shall be collected. The County has the discretion to eliminate up to 5% of the total number of tiles and classify them as inaccessible when an insufficient quantity of the 1/6 sub-tiles test points are sampled. As an example, if only one sub-tile was accessible within the tile the County may allow that sub-tile to be the sample for the tile, or consider the tile as inaccessible and eliminate the tile. If no sub-tiles can be collected within the tile, then the tile is deemed inaccessible. The 5% elimination cap is used to ensure that statistical reliability is maintained and that enough samples exist for statistical validity.

If the test exceeds the 5% threshold, then tiles previously excluded from the test may be included, at the County's discretion, to maintain appropriate statistical reliability Tiles with less than six (6) accessible sub-tiles will be included into the PASS/FAIL calculations, starting with five (5) sub-tiles and working down until the 5% threshold has no longer been exceeded. The addition of these tiles shall be at the County's discretion with the stipulation that all tiles within a particular test category are included in the test. For example, if the County elects to include tiles that had 5 sub-tiles tested, then all sub-tiles with 5 sub-tiles tested must be included in the test.

The drive plan shall consist of County streets and byways (excluding tunnels and underground parking) and navigable waters.

Vehicle velocity shall not exceed 55 miles per hour, or the posted speed limit, whichever is lower, to ensure an adequate number of test points over the measurement window within the tile.

4.3.4.3 Accessibility of Tiles

Some tiles or sub-tiles may be inaccessible to the drive plan. The County and the Contractor shall identify the inaccessible tiles and sub-tiles on the drive plan map. The County shall review the inaccessible tiles/sub-tiles to determine whether these will be excluded from the test. Any tile or sub-tile may be excluded from a test at the County's discretion.

Some inaccessible tiles/sub-tiles may be accessible by means other than a car (e.g., by foot or boat). The County reserves the right to require that the Contractor test these tiles by transportation means other than car.

4.3.4.4 Excluded Tiles and Sub-Tiles

Data collected while the test vehicle is in an excluded tile/sub-tile shall not be included in test calculations.

4.3.4.5 Presentation

The developed drive plan shall be plotted using a resolution that will allow the County to easily review the drive plan.

The Contractor will submit the drive plan map to the County for approval 5 days prior to the commencement of the CATP test as both an ESRI Shape File or pdf files.

4.4 Test Equipment

4.4.1 Calibration Requirements

All test equipment shall be calibrated prior to the start of the optimization of the system. All calibration documents (e.g., test certificate) shall be provided to the County prior to the commencement of testing. The calibration of the test equipment shall be accomplished by an independent calibration test facility approved by the County. The calibration facility shall install no-tamper stickers on each piece of test equipment that was tested and calibrated.

4.4.2 Types of Automated Test Equipment

The Contractor shall provide all mobile test equipment for the BER, A-DAQ and RSSI measurements. Automated test measurements, using Motorola's Voyager Test Set, AECOM's RaCe or equivalent, shall be employed to perform the required test throughout the specified DSAs. The Contractor's test equipment should have, at a minimum, the following characteristics:

- A Global Positioning System (GPS) receiver to provide accurate position information for each measured test point
- Contractor provided receivers within the nominal limits of the proposed subscriber unit's offerings to collect RSSI, A-DAQ and BER data.
- Industry standard BER test equipment that can be interfaced with the proposed subscriber equipment.
- Contractor shall provide multiple receivers to allow testing of all NCPSCS systems (BER and RSSI) at a sample rate of 300 RSSI sub-samples and 10-15 BER samples per 40λ.

4.4.3 DAQ Test Equipment

The test radios used for manual DAQ testing shall be randomly selected from the radios provided to the County as part of this contract. All radios will be tested at the Contractor's expense and written performance reports on each test radio will be provided to the County.

The radios delivered from the factory shall be properly aligned and ready for operation, except for the radio-specific information (i.e., channels, talk groups, ID number). The Contractor shall measure, align and calibrate each test radio once removed from the equipment stock. The Contractor shall provide verification to the County that all radios have been aligned prior to the beginning of testing.

All remediation efforts to correct any radio failures shall be at the Contractor's cost.

Once the radios have been confirmed to be operating within the Contractor's nominal parameters, each radio shall be programmed for radio-specific information.
The Contractor shall program the radios for the appropriate channels and talk groups for the test. Tier 2, and 3 radios with shoulder microphones (without shoulder microphone antennas) and swivel cases shall be used for the random building DAQ test. Each radio shall be provided with a spare fully charged battery.

XTS 2500 portable radios shall be used for the automated and M-DAQ tests. Each test radio may be equipped with an AC charger with a DC inverter. An external magnetic mount antenna shall be utilized. The Contractor shall use appropriate attenuators to normalize the magnetic mount antenna for a portable antenna.

The testers for the manual DAQ testing shall wear the radios on their belt at hip level. Tests shall be performed using a shoulder microphone.

The test radios shall be randomly distributed each day to the M-DAQ test teams during the testing period. In addition, the test teams shall be provided with a second radio to use as backup and for administrative communications.

All testing shall be accomplished in the encrypted mode.
The automated testing teams may use the same portables in the mobile test vans.

4.4.4 Test Vehicle

The Contractor shall provide transportation for all of the drive plan tests. The County shall provide transportation for the water testing and other non-accessible areas which the County determines to be tested. All data shall be collected with the test equipment mounted inside the test vehicle. The data shall be backed-up to an external memory device at least twice a day during the test drive.

The test antenna for the mobile testing shall be the same antenna, and use the same antenna cable, that is being proposed by the Contractor for vehicle installations. The antenna location on the test vehicle shall approximate the antenna location on a standard marked patrol vehicle. The characteristics of the test antenna systems for the mobile and portable test are listed in Appendix D.

The Contractor shall provide any special test equipment accessories (e.g., power filters or antenna) or requirements for use of the test equipment within the test vehicle.

4.5 Data Collection

4.5.1 Overview

Data records collected during testing shall undergo post-processing in accordance with Appendix A. For each test, the minimum acceptable signal level at the antenna terminals is

adjusted to the measurement reference point using the loss factors shown in Appendix A. A comparison shall be made between the mean measurement of the test point within a tile or sub-tile and this adjusted minimum level, denoted the *adjusted signal threshold.* Points that meet or exceed the adjusted signal threshold value shall be recorded as a pass, and those below the threshold shall be recorded as a fail.

To simplify the automated tests, only talk-out measurements shall be recorded. The Contractor may record both talk-out and talk-back if the test equipment has the capability.

4.5.2 BER Data

The BER shall be calculated by transmitting from each radio system base station site a test signal in the ITU-T 0.153. The test equipment shall measure this signal at equidistant intervals throughout a specified interval of 40λ, or approximately 27 meters (~88 feet). This sampling pattern shall be used throughout the entire drive route. The BER test point within a sub-tile shall use the mean value of the collected data within the sub-tile.

4.5.3 RSSI Data

RSSI is the amount of RF power being transmitted by the system that is received by a radio. An unmodulated carrier is transmitted on one selected channel. The test equipment shall measure this signal at equidistant intervals throughout a specified interval of 40λ, or approximately 27 meters (~88 feet). This sampling pattern shall be used throughout the entire drive plan.

The RSSI test point within a tile shall use the median value of the collected data within the tile

4.5.4 DAQ Random In-Building Data

The tests shall be based on the DAQ of a test message. Each voice test shall be scored with a DAQ number of 1 to 5. A passing DAQ is considered 3.0. The DAQ scoring shall be based on the following Bell System DAQ definitions:

- DAQ 5: Perfectly readable, negligible noise
- DAQ 4: Perfectly readable but with occasional noise
- DAQ 3: Readable with few syllables missing, requires occasional repetition
- DAQ 2: Readable with difficulty requires frequent repetition
- DAQ 1: Unusable, presence of speech barely discernible.

4.5.4.1 Automated DAQ Tests

The Contractor shall test the outdoor DAQ performance with an automated test methodology. The post-analysis results shall be presented as DAQ values. The automated DAQ test may occur concurrently, to the maximum extent possible, with any other automated test (i.e. RSSI and BER).

4.5.4.2 Random In-Building DAQ Tests

This M-DAQ test involves separate portable radio talk-out and talk-back tests within the specified DSA of the test. The M-DAQ test shall include one test point within each pre-selected tile to verify in-building coverage in the tile.

The test team shall select the test point to be located in a public general access area of the building.

When the test is conducted, it is acceptable to have a DAQ 3.0 performance from either simulcast cell for the test grid to be considered as a pass. The initial test will be conducted with a talkgroup restricted to operate on only one of the two simulcast cells. If DAQ 3.0 performance is observed then the grid is considered a pass. If DAQ 3.0 performance is not observed, the test team shall move 3 feet in any direction and perform another DAQ test. If this test equals a DAQ of 3 or higher, the test will be considered a PASS. If the DAQ is less than 3, the test will be considered a FAIL.

The Contractor shall provide test data, analysis and grid maps for each Zone (North and South) and total System (three (3) separate sets of data).

The County and the Contractor shall identify a demarcation line separating the two zones (i.e. Old Country Road). This line shall separate the two zones and shall illustrate what zone a user would be registered in at a particular location.

The Contractor will divide the DSA into manageable test sectors for the test teams. These test sectors will be used to assign the automated and manual test drive plans to the test teams.

4.5.4.3 Critical Building DAQ Tests

This M-DAQ testing shall be accomplished in each of the buildings identified in Appendix C. Prior to testing, the County and the Contractor shall identify the location of each test call within each building (i.e. which floors to test, general floor test locations, etc.). A minimum of five (5) test points per floor shall be identified. Were applicable, three (3) floors shall be tested—ground floor, top floor, and a middle floor.

The M-DAQ test points shall be located in public access areas of the critical building. Test locations may include selected areas where the NCPD have historically been involved with numerous incidents.
The County, at its discretion, may pass the CAT without completing the testing of the critical buildings. The Contractor shall be responsible to complete the critical building tests and provide resolutions to any poor communications issues.

4.5.5 Automated BER Data Test Points

4.5.5.1 Test Point Definition

A test point is the mean value of measured samples recorded over a 40λ interval. The County desires a 99 percent confidence level that the recorded test point level is valid. In accordance with TSB-88B Table 24, the automated test shall record at least 300 samples over the 40λ

interval. This sampling rate provides 0.54 dB True Value Accuracy at a 99 percent Confidence level.

4.5.5.2 Number of Test Points per Test Sample Area

The procedure to determine the overall BER for a tile is to take the mean (average) BER of the accessible sub-tile contained within the tile. A set of BER subsamples is collected over a distance of 40 wavelengths in each accessible sub-tile. The set of subsamples shall be defined as a test point. The tile will use the mean value of all the collected sub-tile BER test points to form a new resultant BER for the tile.

4.5.6 Post-Processed Data Presentation

Data collected in an excluded tile/sub-tile shall not be plotted or included in the test analysis or results.

The data records shall be plotted by the Contractor to clearly show the areas tested, any excluded areas, and all of the recorded test point values. Sub-tiles shall be plotted on a different overlay than the tile values.

Different colors shall be used to represent different ranges of measured BER and RSSI test point values.

The overlay shall clearly depict passed tiles and sub-tiles. The threshold value shall be printed within each tile and sub-tile.

The overlay shall present all failed tiles in the color red. The failed sub-tiles shall be presented in the color orange, or other color or pattern that differentiates a sub-tile failure from a tile failure.

Tile and sub-tiles that are deemed by the County to be inaccessible and not tested shall be presented in the color black.

Horizontal and vertical axes shall be numbered to facilitate the location of test tiles within the grid.

A table shall be provided by the Contractor, in addition to the drive plan maps, that identifies the testing results of each tile/sub-tile. The Contractor shall provide these processed test results and raw data to the County in a *.csv file. The table shall show, at a minimum, the following information for all tested tiles/sub-tiles—

- A grid identification number
- GPS location information
- The mean (average) BER test point value for that tile/sub-tile
- The median RSSI test point values for the that tile
- The pass/fail status of that tile/sub-tile
- The total number of passed/failed tiles/sub-tiles and the percentage of failed to pass tiles/sub-tiles (no rounding of numbers).

The Contractor may propose alternate approaches that use graphical information system software to accomplish this post-processed data presentation. However, the Contractor is

required to use the method prescribed within this CATP unless the County agrees to changes in writing.

4.5.7 DAQ Test Points

4.5.7.1 Test Point Definition

A DAQ test point shall be defined as the team's PASS/FAIL determination for each test call accomplished during a DAQ test.

4.5.7.2 Automated DAQ Outdoor Test Point

The automated DAQ test may be performed concurrently with the BER test. If so, A-DAQ data may be collected at a sub-tile level. The DAQ test point shall be calculated by the mean DAQ value of the sampled sub-tiles collected within the test tile.

4.5.7.3 Manual DAQ In-Building Test Point Failure Resolution

If the test members disagree regarding the PASS/FAIL status of a test call, a comment shall be recorded in the Test Log. During the DAQ post-test analysis, the BER sub-tile data for the test tile shall be reviewed to assist in resolving any DAQ test call disputes. The County reserves the right to have the Contractor provide additional analysis and mitigation actions to correct DAQ test point failures if the overall test fails. The Contractor shall provide all data pertaining to the failed coverage area and assist the County in the analysis as requested.

Random buildings failing the DAQ test shall be evaluated to determine the building losses if the overall test goals are not met. An evaluation of the specific buildings attenuation shall be accomplished by measuring the available RSSI outside of the building's four walls. Then RSSI measurements at multiple points (approximately ten [10]) will be collected within the building. A median value shall be calculated for each set of RSSI values. A building shall be included in the test scoring if the difference between the mean value of the RSSI measured outside of the building and the mean value of the RSSI measured inside the building is less than or equal to the design threshold (i.e., 15 dB).

The random in-building test resolution process will be identified by the Contractor prior to the beginning of testing. This process will identify the, at a minimum, the following:

- The type of equipment to be used
- The number of test points to be collected around the building
- Where to measure the in-building signal strength
- Who will comprise the test team

Additional testing shall be conducted if the failed building is determined to exceed the 15-dB building loss criteria. The test team shall return to the failed tile and select an alternative building. The team shall retest the tile.

The Contractor may retest a failed DAQ test site on a system not tested. For example,if the South system was being tested, the Contractor may come back at a later date and test the failed site on the North system.

The Contractor shall provide all data pertaining to the failed coverage area and assist the County in the analysis as requested.

4.5.8 DAQ Data Post Processing

As part of the post-test analysis, the Contractor shall compare the results of the M-DAQ test with the Contractor's proposed coverage predictions. The test logs collected from the M-DAQ test shall be post-processed for the DSA by the contractor. The raw and processed data shall be provided to the County in a electronic format, such as a spreadsheet. . Test points that meet or exceed the M-DAQ criteria of the test shall be recorded as a PASS, and those below the threshold shall be recorded as a FAIL. The results of the M-DAQ will be illustrated on a tile level grid map in accordance with Section 4.5.6.

The test results shall not contain any significant groupings of failed tiles. Refer to Section 4.6.2 for testing and analysis of adjacent failed tiles.

4.5.9 DAQ Test Log for Random and Critical In-Building Test

The Contractor shall provide the mobile and dispatch test teams with a log for each DAQ test. These logs shall provide, at a minimum, the following information fields:

- Test point number
- Building name, floor, and room number, if applicable
- GPS coordinates of test location, if applicable
- Description of test location for in-building test points (i.e. outside room 1210)
- Time and date of test
- Initials of testers
- Test score
- Comments
- Grid number.

As part of the post-test analysis, the Contractor shall compare the results of the M-DAQ test with the Contractor's proposed coverage predictions. The test logs collected from the M-DAQ test shall be post-processed for each building. Points that meet or exceed the M-DAQ criteria shall be recorded as a PASS, and those below the threshold are recorded as a FAIL. Each test point in the building shall be annotated to indicate the result of the test.

4.6 PASS/FAIL Criteria

The Contractor and the County agree that failure to pass any of the required tests that are identified in Appendix A constitutes a failure of the overall CATP. Furthermore, if the system fails automated testing, all acceptance tests shall cease until the automated test can be successfully retested. Failure of any of the required tests listed in Appendix A shall require the Contractor to identify and correct the cause of the failure and restart the CATP at no cost to the County.

4.6.1 Test Resolution Team

The Test Resolution Team (TRT) shall be responsible to resolve problems that are encountered during the collection of data by the test teams. The TRT shall resolve the following types of issues:

- Resolution of disputes between M-DAQ test team members
- Failed tiles from the A-DAQ will be manually reviewed and scored by the Resolution Team.
- Approval for any deviations of the drive plan
- Determination of the testability of tiles and sub-tiles (i.e., exempting a tile from testing)
- Determination of testing procedures
- Review Drive Plans

The Test Resolution Team may be composed of the County's and Contractor's, Project Director, Project Manager, Lead Project Engineer, and the Project Director's designee(s).

4.6.2 Tile and Sub-Tile

The procedure to determine the overall BER for a tile is defined in section 4.5.5. The tile will use the mean value of all the collected sub-tile BER test points to form a new resultant BER for the tile.

If a tile fails in a cell, the TRT shall investigate the failure at the County's discretion. The TRT may compare the results of the north and south simulcast cell testing to determine whether the tile past in either test. If a tile passes in either test, the tile shall be determined to pass.

4.6.3 Adjacent Failed Tiles

4.6.3.1 Overview

As part of the post-test analysis, the Contractor shall compare the results of the drive test with the Contractor's proposed coverage predictions. The test results shall not contain any significant groupings of failed tiles (i.e., clusters). No failed tile shall be adjacent to more than one other failed tile. The CAT shall fail if the test data depicts a cluster of tile(s) containing more than one (1) adjacent failed tile(s) in either the horizontal, vertical, or diagonal orientation. The raw and processed data shall be provided to the County as a spreadsheet or text file (*.txt) to determine the magnitude of the failure.

4.6.3.2 PASS/FAIL Criteria

The post-analysis of the drive test data shall identify the PASS/FAIL status of all tested tiles. If any failed tile has more than one (1) side adjacent to another failed tile, then a cluster of failed tiles shall be identified.

The County is allowing up to two adjacent tiles to fail. When three or more adjacent tiles are encountered the following method is proposed:

Each sub-tile shall have a test point. The test point shall be the mean of the collected BER subsamples measured within a 40λ distance totally within that sub-tile to form a resultant BER for that particular sub-tile.

The results from the North and South simulcast cells are performed individually and the lowest resultant mean BER for the sub-tile will prevail as the representative BER test value for the sub-tile. If a BER result of 2.6% or less is calculated, then the sub-tile is considered a pass.

This procedure is repeated within each of the failed tiles that represent the adjacent test tile failure. In the event of adjacent tiles failing the BER requirement, the individual BER results for the sub-tiles within the failing tiles will be analyzed to determine if the adjacent tile failure is a localized problem or symptomatic of a larger area of poor coverage. If the majority of sub-tiles within the larger tile fail, then the tile fails. For the tile to pass, the following minimum quantity of sub-tiles must pass (BER 2.6%) in order for the previously failed adjacent tile area to be considered as a pass and no longer be considered in the adjacent tile analysis:

5 of 9 sub-tiles (full compliment)

4 of 8 sub-tiles (partial compliment)

4 of 7 sub-tiles (partial compliment)

3 of 6 sub-tiles (partial compliment)

3 of 5 sub-tiles (partial compliment)

2 of 4 sub-tiles (partial compliment)

2 of 3 sub-tiles (partial compliment)

1 of 2 sub-tiles (partial compliment)

The Contractor will perform this adjacent tile failure analysis for the Portable On-Street BER test and Portable Simulated In-Building BER test scenarios.

For the purposes of in-building adjacent tile testing, one area has been identified that will not be considered. This area is Jones Beach State Park. As listed above, this area is defined by the following coordinates

Jones Beach State park: 40 37 14.26, 73 34 39.39

40 37 14.26, 73 25 3.61

40 34 57.5, 73 34 39.39

40 34 57.5, 73 25 3.61

For DAQ On-Street testing, if more than two (2) adjacent tiles fail, the tiles shall be subdivided into the sub-tiles. The sub-tiles shall be individually tested for DAQ 3.0. If more than three (3) sub-tiles of a complete tile fail, then the tile fails. If the majority of sub-tiles within the larger tile fail, then the tile fails. For the tile to pass, the following minimum quantity of sub-tiles must pass (DAQ 3.0) in order for the previously failed adjacent tile area to be considered as a pass and no longer be considered in the adjacent tile analysis:

5 of 9 sub-tiles (full compliment)

4 of 8 sub-tiles (partial compliment)

4 of 7 sub-tiles (partial compliment)

3 of 6 sub-tiles (partial compliment)

3 of 5 sub-tiles (partial compliment)

2 of 4 sub-tiles (partial compliment)

2 of 3 sub-tiles (partial compliment)

1 of 2 sub-tiles (partial compliment)

If a cluster is identified, the Contractor shall be responsible for providing a mitigation plan to correct the cluster at no cost to the County. The mitigation plan could include, but is not limited to, comparing the actual and planned land use land clutter (LULC) criteria for the failed area with the assumed criteria (15 dB building loss) in the coverage design and test plan. Once the County has reviewed and approved the Contractor's mitigation plan the Contractor will immediately implement the approved mitigation plan at no cost to the County. If required by the County, the Contractor is then responsible for retesting the cluster of failed tiles, as well as all other areas that may have been impacted by the Contractor's mitigation plan, at no cost to the County.

The County reserves the right to PASS/FAIL the CATP based on the presence of a cluster of failed tiles.4.6.4 CAT Acceptance Criteria

The County shall review the results of each of the test tests in Appendix A. The County shall consider a test to PASS if:

- BER Outdoor Testing: 97% of the tiles have a BER not to exceed 2.6%
- BER Simulated In-Building Testing: 95% of the tiles have a BER not to exceed 2.6%
- A-DAQ Testing: 97% of the tile have a DAQ value of 3 or better
- Random In-Building Testing: 95% of the buildings in the tested tiles have a DAQ value of 3 or better
- Critical Building Testing: Each of the buildings identified in Appendix C have passed the M-DAQ testing with a DAQ of 3 or better.

4.7 Test Team

The automated and M-DAQ test teams shall be composed of at least one (1) County and at least one (1) Contractor representative. Any dispute among test team members concerning the collected test data shall be resolved by the TRT.

Schedules and the number of County test personnel may be provided to the Contractor a minimum ten (10) calendar days prior to commencement of coverage testing to allow for setting up the logistics of the test (i.e., correct number of radios, vehicles). The County and the Contractor shall coordinate the logistic and personnel requirements to the maximum extent possible.

A test console shall be staffed by, at least, an experienced County dispatcher and one Contractor representative who will be dedicated to the performance of the coverage test.

The M-DAQ test shall be composed of the Mobile and Dispatch teams. Each team shall be composed of qualified and trained County and contractor personnel. The Dispatch team shall reside at the Dispatch Center location and initiate all calls from the Dispatch console.

The Contractor shall provide M-DAQ test training to all personnel, County and Contractor, performing the test. This training shall include, but not limited, the following information:

- DAQ voice quality demonstration
- Selection of random buildings for in-building test
- Selection of testing locations within the building
- Procedures to accomplish the test
- Procedures for logging test results
- Procedures to log conflicting test results.

The M-DAQ training plan shall be presented to the County prior to the start of M-DAQ training. M-DAQ testing shall commence after satisfactory completion of M-DAQ training.

4.8 System or Equipment Malfunctions

The County and the Contractor agree that the intent of the CAT portion of the CATP is to test coverage and not individual system components. Therefore, the following procedures apply:

- The Contractor and the County agree that, in the event of a component failure in the system or test equipment that adversely affects the coverage test process, the coverage test shall be suspended until the system component or test equipment is restored to normal operation. Any such corrective action shall be done under the supervision of the Contractor's Site Manager or his/her designee in coordination with the County Project Manager. The Contractor shall provide and implement an approved remedy to correct the failure at no cost to the County. After correction of the failure, the Contractor may be required, at the County's discretion, to restart all testing from the beginning of the CAT at no cost to the County. The data collected prior to the system failure shall not be used to determine system coverage performance.
- During the coverage testing period, the Contractor agrees that maintenance, repair work, or adjustments to the system SHALL NOT BE PERMITTED unless specifically authorized by the Contractor's Site Manager and the County Project Manager.

The Contractor's Site Manager shall authorize any maintenance that is necessary for the upkeep of the system. County representatives are encouraged to accompany the Contractor personnel at all times.

4.9 Simulcast Optimization Test Data Collection

The contractor shall verify the performance of both the analog conventional and digital trunked simulcast systems after initial installation and optimization before starting the CAT. This shall take the form of collecting sample measurements of BER, RSSI and A-DAQ for the digital

system and RSSI tests for the analog system. These test samples shall be distributed across the County and include areas where the contractor's predictive model indicates the possibility of Time Delay Interference (TDI) as well as areas of overlapping site coverage where it is not expected. Unexpected areas of high BER accompanied by high signal strength for the digital trunked simulcast system or audio distortion accompanied by high signal strength in the analog simulcast system shall be investigated by the contractor before beginning the CAT.

Once identified, the Contractor shall optimize the digital and analog simulcast system to minimize the impact of the interference to the systems. The Contractor, at no cost to the County, is responsible for remedying all such deviations, to the greatest extent possible, while still meeting the CAT requirements.

5 COVERAGE ACCEPTANCE TEST (CAT)

5.1 BER Test

Radio coverage shall be verified by measuring talk-out (base-to-mobile) BER throughout the DSA for each test, as specified in Appendix A, and calculating the threshold of each sub-tile that exceeds the required BER level for acceptable performance.

The system shall be considered to have passed the test if the percentage of passing test tiles equals, or exceeds, the County's minimum requirement for area coverage within the DSA.

Test values shall be reported with a precision of a tenth of a percent. Rounding up to whole number values shall not be allowed.

5.2 RSSI Test

Radio coverage shall be verified by measuring talk-out (base-to-mobile) RSSI throughout the DSA for each test, as specified in Appendix A, and calculating the threshold of each sub-tile that exceeds the required RSSI level for acceptable performance. This testing is for information purposes only.

Test values shall be reported with a precision of a tenth of a percent. Rounding up to whole number values shall not be allowed.

5.3 DAQ Testing

The A-DAQ and M-DAQ tests on the trunked system listed in Appendix A shall be performed using the encrypted, digital mode of the portable radio at all test points within the specified DSA of each individual test. The A-DAQ tests on the analog overlay listed in Appendix A shall be performed using the analog mode of the portable radio at all test points within the specified DSA of the individual test. ADAQ test set will be configured to test the Analog Simulcast system using the 'worst case' condition which is simulated indoor.

5.3.1 PORTABLE OUTDOOR (A-DAQ)

The A-DAQ test shall verify the portable outdoor coverage performance. The A-DAQ test setup shall include the 8 dB body loss attenuation.

The A-DAQ shall be accomplished in every accessible test tile.

A test call shall not be initiated from within tunnels or underground parking decks.

5.3.2 Portable Random In-Building (M-DAQ)

The M-DAQ tester shall have the radio at the hip level to include user body loss. The test shall be valid on only buildings of 15 dB or less attenuation.

One random building shall be tested per tile within DSA_C. Only one test point shall be recorded per building.

5.3.3 Portable Critical In-Building (M-DAQ)

The M-DAQ tester shall have the radio at the hip level to include user body loss.

The County requires communications in all of the critical buildings. The Contractor's design must accommodate the specific building loss of each critical building.

5.3.4 Null Test Points

In complex urban radio systems, null coverage area are often encountered. A null coverage area is usually the result of reflected signal paths coming together in unpredictable ways causing one signal to cancel another. There is no method to predict the location of a null point. A lack of sufficient RSSI would be the first indication to the test team that a null has been encountered. If this occurs, the test team shall be allowed to move 3 feet in any direction and attempt the test a second time. The failure of the first call shall be annotated on the test sheet. The test call shall be successful if the second call passes.

5.3.5 Test Call Procedure

Each DAQ test team shall inform the Dispatch Center that it is ready for a test call. The test radio shall be worn at the hip of the test team member making the test call. The Dispatch team initiates the test by making a call to the test team. The test team shall respond with the shoulder microphone. The microphone shall be held appropriately close to the testers mouth. After the call is completed, the members of both test teams shall evaluate the voice quality of the call and log the results into the test log book.

The test team shall make test calls on the digital system at each in-building test point.

5.3.5.1 Test Call Steps

A standardized test form shall be completed for each test location. Testers shall use phonics when calling out alphabetic symbols (i.e., "a" is alpha). For numeric strings each individual

number shall be called separately. The following is the M-DAQ Test Procedure for the trunked system:

- The tester with a portable radio located at the hip shall initiate the test call by notifying the Dispatch team that he/she is ready to proceed. If the tester cannot contact the Dispatch team, he/she shall relocate to a position within 3 feet and attempt a second call. If the tester cannot contact the Dispatch team, he/she shall exit the building and attempt to establish contact with the Dispatch team. The site shall be graded a failure.
- The Dispatch team shall begin the test call for each test point.
- The dispatcher shall acknowledge the call using the tester's unit number (e.g., 2246).
- The tester shall transmit an Inbound test message (e.g., Test Number 3245.1A, 12, 42, 57, 14, 88).
- The dispatcher shall transmit the outbound test message (e.g., 13, 47, 39, 99, and 11).
- The tester shall sign off.
- If human error or distraction causes a transmission to be missed, the test sequence shall be repeated and not be recognized as an attempt.
- After all test cycles are completed, the standardized test forms shall be tabulated and scored.

5.3.5.2 Outdoor Test Call Procedure

This section left intentionally blank.

5.3.5.3 Random In-Building Test Call Procedure

The test team shall randomly select a building or structure within each approved test grid to perform a test. The structure shall be as centrally located in the test grid as possible.

The selected building shall be of a light industrial or light commercial building construction type. Large poured concrete structures shall not be tested.

The test shall be accomplished in the general access areas of the structure (i.e., lobbies reception areas). The test shall not be accomplished within stairwells, elevators, underground walkways, or similar structures.

5.3.5.4 Critical Building Test Call Procedure

The test team shall identify the locations within the building for the test call. The test point should be located in a general access area within the building. Multiple test calls shall be made within the building.

In buildings that are not equipped with bi-directional amplifier (BDA) systems, at a minimum, five (5) test points per equipped floor shall be tested. In addition, at a minimum of three (3) floors shall be tested (ground level, middle floor, and top floor). The test team shall not locate test

points in areas that are surrounded by substantive structures, such as x-ray rooms, basements, or stairwells.

In buildings that have BDA systems installed, the test team shall test to verify the operation of the BDA system. The County and the Contractor shall identify the test locations based on the design of the BDA system. The test location shall be logged on the test sheet.

Exhibit G—Coverage Acceptance Test Plan

Appendix A — Radio Service Areas and Signal Levels

Test	System	CATP Requirement	DSA	Radio Test	Test Condition	Test Type	Grid Size (mile)	Body Loss (db)	Building Loss (db)	BER Threshold (%)	RSSI Threshold (dB)	Service Area Reliability (%)
1	800MHz Trunked	Required	C+3+Water	Portable	on street	A-DAQ	0.5	8			-100	97
2	800MHz Trunked	Required	C	Portable	Random in Building	M-DAQ	0.5	8	15		-90	95
3	800MHz Trunked	Required	C	Portable	Critical Building	M-DAQ	A/R	8	n/a		-90	95
4	800MHz Trunked	Required	+3+Water	Portable	on street	BER	0.5	8		2.60		97
5	800MHz Trunked	Required	C	Portable	Simulated Indoor	BER	0.167	8	15	2.60		95
6	800MHz Trunked	Required	C	Portable	on street	BER	0.167	8		2.60		97
7	NYMAC-1 NUMC	Information Only	C	Mobile	on street	RSSI	0.5					95
8	NYMAC-2 Bayville	Information Only	C	Mobile	on street	RSSI	0.5					95
9	NYMAC-3 East Hills	Information Only	C	Mobile	on street	RSSI	0.5					95
10	NYMAC-4 Mt. Misery	Information Only	C	Mobile	on street	RSSI	0.5					95
11	NYMAC Suffolk County	Information Only	S	Mobile	on street	RSSI	1					95
12	UHF Analog Overlay - Simulcast - North	Information Only	C+3	Portable	on street	RSSI	0.5					97
12a	UHF Analog Overlay - Simulcast - South	Information Only	C+3	Portable	on street	RSSI	0.5					97
13	VHF Analog	Information Only	C	Mobile	on street	RSSI	0.5					95
14	UHF Analog Overlay - Simulcast - North N/R per Sec 5.4	Information Only	C	Portable	on street	A-DAQ	0.5					97
15	UHF Analog Overlay - Simulcast - South N/R per Sec 5.4	Information Only	C	Portable	on street	A-DAQ	0.5					97
16	UHF Analog Overlay - Simulcast - North	Information Only	C	Portable	Simulated Indoor	A-DAQ	0.5					95
17	UHF Analog Overlay - Simulcast - South	Information Only	C	Portable	Simulated Indoor	A-DAQ	0.5					95

Appendix B—Sample Test Grids

This Appendix left blank intentionally.

Exhibit G—Coverage Acceptance Test Plan

Appendix C—Critical Buildings Listing

FACILITY	ADDRESS
Nassau County Police Department 1st Precinct	900 Merrick Rd., Baldwin, NY
Nassau County Police Department 2nd Precinct	7700 Jericho Turnpike, Woodbury, NY
Nassau County Police Department 3rd Precinct	214 Hillside Ave., Williston Park, NY
Nassau County Police Department 4th Precinct	BDWY & Sheridan Ave., Hewlett, NY
Nassau County Police Department 5th Precinct	1655 Dutch BDWY, Elmont, NY
Nassau County Police Department 6th Precinct	100 Community Dr., Manhasset, NY
Nassau County Police Department 7th Precinct	3636 Merrick Rd., Seaford, NY
Nassau County Police Department 8th Precinct	286 Wantagh Ave., Levittown, NY
Highway Patrol	1255 Newbridge Rd., N. Bellmore, NY
Bureau of Special Operations	231 St. Brigids LA, Westbury, NY
Franklin Hospital Medical Center	900 Franklin Ave., Franklin Square, NY 11582
Island Medical Center	800 Front Street, Hempstead, NY 11550
Long Beach Medical Center	455 East Bay Drive, Long Beach, NY 11561
Long Island Jewish Hospital	270-05 76th Ave., New Hyde Park, NY 11040
Current Department CB	140 15th St., Mineola, NY 11501
Mercy Medical Center	1000 North Village Ave., Rockville Center, NY 11570
New Island Medical Center	4295 Hempstead Turnpike, Bethpage, NY 11714
Nassau University Medical Center	2201 Hempstead Turnpike, East Meadow, NY 11554
North Shore University Hospital @ Glen Cove	St Andrews Lane, Glen Cove, NY 11542
North Shore University Hospital @ Plainview	888 Old County Road, Plainview, NY 11803
North Shore University Hospital @ Syosset	221 Jericho Turnpike, Sysosett, NY 11791
North Shore University Hospital @ Manhasset	300 Community Drive, Manhasset, NY 11030
South Nassau Communities Hospital	1 Healthy Way, Oceanside, NY 11572
St Francis Hospital	100 Port Washington Blvd., Roslyn, NY 11576
Winthrop University Hospital	259 First Street, Mineola, NY 11501
Brunswick Hospital	Precinct 7 / Suffolk County
Hempstead General Hospital	Peninsula Blvd.
Nassau Coliseum *	Hempstead Turnpike, Uniondale, NY 11553
Nassau Aquatic Center *	Elsenhower Park, East Meadow, NY 11554
Sunrise Mall *	Sunrise Highway, Massapequa, NY 11758
Green Acre Mall *	2034 Green Acres Mall, Valley Stream, NY 11581
Roosevelt Field Mall	Old Country Road, Westbury, NY 11590
EAB Plaza	1 EAB Plaza Hempstead Turnpike, Uniondale, NY 11553
Broadway Mall	North Broadway, Hicksville, NY 11801
Nassau County District Court	99 Main St., Hempstead, NY 11550
Nassau County Family Court	1200 Old County Rd., Westbury, NY 11590
Saint Johns Hospital	Far Rockaway, Queens, NY
DEPARTMENT Headquarters	1490 Franklin Ave., Mineola, NY
Nassau County Supreme Court	100 Supreme Court Dr., Mineola, NY
Nassau County Court Complex	252, 262, 272 Old Country Road, Mineola, NY
Nassau County Children's Shelter	Carmen Ave. & Old County Road, Westbury, NY
County Executive Building	1 West St., Mineola, NY
Old Courthouse	1550 Franklin Ave., Mineola, NY
County Office Building	240 Old Country Rd., Mineola, NY
Note: * = already has BDA system to review	

Appendix D - Attenuation Details

Reference Appendix A for types of test.

Test 1 – NCPSCS – Mobile (XTL-2500) Outdoor BER

No Attenuation

Test 2 – NCPSCS – Portable (XTS-2500) Outdoor BER

Attenuation Loss Calculation	
Description	Loss Value
Body Loss for Portable at hip level	8.0 dB
Antenna Height Difference (5 ft vs. 3 ft)	1.0 dB
Cable (From the Portable to the Vehicle Roof mount Antenna)	-2.0 dB
Antenna Type Difference (Quarter wave vs. Half Wave dipole)	-1.0 dB
XTS 2500 Sensitivity Difference	0.0 dB
Total Attenuation	6.0 dB

Test 3 – NCPSCS – Portable (XTS-2500) Indoor BER

Attenuation Loss Calculation	
Description	Loss Value
Body Loss for Portable at hip level	8.0 dB
Antenna Height Difference (5 ft vs. 3 ft)	1.0 dB
Cable (From the Portable to the Vehicle Roof mount Antenna)	-2.0 dB
Antenna Type Difference (Quarter wave vs. Half Wave dipole)	-1.0 dB
XTS 2500 Sensitivity Difference	0.0 dB
Building Loss	15.0 dB
Total Attenuation	21.0 dB

Test 4 – NCPSCS – Portable (XTS-1500, XTS-2500 and XTS-5000) Outdoor DAQ

No Attenuation

Test 5 – NCPSCS - Portable (XTS-1500, XTS-2500 and XTS-5000) Indoor DAQ

No Attenuation

Test 6 – NCPSCS – Portable (XTS-1500, XTS-2500 and XTS-5000) Critical Building

No Attenuation

Test 7 – UHF Analog – Mobile (XTL-2500) Outdoor – RSSI

No Attenuation

Test 8 – UHF Analog – Portable (XTS-1500, XTS-2500 and XTS-5000) Outdoor – DAQ

No Attenuation

Test 9 – UHF Analog - (XTS-1500, XTS-2500 and XTS-5000) Portable Indoor – DAQ

No Attenuation

Test 10 – VHF – Mobile Outdoor – RSSI

No Attenuation

Test 11 – NYMAC – Mobile (XTL-2500) Outdoor – RSSI

No Attenuation

Test 12 – Low-Band – Mobile Outdoor – RSSI

No Attenuation

Nassau County Public Safety Communications System
Motorola Change Order # 016

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 016
Change Order Name: Contract Modifications and Corrections
Date of Change Order: 11/22/10
Pricing Valid until:

Changes Requested:

Conditional Acceptance:
Due to delays in site acquisition the County will not be fully deployed on the new 500 MHz radio system before the December 14, 2010 go-live date for the new Nassau County Public Safety Center (PSC). To accommodate legacy radio communications at the new PSC, conditional acceptance of the new 500 MHz infrastructure, including the microwave system, is required. Upon conditional acceptance of the new infrastructure, Motorola will provision the system to facilitate transport of the legacy radio communication from Mineola to the new PSC for presentation on the MCC7500 consoles installed in the new dispatch center. Conditional acceptance is considered beneficial use and will start a 60-day interim warranty. Upon expiration of the 60-day interim warranty the contracted 2-year system warranty will start regardless if the PD has transitioned to the 500MHz system. Conditional acceptance requires Motorola to complete the Coverage Acceptance Test Plan (CATP) modified in Change Order 014 and the System Acceptance Test Plan (SATP) minus MotoBridge functionality. MotoBridge gateways will be used to transport the legacy radio system.

Modified CATP:
The modified CATP was completed October 27, 2010 with full foliage, but without North sites, Syosset, Oyster Bay, and SUNY. Motorola will invoice 80% of billing milestone 8 (8A in Table 1 Revisions included below) upon completion of this initial coverage testing. Coverage testing will be repeated in grids that failed to meet coverage requirement when construction of the Syosset and Oyster Bay sites is completed. This additional coverage testing will be done regardless of foliage and Nassau County may decide to transition to the new 500MHz system based on the results without the Brookville/SUNY site completed. The remaining 20% for milestone 8 will be split into two milestones: 8B for Full Foliage CATP Retest and 8C for Completion of Critical Buildings which will be invoiced upon completion.

Brookville/SUNY Holdback:
Motorola has diligently pursued and proposed multiple sites in the vicinity of the Brookville water tank. Each of the proposed sites has been rejected by landowners. Motorola coverage prediction tools and initial coverage testing indicate contractual radio coverage requirements will be met without this receive only site. Conditional acceptance will allow Nassau County to begin using the 500 MHz radio system for public safety communications without the completion of this site. This change order revises payment milestones as shown in table 1 below. This payment schedule provides a hold back of **$2,302,440.00** pending the completion of a 24th receive only radio site.

Motorola's plan is to use the proposed water tank at the SUNY Old Westbury campus. However, if this water tank is not constructed and a no fee license agreement to locate required radio equipment on the tank is not completed within 24 months of the execution of this change order, Motorola will install the radio equipment at the Bethpage site or refund the cost of the equipment and services for this 24th site. The refund will be deducted from the final billing milestone.

Motorola Change Order # 016

Table 1 Contract Milestone Revisions				
Milestone Description	**Revised Milestone Description**	**Original Milestone $**	**Revised Milestone $**	**SUNY Hold Back $**
Milestone 2C Brookville (SUNY) site construction completed.	No change	$143,343.75		$143,343.75
Milestone 5b Brookville (SUNY) FNE Installation	No change	$159,096.33		$159,096.33
8) CATP Completion and Critical Buildings		$4,997,200.00		
	8A Initial CATP Completion		$3,000,000.00	
	8B Full Foliage CATP Retest		$499,720.00	
	8C Completion of Critical Buildings		$1,497,480.00	
9) Training Completed for Subscriber Units and Dispatch	No change	$750,000.00	$750,000.00	
12) Final System Acceptance		$6,241,510.00		
	12A) Conditional System Acceptance prior to go-live at new Prospect PSC		$2,993,208.00	
	12B) Conditional System Acceptance prior to transition to 500MHz system		$1,248,302.00	
	12C) Final System Acceptance upon completion of SUNY site			$2,000,000.00
Total		**$12,291,150.08**	**$9,988,710.00**	**$2,302,440.08**

Revised Exhibit D (Site Development):
During final contract discussions changes to Exhibit D were negotiated to meet the adjacent grid failure requirement in the CATP. These changes were not made in the site matrix that was included in the contract. Exhibit D in the contract lists 13 TX sites and 10 RX sites for a total of 23 sites. The agreed to site matrix included 16 TX sites and 8 RX sites. This change order replaces Exhibit D site matrix with the site matrix dated 6/24/05 in appendix A.

Exhibit D also includes the requirement to provide one mobile generator and a Hubbell connector at each shelter. The addition of the mobile generator and Hubbell connectors was an option intended to be listed as an ancillary item which the County chose not to purchase. It was erroneously included in Exhibit D and will be removed with this change order. This site matrix (Exhibit D) was further modified during contract execution.

CAPER Software Upgrade:
The RFP requires "The contractor shall review the current CAPERS system and provide the current technology equivalent replacement." This functionality is now being provided by Nassau County's CAD system and will not be provided by Motorola. In lieu of upgrading the CAPER software Motorola will provide the services needed to present the legacy radio system at the new Prospect consoles.

Nassau County Public Safety Communications System
Motorola Change Order # 016

Site Decommissioning:
Decommissioning of the existing infrastructure will be completed after acceptance and go-live on the new 500 MHz radio system. This work will be a punch list item and will not affect milestones 8B & 8C.

Channel 2 (502.2 MHz) Compatibility:
During BER coverage testing it was discovered that south cell channel 2 (502.2 MHz) is a self quieting frequency on the portable subscribers. Motorola will work with Nassau County to revise FCC licenses to replace channel 2 with a compatible frequency. This work will be a punch list item and will not affect milestones 8B & 8C.

Reason for Change:
This Change Order is required to modify and correct contract language to meet current County requirements and allow use of the 500 MHz system without the receive only site in the Brookville area.

Cost Impact: **Total: $ 0.00**

Current Contract Value:	**$ 44,671,642.00**	**after C.O. 15 is signed**
Net Change in Contract Value:	**$ 0.00**	
Revised Contract Value:	**$ 44,671,642.00**	

Schedule Impact: None

Operational Impact: This change order will allow the legacy radio system to be operated from the new PSC.

Payment Terms: Please see Table 1 above which includes revised milestone values as described above.

Total Change Order - $0.00

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)

NCPD Authorized Representative — Motorola Project Manager (Paul Radmon)

NCPW Authorized Representative — Motorola Authorized Representative

Date: 12/7/10 — Date: 11/23/10

Site Matrix

TX Sites	Island Park	Massapequa	Mattnecock	Bayville	Element	Thomaston	Mineola	Far Rockaway	Sands Point	Syosset	West Hills	East Hills	NUMC	Oyster Bay	Herricks	Farmingdale Water Tank
General Information																
Simulcast Cell Location Part I or Part II	South Part II	South Part II	North Part II	North Part II	South Part I- Prime Site Only, Part II- Add RF	North Part I	South Part I	South Part II	North Part II	North Part I	North Part I	North Part I	South Part I	North Part II	North Part II	South Part II
LMR Site Type	RF	RF	RF	RF	Simulcast Prime, RF	RF	Master and RF	RF	RF	RF	RF	Simulcast Prime, RF	RF	RF	RF	RF
Tower Type	Rooftop	Water Tank	Water Tank	Water Tank	Water Tank	Water Tank	Self Supporting	Rooftop	Water Tank	Self Supporting	Self Supporting	Self Supporting	Rooftop	Water Tank	Water Tank	Water Tank
New Shelter																
Size (ft)	12 X 24	12 X 24	12 X 24	12 X 24	12 X 32	12 X 24	12 X 24	12 X 24	12 X 24	N/A	12 X 24	N/A	N/A	12 x 24	12 x 24	12 X 24
Type	Lightweight	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	Lightweight	Concrete	Cage in Existing Bldg	Concrete	Two Existing Shelters	Existing Rooftop Shelter	Concrete	Concrete	Concrete
Generator (120 hour run time)																
Type	Use Keyspan Emergency Generator	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola supplied Upgraded Generator in Outdoor Cabinet	Use NUMC Emergency Generator	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure
Size (kw)	Keyspan Emergency Generator	70	70	70.	70	70	Upgrade to 100kw	70	70	70	70	Upgrade to 100kw	NUMC Emergency Generator	70	70	70
Fuel Type	n/a	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Natural Gas	Diesel	Natural Gas	Natural Gas	Natural Gas	LP	Diesel	n/a	Natural Gas	Diesel	Natural Gas
UPS Size (20 minute run time)	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	2 x20kva	1 x18kva	1 x18kva	2 x18kva
Site Permitting and A&E Tasks																
Motorola																
Site Walk	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Structural Analysis and Mapping	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Land Survey	n/a	YES	YES	YES	YES	YES	YES	n/a	YES	YES	YES	YES	n/a	YES	YES	YES
FAA-1A Certification	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Soil Resistivity Testing	n/a	YES	YES	YES	YES	YES	YES	n/a	YES	YES	YES	YES	n/a	YES	YES	YES
Structural Design	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Electrical Design	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Grounding Design	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Construction Drawings As Required	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Permitting/Zoning	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Record Drawings	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Nassau County																
Assist in Providing Existing Drawings and Reports	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Assist As Owner/Lessee	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Review/Approve Site Designs Within 15 Days of Submission	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Assist in Providing Property Deed, Boundry Survey and Lease Information	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Site Construction																
Motorola																
Site Prep																
Utility Locating and Marking	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Clearing/Grubbing for New Shelter	n/a	YES	YES	YES	YES	YES	n/a	n/a	YES	Required for Outdoor Generator	YES	Clear & Grub Existing Compound	n/a	YES	YES	YES
Silt Fence to Eliminate Soil Erosion	n/a	n/a	100 ft	75 ft	n/a	100 ft	n/a	n/a	100 ft	n/a	75 ft	n/a	n/a	YES	YES	YES
Site Components Installation																
Install Electrical Service, Electrical Feed Not To Exceed Stated Cable Feet per Site	2 floors	65 ft underground	100 ft Underground	65 ft Underground	150 ft Underground	175 ft underground hand dug	Install from existing Shelter with 4" conduit	2 Floors from Rooftop	200 ft underground	Upgrade as Required	75 ft underground	Upgrade existing to 400 Amps	Upgrade as Required	200 ft Underground	200 ft Underground	150 ft underground
Construct Foundations per TIA/EIA-222-F Normal Soil Conditions	n/a	YES	YES	YES	YES	YES	YES	n/a	YES	n/a	YES	n/a	n/a	YES	YES	YES
Supply and Install Shelter	YES	YES	YES	YES	YES	YES	YES	YES	YES	n/a	YES	n/a	n/a	YES	YES	YES
Saw Cut and remove Asphalt as Required for new Equipment Shelter	n/a	n/a	n/a	n/a	n/a	n/a	As Required	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install Generator	n/a	YES	YES	YES	YES	YES	Upgrade existing Onan Generator to 100 KW	YES	YES	YES	YES	Upgrade existing Outdoor Diesel Generator	Use Existing NUMC Emergency Generator	YES	YES	YES
Install External Ground System to R-56 Standards	Ground to existing Structural Steel	YES	YES	YES	YES	YES	YES	Ground to Building Steel	YES	YES	YES	n/a	Ground to Building Steel	YES	YES	YES

Appendix A

TX Sites	Inland Park	Massapequa	Mattinecock	Bayville	Elmont	Thomaston	Mineola	Far Rockaway	Sands Point	Syosset	West Hills	East Hills	NUMC	Oyster Bay	Herricks	Farmingdale Water Tank
Conduct 3-point ground resistance test	n/a	YES	YES	YES	YES	YES	YES	n/a	YES	YES	YES	n/a	n/a	YES	YES	YES
Supply and Install Cable and Ice Bridge Not To Exceed Stated Length in Feet per Site	300 lft PVC Sleepers every 3 feet	20 ft	20 ft	20 ft	n/a	20 ft	20 ft	20 ft	20 ft	20 ft	65 ft	n/a	PVC Sleepers as Required	20 ft	20 ft	20 ft
Supply and Install Cable Conduit between Water Tank and Shelter Not to Exceed Stated Length in Feet per Site	n/a	n/a	n/a	n/a	90 Feet	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install Cable Ladder for Tower	n/a	n/a	n/a	n/a	n/a	n/a	180 ft	n/a	n/a	300 ft	230 ft	YES	n/a	n/a	n/a	n/a
Supply and Install shelter façade	n/a	n/a	YES	n/a	n/a	n/a	n/a	n/a	YES	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Antennae and Line																
Install Antennae	6	6	4	4	6	12	6	6	4	4	6	4	10	4	4	6
Install Transmission Line Not To Exceed Stated Length in Feet per Site	525 ft of 7/8" Cable	1260 ft of 1 1/4"Cable	780 ft of 1 1/4" Cable	500 ft of 7/8" Cable	2100 feet of 1 5/8" Cable	1000 ft of 1 1/4" Cable	1110 ft of 1 1/4" Cable	900 ft of 7/8" Cable	600 ft of 7/8" Cable	1400 ft of 1 1/4" Cable	1200 ft of 1 1/4" Cable	560 ft of 7/8" Cable	600 ft of 7/8" Cable	250 feet of 7/8" Cable	250 feet of 7/8" Cable	250 ft of 7/8" Cable
Sweep Test Transmission Lines	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Install Antennae Ground Bus Bar	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Misc Work																
Install & Core Drill building for Gas Line	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Install Natural Gas Line underground	n/a	n/a	n/a	n/a	n/a	As Required	n/a	n/a	300 ft from Site	As Required	n/a	n/a	n/a	As Required	As Required	As Required
Install 2 LP Tanks for 120 hour generator Run Time	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	YES	n/a		n/a	n/a	n/a
Supply and Install Wiremold for new communications equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	YES	n/a	n/a	Yes	n/a	n/a	n/a
Upgrade Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	YES	n/a	n/a	n/a	n/a	n/a	n/a
Upgrade Air Conditioning as Required	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	n/a	n/a	n/a
Supply and Install RF Cable Entry Port	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	YES	n/a	n/a	YES	n/a	n/a	n/a
Supply and Install Entry Boot in Water Tank Central Leg to run Cables	n/a	YES	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	YES	YES	YES
Install Covered Cable Tray (Paint to Match Tank)	n/a	n/a	YES	YES	YES	YES	n/a	n/a	YES	n/a	n/a	n/a	n/a	YES	YES	n/a
Shelter and Foundation Removal of Old NCPD Shelter	n/a	YES	YES	YES	YES	YES	n/a	n/a	YES	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Remove old NCPD Equipment	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	n/a	n/a	n/a
Temporary Shelter Power Cut-Over	n/a	YES	YES	YES	YES	YES	n/a	n/a	YES	n/a	n/a	YES	n/a	YES	YES	n/a
Remove old Antennae and Lines	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Utilize COW during Cutover	YES	n/a	n/a	n/a
Site Touch-Up												n/a	n/a			
Plant Trees/Shrubs	n/a	YES	YES	YES	YES	YES	n/a	n/a	10	n/a	YES	n/a	n/a	YES	YES	n/a
Fertilize and Reseed Disturbed Areas	n/a	YES	YES	YES	YES	YES	n/a	n/a	YES	n/a	YES			YES	YES	YES
Nassau County																
Recurring Utility and Generator Fueling Costs	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Assumptions and Caveats																
Does Not Include Ultrasonic Material Testing or Mapping of Structural Members for Existing Structures	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Lead Paint Testing	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Excluded Legal Council Support for Zoning, Permitting and Leasing	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Phase II, III Environmental Studies or Testing	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Hazardous Waste Removal	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Appendix A

Receive Only Sites	AT&T Roslyn	Great Neck Water Tank	Brookville	Jericho	Westbury	Freeport	Bethpage	7th Precinct
General Information								
Receive Location	North	North	North	North	South	South	South	South
Part I or Part II	Part II	Part II	Part II	Part II	Part II	Part II	Part II	Part II
LMR Site Type	RF	RF	RF	RF	RF	RF	RF	RF
Tower Type	Self Supporting	Water Tank	Water Tank	Water Tank	Smoke Stack	Water Tank	100 ft.Self Supporting to be built	120 ft.Self Supporting to be built
New Shelter								
Size (ft)	12 x 24	12 x 24	12 x 24	12 x 24	12 X 24	12 X 24	n/a	12 X 24
Type	Concrete	Concrete	Concrete	Concrete	Concrete	Concrete	n/a	Concrete
Generator (120 hour run time)								
Type	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Motorola Supplied Generator in Outdoor Enclosure	Use existing generator	Use existing generator
Size (kw)	70	70	70	70	70	70	Use existing generator	Use existing generator
Fuel Type	Natural Gas	Liquid Propane	Liquid Propane	Liquid Propane	Liquid Propane	Natural Gas	n/a	n/a
UPS Size	1 x18kva	1 x18kva	1 x18kva	1 x18kva	2 x18kva	2 x18kva	2 x18kva	2 x18kva
Site Permitting and A&E Tasks								
Motorola								
Site Walk	YES	YES	YES	YES	YES	YES	YES	YES
Structural Analysis and Mapping	YES	YES	YES	YES	YES	YES	YES	YES
Land Survey	YES	YES	YES	YES	YES	YES	YES	YES
FAA-1A Certification	YES	YES	YES	YES	YES	YES	YES	YES
Soil Resistivity Testing	YES	YES	YES	YES	YES	YES	YES	YES
Structural Design	YES	YES	YES	YES	YES	YES	YES	YES
Electrical Design	YES	YES	YES	YES	YES	YES	YES	YES
Grounding Design	YES	YES	YES	YES	YES	YES	YES	YES
Construction Drawings As Required	YES	YES	YES	YES	YES	YES	YES	YES
Permitting/Zoning	YES	YES	YES	YES	YES	YES	YES	YES
Record Drawings	YES	YES	YES	YES	YES	YES	YES	YES
Nassau County								
Assist in Providing Existing Drawings and Reports	YES	YES	YES	YES	YES	YES	YES	YES
Assist As Owner/Lessee	YES	YES	YES	YES	YES	YES	YES	YES
Review/Approve Site Designs Within 15 Days of Submission	YES	YES	YES	YES	YES	YES	YES	YES
Assist in Providing Property Deed, Boundry Survey and Lease Information	YES	YES	YES	YES	YES	YES	YES	YES
Site Construction								
Motorola								
Site Prep								
Utility Locating and Marking	YES	YES	YES	YES	YES	YES	YES	YES
Clearing/Grubbing for New Shelter	YES	YES	YES	YES	YES	YES	n/a	YES
Silt Fence to Eliminate Soil Erosion	YES	YES	YES	YES	YES	YES	YES	YES
Site Components Installation								
Install Electrical Service, Electrical Feed Not To Exceed Stated Cable Feet per Site	125 ft Underground	125 ft Underground	125 ft Underground	125 ft Underground	125 ft underground	100 ft Underground	Upgrade as Required	Upgrade as Required
Construct Foundations per TIA/EIA-222-F Normal Soil Conditions	YES	YES	YES	YES	YES	YES	n/a	YES
Supply and Install Shelter	YES	YES	YES	YES	YES	YES	n/a	YES

Appendix A

Receive Only Sites	AT&T Roslyn	Great Neck Water Tank	Brookville	Jericho	Westbury	Freeport	Bethpage	7th Precinct
Saw Cut and remove Asphalt as Required for new Equipment Shelter	n/a	n/a	n/a	n/a	n/a	n/a	YES	As Required
Supply and Install Generator	YES	YES	YES	YES	YES	YES	Use existing generator	Use existing generator
Install External Ground System to R-56 Standards	YES	YES	YES	YES	YES	YES	Ground to existing steel	YES
Conduct 3-point ground resistance test	YES	YES	YES	YES	YES	YES	YES	YES
Supply and Install Cable and Ice Bridge Not To Exceed Stated Length In Feet per Site	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft
Supply and Install Cable Conduit between Water Tank and Shelter Not to Exceed Stated Length in Feet per Site	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install Cable Ladder for Tower	180	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install shelter façade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Antennae and Line								
Install Antennae	1	1	1	1	1	1	1	1
Install Transmission Line Not To Exceed Stated Length in Feet per Site	220 ft of 7/8" Cable	250 ft of 7/8" Cable	175 ft of 7/8" Cable	175 ft of 7/8" Cable	250 ft of 7/8" Cable	250 ft of 7/8" Cable	100 ft of 7/8" Cable	130 ft of 7/8" Cable
Sweep Test Transmission Lines	YES	YES	YES	YES	YES	YES	YES	YES
Install Antennae Ground Bus Bar	YES	YES	YES	YES	YES	YES	YES	YES
Misc Work								
Install & Core Drill building for Gas Line	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Install Natural Gas Line underground	As Required	n/a	n/a	n/a	n/a	As Required	n/a	n/a
Install LP Tank for 120 hour generator Run Time	n/a	YES	YES	YES	YES	n/a	n/a	n/a
Supply and Install Wiremold for new communications equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Upgrade Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Upgrade Air Conditioning as Required	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install RF Cable Entry Port	n/a	n/a	n/a	n/a	n/a	n/a	YES	n/a
Supply and Install Entry Boot in Water Tank Central Leg to run Cables	n/a	YES	YES	YES	n/a	YES	n/a	n/a
Install Covered Cable Tray (Paint to Match Tank)	n/a	YES	YES	YES	n/a	YES	n/a	n/a
Shelter and Foundation Removal of Old NCPD Shelter	n/a	n/a	n/a	n/a	YES	YES	n/a	n/a
Remove old NCPD Equipment	n/a	n/a	n/a	n/a	YES	YES	n/a	n/a
Temporary Shelter Power Cut-Over	n/a	n/a	n/a	n/a	YES	YES	n/a	n/a
Remove old Antennae and Lines	n/a	n/a	n/a	n/a	YES	YES	n/a	n/a
Site Touch-Up								
Plant Trees/Shrubs	YES	YES	YES	YES	n/a	n/a	n/a	n/a
Fertilize and Reseed Disturbed Areas	YES	YES	YES	YES	n/a	YES	n/a	n/a
Nassau County								
Recurring Utility and Generator Fueling Costs	YES	YES	YES	YES	YES	YES	YES	YES
Assumptions and Caveats								
Does Not Include Ultrasonic Material Testing or Mapping of Structural Members for Existing Structures	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Lead Paint Testing	YES	YES	YES	YES	YES	YES	YES	YES
Excluded Legal Council Support for Zoning, Permitting and Leasing	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Phase II, III Environmental Studies or Testing	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Hazardous Waste Removal	YES	YES	YES	YES	YES	YES	YES	YES

Appendix A

Microwave only Sites	1st Precinct	2nd Precinct	3rd Precinct	4th Precinct	5th Precinct	6th Precinct	8th Precinct	Highway Patrol Bellmore
General Information								
Microwave Location	South	North	South	South	South	North	South	South
Part I or Part II	Part II	Part II	Part II	Part II	Part II	Part II	Part II	Part II
LMR Site Type	M/W	M/W	M/W	M/W	M/W	M/W	M/W	M/W
Tower Type	120 ft.Self Supporting to be built	120 ft.Self Supporting to be built	100 ft.Self Supporting to be built	120 ft.Self Supporting to be built	95 ft.Self Supporting to be built	160 ft.Self Supporting to be built	120 ft.Self Supporting to be built	95 ft.Self Supporting to be built
New Shelter								
Size (ft)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Type	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Generator (120 hour run time)								
Type	Use existing generator	Use existing generator	Use existing generator	Use existing generator	Use existing generator	Use existing generator	Use existing generator	Use existing generator
Size (kw)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fuel Type	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
48 VDC-24 Cell System 19' Racks, 105 Nomint. Amp-hrs	YES	YES	YES	YES	YES	YES	YES	YES
Site Permitting and A&E Tasks								
Motorola								
Site Walk	YES	YES	YES	YES	YES	YES	YES	YES
Structural Analysis and Mapping	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Land Survey	YES	YES	YES	YES	YES	YES	YES	YES
FAA-1A Certification	YES	YES	YES	YES	YES	YES	YES	YES
Soil Resistivity Testing	YES	YES	YES	YES	YES	YES	YES	YES
Structural Design	YES	YES	YES	YES	YES	YES	YES	YES
Electrical Design	YES	YES	YES	YES	YES	YES	YES	YES
Grounding Design	YES	YES	YES	YES	YES	YES	YES	YES
Construction Drawings As Required	YES	YES	YES	YES	YES	YES	YES	YES
Permitting/Zoning	YES	YES	YES	YES	YES	YES	YES	YES
Record Drawings	YES	YES	YES	YES	YES	YES	YES	YES
Nassau County								
Assist In Providing Existing Drawings and Reports	YES	YES	YES	YES	YES	YES	YES	YES
Assist As Owner/Lessee	YES	YES	YES	YES	YES	YES	YES	YES
Review/Approve Site Designs Within 15 Days of Submission	YES	YES	YES	YES	YES	YES	YES	YES
Assist In Providing Property Deed, Boundry Survey and Lease Information	YES	YES	YES	YES	YES	YES	YES	YES
Site Construction								
Motorola								
Site Prep								
Utility Locating and Marking	YES	YES	YES	YES	YES	YES	YES	YES
Clearing/Grubbing for New Shelter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Silt Fence to Eliminate Soil Erosion	YES	YES	YES	YES	YES	YES	YES	YES

Appendix A

Microwave only Sites	1st Precinct	2nd Precinct	3rd Precinct	4th Precinct	5th Precinct	6th Precinct	8th Precinct	Highway Patrol Bellmore
Site Components Installation								
Install Electrical Service, Electrical Feed Not To Exceed Stated Cable Feet per Site	YES	YES	YES	YES	YES	YES	YES	YES
Construct Foundations per TIA/EIA-222-F Normal Soil Conditions	YES	YES	YES	YES	YES	YES	YES	YES
Supply and Install Shelter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Saw Cut and remove Asphalt as Required for new Equipment Shelter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install Generator	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Install External Ground System to R-56 Standards	YES	YES	YES	YES	YES	YES	YES	YES
Conduct 3-point ground resistance test	YES	YES	YES	YES	YES	YES	YES	YES
Supply and Install Cable and Ice Bridge Not To Exceed Stated Length in Feet per Site	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft
Supply and Install Cable Conduit between Water Tank and Shelter Not to Exceed Stated Length in Feet per Site	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install Cable Ladder for Tower	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install shelter façade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Antennae and Line								
Install Antennae	1	1	1	1	1	1	1	1
Elliptical Waveguide 10.20 – 11.70 GHz Std.	127 ft	144 ft	115 ft	127 ft	103 ft	185 ft	105 ft	100 ft
Sweep Test Transmission Lines	YES	YES	YES	YES	YES	YES	YES	YES
Install Antennae Ground Bus Bar	YES	YES	YES	YES	YES	YES	YES	YES
Misc Work								
Install & Core Drill building for Gas Line	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Install Natural Gas Line underground	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Install LP Tank for 120 hour generator Run Time	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install Wiremold for new communications equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Upgrade Lighting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Upgrade Air Conditioning as Required	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supply and Install RF Cable Entry Port	YES	YES	YES	YES	YES	YES	YES	YES
Supply and Install Entry Boot in Water Tank Central Leg to run Cables	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Install Covered Cable Tray (Paint to Match Tank)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Shelter and Foundation Removal of Old NCPD Shelter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Remove old NCPD Equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Temporary Shelter Power Cut-Over	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Remove old Antennae and Lines	YES	YES	YES	YES	YES	YES	YES	YES
Site Touch-Up								
Plant Trees/Shrubs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fertilize and Reseed Disturbed Areas	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nassau County								
Recurring Utility and Generator Fueling Costs	YES	YES	YES	YES	YES	YES	YES	YES
Assumptions and Caveats								
Does Not Include Ultrasonic Material Testing or Mapping of Structural Members for Existing Structures	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Lead Paint Testing	YES	YES	YES	YES	YES	YES	YES	YES
Excluded Legal Council Support for Zoning, Permitting and Leasing	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Phase II, III Environmental Studies or Testing	YES	YES	YES	YES	YES	YES	YES	YES
Does Not Include Hazardous Waste Removal	YES	YES	YES	YES	YES	YES	YES	YES

COUNTY OF NASSAU
DEPARTMENT OF PUBLIC WORKS
CONSULTANT'S, CONTRACTOR'S AND VENDOR'S DISCLOSURE STATEMENT

1. Name of Firm: Motorola, Inc.

   Address: 5 Paragon Drive

   City and State: Montvale, New Jersey Zip Code 07645

2. Firm's Vendor Identification Number: 36-1115800

3. Type of Business:

   X Public Corp. _____ Partnership _____ Sole Proprietorship _____ Joint Venture

   _____ Ltd Liability Company _____ Closely Held Corp. _____ Other (specify)

4. List names and address of all principals; that is, all individuals serving on the Board of Directors or comparable body, all partners and limited partners, all corporate officers, all parties of joint ventures, and all members and officers of Limited Liability Companies (attach additional sheet (s) if necessary)

   See Attachment

   Motorola is a publicly traded corporation and, as such, for privacy and security reasons, Motorola has included only publicly available information for the identified officers.

5. List all names and address of all shareholders, members, or partners of the firm. If the shareholder is not an individual, list the individual shareholders/partners/members. (* If a Publicly held Corporation include a copy of 10K form in lieu of completing this section) (attach additional sheet (s) if necessary).

   SEE ATTACHED 10-K

6. List all affiliated and related companies and their relationship to the firm entered on line 1 (one) above [if none, enter "None"] (* include a separate disclosure form for each affiliated or subsidiary company) (attach additional sheet (s) if necessary).

   SEE ATTACHED LIST

   Motorola has over 250 affiliates and subsidiaries and does not maintain the information required for separate Disclosure Forms for each of them.

7. VERIFICATION: This section must be signed by a principal of the Consultant, Contractor or Vendor authorized as signator of the firm for the purpose of executing contracts. The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her own knowledge, true.

Dated: 8/5/10

Signed: _____

Print Name: David R. White

Title: Vice President, MSSI

Learn more about Motorola executives and find high resolution photos here.

Greg Brown
Co-CEO, Motorola
CEO, Motorola Solutions

Dr. Sanjay K. Jha
Co CEO, Motorola
CEO, Motorola Mobility

Gene Delaney
President, Enterprise Mobility Solutions
Motorola

Bruce Gale
Senior Vice President
General Manager, Networks
Motorola

Edward J. Fitzpatrick
Senior Vice President
Chief Financial Officer
Motorola

Michele Aguilar Carter
Senior Vice President
Human Resources
Motorola

A. Peter Lawson
Executive Vice President
General Counsel and Secretary
Motorola

Karen P. Tandy
Senior Vice President
Public Affairs and Communications
Motorola

Leslie Kenna
Senior Vice President
Chief Information Officer
Motorola

Michael Annas
Corporate Vice President
Corporate Development and Ventures
Motorola

Investor Relations

BOARD OF DIRECTORS

(*) denotes

(*) David W. Dorman
Non-Executive Chairman of the Board, Motorola, Inc.

(*) Gregory Q. Brown
Co-Chief Executive Officer, Motorola, Inc., and Chief Executive Officer, Enterprise Mobility Solutions and Networks business

(*) Dr. Sanjay K. Jha
Co-Chief Executive Officer, Motorola, Inc., and Chief Executive Officer, Mobile Devices and Home business

(*) William R. Hambrecht
Chairman and Chief Executive Officer of WR Hambrecht + Co

(*) Keith A. Meister
Vice Chairman of the Board of Icahn Enterprises G.P., Inc., the general partner of Icahn Enterprises L.P.

(*) Thomas J. Meredith
General Partner and Co-Founder, Meritage Capital L.P. and Chief Executive Officer, MVI Capital

(*) Samuel C. Scott III
Retired; Former Chairman, President and Chief Executive Officer, Corn Products International

(*) James R. Stengel
President and Chief Executive Officer, The Jim Stengel Company, LLC

(*) Anthony J. Vinciquerra
Chairman and Chief Executive Officer, Fox Networks Group

(*) Douglas A. Warner III
Former Chairman of the Board, J.P. Morgan Chase & Co.

(*) Dr. John A. White
Former Chancellor and Distinguished Professor, University of Arkansas

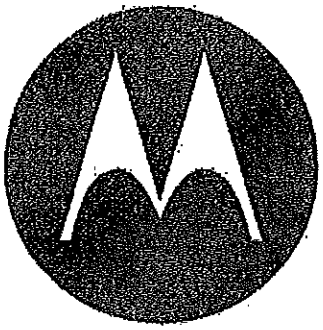
07/02/2010

Motorola, Inc.

Type	Appointed Entity	Date Last Elected
Assistant Secretary	Mark Hacker	
Assistant Secretary	Patricia Kall	06/08/2010
Assistant Secretary, BMS, FL	Luisa Gamboa	11/20/2008
Assistant Secretary, Corporate Law, IL01-11th FL	Carol Forsyte	
Assistant Secretary, Corporate Law, IL01-11th FL	Jeffrey A. Brown	
Assistant Secretary, Corporate Law, IL01-11th FL	Jennifer Lagunas	12/21/2009
Assistant Secretary, Corporate Law, IL01-11th FL	Jonathan P. Meyer	
Assistant Secretary, Corporate Law, IL01-3rd Fl	Michelle Warner	
Assistant Secretary, EMS, MD09	Sheldon Smith	04/21/2009
Assistant Secretary, FL	Barbara Doutre	
Assistant Secretary, Government And Public Safety, Enterprise Mobility Solutions Business - NJ01, IL01	Rich Brancale	
Assistant Secretary, Government and Public Safety, Enterprise Mobility Solutions Business, CA25	David Little	
Assistant Secretary, Government And Public Safety, Enterprise Mobility Solutions Business, IL02	Bruce Marley	
Assistant Secretary, Government And Public Safety, Enterprise Mobility Solutions Business, IL02	Christine Perochena	
Assistant Secretary, Government And Public Safety, Enterprise Mobility Solutions Business, IL02	Ric Blackwell	
Assistant Secretary, Government And Public Safety, Enterprise Mobility Solutions Business, IL02 - 5th FL	Georgia Vlamis	
Assistant Secretary, Government And Public Safety, Enterprise Mobility Solutions Business, IL75	Lewis Steverson	
Assistant Secretary, Home, PA06	John Silverio	
Assistant Secretary, IL01 3rd Floor	George Selby	
Assistant Secretary, IL02	Judith Jean-Pierre	
Assistant Secretary, Mobile Devices Law, Il93/4th FL	Scott Offer	
Assistant Secretary, Mobile Devices, IL93	Manual Cuevas	
Assistant Secretary, Mobile Devices, IL93	Neill Taylor	
Assistant Treasurer	Perry F. Rowicki	
Assistant Treasurer - Investments	Alfred Andrew Steiner, Jr.	
Assistant Treasurer, Capital Markets	Michele Tracy	
Co-Chief Executive Officer, Motorola, Inc., and Chief Executive Officer, Enterprise Mobility Solutions and Networks business	Gregory Q. Brown	05/04/2010
Co-Chief Executive Officer, Motorola, Inc., and Chief Executive Officer, Mobile Devices and Home business	Sanjay K. Jha	05/04/2010
Corporate Vice Persident, Global Operations, Home Business	MS Gay	
Corporate Vice President and President, Greater China, Mobile Devices Business	Frank Meng	
Corporate Vice President, Advanced Technology & Research and Emerging Business Office,	David Borth	

Enterprise Mobility Solutions Business		
Corporate Vice President, Asia Pacific Government and Enterprise Markets, Enterprise Mobility Solutions Business	Phey Teck Moh	
Corporate Vice President, Broadband Home Solutions, CPE Engineering, Home Business	Marc Kauffman	
Corporate Vice President, Business General Manager Companion Products, Mobile Devices business	Wayne White	
Corporate Vice President, Business Operations, Mobile Devices business	Juergen Stark	
Corporate Vice President, China and Korea Design Centers, Mobile Devices Business	Scott Steele	
Corporate Vice President, Corporate Development and Ventures	Michael D. Annes	
Corporate Vice President, EMEA Government and Enterprise Markets, Enterprise Mobility Solutions Business	Manuel Torres	
Corporate Vice President, Finance, Audit Services	Teri Valentine	
Corporate Vice President, Finance, Chief Accounting Officer	John K. Wozniak	11/03/2009
Corporate Vice President, Finance, Chief Economist, Strategic Transactions and Security, Corporate	Tom Davis	
Corporate Vice President, Finance, Corporate Financial Planning and Analysis	Kyle Spainhour	
Corporate Vice President, Finance, Customer Financial Services	Gary Tatje	
Corporate Vice President, Finance, Enterprise Mobility Solutions Business	Ed Hughes	
Corporate Vice President, Finance, Global Tax, Corporate	Janet M. Riley	
Corporate Vice President, Finance, Home and Networks Mobility Business and Chief Procurement Officer	Rich Valin	
Corporate Vice President, Finance, Investor Relations	Dean Lindroth	
Corporate Vice President, Finance, Product Business Case & Pricing Optimization, Business Optimization Center, Mobile Devices Business	Dennis Olis	
Corporate Vice President, General Manager Broadband Solutions Group, Home Business	Alan Lefkof	
Corporate Vice President, Global ASTRO Products and Solutions, Enterprise Mobility Solutions Business	Brenda Herold	
Corporate Vice President, Global Manufacturing, Distribution and Transportation, Mobile Devices Business	E. L. Tay	
Corporate Vice President, GM Americas QAM STB, Home Business	Larry Robinson	
Corporate Vice President, Hardware Development, Mobile Devices Business	Gary Weiss	
Corporate Vice President, Human Resources, Corporate Functions HR, Rewards, Talent Management & Development Centers of Expertise	Robert Cabanelas	10/13/2009
Corporate Vice President, Human Resources, Enterprise Mobility Solutions Business	Chris Oulmet	
Corporate Vice President, Human Resources, Home and Networks Mobility Business	Denise Haylor	
Corporate Vice President, Human Resources, Mobile Devices business	Carey Dassatti	
Corporate Vice President, Industrial Design and User Interface, Portfolio Management Co-Lead, Mobile Devices business	Jim Wicks	
Corporate Vice President, Information Technology Operations, Corporate	Cathie Kozik	
Corporate Vice President, Information Technology, Broadband Mobility Solutions Run, Corporate	Mike Guggemos	
Corporate Vice President, Information Technology, Mobile Devices business	Walt Oswald	
Corporate Vice President, Innovation Products and European Products, Mobile Devices Business	Iqbal Arshad	
Corporate Vice President, Innovation Products, Mobile Devices Business	Roger Jellicoe	
Corporate Vice President, Latin America Government and Enterprise Markets, Enterprise Mobility Solutions Business	Oscar Rojas	
Corporate Vice President, Law, Intellectual Property Strategy, Mobile Devices Business	Kirk Dailey	
Corporate Vice President, Law, Intellectual Property Transactions, Corporate	Char Whitaker	

Corporate Vice President, Law, Labor/Employment, Ethics & Compliance	Jill Goldy
Corporate Vice President, Law, Litigation	George Selby
Corporate Vice President, Law, Securities, Corporate	Carol Forsyte
Corporate Vice President, North America Business and General Manager, North America Go-To-Market, Mobile Devices Business	Jeff Miller
Corporate Vice President, North America Cable and Telco Sales, Home Business	G. Bickley Remmey, III
Corporate Vice President, North America Enterprise Markets, Enterprise Mobility Solutions Business	Jim Welch
Corporate Vice President, North America Government and Commercial Markets, Enterprise Mobility Solutions Business	Kelly Kirwan
Corporate Vice President, ODM Products, Mobile Devices business	Fei Liu
Corporate Vice President, Post-Sales Support, Mobile Devices Business	Bernie Schaeffer
Corporate Vice President, Public Affairs and Communications, Chairman Motorola China	Ruey Bin Kao
Corporate Vice President, Quality and Compliance, Mobile Devices Business	Gloria Vanderhelden
Corporate Vice President, Research and Development, Networks Business	Sudhakar Ramakrishna
Corporate Vice President, Software and Services Product Management, Mobile Devices business	Christy Wyatt
Corporate Vice President, Software Development, Mobile Devices Business	Mahesh Veerina
Corporate Vice President, Strategy, Mobile Devices and Home business	John R. Bucher
Corporate Vice President, Supply Chain, Home business	Jim Brennan
Corporate Vice President, Supply Chain, Mobile Devices business and Procurement, Mobile Devices and Home business	Michael Fleming
Corporate Vice President, Wireless Networks Asia Pacific Go-to-Market, Networks Business	Mohammad Akhtar
Executive Vice President and President, Enterprise Mobility Solutions Business	Eugene A. Delaney
Executive Vice President, Law, General Counsel and Secretary to the Board	A. Peter Lawson
Fellow Chief Architect, Enterprise Mobility Solutions Business	Mario Derango
Fellow, Advanced Technology, Home Business	Paul Moroney
Fellow, Chief Architect, Integrated Command and Control/Private Broadband, Enterprise Mobility Solutions Business	Paul Steinberg
Fellow, Engine Systems, Mobile Devices Business	Ken Stewart
Fellow, Enterprise Mobility Solutions	Robert O'Dea
Fellow, Technology, Enterprise Mobility Solutions Business	Edward Barkan
Fellow, Technology, Enterprise Mobility Solutions Business	Robert Beach
Fellow, Telco Technology and Start-Ups, Home Business	Bill Weeks
Senior Vice President and General Manager, Networks Business	Bruce Brda
Senior Vice President and General Manager, Worldwide Enterprise Solutions & Wireless Network Solutions, Enterprise Mobility Solutions Business	Bob Sanders
Senior Vice President and Regional GM, Global Home Go-to-Market, Home business	Rob McLaughlin
Senior Vice President, Broadband Home Solutions General Manager, Home business	John Burke
Senior Vice President, Cellular Networks General Manager, Home and Networks Mobility Business	Fred Wright
Senior Vice President, Cellular Wireless Networks, Networks Business	Bruce M. Stone



2009 ANNUAL REPORT

MOTOROLA, INC.

About Motorola

Motorola (NYSE: MOT) is a global communications leader powered by a passion to invent and an unceasing commitment to advance the way the world connects. Our communication solutions allow people, businesses and governments to be better connected and more mobile.

We have been at the forefront of communication inventions and innovations for more than 80 years. We have achieved extraordinary accomplishments along the way – such as making the equipment that carried the first words from the moon and leading the cellular communication revolution with the development of the world's first handheld cellular phone. More recently, Motorola has taken leadership positions in solutions for public safety, enterprises, mobile computing, 4G communications and high definition video.

Today, Motorola offers a broad portfolio of technologies, solutions and services – including wireless handsets and smartphones, digital entertainment devices, video distribution systems, two-way radios, mission critical solutions, wireless and wireline broadband solutions, and end-to-end enterprise mobility solutions. We operate in numerous countries around the globe, tapping the creativity of diverse cultures and individuals.

The trends toward media mobility, ubiquitous connectivity and wireless flexibility, coupled with mobile lifestyles and business, continue to expand. With the rapid convergence of fixed and mobile broadband Internet and the growing demand for next-generation mobile communication solutions, our mission is to lead the next wave of innovative products that meet the expanding needs of our customers around the world.

At Motorola, our history is rich, our future is filled with opportunity, and the spirit of innovation is what drives us.

March 2010

Dear Fellow Shareholders:

In 2009, we navigated through very challenging global economic conditions. We focused on our customers, developed innovative products and solutions, increased total cash to more than $8 billion, and reduced our cost structure by $1.9 billion. In Mobile Devices, we substantially reduced our operating loss. In Enterprise Mobility Solutions and Home and Networks Mobility, we maintained market leadership and delivered solid operating profitability.

In February 2010, we provided an update on our plans to pursue the creation of two independent, publicly traded companies. We expect to complete the separation in the first quarter of 2011, with one company comprised of our Mobile Devices and Home businesses and the other company comprised of our Enterprise Mobility Solutions and Networks businesses. We believe that the separation will best position each business to successfully pursue its respective strategies and opportunities for growth.

Business review

2009 was a year of significant progress for our Mobile Devices business. Execution of our smartphone strategy showed tangible results with the launch of CLIQ™/DEXT™ with MOTOBLUR™ and DROID by Motorola/MILESTONE™, our first Android-based smartphones. During the year, Mobile Devices significantly reduced its cost structure and sharpened its focus in priority markets. With plans to further expand our portfolio of smartphones in 2010, we are well positioned to address the fastest growing segment of the handset market.

Our Enterprise Mobility Solutions business is a substantial franchise with leadership positions in many business and mission-critical communications markets. In 2009, our research and development continued to focus on delivering innovative products and solutions, such as our industry-leading APX™ two-way radio communications systems. We believe that our comprehensive product portfolio and market leadership make our Enterprise Mobility Solutions business well positioned for profitable growth as market conditions improve.

In Home and Networks Mobility, we remained the world's leading provider of digital entertainment devices in 2009 and shipped our 100 millionth digital entertainment device. We prioritized our research and development to deliver innovative video solutions for both consumers and operators and, through our acquisition activity, enhanced our portfolio with leading video-on-demand and digital security solutions. We also continued to invest in WiMAX and LTE, 4G wireless broadband solutions that deliver higher bandwidth speeds and enable richer mobile experiences.

continued –

Looking ahead

In 2010, we believe that improving market conditions and customer demand, as well as the continued convergence of mobility, computing, communications and the Internet, will provide the foundation for renewed growth. As two separate companies, we have the opportunity to strengthen our leadership positions for both companies in their respective markets. They will operate in attractive and growing industries and offer solutions that solve consumer needs, improve security, increase productivity and enable an increasingly mobile world.

As we prepare for separation, we will continue to focus on:

- Customers—Our customers depend on Motorola as an innovative partner that anticipates emerging trends and collaborates on technology roadmaps. We will continue to listen to our customers and create solutions that help them succeed.
- Innovation—We will differentiate our products through innovation and experiences. Our unique combination of technology, design and functionality create high-value, end-to-end solutions for our customers. We will take a leadership role in emerging consumer and enterprise demand trends and technology transitions through prioritized investments and an uncompromising commitment to quality.
- Brand—Motorola enjoys one of the most recognized brands in the world. We will continue to expand our brand strength across all of our businesses.
- Corporate responsibility—We believe that *doing business* and *doing the right thing* are not mutually exclusive for responsible global companies. We will continue to demonstrate our corporate responsibility by investing in our communities as well as reducing our environmental impact.
- People—We remember that people are at the heart of everything we do—from the incredibly innovative and dedicated Motorola team to the end users and consumers that we serve. We will continue to advance the way the world connects by focusing on the value we provide to people around the world.

We are excited about the opportunity ahead of us and look forward to providing a path for improved financial results and increased long-term shareholder value.

Regards,

Greg Brown
Co-CEO, Motorola, Inc.
CEO, Enterprise Mobility Solutions and Networks business

Sanjay Jha
Co-CEO, Motorola, Inc.
CEO, Mobile Devices and Home business

MOTOROLA, INC.
2009
FORM 10-K

08/04/2010

Name	Full Address	Motorola Subsidiary/Affiliate
@pos.com, Inc.	One Motorola Plaza, Holtsville, NY, 11742	Subsidiary
Access Spectrum, LLC	2 Bethesda Metro Center, Bethesda, MD, 20814, United States	Affiliate
Advanced International Electronic Equipment Company	Shuwaikh District, Street No. 1, Building 47, Office 4A, Kuwait	Affiliate
AgION Technologies, Inc.	60 Audubon Road, Wakefield, MA, 01880	Affiliate
AirClic, Inc.	411 South State Street, Newtown, PA, 18940	Affiliate
AirCommunications Information Services Limited	18F, Two Harbour Front, 22 Tak Fung Street, Hunghom, Kowloon, Hong Kong	Subsidiary
AirDefense Limited	Jays Close, Viables Industrial Estate, Basingstoke, RG22 4PD, UK	Subsidiary
AirDefense, Inc.	4800 North Point Parkway, Suite 100, Alpharetta, GA, 30022	Subsidiary
Antenna Software, Inc.	111 Town Square Place, Jersey City, NJ, 07310	Affiliate
Apprion, Inc.	1340 Space Park Way, Mountain View, CA, 94043	Affiliate
Bar-Mot Communication Ltd.	6, Amal St., Bat-Yam, Israel	Affiliate
bDNA Corporation	339 North Bernardo Avenue, Suite 206, Mountain View, CA, 94043	Affiliate
Beceem Communications Inc.	3960 Freedom Circle, Floor 1, Santa Clara, CA, 95054	Affiliate
Beeper Communications Israel Ltd.	147, Bialik St. Ramat-Gan, P.O.Box 1991, Ramat-Gan 52118, Israel	Subsidiary
Bermuda Holdings 2005, Inc.	1303 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Bluefire Security Technologies, Inc.	509 S. Exeter Street, Suite 220, Baltimore, MD, 21202	Affiliate
Camero, Inc.	Delta Building Level 3, Grand Netter Industrial Zone, P.O. Box 3521, Kfar Netter, 40593, Israel	Affiliate
CanvasM Technologies Limited	Oberal Gardens Estates, Chandivali	Affiliate
Celcom, Inc.	1303 E. Algonquin Road, Schaumburg IL	Subsidiary
Centel Cellular Company of Mexico	1303 E. Algonquin Road, Schaumburg IL	Subsidiary
China Internet Technology and Service Ltd.	6/F, C Zone, Research Institute of Tsinghua University, H-Tech Industrial Park (South Park), She...	Affiliate
CityLink Telecommunications Holdings Ltd	Registered Office Address, 1st Floor 89 Albert Embankment, London, SE1 7TP, United Kingdom	Affiliate
Clarlant Technologies, Corp.	6280 Manchester Boulevard, Suite 203, Buena Park, CA, 90621	Affiliate
CommLaunch Ventures L.P.	R.M.P.E. Building, Har Hotzvim, P.O. Box 45129, Jerusalem, 91450, Israel	Affiliate
CompXchange, Inc.	33 Reed Boulevard, Suite B, Mill Valley, CA, 94941	Affiliate
Covigo UK Limited	REGISTERED OFFICE: 7-8 Eghams Court Boston Drive, Bourne End, Buckinghamshire, SL8 5YS, United Ki...	Subsidiary
Covigo, Inc.	One Motorola Plaza, Holtsville, NY, 11742	Subsidiary
CRISNet, Inc.	756 E. Winchester Drive, Suite 150, Salt Lake City, UT, 84107	Subsidiary
Crossvue, Inc.	One Motorola Plaza, Holtsville, NY, 11742	Subsidiary
CWXT, Inc.	1303 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Dansk Beredskabskommunikation A/S	Sydvestvej 21, Glostrup, DK-2600, Denmark	Subsidiary
Data Net Corporation	10112 USA Today Way, Miramar, FL, 33025	Affiliate
DesignArt Networks Ltd.	4 Haharoshet, Street, Ra'anana, 43657, Israel	Affiliate
Dilithium Networks, Inc.	5401 Old Redwood Highway, Suite 100, Petaluma, CA, 94954	Affiliate
EIC Corporation Ltd.	Cedar House, 41 Cedar Avenue, Hamilton, HM 12, Bermuda	Affiliate
Express Telecommunications Co., Inc.	Unit 1802, Jollibee Plaza Building, F. Ortigas Avenue, Ortigas Center, Pasig City, Philippines	Affiliate
Fonbox, Inc.	2875 NE 191 Street, PH 1A, Aventura, FL, 33180	Affiliate
GoTV Networks, Inc.	14144 Venture Boulevard, Suite 300, Sherman Oaks, CA, 91423	Affiliate

GreenPeak Technologies B.V.	Catharijnesingel 30, 3511 GB, Utrecht, Netherlands	Affiliate
Guangzhou Jinpeng Mobile Communications System Limited	Room 406B, Management Building, Zhicheng Avenue, Guangzhou Economics & Technology Development Zon...	Affiliate
Hangzhou Eastcom Cellular Phone Co. Ltd.	Road No. 1, Hangzhou Economic & Technical Development Zone, Hangzhou, 310018, People's Republic o...	Affiliate
Hangzhou Motorola Cellular Equipment Co. Ltd.	Road No.1, Hangzhou Economic & Technical Development Zone, Hangzhou 310018, China	Subsidiary
Illinois Emerging Technologies Fund, L.P.	2255 West Harrison, Suite C, Chicago, IL, 60612	Affiliate
Incidentally Limited	P.O. Box 79, La Plaiderie St Peter Port, Guernsey, GY1 3DQ, Channel Islands	Subsidiary
InfoPower, Inc.	1303 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Integrian, Inc.	511 Davis Drive, Suite 300, Morrisville, NC, 27560	Affiliate
Intelleflex Corporation	2465 Augustine Drive, #102, Santa Clara, CA, 95054	Affiliate
Invisix, Inc.	1303 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Iridium Communications Inc.	6707 Democracy Blvd, Suite 300, Bethesda, MD, 20817	Affiliate
Iridium de Honduras S.A.	Edificio Fiallos Soto - No. 222, Tegucigalpa, Honduras	Subsidiary
Iridium El Salvador, S.A. de C.V.	Pasaje Senda Florida Nte #124, Col. Escalon, San Salvador, El Salvador	Subsidiary
Iridium India Telecom, Ltd.	India, India	Affiliate
Iridium SudAmerica Corporation	Av Principal de Los Cortijos de Lourdes, Edif. Maploca II, Piso 4, Caracas, 1071, Venezuela	Affiliate
Iridium SudAmerica Corporation	Av. Don Diego Cisneros, Edif. Calox International, Piso 2 Los Ruices, Caracas, 1070, Venezuela	Affiliate
Iridium U.S., L.P.	c/o Wheelwright Mathis PLC, 2151 East Broadway Suite 111, Tempe, AZ, 85282-8525	Subsidiary
Ischua Creek Holding Company, Inc.	9450 Very Road, Machias, NY, 14101	Subsidiary
Japan Mobile Telecommunication-system Association	ThinkPark Tower, 2-1-1 Osaki, Shinagawa-ku, Tokyo, 141-6021, Japan	Subsidiary
Jentro Technologies GmbH	Rosenheimer Strasse 145e, 81671 Munich, Germany	Affiliate
July Systems, Inc.	3945 Freedom Circle, Suite 910, Santa Clara, CA, 95054	Affiliate
Kineto Wireless, Inc.	1601 McCarthy Boulevard, Milpitas, CA, 95035	Affiliate
KXEN, Inc.	201 Mission Street, Suite 1950, San Francisco, CA, 94105-1831	Affiliate
Legend Silicon Corp.	440 Mission Court, Suite 210, Fremont, CA, 94539	Affiliate
Liferaft Software Corporation	One Longfellow Place #2421, Boston, MA, 02114	Affiliate
Lumidigm, Inc.	801 University Boulevard SE, Suite 302, Albuquerque, NM, 87106	Affiliate
Lux Ventures II, L.P.	245 Park Avenue, 24th Floor, New York, NY, 10167	Affiliate
MeshNetworks, Inc.	1064 Greenwood Blvd, Suite 400, Lake Mary, FL, 32746	Subsidiary
Metanetics Corporation	One Motorola Plaza, Holtsville, NY, 11742	Subsidiary
MI KK	Tokyo Aoyama, Aoki, Koma Law Office, Baker & McKenzie Foreign Law Office, 2-13-10 Nagata-Cho, Chi...	Subsidiary
Micro-Tag Temed Ltd.	Rotem Industrial Park, Arava, 86800, Israel	Affiliate
Milcom Technologies	485 North Keller Road, Suite 100, Maitland, FL, 32751	Affiliate
Military Commercial Technologies, Inc.	485 North Keller Road, Suite 100, Maitland, FL, 32751	Affiliate
Mobile Integrated Technologies, Inc.	One Motorola Plaza, Holtsville, NY, 11742	Subsidiary
Mobileye N.V.	Brantvijk 41, 1181 MS Amstelveen, Netherlands	Affiliate
Mocel, Inc.	1303 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Modiv Media, Inc.	1250 Hancock Street, Suite 502N, Quincy, MA, 02169	Affiliate
Molecular Imprints, Inc.	1807 West Braker Lane, Building C-100, Austin, TX, 78758-3605	Affiliate
Monterla Holdings, B.V.	Schouwburgplein 30-34, 3012 CL Rotterdam, Netherlands	Subsidiary
Motif, Inc.	27700A SW Parkway Avenue, Wilsonville, OR, 97070-9215	Subsidiary
Motorola (China) Electronics Ltd.	No. 10, 4th Avenue, TEDA, Tianjin, 300457, People's Republic of China	Subsidiary
Motorola (China) Finance Co. Ltd.	No. 5, 4th Avenue, TEDA, Tianjin, People's Republic of China	Subsidiary

Motorola (China) Investment Limited	No. 1, Wang Jing East Road, Chao Yang District, Beijing, 100102, People's Republic of China	Subsidiary
Motorola (China) Technologies Ltd.	No. 1, Wang Jing East Road, Chao Yang District, Beijing 100102, China	Subsidiary
Motorola (Suisse) S.A.	c/o Prorlep Renggli, Grafenaustrasse 3, Zug, 6304, Switzerland	Subsidiary
Motorola (Thailand) Limited	142 Two Pacific Place Bldg., 22nd Floor, Room 2201, Sukhumvit Road, Khwaeng Klongtoey, Khet Klong...	Subsidiary
Motorola A.B.	Box 1115, Kista, 16440, Sweden	Subsidiary
Motorola A/S	Sydvestvej 15, Glostrup, DK-2600, Denmark	Subsidiary
Motorola AE (Greece)	90, Kifissias Avenue, Maroussi, Athens, 151 25, Greece, Europe	Subsidiary
Motorola AirCommunication Limited (Dormant)	18F, Two Harbourfront, 22 Tak Fung Street Hunghom, Kowloon, Hong Kong	Subsidiary
Motorola Arabia, Inc.	1303 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Motorola Argentina S.A.	Avenida del Libertador 1855, B1638BGE Vicente Lopez, Buenos Aires, 1006, Argentina	Subsidiary
Motorola Asia Limited	18F, Two Harbourfront, 22 Tak Fung Street Hunghom, Kowloon, Hong Kong	Subsidiary
Motorola Asia Pacific Limited	18F, Two Harbourfront, 22 Tak Fung Street Hunghom, Kowloon, Hong Kong	Subsidiary
Motorola Asia Pacific Pte Ltd	Motorola Innovation Center 12 Ang Mo Kio Street 64, Ang Mo Kio Industrial Park 3, Singapore, Sing...	Subsidiary
Motorola Asia Treasury Pte Ltd	Motorola Innovation Center 12 Ang Mo Kio Street 64, Ang Mo Kio Industrial Park 3, Singapore, Sing...	Subsidiary
Motorola Australia Proprietary Limited	10 Wesley Court, Tally Ho Business Park, East Burwood, Melbourne, Victoria, 3151, Australia	Subsidiary
Motorola B.V.	GEMS, Mobile Devices, Connected Homes, Networks:, Marconibaan 57, 3439 MR Nlewegein, Netherlands	Subsidiary
Motorola Bulgaria EAD	Mladost District, z.k. Mladost 4, Business Park Sofia, building, Building 10, Floor 2, 1000 Sofia...	Subsidiary
Motorola Canada Limited/Motorola Canada Limitée	8133 Warden Avenue, Markham, ON, L6G 1B3, Canada	Subsidiary
Motorola Card, Inc.	1301 E. Algonquin Road, Schaumburg IL, 60196	Subsidiary
Motorola Chile S.A.	Avenida Nueva Tajamar 481, Oficina 1702, Torre Norte Las Condes, Santiago, Chile	Subsidiary

Page 1 of 3 Next >> | End

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County of Nassau
Inter-Departmental Memo

To: JANE LEVINE
Chief Deputy Comptroller

From: HELENA E. WILLIAMS
Deputy County Executive for Compliance

Date: June 28, 2005

Subject: Contract No. CFPW05000024 – Motorola Police Land Mobile Radio System

This memorandum confirms our understanding that purchase of optional ancillary components set forth in Exhibit E of the above-referenced Agreement (the "Agreement") may be made only by a change order to the Agreement approved pursuant to the procedure set forth in Section 30 of the Agreement. While the Legislature's approval of the Agreement authorizes the purchase of $1.4 million worth of optional ancillary components, as well as change orders for unanticipated contingencies in the amount of $1.6 million without further legislative approval, we understand that no moneys will be encumbered by the Comptroller until a change order has been approved for the purchase of an optional ancillary component or to pay for an unanticipated contingency. We further agree that the Comptroller should be invited to participate in the reviewing of each change order request and that no change order shall be approved without first consulting the Comptroller.

cc: James H. Lawrence
Peter J. Gerbasi

AMENDMENT NO. THREE

AMENDMENT, dated as of _____, 2010 (together with the exhibit attached hereto, this "Amendment"), between (i) Nassau County, a municipal corporation having its principal office at 1550 Franklin Avenue, Mineola, New York 11501 (the "County"), acting for and on behalf of the Nassau County Police Department, having its principal office at 1490 Franklin Avenue, Mineola, New York 11501, and (ii) Motorola, Inc., having its principal office at 1303 East Algonquin Road, Schaumburg, Illinois, 60196 (the "Contractor").

WITNESSETH:

WHEREAS, pursuant to County contract number CFPW05000024 between the County and the Contractor, executed on behalf of the County on June 30, 2005 and the amendment entered into thereafter (the "Original Agreement") the Contractor performs certain services for the County in connection with the Nassau County Police Department Land Mobile Radio Modernization Project, which services are more fully described in the Original Agreement (the services contemplated by the Original Agreement, the "Services"); and

WHEREAS, as of December 2009, pursuant to Change Order number 10 CLPD09000017, the term of the Original Agreement is from June 30, 2005 to December 31, 2010 ("Original Term"); and

WHEREAS, the County and the Contractor desire to extend the term of the Original Agreement; and

WHEREAS, the County and the Contractor desire to change the distribution of payment and warranty to insure the coordination of the installation of the system with the completion of system testing and final system acceptance; and

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Amendment, the parties agree as follows:

1. Pursuant to Section 30, Amendment, contained in the Original Agreement:
   i. Change Order # 13, attached hereto as Exhibit A, sets forth equipment return and replacement.
   ii. Change Order #14, attached hereto as Exhibit A, sets forth revisions to the coverage acceptance test plan.
   iii. Change Order # 15, attached hereto as Exhibit A, sets forth the purchase of required equipment.

2. Payment Terms. (a) The amounts paid by the County to the Contractor under Section 4(a) Amount of Consideration, of the Original Agreement, is amended as set forth below, and in Exhibit B attached hereto (the "Amended Payment").

(b) Milestone Payment number 8 "CATP Completion and Critical Buildings,"contained in Section 4(a) of the Original Agreement shall be broken down into three separate payments (a), (b), and (c), disbursed accordingly, as more fully set forth in Exhibit B attached hereto.

(c) Milestone Payment number 12 "Final System Acceptance," contained in Section 4(a) of the Original Agreement shall be broken down to provide for conditional and final acceptance, resulting in three separate payments (a), (b) and (c), disbursed accordingly, as more fully set forth in Exhibit B attached hereto.

3. Term. Section 28 of the Original Agreement, Term, shall be amended by Change Order #16, attached hereto as Exhibit B, to extend the Term for two (2) years until December 31, 2013, or upon final system acceptance, whichever occurs first.

4. Warranties. Section 25(b) of the Original Agreement, shall be amended in part by Change Order #16, attached hereto as Exhibit B, to provide that Contractor warrants and represents that all products or Deliverables specified in and furnished by or through Contractor under this Agreement substantially conform to the specifications set forth in the Exhibits to this Agreement and the proposal submitted to Nassau County by the Contractor and will continue to do so for a period of two (2) years, which two (2) years shall commence sixty (60) days after the date of conditional acceptance by the County (the "Warranty Period"). Conditional acceptance is considered beneficial use and will start a 60-day interim warranty. Upon expiration of the 60-day interim warranty the contracted 2-year system warranty will start.

5. Full Force and Effect. All the terms and conditions of the Original Agreement not expressly amended by this Amendment shall remain in full force and effect and govern the relationship of the parties for the term of the Original Agreement.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written.

MOTOROLA, INC.

By: _____
Name: David R. White, Jr.
Title: MSSI Vice President
Date: 11-23-2010

NASSAU COUNTY

By: _____
Name: Richard Walker
Title: Deputy County Executive
Date: 3/23/11

PLEASE EXECUTE IN BLUE INK

STATE OF NEW ~~YORK~~ Jersey)

)ss.:

COUNTY OF ~~NASSAU~~ Passaic)

On the 23rd day of November in the year 2010 before me personally came David R. White, Jr. to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Orange; that he or she is the MSSI Vice President of Motorola, Inc., the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

Christina Albanese
NOTARY PUBLIC

Christina Albanese
Notary Public
New Jersey
My Commission Expires 8-17-14

STATE OF NEW YORK)

)ss.:

COUNTY OF NASSAU)

On the 23 day of March in the year 2011 before me personally came Richard Rhoden to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of NASSAU; that he or she is a **Deputy County Executive** of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

NOTARY PUBLIC
Doreen R Pennica

DOREEN R. PENNICA
NOTARY PUBLIC
STATE OF NEW YORK
COMMISSION NO. 01PE6170832
EXPIRES 7/23/2011

EXHIBIT A

Nassau County Public Safety Communications System
Motorola Change Order # 013

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 013
Change Order Name: Subscriber Exchange
Date of Change Order: 9/29/09
Pricing Valid until: N/A

Change Requested:
This change order is to authorize and document the return of 438 excess XTS5000 portable radios with associated carry cases and the shipment of equipment listed below:

Returned Equipment

Description	Qty	Credit
XTS5000 Portable Radio	438	$1,669,450
NTN8381 Carrying Case XTS5000	438	$11,103
Less Restocking Charge		$0
Less Shipping		$850
Total Credit		**$1,679,703**

Replacement Equipment Purchase 1

Description	Ship date	Qty	Price
XTL5000 Motorcycle style	ASAP	80	$395,530
XTL2500 one piece dash mount	ASAP	100	$338705
XTL2500 2 piece remote mount	ASAP	100	$352,981
Vehicle chargers	ASAP	100	$32,370
Shipping			$2,975
Purchase 1 Total			**$1,122,561**

Replacement Equipment Purchase 2

Description	Ship date	Qty	Price
XTL2500 one piece dash mount	10/15/2010	110	$372,576
XTL2500 2 piece remote mount	10/15/2010	42	$148252
Vehicle chargers	10/15/2010	107	$34,636
Shipping			$1,679
Purchase 2 Total			$557,142

Equipment Swap Summary

Description	Price
Total Credit	**$1,679,703**
Replacement Equipment Purchase 1	**$1,122,561**
Replacement Equipment Purchase 1	**$557,142**
Credit Balance	**$0**

Reason for Change:
The subscriber equipment needed has changed since the contract was signed in June 2005.

Cost Impact: **Total: $ 0.00**

Current Contract Value: **$ 44,638,706.00**

Net Change in Contract Value:	**$ 0.00**
Revised Contract Value:	**$ 44,638,706.00**

Schedule Impact:
None

Operational Impact:
This change order will allow the installation of new subscriber equipment in all Nassau County Police Department vehicles.

Payment Terms:

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)	NCPD Authorized Representative	Motorola Project Manager 10/1/09
	Inspector NCPD NCPW Authorized Representative	GARY FLEISCH PM Motorola Authorized Representative
Date:		Date: 10/1/09

Nassau County Public Safety Communications System
Motorola Change Order # 013

Returned Equipment List

FO#	Model #	Qty	Unit price	Ext. Price	Invoice #	Invoice Date
3320020170047	H18SDF9PW6 N	38	1,791.14	68,063.32	12500211	8/28/2008
	Q806	38	427.45	16,243.10		
	H38	38	1,245.00	47,310.00		
	Q361	38	249.00	9,462.00		
	H14	38	62.25	2,365.50		
	H885	38	84.00	3,192.00		
	Q667	38	8.30	315.40		
	H301	38	-8.30	-315.40		
	H207	38	-47.31	-1,797.78	DEL: BATTERY ALTOGETHER (800 MHZ HN	
	H18SDF9PW6 N	50	1,791.14	89,557.00	12500211	8/28/2008
	Q806	50	427.45	21,372.50		
	H38	50	1,245.00	62,250.00		
	Q361	50	249.00	12,450.00		
	H14	50	62.25	3,112.50		
	H885	50	84.00	4,200.00		
	Q667	50	8.30	415.00		
	H301	50	-8.30	-415.00		
	H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
	H18SDF9PW6 N	50	1,791.14	89,557.00	12500211	8/28/2008
	Q806	50	427.45	21,372.50		
	H38	50	1,245.00	62,250.00		
	Q361	50	249.00	12,450.00		
	H14	50	62.25	3,112.50		
	H885	50	84.00	4,200.00		
	Q667	50	8.30	415.00		
	H301	50	-8.30	-415.00		
	H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
	H18SDF9PW6 N	50	1,791.14	89,557.00	12500211	8/28/2008
	Q806	50	427.45	21,372.50		
	H38	50	1,245.00	62,250.00		
	Q361	50	249.00	12,450.00		
	H14	50	62.25	3,112.50		
	H885	50	84.00	4,200.00		
	Q667	50	8.30	415.00		
	H301	50	-8.30	-415.00		
	H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
	H18SDF9PW6 N	50	1,791.14	89,557.00	12500211	8/28/2008
	Q806	50	427.45	21,372.50		
	H38	50	1,245.00	62,250.00		
	Q361	50	249.00	12,450.00		
	H14	50	62.25	3,112.50		
	H885	50	84.00	4,200.00		

Q667	50	8.30	415.00		
H301	50	-8.30	-415.00		
H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
H18SDF9PW6 N	50	1,791.14	89,557.00	12500211	8/28/2008
Q806	50	427.45	21,372.50		
H38	50	1,245.00	62,250.00		
Q361	50	249.00	12,450.00		
H14	50	62.25	3,112.50		
H885	50	84.00	4,200.00		
Q667	50	8.30	415.00		
H301	50	-8.30	-415.00		
H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
H18SDF9PW6 N	50	1,791.14	89,557.00	12500211	8/28/2008
Q806	50	427.45	21,372.50		
H38	50	1,245.00	62,250.00		
Q361	50	249.00	12,450.00		
H14	50	62.25	3,112.50		
H885	50	84.00	4,200.00		
Q667	50	8.30	415.00		
H301	50	-8.30	-415.00		
H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
H18SDF9PW6 N	50	1,791.14	89,557.00	12500444	8/29/2008
Q806	50	427.45	21,372.50		
H38	50	1,245.00	62,250.00		
Q361	50	249.00	12,450.00		
H14	50	62.25	3,112.50		
H885	50	84.00	4,200.00		
Q667	50	8.30	415.00		
H301	50	-8.30	-415.00		
H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	
H18SDF9PW6 N	50	1,791.14	89,557.00	12502407	9/17/2008
Q806	50	427.45	21,372.50		
H38	50	1,245.00	62,250.00		
Q361	50	249.00	12,450.00		
H14	50	62.25	3,112.50		
H885	50	84.00	4,200.00		
Q667	50	8.30	415.00		
H301	50	-8.30	-415.00		
H207	50	-47.31	-2,365.50	DEL: BATTERY ALTOGETHER (800 MHZ HN	

Replacement Equipment List

1-Piece Dash Mount

Site	BidItm	Qty	Description
MOBILE	DASH-MOUNT	210	XTL2500 UHF R2 450-520 MHZ, 10-40 W
MOBILE	DASH-MOUNT	210	ADD: CONTROL HEAD SOFTWARE
MOBILE	DASH-MOUNT	210	ADD: XTL2500 CONTROL HEAD
MOBILE	DASH-MOUNT	210	ADD: DASH MOUNT
MOBILE	DASH-MOUNT	210	ENH: SOFTWARE ASTRO DIGITAL CAI ENH: SOFTWARE
MOBILE	DASH-MOUNT	210	SMARTZONE/SINGLETONE
MOBILE	DASH-MOUNT	210	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	DASH-MOUNT	210	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	DASH-MOUNT	210	ADD: ANTENNA 1/4 WAVE 470-512 MHZ
MOBILE	DASH-MOUNT	210	ADD: PALM MICROPHONE
MOBILE	DASH-MOUNT	210	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	DASH-MOUNT	210	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	DASH-MOUNT	210	ADD: ADP SOFTWARE DSP BASED CRYPTO
MOBILE	DASH-MOUNT	210	XTL2500 UHF R2 450-520 MHZ, 10-40 W
MOBILE	DASH-MOUNT	210	ADD: CONTROL HEAD SOFTWARE
MOBILE	DASH-MOUNT	210	ADD: XTL2500 CONTROL HEAD
MOBILE	DASH-MOUNT	210	ADD: DASH MOUNT
MOBILE	DASH-MOUNT	210	ENH: SOFTWARE ASTRO DIGITAL CAI ENH: SOFTWARE
MOBILE	DASH-MOUNT	210	SMARTZONE/SINGLETONE
MOBILE	DASH-MOUNT	210	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	DASH-MOUNT	210	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	DASH-MOUNT	210	ADD: ANTENNA 1/4 WAVE 470-512 MHZ
MOBILE	DASH-MOUNT	210	ADD: PALM MICROPHONE
MOBILE	DASH-MOUNT	210	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	DASH-MOUNT	210	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	DASH-MOUNT	210	ADD: ADP SOFTWARE DSP BASED CRYPTO

2-Piece Remote Mount

Site	BidItm	Qty	Description
MOBILE	REAR-MOUNT	142	XTL2500 UHF R2 450-520 MHZ, 10-40 W
MOBILE	REAR-MOUNT	142	ADD: CONTROL HEAD SOFTWARE
MOBILE	REAR-MOUNT	142	ADD: XTL2500 CONTROL HEAD
MOBILE	REAR-MOUNT	142	ENH: SOFTWARE ASTRO DIGITAL CAI
MOBILE	REAR-MOUNT	142	ENH: SOFTWARE SMARTZONE/SINGLETONE
MOBILE	REAR-MOUNT	142	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	REAR-MOUNT	142	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	REAR-MOUNT	142	ADD: ANTENNA 1/4 WAVE 470-512 MHZ
MOBILE	REAR-MOUNT	142	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	REAR-MOUNT	142	ADD: PALM MICROPHONE
MOBILE	REAR-MOUNT	142	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	REAR-MOUNT	142	ADD: THUMB SCREW REMOTE MOUNT
MOBILE	REAR-MOUNT	142	ADD: ADP SOFTWARE DSP BASED CRYPTO
MOBILE	REAR-MOUNT	142	XTL2500 UHF R2 450-520 MHZ, 10-40 W
MOBILE	REAR-MOUNT	142	ADD: CONTROL HEAD SOFTWARE
MOBILE	REAR-MOUNT	142	ADD: XTL2500 CONTROL HEAD
MOBILE	REAR-MOUNT	142	ENH: SOFTWARE ASTRO DIGITAL CAI
MOBILE	REAR-MOUNT	142	ENH: SOFTWARE SMARTZONE/SINGLETONE
MOBILE	REAR-MOUNT	142	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	REAR-MOUNT	142	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	REAR-MOUNT	142	ADD: ANTENNA 1/4 WAVE 470-512 MHZ
MOBILE	REAR-MOUNT	142	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	REAR-MOUNT	142	ADD: PALM MICROPHONE
MOBILE	REAR-MOUNT	142	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	REAR-MOUNT	142	ADD: THUMB SCREW REMOTE MOUNT
MOBILE	REAR-MOUNT	142	ADD: ADP SOFTWARE DSP BASED CRYPTO

Motorcycles

Site	BidItm	Qty	Description
MOBILE	MOTORCYCLE	142	XTL 5000 UHF R2 450-520 MHZ 10-45 W
MOBILE	MOTORCYCLE	142	ENH: SOFTWARE ASTRO DIGITAL CAI
MOBILE	MOTORCYCLE	142	ENH: 3600 SMARTZONE OPERATION
MOBILE	MOTORCYCLE	142	ADD: XTL5000 CONTROL HEAD
MOBILE	MOTORCYCLE	142	ADD: CONTROL HEAD SOFTWARE
MOBILE	MOTORCYCLE	142	ADD: XTL MOTORCYCLE CH SFWR
MOBILE	MOTORCYCLE	142	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	MOTORCYCLE	142	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	MOTORCYCLE	142	ADD: ADP SOFTWARE DSP BASED CRYPTO
MOBILE	MOTORCYCLE	142	ADD: REMOTE MOUNT MOTORCYCLE
MOBILE	MOTORCYCLE	142	ADD: ANT LOW PROFILE 450-512 MH
MOBILE	MOTORCYCLE	142	ADD: MOTORCYCLE PALM MICROPHONE
MOBILE	MOTORCYCLE	142	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	MOTORCYCLE	142	ADD: BLACK WEATHER RESISTANT MOTORC
MOBILE	MOTORCYCLE	142	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	MOTORCYCLE	142	XTL 5000 UHF R2 450-520 MHZ 10-45 W
MOBILE	MOTORCYCLE	142	ENH: SOFTWARE ASTRO DIGITAL CAI
MOBILE	MOTORCYCLE	142	ENH: 3600 SMARTZONE OPERATION
MOBILE	MOTORCYCLE	142	ADD: XTL5000 CONTROL HEAD
MOBILE	MOTORCYCLE	142	ADD: CONTROL HEAD SOFTWARE
MOBILE	MOTORCYCLE	142	ADD: XTL MOTORCYCLE CH SFWR
MOBILE	MOTORCYCLE	142	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	MOTORCYCLE	142	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	MOTORCYCLE	142	ADD: ADP SOFTWARE DSP BASED CRYPTO
MOBILE	MOTORCYCLE	142	ADD: REMOTE MOUNT MOTORCYCLE
MOBILE	MOTORCYCLE	142	ADD: ANT LOW PROFILE 450-512 MH
MOBILE	MOTORCYCLE	142	ADD: MOTORCYCLE PALM MICROPHONE
MOBILE	MOTORCYCLE	142	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	MOTORCYCLE	142	ADD: BLACK WEATHER RESISTANT MOTORC
MOBILE	MOTORCYCLE	142	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	MOTORCYCLE	142	XTL 5000 UHF R2 450-520 MHZ 10-45 W
MOBILE	MOTORCYCLE	142	ENH: SOFTWARE ASTRO DIGITAL CAI
MOBILE	MOTORCYCLE	142	ENH: 3600 SMARTZONE OPERATION
MOBILE	MOTORCYCLE	142	ADD: XTL5000 CONTROL HEAD
MOBILE	MOTORCYCLE	142	ADD: CONTROL HEAD SOFTWARE
MOBILE	MOTORCYCLE	142	ADD: XTL MOTORCYCLE CH SFWR
MOBILE	MOTORCYCLE	142	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	MOTORCYCLE	142	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	MOTORCYCLE	142	ADD: ADP SOFTWARE DSP BASED CRYPTO
MOBILE	MOTORCYCLE	142	ADD: REMOTE MOUNT MOTORCYCLE
MOBILE	MOTORCYCLE	142	ADD: ANT LOW PROFILE 450-512 MH
MOBILE	MOTORCYCLE	142	ADD: MOTORCYCLE PALM MICROPHONE
MOBILE	MOTORCYCLE	142	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	MOTORCYCLE	142	ADD: BLACK WEATHER RESISTANT MOTORC
MOBILE	MOTORCYCLE	142	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
MOBILE	MOTORCYCLE	142	XTL 5000 UHF R2 450-520 MHZ 10-45 W
MOBILE	MOTORCYCLE	142	ENH: SOFTWARE ASTRO DIGITAL CAI

Nassau County Public Safety Communications System
Motorola Change Order # 013

Site	BidItm	Qty	Description
MOBILE	MOTORCYCLE	142	ENH: 3600 SMARTZONE OPERATION
MOBILE	MOTORCYCLE	142	ADD: XTL5000 CONTROL HEAD
MOBILE	MOTORCYCLE	142	ADD: CONTROL HEAD SOFTWARE
MOBILE	MOTORCYCLE	142	ADD: XTL MOTORCYCLE CH SFWR
MOBILE	MOTORCYCLE	142	ENH: ASTRO PROJECT 25 TRUNKING SOFT
MOBILE	MOTORCYCLE	142	ENH: ENHANCED DIGITAL ID DISPLAY
MOBILE	MOTORCYCLE	142	ADD: ADP SOFTWARE DSP BASED CRYPTO
MOBILE	MOTORCYCLE	142	ADD: REMOTE MOUNT MOTORCYCLE
MOBILE	MOTORCYCLE	142	ADD: ANT LOW PROFILE 450-512 MH
MOBILE	MOTORCYCLE	142	ADD: MOTORCYCLE PALM MICROPHONE
MOBILE	MOTORCYCLE	142	ADD: AUXILARY SPKR SPECTRA 7.5 WATT
MOBILE	MOTORCYCLE	142	ADD: BLACK WEATHER RESISTANT MOTORC
MOBILE	MOTORCYCLE	142	ENH: 2 YEAR REPAIR SERVICE ADVANTAG
PORTABLE	VEH.CHARGR	207	IMPRES XTS VEHICULAR CHARGER

Nassau County Public Safety Communications System
Motorola Change Order # 015

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 015
Change Order Name: Prospect Fence Modification
Date of Change Order: 07/27/10
Pricing Valid until: 09/30/10

Change Requested:

This Change Order is to modify the fence that encloses the tower and shelters in the rear of the new Public Safety Center at 1194 Prospect Ave.

Pricing is based on the attached drawing and the site visit on 6/8/10 0

Utility Detection, Fencing and Fence Grounding –

- Investigate and locate subsurface utilities and advise of their approximate location with marking paint, stakes, flags, or chalk on the ground surface.
- Remove approximately 39 linear feet of existing fencing. Provide and install approximately 93 linear feet of anti-climb chain link fencing to match existing (will reuse as much of the removed fence as possible-anything not used to be removed from site and properly disposed of). All work is to be union labor.
- Provide and install fence grounding components for new fencing and tie into existing ground ring. Includes grounding of all posts within 6' of all structures or metallic site components and all corner posts-approximately 10 posts (mid-span posts not within 6' of existing structures or metallic site components will not require bonding to ground ring).
- Does not include jersey barriers and site touch up in area of existing vault.

Reason for Change:

The Fire Marshall requires the fence to be moved to allow obstruction free egress from all building exits currently enclosed by the compound fence. This also allows for better space flexibility for (future) phase three construction and insures that the Radio Tower Area is fully secured with fence around entire perimeter.

Cost Impact: **Total: $ 32,936.00**

Current Contract Value:	**$ 44,638,706.00**
Net Change in Contract Value:	**$ 32,936.00**
Revised Contract Value:	**$ 44,671,642.00**

Schedule Impact: None

Operational Impact: This change order will allow the radio tower to be secured with a locked fence.

Payment Terms: $32,936.00 – Due upon completion of utility mark outs, fence installation and fence grounding

Total Change Order - $32,936.00

Nassau County Public Safety Communications System
Motorola Change Order # 015

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)	NCPD Authorized Representative	Motorola Project Manager 8/10/10
	NCPW Authorized Representative	Motorola Authorized Representative
Date: 8/5/10		Date: 8-12-2010

Nassau County Public Safety Communications System
Motorola Change Order # 015

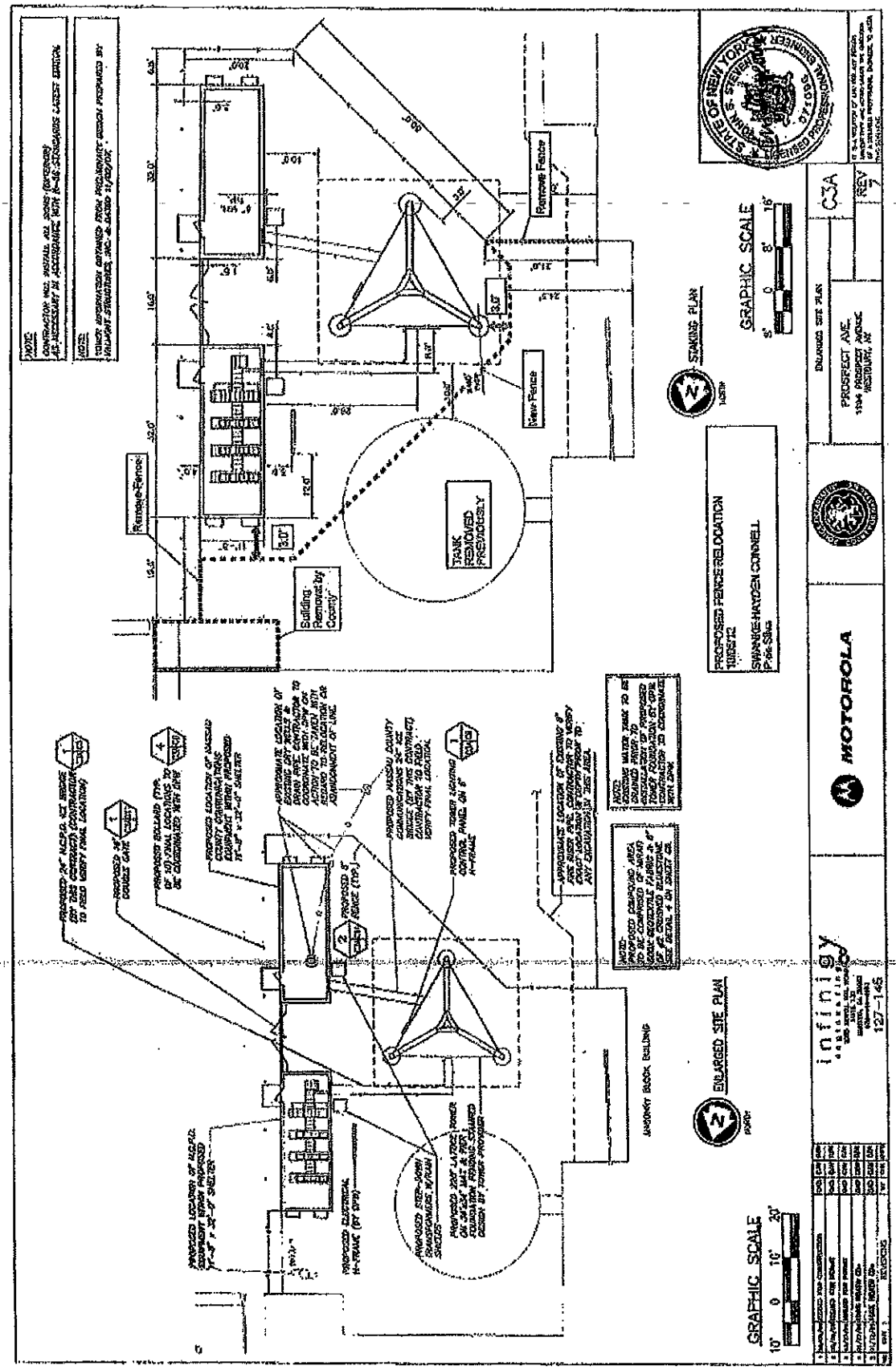


EXHIBIT B

Contract ID#: CFPW050000024

9/0 12

Department: Police Department COPS

CF (Capital)
Contract Details

CF

SERVICE Motorola Radio Project

NIFS ID #:CLPD09000015 NIFS Entry Date 6/20/2005

Term: from 6/20/2005 to 6/20/2010

New ☐ Renewal ☐	
Amendment	☒
Time Extension	☐
Addl. Funds	☐
Blanket Resolution RES#	☐

1) Mandated Program:	Yes ☐	No ☐
2) Comptroller Approval Form Attached:	Yes ☐	No ☒
3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☐
5) Insurance Required	Yes ☒	No ☐

Agency Information

Vendor	
Name Motorola, Inc.	Vendor ID# 361115800-01
Address 85 Harristown Road Glen Rock, New Jersey 07452	Contact Person Stephanie Walsh
	Phone (201) 447-7525

County Department	
Department Contact Inspector Edmund J. Horace & Lieutenant Thomas Golder	
Address 1490 Franklin Avenue, Mineola	
Phone (516) 573-7932/573-7180	

Routing Slip

Date Rec'd	Dept. Reviewer	Internal Control Point	Date Cleared	SIGNATURE	Dept. Approval Routing
	Department	*NIFS Entry (Dept)* ☐ *NIFS Appvl (Dept. Head)* ☐ *Contractor Registered* ☐			
	DPW (Capital Only)	*CF Capital Fund Approval* ☐			
9/15	OMB	*Contractor Registered* ___ *NIFS Approval* ☐			
9/17/09	County Attorney	*CA RE & Insurance Verification* ☑	9/17/09		
9/17/09	County Attorney	*CA Approval as to form* ☒	9/17/09		
~~—~~	~~Legislative Affairs~~	~~*Fw'd Original Contract to CA*~~ ☐			
~~—~~	~~County Attorney~~	~~*NIFS Approval*~~ ☐			
	Comptroller	*NIFS Approval* ☐			
	County Executive	*Notarization* ☐ *Filed with Clerk of the Leg.* ☐	9/22/09		

Contract ID#: CFPW050000024

Department: Police Department

Contract Summary

Description: Change order to Motorola contract number CFPW05000024

Purpose: The purpose of Change Order Twelve (12) is to authorize Motorola to revise contract billing milestones to allow for partial invoicing as work is completed. Additional scope dictated by site landlords, site acquisition delays, and delays in construction of the new Nassau County Public Safety Center (PSC) have delayed the completion of this contract. The delay has put the $6,000,000 COPS grant in jeopardy. The County has been requested to draw down all funds from the COPS grant by the end of September 2009. This requires revisions to the contract billing milestones associated with the COPS grant as follows:

Description	Total Milestone	Revised Milestone	Invoice Now	Inv. As Completed	COPS Contribution
2). Completed Site Development Preparations for all Transmit & Receive sites	$4,587,000	Invoice 20 of the 32 sites where construction is completed now and invoice $143,343.75 per site as construction is completed on remaining 12 sites	$2,866,875	$143,343.75 per site (x12) as construction is completed	$279,931
5). Installation, optimization, verification, & acceptance of all backbone infrastructure. (Transmit receive sites, primary dispatch, microwave)	$3,818,312	Invoice 10 of 24 TX/RX sites completed now, pre-bill 8 sites under construction no to meet COPS grant requirement and invoice remaining 6 sites when FNE and microwave is installed.	$2,863,734	$159,096 per site (x6) as FNE and microwave installation is complete.	$1,765,935
6). Backup Dispatch Center equipment installation, optimization, verification & acceptance	$993,300	Invoice 80% upon installation of Mineola backup dispatch equipment now and invoice remaining 20% upon acceptance	$744,975	$248,325 upon acceptance of backup dispatch equipment	$430,447
TOTAL			$6,475,584		$2,476,313

Method of Procurement: Revision of existing milestones only.

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Cost and Technical Evaluation Teams, which operated completely independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems .The adoption of MCC 7500 IP based console technology increased capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis: The dollar value of the contract remains unchanged as a result of Change Order Twelve (12).

Recommendation: Approve as submitted.

Contract ID#: CFPW050000024

Department: Police Department

Advisement Information

BUDGET CODES	
Fund:	CAP
Control:	50
Resp:	590
Object:	00003
Transaction:	OL

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	XXXXX
County	$ .01
Federal	$
State	$
Capital	$
Other	$
TOTAL	$ .01

LINE	INDEX/OBJECT CODE	AMOUNT
1	50590/PWCAPCAP/00003	$ .01
2		$
3		$
4	9/17/09	$
5		$
6		$
	TOTAL	$ .01

APPROVED
INSURANCE SECTION

RENEWAL	
% Increase	
% Decrease	

Document Prepared By: Inspector Edmund J. Horace Date: 9/09/09

NIFS Certification	Financial Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date Sept 22 2009
Date	Date	(For Office Use Only) E #:

AMENDMENT NO. TWO

AMENDMENT, dated as of _____, 2009 (together with the exhibit attached hereto, this "Amendment"), between (i) Nassau County, a municipal corporation having its principal office at 1550 Franklin Avenue, Mineola, New York 11501 (the "County"), acting for and on behalf of the Nassau County Police Department, having its principal office at 1490 Franklin Avenue, Mineola, New York 11501, and (ii) Motorola, Inc,, having its principal office at 1303 East Algonquin Road, Schaumburg, Illinois, 60196 (the "Contractor").

WITNESSETH:

WHEREAS, pursuant to County contract number CFPW05000024 between the County and the Contractor, executed on behalf of the County on June 30, 2005 and the amendment entered into thereafter (the "Original Agreement") the Contractor performs certain services for the County in connection with the Nassau County Police Department Land Mobile Radio Modernization Project, which services are more fully described in the Original Agreement (the services contemplated by the Original Agreement, the "Services"); and

WHEREAS, the term of the Original Agreement is from June 30, 2005 to June 30, 2010 ("Original Term"); and

WHEREAS, the maximum amount that the County agreed to reimburse the Contractor as full compensation for Services under the Original Agreement was Forty-four Million Six Hundred Thirty-eight Thousand Seven Hundred and Six Dollars ($44,638,706.00) (the "Maximum Amount");

WHEREAS, the County and the Contractor desire to amend the payment terms contained in the Original Agreement;

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Amendment, the parties agree as follows:

1. Section 4 of the Original Agreement shall be amended to read as follows:

"(a) Amount of Consideration. The amount to be paid to the Contractor as full consideration for the Contractor's Services under this Agreement shall be paid upon completion of each milestone listed below and in the amount listed next to each milestone, provided that the County may, in its discretion, make partial payment to the Contractor upon substantial completion of a milestone in order to utilize existing or future grant funding."

2. In furtherance of the foregoing and in accordance with Section 30 of the Original Agreement, the Milestone Payment schedule contained in Section 4(a) the Original Agreement is hereby amended as described in Change Order 12 attached hereto as Exhibit A.

3. Full Force and Effect. All the terms and conditions of the Original Agreement not expressly amended by this Amendment shall remain in full force and effect and govern the relationship of the parties for the term of the Original Agreement.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written.

MOTOROLA, INC.

By: _____
Name: David R. White, Jr.
Title: MSSI Vice President
Date: 9/17/09

NASSAU COUNTY

By: _____
Name: FRANCIS X. RYAN
Title: Deputy County Executive
Date: Sept. 21, 2009

PLEASE EXECUTE IN BLUE INK

STATE OF ~~NEW YORK~~
NEW JERSEY)ss.:
COUNTY OF ~~NASSAU~~)
PASSAIC

On the 17th day of September in the year 2009 before me personally came David R. White, Jr. to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Orange; that he or she is the MSSI Vice President of Motorola, Inc., the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

NOTARY PUBLIC

Mary Scrivens

MARY SCRIVENS
MY COMMISSION EXPIRES
01/31/2012

STATE OF NEW YORK)
)ss.:
COUNTY OF NASSAU)

On the 22nd day of September in the year 2009 before me personally came Francis X. Ryan to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Nassau; that he or she is a **Deputy County Executive** of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

Barbara Conroy
NOTARY PUBLIC

BARBARA CONROY
Notary Public, State of New York
No. 30-4838123
Qualified in Nassau County
Commission Expires November 30, 2009

Exhibit A – Change Order 12

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 012
Change Order Name: Revised Billing Milestones
Date of Change Order: 09/9/09
Pricing Valid until: N/A

Change Requested:
The change order to revises the contract billing milestones to allow partial invoicing as work is completed.

Reason for Change: Additional scope dictated by site landlords, site acquisition delays, permitting delays and delays in construction of new Nassau County Public Safety Communications Center have delayed the completion of this contract. This delay has put the $6,000,000 COPS grant in jeopardy. The County has been requested to draw down all funds from the COPS Grant by the end of Sept. 2009. This requires revisions to the contract billing milestones associated with the COPS grant.

Cost Impact: **Total: $ 0.00**

Current Contract Value:	**$ 44,638,706.00**
Net Change in Contract Value:	**$ 0.00**
Revised Contract Value:	**$ 44,638,706.00**

Schedule Impact:
None

Change Order #012 revised Milestones

Description	Total Milestone	Revised Milestone	Invoice Now	Invoice as completed	COPS GRANT Contribution
2.) Completed Site Development Preparations for all Transmit & Receive sites	$4,587,000	Invoice 20 of the 32 sites where construction is completed now and invoice $143,343.75 per site as construction is completed on remaining 12 sites	$2,866,875	$143,343.75 per site (x12) as construction is completed	$279,931
5.) Installation, optimization, verification & acceptance of all backbone infrastructure. (Transmit receive sites, primary dispatch, microwave)	$3,818,312	Invoice 10 of 24 TX/RX sites completed now, pre-bill 8 sites under construction now to meet COPS grant requirement and invoice remaining 6 sites when FNE and microwave is installed.	$2,863,734	$159,096 per site (x6) as FNE and microwave installation is completed.	$1,765,935
6.) Backup Dispatch Center equipment installation, optimization, verification & acceptance	$993,300	Invoice 80% upon installation of Mineola backup dispatch equipment now and invoice remaining 20% upon acceptance	$744,975	$248,325 upon acceptance of backup dispatch center equipment	$430,447
Total			**$6,475,584**		**$2,476,313**

POLICE DEPARTMENT
COUNTY OF NASSAU, NEW YORK

INTERNAL CORRESPONDENCE

DATE: September 9, 2009 SNCC NO: 2411

TO: Commissioner of Police (Through Official Channels)

FROM: Inspector Edmund J. Horace, Serial No. 6069, Commanding Officer, Information Technology Unit/Special Projects Coordinator Office of Chief of Support

SUBJECT: **REQUEST FOR CHANGE ORDER, MOTOROLA RADIO PROJECT CONTRACT CFPW05000024**

1. Attached is Change Order Number Twelve (12) and accompanying Staff Summary regarding Motorola Radio Contract Number CFPW05000024 initiated on June 30, 2005.This change order will authorize Motorola to revise contract billing milestones to allow for partial invoicing as work is completed.

2. Additional scope dictated by site landlords, site acquisition delays and delays in construction of the new Nassau County Public Safety Center (PSC) have delayed the completion of this contract. This delay has put the $6,000,000 COPS grant in jeopardy. The County has been requested to draw down all funds from the COPS grant by the end of September 2009. This requires revisions to the contract billing milestones associated with the COPS grant.

3. The Nassau County Public Safety Center Project Team has recommends this change be implemented in order not to jeopardize COPS grant funds.

4. Payment milestones two (2), four (4), five (5) and six (6) are revised per this change order. All other milestones remain per the contract and previous change orders. The total dollar value of the contract remains unchanged.

5. As per Section Thirty (30) in the radio contract, the Commissioner of Police, or his designee, and the Commissioner of Department of Public Works, or his designee, must approve change orders. As project manager of the 500 MHz Radio Project, I recommend this change order be approved.

6. Please sign Change Order Number Twelve (12) and the accompanying Staff Summary where indicated and return to Inspector Edmund J. Horace. The change order has already been approved and signed by Commissioner Raymond Ribeiro, Nassau County Department of Public Works.

ENDORSED / DATE

DEPUTY C.O.

C.O.

DIV C.O.

DEPUTY OFFICE CHIEF

OFFICE CHIEF

Edmund J. Horace
Inspector

DOCUMENT: N:\Admin\New System Radio Project\Motorola Contract\Change Orders\Motorola-Change Order 12-Milestones\Motorola-Change Order 12-Ltr to COP.doc

Contract ID#: CFPW050000024

Department: Police Department

CF (Capital)
Contract Details

CF

SERVICE Motorola Radio Project

NIFS ID #: CLPD090000001 NIFS Entry Date 6/20/2005 Term: from 6/20/2005 to 6/20/2010

New ☐ Renewal ☐	
Amendment	☒
Time Extension	☐
Addl. Funds	☐
Blanket Resolution RES#	☐

1) Mandated Program:	Yes ☐	No ☐
2) Comptroller Approval Form Attached:	Yes ☐	No ☒
3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☐
5) Insurance Required	Yes ☐	No ☐

Agency Information

Vendor	
Name Motorola, Inc.	Vendor ID# 361115800-01
Address 85 Harristown Road Glen Rock, New Jersey 07452	Contact Person Stephanie Walsh
	Phone (201) 447-7525

County Department	
Department Contact Inspector Edmund J. Horace & Lieutenant Thomas Golder	
Address 1490 Franklin Avenue, Mineola	
Phone (516) 573-7932/573-7180	

Routing Slip

DATE Received	DEPARTMENT	Internal Verification	Date Approved	SIGNATURE	Leg. Approval Required
	Department	*NIFS Entry (Dept)* ☐ *NIFS Appvl (Dept. Head)* ☐ *Contractor Registered*			
	DPW (Capital Only)	*CF Capital Fund Approval* ☐			
	OMB	*Contractor Registered*____ *NIFS Approval* ☐			Yes ☐ No ☐ Not required for Blanket Res.
	County Attorney	*CA RE & Insurance Verification* ☐			
	County Attorney	*CA Approval as to form* ☐			Yes ☒ No ☐
	Legislative Affairs	*Fw'd Original Contract to CA* ☐			
	County Attorney	*NIFS Approval* ☐			
	Comptroller	*NIFS Approval* ☐			
	County Executive	*Notarization* ☐ *Filed with Clerk of the Leg.* ☐			

PRCF1205 (3/06)

Contract ID#: CFPW050000024

Department: Police Department

Contract Summary

Description: Contract Amendment to contract number CFPW05000024

Purpose: The purpose of this contract amendment is to authorize Motorola to construct a new 220' self-supporting tower structure and two (2) 12' x 32' Motorola Standard Buildings (MSB) RF enclosures at 1194 Prospect Avenue, Westbury, New York. This location is the site of the new Public Safety Center. The new tower is needed for police and fire radio systems' transmit/receive antennas and microwave dishes on the Department's 500 MHz Motorola Land Mobile Radio system. The Motorola Standard Building RF enclosures are needed to house police and fire communications equipment for these systems.

Method of Procurement: The tower and related equipment will be procured through capital funds from the Nassau County DPW New Public Safety Center (PSC) Capital Project 90230P and the Nassau County Police Department's 500 MHz Motorola Radio Capital Project 50590.

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Cost and Technical Evaluation Teams, which operated completely independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems .The adoption of MCC 7500 IP based console technology increased capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

The construction of the tower structure and buildings is critical to the County's operational requirements for public safety radio coverage and interoperability.

Impact on Funding / Price Analysis:

New Tower at PSC — Cost - One Million Four Hundred Twenty Seven Thousand ($1,427,000) Dollars.

Funding – Motorola Radio Capital Project 50590 Ancillary Funds - $427,000

Nassau County DPW Capital Funds - $1,000,000

Contract price increases to Forty Three Million Nine Hundred Sixty Four Thousand Three Hundred Sixty Three ($43,964,363) Dollars

Change in Contract from Prior Procurement Construction of 220' self-supporting tower structure and two building enclosures at 1194 Prospect Avenue, Westbury.

Recommendation: Approve as submitted.

Advisement Information

BUDGET CODES	
Fund:	
Control:	
Resp:	
Object:	
Transaction:	

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	XXXXXXX
County	$
Federal	$
State	$
Capital	$
Other	$

LINE	INDEX/OBJECT CODE	AMOUNT
1	50590/PWCAPCAP/00003	$ 427,000.00
2		$
3	90230P/PWCAPCAP/00003	$1,000,000.00
4		$
5		$
6		$

Contract ID#: CFPW050000024

Department: Police Department

RENEWAL	
% Increase	
% Decrease	

TOTAL	$	TOTAL	$1,427,000.00

Document Prepared By: Inspector Edmund J. Horace Date: 3/5/09

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date
Date	Date	*(For Office Use Only)* E #:

PRCF1205 (3/06)

COUNTY OF NASSAU

INTER-DEPARTMENTAL MEMO

DATE: November 3, 2008

TO: Commissioner Raymond Ribeiro: Nassau County Department of Public Works

FROM: Inspector Edmund J. Horace: Nassau County Police Department

SUBJECT: **MOTOROLA RADIO PROJECT CHANGE ORDER REQUEST**

As per Motorola Radio Contract CFPW05000024, Section 30b, the Radio Contract Change Order Review Board must approve all change orders. The Radio Contract Change Order Review Board consists of the Commissioner of Police of Nassau County, or his designee, and the Commissioner of Public Works of Nassau County, or his designee.

Attached is Motorola Change Order Number Eight (8), which authorizes Motorola to construct a new 220' self-supporting tower structure and two (2)- 12' x'32' Motorola Standard Buildings (MSB) RF enclosures at 1194 Prospect Avenue, Westbury, New York. This location is the site of the new Public Safety Center. The new tower is needed for police and fire radio systems' transmit/receive antennas and microwave dishes. The Motorola Standard Building RF enclosures are needed to house police and fire communications equipment required for the system.

Although the cost of this additional equipment and services is One Million Four Hundred Twenty Seven Thousand ($1,427,000) Dollars, this expenditure is critical to the County's operational requirements for public safety radio coverage and interoperability. The need for this equipment and was not determined when the Police Department's 500MHz Radio Project was negotiated and approved because the Department of Public Works' Public Safety Center project was in a conceptual stage at that time. However, ancillary funds were set aside in the Police Department's 500 MHz Radio Project for this tower. Thus, there will be no increase in the total amount of the PD Radio Capital Project. I request this additional cost be paid as follows: One Million ($1,000,000) Dollars in Nassau County Department of Public Works capital funds and Four Hundred Twenty Seven Thousand ($427,000) Dollars in capital funds from the Motorola Radio Capital Project 50590.

As project manager of the 500 MHz radio project, I recommend that this change be implemented and request approval of the attached change order. Please sign the change order request where indicated and return to me. If you have any questions regarding this request I can be contacted at 573-7932 or via e-mail ehorace@pdcn.org. Thank you for your assistance.

Edmund J. Horace
Inspector

DOCUMENT: N:\Admin\New System Radio Project\Motorola Contract\Change Orders\Motorola-Change Order 8-Prospect Ave. Towers and Shelters\Motorola-Change Order 8-Tower-Ltr. DPW.doc

COUNTY OF NASSAU

INTER-DEPARTMENTAL MEMO

DATE: November 3, 2008

TO: Commissioner Raymond Ribeiro: Nassau County Department of Public Works

FROM: Commissioner of Police Lawrence W. Mulvey: Nassau County Police Department

SUBJECT: **MOTOROLA RADIO PROJECT CHANGE ORDER REQUEST**

As per Motorola Radio Contract CFPW05000024, Section 30b, the Radio Contract Change Order Review Board must approve all change orders. The Radio Contract Change Order Review Board consists of the Commissioner of Police of Nassau County, or his designee, and the Commissioner of Public Works of Nassau County, or his designee.

I have reviewed the proposed change order submitted by the project manager of the 500MHz radio project, Inspector Edmund J. Horace, and concur with his recommendations. I hereby give my approval of Motorola Change Order Number Eight (8) authorizing Motorola to construct a new 220' tower and two (2) shelters to enhance Nassau County's operational requirements for interoperability.

Lawrence W. Mulvey
Commissioner of Police

DOCUMENT: N:\Admin\New System Radio Project\Motorola Contract\Change Orders\Motorola-Change Order 8-Prospect Ave. Towers and Shelters\Motorola-Change Order 8-Tower-Approval COP to Ribeiro.doc

COUNTY OF NASSAU

INTER-DEPARTMENTAL MEMO

DATE: November 3, 2008

TO: Inspector Edmund J. Horace: Nassau County Police Department

FROM: Commissioner Raymond Ribeiro: Nassau County Department of Public Works

SUBJECT: **MOTOROLA RADIO PROJECT CHANGE ORDER REQUEST**

As per Motorola Radio Contract CFPW05000024, Section 30b, the Radio Contract Change Order Review Board must approve all change orders. The Radio Contract Change Order Review Board consists of the Commissioner of Police of Nassau County or his designee and the Commissioner of Public Works of Nassau County or his designee.

I hereby give my approval of Motorola Change Order Number Eight (8) authorizing Motorola to construct a new 220' tower and two (2) shelters to enhance Nassau County's operational requirements for interoperability.

Raymond Ribeiro
Commissioner

DOCUMENT: N:\Admin\New System Radio Project\Motorola Contract\Change Orders\Motorola-Change Order 8-Prospect Ave. Towers and Shelters\Motorola-Change Order 8-Ribeiro to Horace.doc

Nassau County Public Safety Communications System
Motorola Change Order # 008

Contract Number:	CFPW05000024
Contract Date:	06/30/2005
Change Order Number:	008
Change Order Name:	Prospect Ave. Tower and Shelters
Date of Change Order:	10/30/08
Pricing Valid until:	11/30/08

Change Requested:
This Change Order authorizes Motorola to construct a new 220' self supporting tower structure and two (2) -12' x 32' Motorola Standard Buildings (MSB) RF enclosures at 1194 Prospect Ave, Westbury NY 11590, as per Statement of Work, see Appendix "A". Tower and shelters to be located at the rear of the building as shown in the attached "Prospect Ave Overall Site Plan 10-28-03.pdf

Reason for Change:
Nassau County is currently constructing a new Communications Bureau and Primary Dispatch Facility at 1194 Prospect Ave. Westbury NY 11590. In addition to dispatch functions, this new facility will become a transmit/receive site in the Nassau County Public Safety Communications System. The new tower is needed for the transmit/receive antennas and the microwave dishes. The Motorola Standard Building RF enclosures are needed to house the communications equipment required for the system.

Cost Impact: **Total: $ $1,427,000**

Current Contract Value:	**$ 42,537,363.00**
Net Change in Contract Value:	**$ 1,427,000.00**
Revised Contract Value:	**$ 43,964,363.00**

Schedule Impact:
Nassau County's estimated construction schedule for the tower and shelters at 1194 Prospect is as follows:

Start	Change Order Signed
4 weeks	Create preliminary site drawings for Nassau / DPW approval
8 weeks	Complete A&E and Nassau approval for stamped construction drawings
4 weeks	Order equipment and initiate subcontracts
14 weeks	Site construction
2 weeks	Punch list resolution.

Operational Impact:
Meets the operational needs of the new Communications Bureau Primary Dispatch Facility as a transmit/receive site in the Nassau County Public Safety Communications System.

Payment Terms:
Payments due as the result of this change order will be invoiced as follows:

1. **$ 338,000 – Upon mobilization**
2. **$ 878,800 – Upon equipment delivery**
3. **$ 135,200 – Upon final acceptance of change order**

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)	NCPD Authorized Representative	Motorola Project Manager
	NCPW Authorized Representative	Motorola Authorized Representative
Date:		Date: 11/17/08

Attachments

SOW Prospect Tower and Shelters 10-30-08 (Appendix A).pdf
Prospect Ave Overall Site Plan 10-28-03.pdf
Prospect Ave Antenna Load Spec Final (GFleisch 4-16-08).pdf

SITE DEVELOPMENT AT PROSPECT ST. INCLUDING A REAR 220' NO FALL TOWER AND TWO EXTERNAL SHELTERS

The work detailed in this SOW will follow all Terms and conditions in the Land Mobile Radio agreement between Nassau County and Motorola. This location is the new Nassau County EOC. The tower location is to the rear of the site/facility and is located within 170' of an active rail line as shown in "Prospect Ave Overall Site Plan 10-28-03.pdf". Due to the location, we will be supplying a 220' "no-fall" tower with a break at 140'. The large proposed antenna load as specified by Nassau County for this tower (84 antennas per "Prospect Ave Antenna Load Spec Final (GFleisch 4-16-08).pdf") and associated line, as well as the no fall requirement, demanded a substantial custom designed tower foundation be required. The County has supplied a soil study **(Slacke GeoTech Report - Prospect Ave (8-16-07).pdf)** for this location. Two 12 x 32 external shelters will be placed adjacent to the new tower location. This proposal is conditional on sufficient room being available to place shelters/pads without affecting the tower's pad and pier foundation.

Motorola Will:

SITE ENGINEERING

- Prepare site construction drawings, showing the layout of various new and existing site components for approval by Nassau County.
- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities etc.).
- Perform a boundary and topographic survey for the property on which the communication site is located or will be located and submit to Nassau County for recording.
- Prepare a lease exhibit sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare record drawings of the site showing the as-built information.
- Perform construction staking around the site to establish reference points for proposed construction.
- If required, perform National Environmental Policy Act (NEPA) Threshold Screening including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus require additional documentation, submittals or work. Regional

Environmental Review (RER) report submittals if required by FEMA have not been included.

- Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Check tower erection for plumbness, linearity and alignment after installation.
- Perform inspection of the site and the work performed to document that the site is built in accordance with the "Site Plans" and document any deviations or violations.
- If required, research permit requirements (building, utility, construction and FAA permits) for the construction of the proposed site, and determine if the permits are required. If a permit is required, the Motorola shall obtain the necessary permit forms and complete and file the necessary information on behalf of the customer.
- Submit the completed application forms, to the local jurisdiction and apply for applicable permits.
- Install

SITE PREPARATION

- If required, obtain the permits such as electrical, building and construction permits, and any inspections that may need to be coordinated with the local authorities to complete site development work.
- Any remobilization due to interruptions/delays caused by the County will result in additional costs.
- Grading of site compound and 10' path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 16,000 square feet).
- Supply and install gravel surfacing to a depth of six inches, underlain with geotextile fabric within the fenced in site compound area and 3' path around it (not to exceed 12,000 square feet).
- Supply and install (10) guard posts.
- Construct swales around the compound to control soil erosion (not to exceed 450 linear feet).
- Provide silt fence around the compound to control soil erosion (not to exceed 450 linear feet).
- Supply and install 8' high chain link fencing with a ten-foot wide gate around the shelter compound (not to exceed 260 linear feet).
- Site touchup (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement required by local jurisdictions have not been included and may be provided through a negotiated contract change notice.

SITE COMPONENTS INSTALLATION:

- Construct (2) reinforced concrete foundation necessary for 12'x32' shelter.
- Install (2) prefabricated concrete shelters 12'x32'.
- Provide all trenching, conduit, and cabling necessary from nearby customer provided utility vaults (separate vaults for data and electrical) for underground hookup of power to both shelters from nearby customer supplied disconnect (480V 3 phase), said vaults to be located within 100 cable feet of the shelters.
- Supply and install grounding system around the shelters and tower tied to the fence and other new metal structures within compound to meet Motorola's R-56 standards. Motorola is not responsible for R-56 compliance for customer installed equipment.
- Conduct (1) three point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Motorola.
- Supply and install one free standing 24 inches wide cable/ice bridge from tower to each shelter (2 total) (up to 75 linear feet).

TOWER WORK:

- Construct mat type tower foundations including excavation, rebar and concrete as required to meet contract specification
- Erect new 220' self-supported, no fall tower with break at 140' and with strobe lighting
- Provide and install a dual lighting system for the tower in accordance with the applicable chapters of FAA Advisory Circular AC 70/7460-1G.
- Supply and install grounding system around the shelters and tower tied to the fence and other new metal structures within compound to meet Motorola's R-56 standards. Motorola is not responsible for R-56 compliance for customer installed equipment.
- Refer to foundation and tower design information supplies separately

ANTENNA AND TRANSMISSION LINE INSTALLATION:

- Install (5) antennas for the RF system.
- Install (2) 6' microwave dishes.
- Install (2) ice shields above 6' microwave dishes.
- Install 1 1/4 inch transmission line as required for the antenna installations included in this SOW.
- Install 7/8 inch transmission line as required for the antenna installations included in this SOW..
- Install EW90 waveguide as required for the installations of microwave dishes included in this SOW.
- Perform sweep tests on all transmission lines
- Supply and install (3) ground buss bar at the bottom of antenna support structure for grounding RF cables before they make horizontal transition.

- Supply and install #2 stranded copper ground as required for grounding the antennas to the tower ground.
- Install (2) GPS receiver antennas on the 12'x32' shelter roof for the RF system.

MISCELLANEOUS WORK:

- Provide a 400A 3-phase configuration instead of the standard 400A 1-phase configuration. Changes include:
  - 3-Phase Surge Protection Devices (SPD), Type 1 and Type 2
  - 3-Phase UPS units - (2) Liebert NX Series 16kW with 10 min. runtime
  - 3-Phase HVAC units
  - 3-Phase Main Service Disconnect
  - 3-Phase Main Panel & Sub-panels
  - Additional wiring for 3rd phase
  - Two (2) Step down transformers from 480 three phase volts to 208 three phase for each shelter (1 each)

Customer Will:

- Provide EME plans for the site to comply with FCC requirements, prior to starting tower work.
- Assist Motorola with permitting for sites, as owner/lessee.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required due to errors or omissions, the customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fueling both during the construction/installation effort and on an ongoing basis.
- Application fees, taxes and recurring payments for lease/ownership of the property
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- Secure clear and unencumbered title, Memorandum of Understanding or Lease Agreement with the property owner.
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site, and site components to Motorola for conducting site engineering.
- Provide a right of entry letter from the site owner for Motorola to conduct field investigations.
- Provide clear and stable access road to the site 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.
- Conduct all the testing and documentation (balloon tests, photo simulations, zoning application, expert testimony, zoning drawings etc.) required for the zoning the proposed new tower sites.

- Provide additional temporary space for the staging the construction equipment during the construction of new site facilities (tower, shelter, generator, fuel tank etc.). Motorola will coordinate this with the County.
- Customer is responsible for all zoning.
- Secure power connection to the site, associated permitting and installation of a disconnect within 100 feet of the proposed shelter location.
- Supply 3 phase 400AMP disconnect to be located within 100 ft adjacent to existing building outside wall in a customer supplied cable vault specified by Motorola. Customer will supply required Standby Generator Power (50KVA) to support the equipment in the shelters. This power source shall be adequate to back-up all radio equipment, future equipment growth and ancillary equipment such as but not limited to interior lighting, tower lighting and HVAC.
- Customer to drain or remove existing water tank prior to commencement of any foundation work. This tank serves as an auxiliary fire suppression system for this building. Nassau County will take appropriate action for compliance with local fire code safety while the tank is empty or removed.
- Supply four (4) conduits from the Communication center to the shelters and four (4) conduits from the telephone room to the server room.

Assumptions:

- As applicable, coordinate, prepare, submit and pay for all required permits and inspections for the work that is customer's responsibility
- As applicable Motorola will, with assistance from the County coordinate, prepare, submit and pay for all required permits and inspections required from the LIRR/MTA/Railroad for all site construction, and any railroad specified required personnel resources.
- LIRR/MTA will grant letter of no objection and permits after reasonable due diligence by Motorola.
- Prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday - 7:30 a.m. - 5:00 p.m.)
- Temporary site trailers (tower, housing, COWS and generator) have not been included for cutovers. Cutover logistics to be determined on a case by case basis; any additional costs will be negotiated prior to execution.
- All recurring and non-recurring utility costs (including but not limited to liquid propane (except first fill), natural gas, electrical, telephone, fiber, and T-1) will be borne by the customer or site owner.
- All T-1 installations shall be coordinated and paid for by owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site has adequate utility service for new shelter and tower. Utility transformer, transformer upgrades, line or pole extensions have not been included.

- Assumptions, notes and caveats in figure 1 and listed in "NCPD Exhibit D Contract Disclosure." apply.

ASSUMPTIONS, NOTES AND CAVEATS:

- Where Motorola is responsible for new tower and communication site construction and will be responsible for coordinating and submitting initial documentation required to satisfy NEPA requirements per the Federal Communications Commission (FCC), the following shall apply;

  Should any jurisdictional authority determine that a proposed communication facility "may have a significant environmental impact" and thus requires additional documentation, submittals or work, Motorola shall cease any further work on the facility and notify the customer of such action in writing. This includes any requirement directly or indirectly related to Code of Federal Regulations (CFR) 47 Chapter 1, subsection 1.1301 - 1.1319 including but not limited to: wilderness areas, wildlife preserves, threatened or endangered species (Endangered Species Act), Migratory Bird Treaty Act (MBTA), National Environmental Policy Act (NEPA), historical property, Indian religious sites, flood plains or wetlands. Such additional jurisdictional requirements may include but are not limited to:

  environmental or biological assessments, environmental or biological evaluations, scientific evaluations, formal studies, engineering studies, historical evaluations, tribal investigations or evaluations, further authority or departmental reviews. Such additional requirements are not included in this proposal. Upon execution of a negotiated contract change order, Motorola will move forward with such additional jurisdictional authority requests. In addition, Motorola will not be held accountable for schedule slippage associated with such requests nor shall other reasonable payments or project milestones be withheld.

- Regional Environmental Reviews (RER) report submittals are not included in this proposal. This is usually required by FEMA if the project is receiving federal grant money or is federally funded.
- Does not include lead paint testing
- All recurring and non-recurring utility fees shall be the responsibility of the customer.
- We have not included Phase II or III environmental studies or testing in this proposal.
- We have not included any type of hazardous waste removal in this proposal. Any hazardous waste encountered during site investigations or construction is the sole responsibility of the site owners(s). Additionally, it assumed that no site shall be constructed on a landfill or reclaimed area.

Figure 1

- Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal.
- Site is being constructed at a location where hazardous materials are not present. Testing and removal of hazardous materials encountered during site investigations or construction will be the responsibility of the customer.
- We have not included Regional Environmental Review (RER) report submittals in this proposal. This is usually required by FEMA if the project is receiving grant money or is federally funded.
- New tower location will pass the FAA hazard study, zoning, FCC and environmental permitting
- Restoration of the site surroundings by fertilizing, seeding and strawing the disturbed areas will be adequate. Additional landscaping or aesthetic improvements (decorative fencing, tree plantings, stealth towers etc.) will not be required.
- Tower and foundation sizing is based on the tower loading requirements as a result of the RF Antenna System design and the Microwave Antenna System design (i.e. - dish sizes and locations obtained from paper path studies). If after physical path studies, the dish sizes and locations change, then Motorola will review the review the impact to tower structure and foundations and revise applicable costs
- If as a result of NEPA studies, should any jurisdictional authority determine that a proposed communication facility "may have a significant environmental impact", then environmental impact studies or field testing and evaluation related to such determination have not been included.
- Medium intensity strobe lighting has been included. Painting or dual lighting of any new towers has not been included.
- Waiver to zoning requirements like setbacks, tower height limitations etc. can be obtained.
- The soil resistivity at the site is sufficient to achieve resistance of 10 ohms or less. Communication site grounding will be designed and installed per Motorola's STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES (R-56, revision 09/01/2005).
- Site has adequate utility service to support the proposed equipment loading. Utility transformer upgrades or step up or down transformers will not be required.
- Underground utilities are not present in the construction area, and as such no relocation will be required
- Spoils from the tower foundations may be dispersed on the property if approved by the County or will be transported to a dump location by Mororola.
- No curbing covered within scope of this quote.
- Customer will be responsible to supply and install all antennas not specifically listed in this SOW.
- Assumes that there is sufficient space for shelter, a minimum of 20 ft from the tower foundation is required.
- Assumes that area will not be paved at time of tower installation

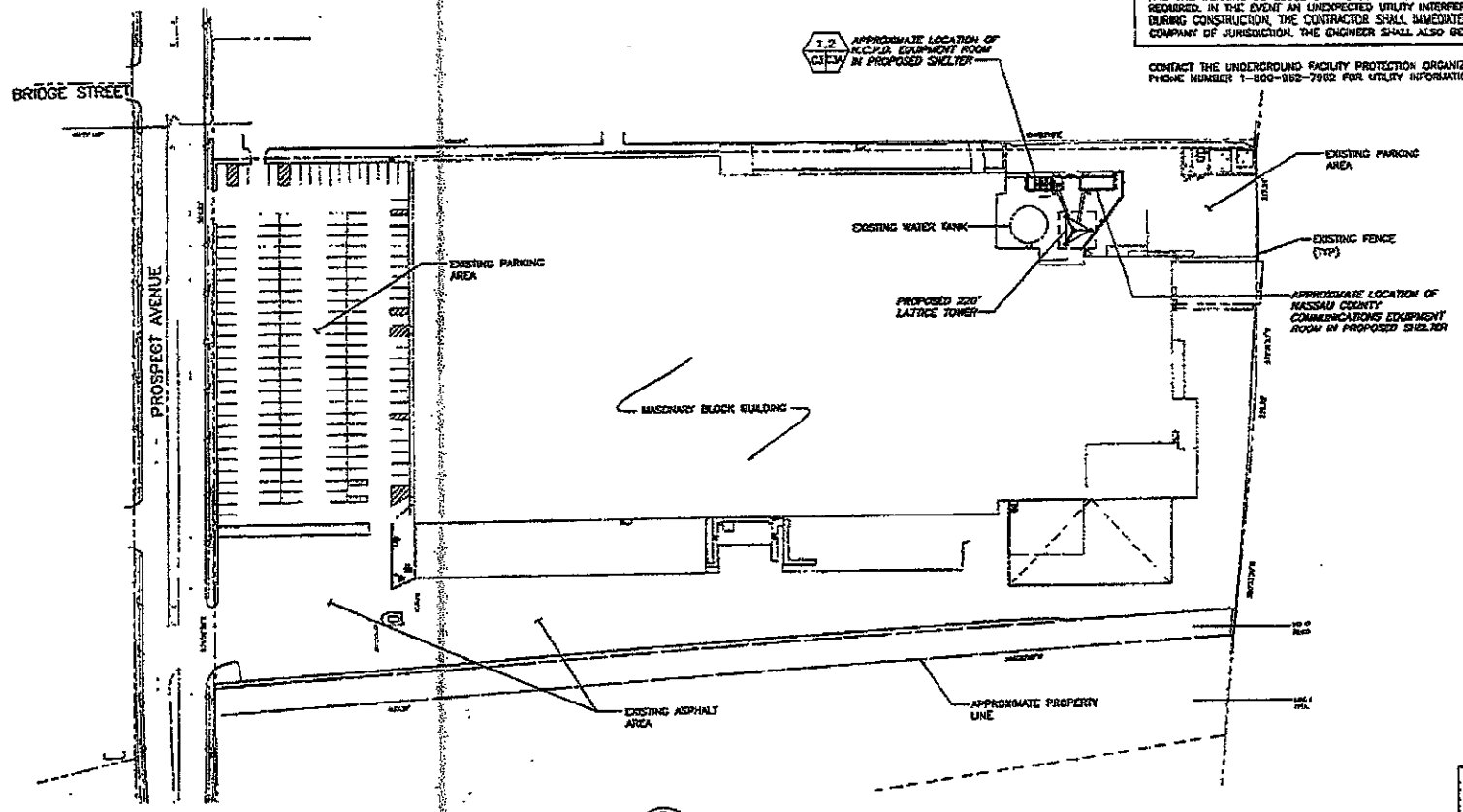
Completion Criteria

- All site development completed, and approved by Nassau County PD.

Prospect Ave Overall Site Plan 10-28-03.pdf

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING THE SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED.

CONTACT THE UNDERGROUND FACILITY PROTECTION ORGANIZATION @ PHONE NUMBER 1-800-962-7962 FOR UTILITY INFORMATION.



OVERALL SITE PLAN

GRAPHIC SCALE
50' 0 50' 100'

2	10/24/03	ADD TOWER CO#	DMD	CJW
1	10/15/03	ADD TOWER CO#	DMD	CJW
0	09/19/03	PRELIMINARY CO#	DMD	CJW
NO.	DATE	REVISIONS	BY	CHK

infinigy engineering
127-145

Pyramid Network Services, LLC

MOTOROLA

OVERALL SITE PLAN

PROSPECT AVE.
1794 PROSPECT AVENUE
WESTBURY, NY

C3

REV 2

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

Nassau County Public Safety Center Radio Communications 220'Tower Requirements

Ant No.	Height in feet	Antenna Mfr.	Model Number	Leg	Mount	Side Strut	Mount Pipe	Line Size	Line Length	User	Frequency MHz	Tenp Location	Comment / Source	County Input from Lt Golder 3/20/08	Input from J.Valatkevage 3/17/08
1	210	Celwave	PD201-6	South	B1516	B993	B1001	7/8"	205	E-1	450	S,F	Existing - IXP 10/5/06		
2	204	Celwave	PD1142	North	B1498	B993	B1001	1/2"	224	F-3	46.2	S,F	Existing - IXP 10/5/06	MINEOLA 2 TRANSCEIVER	
3	204	Celwave	PD1142	East	B1498	B993	B1001	1/2"	224	F-2	46.2	S,F	Existing - IXP 10/5/06	MINEOLA 1 TRANSMITTER	
4	198	Celwave	PD220	North	B1516	B993	B1001	7/8"	218	F-6	150	S,F	Existing - IXP 10/5/06	FIRECOM VHF TRANSCEIVER	
5	198	Celwave	PD220	East	B1516	None	B1001	7/8"	210	E-2	150	S,F	Existing - IXP 10/5/06		
6	198	Celwave	PD220	South	B1516	B993	B1001	7/8"	210	F-21	150	S,F	Existing - IXP 10/5/06	KRX-593	
7	185	Celwave	BA1212-4	East	B1516	B993	B1001	1/2"	285		450	C,S	Existing - IXP 10/5/06	PD-6 Move to rooftop rack 4/10/08	VHF Mac Trak ??
8	180	DB Products	DB8633C	East	B1516	B993	B1001	1/2"	280	PD-5	450	C,S	Existing - IXP 10/5/06		unknown ??
9	180	Celwave	PD1142	South	B1516	B993	B1001	1/2"	200	F-4	33.9	S,F	Existing - IXP 10/5/06	ROCKVILLE CENTRE F.D.	
10	170	Celwave	PD1142	North	B1516	B993	B1001	1/2"	190	F-8	48	S,F	Existing - IXP 10/5/06	SPARE LOW BAND	
11	170	Celwave	PD201-7	South	B1517	B993	B1001	7/8"	190	F-5	450	S,F	Existing - IXP 10/5/06	FIRECOM UHF TRANSCEIVER	
12	150	Celwave	PD1142	North	B1519	B993	B1001	1/2"	170	F-1	46.2	S,F	Existing - IXP 10/5/06	MINEOLA 1 RECEIVERS	
13	150	Celwave	PD220	East	B1519	B993	B1001	1/2"	170	F-26	155	S,F	Existing - IXP 10/5/06	HICKSVILLE F.D.	
14	150	Celwave	PD220	South	B1519	B993	B1001	7/8"	170	F-7	160	S,F	Existing - IXP 10/5/06	LIRR TRANSCEIVER	
15	140	Celwave	PD201-8	North	B1519	B993	B1001	7/8"	160		470	S,R	Existing - IXP 10/5/06	PD-10 Mobile @ ops desk - remove 4/10/08	470 MHz. - F1- F10 Rx ??
16	135	Celwave	BA1212-4	East	B1519	B993	B1001	1/2"	225		450	C,1	Existing - IXP 10/5/06	PD-3 County MRD not needed at prospect 4/10/08	County MRD ??
17	130	Celwave	BA1212-4	North	B1519	B993	B1001	7/8"	150		156	S,R	Existing - IXP 10/5/06	PD-13 Air/Marine-Console Access 4/10/08	County Air / Marine ??
18	130	DB Products	DB8633C	South	B1502	None	B1001	7/8"	230	PD-2	450	C,1	Existing - IXP 10/5/06	Need to investigate 4/10/08	unknown ??
19	120	DB Products	DB583-XT	North	B1502	None	B1001	1/2"	220	F-17	800	C,S	Existing - IXP 10/5/06	800 Trunk System	
20	120	DB Products	DB583-XT	South	B1502	None	B1001	1/2"	220	F-18	800	C,S	Existing - IXP 10/5/06	800 Trunk System	
21	117	Andrew	PL8-65	East	Rohn	Angle	4" Pipe	EW63	127		6765	S,R	Delete P-16 - IXP 10/5/06		Delete P-16
22	115	Andrew	PL6-2	South	Rohn	Angle	4" Pipe	7/8"	125		2150.6	S,R	Delete P-15 - IXP 10/5/06		Delete P-15
23	110	DB Products	DB830C	North	B1502	None	B1001	1/2"	210	PD-4	450	C,S	Existing - IXP 10/5/06		unknown ??
24	105	Andrew	PL8-65	North	Rohn	Angle	4" Pipe	EW63	125		6725	S,R	Delete P-17 - IXP 10/5/06		Delete P-17
25	100	DB Products	DB830C	East	B1502	None	B1001	1/2"	200	PD-1	450	C,1	Existing - IXP 10/5/06		unknown ??
26	85	DB Products	DB830C	North	B1502	None	B1001	1/2"	185	PD-12	450	C,7	Existing - IXP 10/5/06		unknown ??
27	80	Andrew	PL4-2	East	Rohn	Angle	4" Pipe	7/8"	100		2150.2	S,R	Delete P-14 - IXP 10/5/06		Delete P-14
28	80	Celwave	BAT311	South	B1502	B996	B1001	1/2"	180	F-9	154.815	S,F	Existing - IXP 10/5/06	GARDEN CITY FIRE DEPT	
29	70	Celwave	PD6685	70' NE	B1900	None	B1001	1/2"	90	F-19	450	S,F	Existing - IXP 10/5/06	BETHPAGE F.D.	
30	70	Celwave	PD6685	70' NE	B1900	None	B1001	1/2"	90	F-10	450	S,F	Existing - IXP 10/5/06	WESTBURY F.D.	
31	70	Radio Shack	20-053	70' NE	B1900	None	B1001	1/2"	170	E-8	25-13000	O,7	Existing - IXP 10/5/06		
32	70	Celwave	PD6685	70' NE	B1900	None	B1001	1/2"	90	F-15	450	S,F	Existing - IXP 10/5/06	JERICHO F.D.	
33	70	Celwave	PD6685	70' SE	B1900	None	B1001	1/2"	90	F-11	450	S,F	Existing - IXP 10/5/06	BELLMORE-MERRICK VAC	
34	70	Radio Shack	20-053	70' SE	B1900	None	B1001	1/2"	170		25-1300	C,1	Existing - IXP 10/5/06	PD-11 Confirm. TV then delete 4/10/08	TV antenna for break room?
35	70	Celwave	PD6685	70' SE	B1900	None	B1001	1/2"	90	F-12	450	S,F	Existing - IXP 10/5/06	WANTAGH FD.	
36	70	Celwave	PD6685	70' SE	B1900	None	B1001	1/2"	90	F-14	450	S,F	Existing - IXP 10/5/06	UNIONDALE FD.	
37	70	Radio Shack	20-053	70' W	B1900	None	B1001	1/2"	170	F-27	25-1300	C,9	Existing - IXP 10/5/06	20-043 Scanner Antenna	
38	70	Celwave	PD6685	70' W	B1900	None	B1001	1/2"	90	F-13	450	S,F	Existing - IXP 10/5/06	ELMONT F.D.	
39	70	DB Products	PD6685	70' W	B1900	None	B1001	1/2"	90	F-28	450	S,F	Existing - IXP 10/5/06	INWOOD F.D.	
40	60	DB Products	DB583-XT	North	B1900	None	B1001	1/2"	150	E-3	800	C,6	Existing - IXP 10/5/06		
41	50	DB Products	DB583-XT	50' SE	B1900	None	B1001	1/2"	150	F-29	800	S,F	Existing - IXP 10/5/06	800 Trunk System	
42	50	DB Products	DB583-XT	50' SE	B1900	None	B1001	1/2"	150	F-30	800	C,6	Existing - IXP 10/5/06	800 Trunk System	
43	50	DB Products	DB583-XT	50' SE	B1900	None	B1001	1/2"	150	F-31	800	C,6	Existing - IXP 10/5/06	800 Trunk System	
44	50	DB Products	DB583-XT	50' SE	B1900	None	B1001	1/2"	150	E-5	800	C,6	Existing - IXP 10/5/06		
45	50	DB Products	DB583-XT	50' SE	B1900	None	B1001	1/2"	150	E-7	800	C,6	Existing - IXP 10/5/06		

Ant No.	Height in feet	Antenna Mfr.	Model Number	Leg	Mount	Side Strut	Mount Pipe	Line Size	Line Length	User	Frequency MHz	Term Location	Comment / Source	County Input from Lt Golder 3/20/08	Input from J.Valastro/vga 3/17/08
46	50	DB Products	DB583-XT	50° SE	B1900	None	B1001	1/2"	150	E-6	800	C,6	Existing - DP 10/5/06		
47	50	DB Products	DB583-XT	50° SE	B1900	None	B1001	1/2"	150		800	C,7	Existing - DP 10/5/06	PD-8 Delete - Console Access 4/10/08	800 Sheriff / 800 DA ???
48	50	DB Products	DB583-XT	50° SE	B1900	None	B1001	1/2"	150		800	C,7	Existing - DP 10/5/06	PD-9 Delete - Console Access 4/10/08	800 SCFD (Suffolk)
49	50	DB Products	DB583-XT	50° W	B1900	None	B1001	1/2"	70	F-22	800	S,F	Existing - DP 10/5/06	800 Trunk System	
50	50	DB Products	DB583-XT	50° W	B1900	None	B1001	1/2"	70	F-23	800	S,F	Existing - DP 10/5/06	800 Trunk System	
51	50	DB Products	DB583-XT	50° W	B1900	None	B1001	1/2"	70	F-24	800	S,F	Existing - DP 10/5/06	800 Trunk System	
52	50	DB Products	DB583-XT	50°W	B1900	None	B1001	1/2"	70	F-25	800	S,F	Existing - DP 10/5/06	800 Trunk System	
53	50	DB Products	DB583-XT	50°W	B1900	None	B1001	1/2"	70	F-26	800	S,F	Existing - DP 10/5/06	800 Trunk System	
54	40	DB Products	DB6630C	East	B1542	None	B1003	1/2"	140	PD-7	490	C,F	Existing - DP 10/5/06	Need to investigate 4/10/08 ?.	490 MHz. ??? - unknown user
55	35	VHF-Low Band	RFS/Cellwave 1142-2C TDB-6320	South				7/8"	250'	FD	VHF-Low Band		Addition - DP 10/5/06		
56	35	VHF-Low Band	RFS/Cellwave 1142-2C TDB-6320	North				7/8"	250'	FD	VHF-Low Band		Addition - DP 10/5/06		
57	35	VHF-Low Band	RFS/Cellwave 1142-2C TDB-6320	East				7/8"	250'	FD	VHF-Low Band		Addition - DP 10/5/06		
58	40	VHF-High Band	Sinclair SC229DPLN	South				7/8"	250'	FD	VHF-High Band		Addition - DP 10/5/06		
59	40	VHF-High Band	Sinclair SC229DPLN	North				7/8"	250'	FD	VHF-High Band		Addition - DP 10/5/06		
60	40	VHF-High Band	Sinclair SC229DPLN	East				7/8"	250'	FD	VHF-High Band		Addition - DP 10/5/06		
61	35	VHF-High Band	Sinclair SC229DPLN	East				7/8"	250'	FD	VHF-High Band		Addition - DP 10/5/06		
62	60	UHF (450-512)	TXRX101681003	South				7/8"	270'	FD	UHF (450-512)		Addition - DP 10/5/06		
63	60	UHF (450-512)	TXRX101681003	North				7/8"	270'	FD	UHF (450-512)		Addition - DP 10/5/06		
64	60	UHF (450-512)	TXRX101681003	East				7/8"	270'	FD	UHF (450-512)		Addition - DP 10/5/06		
65	30	UHF (450-512)	TXRX101681003	South				7/8"	300'	FD	UHF (450-512)		Addition - DP 10/5/06		
66	30	UHF (450-512)	TXRX101681003	North				7/8"	300'	FD	UHF (450-512)		Addition - DP 10/5/06		
67	60	UHF (450-512)	TXRX101681003	East				7/8"	300'	FD	UHF (450-512)		Addition - DP 10/5/06		
68	35	UHF (450-512)	TXRX101681003	North				7/8"	300'	FD	UHF (450-512)		Addition - DP 10/5/06		
69	35	UHF (450-512)	TXRX101681003	North				7/8"	300'	FD	UHF (450-512)		Addition - DP 10/5/06		
70	160' or higher	UHF (Trunking TX)	TXRX101681003	South				7/8"	400'	PD	P 500MHz		Addition - DP 10/5/06		
71	160' or higher	UHF (Trunking TX)	TXRX101681003	North				7/8"	400'	PD	P 500MHz		Addition - DP 10/5/06		
72	160' or higher	UHF (Trunking TX)	TXRX101681003	East				7/8"	400'	PD	P 500MHz		Addition - DP 10/5/06		
73	160' or higher	UHF (Trunking TX)	TXRX101681003	South				7/8"	400'	PD	P 500MHz		Addition - DP 10/5/06		
74	160' or higher	UHF (Trunking TX)	TXRX101681003	North				7/8"	400'	PD	P 500MHz		Addition - DP 10/5/06	T.Golder growth	
75	210' or higher	UHF (Trunking RX)	TXRX101681003	East				1 1/4"	400'	PD	P 500MHz		Addition - DP 10/5/06		
76	115	700 MHz	RFI CC806-06	South				7/8"		Public Safety	700 MHz		Addition - DP 10/5/06		
77	145	700 MHz	RFI CC806-06	North				7/8"		Public Safety	700 MHz		Addition - DP 10/5/06		
78	115	700 MHz	RFI CC806-06	East				7/8"		Public Safety	700 MHz		Addition - DP 10/5/06		
79	115	700 MHz	RFI CC806-06	South				7/8"		Public Safety	700 MHz		Addition - DP 10/5/06		
80	105	700 MHz	RFI CC806-06	North				7/8"		Public Safety	700 MHz		Addition - DP 10/5/06		
81	105	700 MHz	RFI CC806-06	East				7/8"		Public Safety	700 MHz		Addition - DP 10/5/06		
82	105	800 MHz	RFI CC806-06	South				7/8"		Public Safety	800 MHz		Addition - DP 10/5/06		
83	105	800 MHz	RFI CC806-06	North				7/8"		Public Safety	800 MHz		Addition - DP 10/5/06		
84	100	800 MHz	RFI CC806-06	East				7/8"		Public Safety	800 MHz		Addition - DP 10/5/06		
85	100	800 MHz	RFI CC806-06	East				7/8"		Public Safety	800 MHz		Addition - DP 10/5/06		
86	110'	4' microwave dish		182.24° Azimuth				2.21"	140'	PD - NUMC	4' microwave dish		Addition - DP 10/5/06		
87	122'	6' microwave dish		265.24° Azimuth				2.21"	140'	PD - Herricks	6' microwave dish		Addition - DP 10/5/06		
88	150'	6' microwave dish		45° Azimuth				2.21"	140'	PD - Growth	6' microwave dish		Addition - DP 10/5/06		
89	75'	VHF-High Band	Sinclair SC229DPLN	SW				7/8"	300'	F	70		Addition - County 3/20/08	ELMONT BOX SYSTEM	
90	75'	VHF-High Band	Sinclair SC229DPLN	NW				7/8"	300'	F	70		Addition - County 3/20/08	ELMONT BOX SYSTEM	

Ant No.	Height in feet	Antenna Mfr.	Model Number	Leg	Mount	Side Strut	Mount Pipe	Line Size	Line Length	User	Frequency MHz	Term Location	Comment / Source	County Input from Lt Golder 3/20/08	Input from J.Valatkavage 3/17/08
91	50	Celwave	PD6885	50° S/W				1/2"		F	450		Addition - County 3/20/08	LYNBROOK F.D.	
92	130	Celwave	PD6885	South				1/2"		F	450		Addition - County 3/20/08	EAST ROCKAWAY F.D.	
93	80	Celwave	PD6885	South				1/2"		F	450		Addition - County 3/20/08	ROCKVILLE CENTRE U.F.	
94	70	Celwave	PD6885	West				1/2"		F	450		Addition - County 3/20/08	LAWRENCE-CEDARHURST F.D.	
95	50	Celwave	PD6885	South				1/2"		F	450		Addition - County 3/20/08	OCEANSIDE F.D.	

Fire	62
Police	15
EMO	7
Public Safety	10
Total	94

Existing	50
Additions	41
Total	91

Notes

1.) Antennas numbered 1 through 89 are from Appendix A in IXP bid specification dated October 5, 2005. Antennas 90 through 95 were added by the County on 3/20/08 after an internal review.

2.) This table describes an existing tower, the equivalent antennas which will be installed on the tower specific in this document. The existing tower was manufactured by Rohn and the nomenclature relates to that vendor. The four strikethrough's are for microwave dishes that will not be included on the new tower. The microwave dishes required are listed as additions.

3.) Included are new antennas will be added to the new tower and shall be included in the design. Mounts comparable to equivalent antenna type listed above shall be provided for each antenna, respectively. The height location for these new antennas, if not otherwise specified, shall be located at a height above the lowest respective antenna band described elsewhere in the table.

4.) PD growth for sticks will be provided by either combining some of the PD's existing antenna or providing transport from prospect to Mineola via RNK.

5.) Antennas for mobiles at each dispatch are to be included in the quote as an option. This will include roof mounts and associated lines and cable trays

6.) Antennas for control stations listed below are to be included in the quote as an option. This will include roof mounts and associated lines and cable trays

7.) Information highlighted in yellow is a best guess only based on existing and new 800 MHz antennas. No data was provided. These are not Motorola recommendations and no engineering has been used to determine if these locations provide acceptable spacing. This is simply an attempt to spread the weight and wind load to allow the design team to complete the quotation.

PD Control Stations needed at Prospect (per J. Valatkavage 3/13/08)

5	NPSPAC - National (existing)		County Supplied Control Station @ Prospect		Existing unit supplied by County, manual switching of unit's mode/channel of operation is required for NPSPAC access
7	NPSPAC - TAC-2 (FUTURE USE)		County Supplied Control Station @ Prospect		External TRC adapter NOT INCLUDED, Transmission line & Antenna NOT INCLUDED, this is just to provision for future NPSPAC use, 3 total NPSPAC @ Prospect, 2 total NPSPAC @ Mineola
9	NPSPAC - TAC-4 (FUTURE USE)		County Supplied Control Station @ Prospect		External TRC adapter NOT INCLUDED, Transmission line & Antenna NOT INCLUDED, this is just to provision for future NPSPAC use, 3 total NPSPAC @ Prospect, 2 total NPSPAC @ Mineola
25-B	800 EDACS (General TG)		County Supplied Control Station @ Prospect		This is a stand-alone unit with manual mode control, terminated into IP Console.
57	EAB Mod-09		County Supplied Control Station		County Supplied Control Station @ Prospect, acts as backup for NUMC/EAB
58	EAB Mod-10		County Supplied Control Station		County Supplied Control Station @ Prospect, acts as backup for NUMC/EAB
87	EDACS Village PD (TRC)		County Supplied Control Station @ Prospect		New antenna & line provided by Motorola @ Prospect.

CLPD0900017 10

Contract ID#: CFPW050000024

Department: Police Department

CF (Capital) Contract Details

CF

SERVICE Motorola Radio Project

NIFS ID #:

NIFS Entry Date 6/20/2005

Term: from 6/20/2005 to 6/20/2010

New ☐ Renewal ☐	
Amendment ☐	
Time Extension ☐	
Addl. Funds ☐	
Blanket Resolution ☐ RES#	

1) Mandated Program:	Yes ☐	No ☐
2) Comptroller Approval Form Attached:	Yes ☐	No ☒
3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☐
5) Insurance Required	Yes ☐	No ☐

Agency Information

Vendor	
Name Motorola, Inc.	Vendor ID# 361115800-01
Address 85 Harristown Road Glen Rock, New Jersey 07452	Contact Person Stephanie Walsh
	Phone (201) 447-7525

County Department
Department Contact Inspector Edmund J. Horace & Lieutenant Thomas Golder
Address 1490 Franklin Avenue, Mineola
Phone (516) 573-7932/573-7180

Routing Slip

Date Rec'd	Department	Internal Verification	Date Appvd	Signature	Leg. Approval Required
	Department	*NIFS Entry (Dept)* ☐ *NIFS Appvl (Dept. Head)* ☐ *Contractor Registered* ☐			
	~~DPW (Capital Only)~~	*CF Capital Fund Approval* ☐			
	OMB	*Contractor Registered* ___ *NIFS Approval* ☐			Yes ☒ No ☐ Resolution Number
	County Attorney	*CA RE & Insurance Verification* ☐			
	County Attorney	*CA Approval as to form* ☐			Yes ☐ No ☐
	Legislative Affairs	*Fw'd Original Contract to CA* ☐			
	County Attorney	*NIFS Approval* ☐			
	Comptroller	*NIFS Approval* ☐			
	County Executive	*Notarization* ☐ *Filed with Clerk of the Leg.* ☐			6/9/10

Contract ID#: CFPW050000024

Department: Police Department

Contract Summary

Description: Change order to Motorola contract number CFPW05000024

Purpose: Change Order Ten (10) authorizes Motorola to revise contract milestones which moves final system acceptance to December 2010, with two (2) years of warranty ending December 31, 2012. This change is necessary since additional scope dictated by site landlords, site acquisition delays, permitting delays, and delays in construction of the new Nassau Count Public Safety Communications Center have prevented timely completion of this contract. This change reconciles the County expiration date with new schedule requirements due to additional scope and delays in construction of the new PSC by parties other than Motorola.

Method of Procurement: Revision of existing milestones only.

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Cost and Technical Evaluation Teams, which operated completely independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County. This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems .The adoption of MCC 7500 IP based console technology increased capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis The dollar value of the contract remains unchanged as a result of Change Order Ten (10).

Recommendation: Approve as submitted.

Advisement Information

BUDGET CODES	
Fund:	
Control:	
Resp:	
Object:	
Transaction:	

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	XXXXX
County	$
Federal	$
State	$
Capital	$
Other	$
TOTAL	$

LINE	INDEX/OBJECT CODE	AMOUNT
1	50590/PWCAPCAP/00003	$.01
2		$
3		$
4		$
5		$
6		$
	TOTAL	$.01

RENEWAL	
% Increase	
% Decrease	

Document Prepared By: Inspector Edmund J. Horace **Date:** 10/08/2009

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date
Date	Date	(For Office Use Only) E #:

PRCF1205 (3/06)

Nassau County Public Safety Communications System
Motorola Change Order # 010

Contract Number: CFPW05000024
Contract Date: 06/30/2005
Change Order Number: 010
Change Order Name: Contract Extension
Date of Change Order: 06/15/09
Pricing Valid until: N/A

Change Requested:
This Change Order authorizes Motorola to revise contract milestones which moves final system acceptance to Dec. 2010 with 2 years of warranty ending Dec 31, 2012.

Reason for Change: Additional scope dictated by site landlords, site acquisition delays, permitting delays and delays in construction of new Nassau County Public Safety Communications Center have prevented the completion of this contract.

Cost Impact: **Total: $ 0.00**

Current Contract Value:	**$ 44,487,564.00**
Net Change in Contract Value:	**$ 0.00**
Revised Contract Value:	**$ 44,487,564.00**

Schedule Impact:
Nassau County's estimated construction schedule for the build out of sites, installation of FNB and microwave and renovation of the facility at 1194 Prospect Ave requires an adjustment to the Radio Project's Primary Dispatch installation, optimization and acceptance testing schedule. The affected Contractual Milestone Completion dates will be modified as follows:

OLD

Milestones	Current Contract
2	Completed Site Development Preparations for all Transmit & Receive sites – Seven (7) months after signing of this Agreement by the County Executive
4	Install of Primary Dispatch Equipment - Thirty-eight (38) months after signing of this Agreement by the County Executive.
5	Acceptance of Infrastructure – Thirty-four (34) months after signing of this Agreement by the County Executive
6	Backup Dispatch Center Equipment Acceptance – Twenty-five (25) months after signing of this Agreement by the County Executive.
8	CATP Completion and Critical Buildings – Thirty-eight (38) months after signing of this Agreement by the County Executive.
9	Training – Thirty-five (35) months after signing of this Agreement by the County Executive.
12	Final System Acceptance – Thirty-nine (39) months after signing of this Agreement by the County Executive.

NEW

Milestones	Revised by this Change Order #010
2	Completed Site Development Preparations for all Transmit & Receive sites – Fifty-seven (57) months after signing of this Agreement by the County Executive
4	Install of Primary Dispatch Equipment - Fifty-seven (57) months after signing of this Agreement by the County Executive.
5	Acceptance of Infrastructure – Fifty-seven (57) months after signing of this Agreement by the County Executive
6	Backup Dispatch Center Equipment Acceptance – Fifty-eight (58) months after signing of this Agreement by the County Executive.
8	CATP Completion and Critical Buildings – Sixty-four (64) months after signing of this Agreement by the County Executive..
9	Training – Sixty-five (65) months after signing of this Agreement by the County Executive.
12	Final System Acceptance – Sixty-six (66) months after signing of this Agreement by the County Executive.

Operational Impact:
Reconciles Contract expiration date with new schedule requirements due to additional scope and delays in construction of new Nassau County Public Safety Communications Center (Work performed by parties other than Motorola)

Payment Terms:
Only the dates of the project milestones are affected by this change order. The dollar value of the contract payment milestones remains unchanged.

There will be no increase in the performance bond as a result of this change order.

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By: (Signatures)	Lawrence W Mealey	Gary Zlusick 10/1/09
	NCPD Authorized Representative	Motorola Project Manager
	R P C	Paul Rodman
	NCPW Authorized Representative	Motorola Authorized Representative
Date:	8/28/09	10/2/2009

FAML8025 V4.2 NIFS PRODUCTION SYSTEM 12/02/2009
LINK TO: DOCUMENT AUTHORIZATION TRACKING -ARCHIVE 11:14 AM

DOCUMENT NO : CLPD09000017 NOTEPAD : N CUMULATIVE DAYS : 54

DATE	TIME	DEPARTMENT	USER	LVL	APPR STAT	DYS OUT
10/08/2009	4:41PM	PD	GONZALEZ, JANE' 3-7600	160	INIT	
10/08/2009	4:42PM		GONZALEZ, JANE 3-7600	160	AUTH	
11/02/2009	10:18AM	BU	MALHOTRA, SUDHA 1-427	667	AUTH	25
11/19/2009	11:41AM	AT	GORDON, SUSAN	182	AUTH	17
12/01/2009	9:43AM	C0101200	MARTIN, ROBERT, 12617	960	AUTH	12

F1-HELP F4-PRIOR F5-NEXT
F7-PRIOR PG F8-NEXT PG F9-LINK F11-NOTE PAD
3014 - RECORD FOUND

	(201) 447-7525	(516) 573-7932/573-7180

Routing Slip

DATE OUT	DEPARTMENT	Internal Verification	DATE IN	SIGNATURE	Legal Approval Required
	Department	NIFS Entry (Dept) ☐ NIFS Appvl (Dept. Head) ☐ Contractor Registered			
	DPW (Capital Only)	CF Capital Fund Approval ☐			
	OMB	Contractor Registered___ NIFS Approval ☐			
	County Attorney	CA RE & Insurance Verification ☐			
	County Attorney	CA Approval as to form ☐			
	Legislative Affairs	Fw'd Original Contract to CA ☐			
	County Attorney	NIFS Approval ☐			
	Comptroller	NIFS Approval ☐			
	County Executive	Notarization ☐ Filed with Clerk of the Leg. ☐			6/9/10

PRCF1205 (3/06)

Contract ID#: _____ Department: P.D.

CL PW 06 00 00 04 10

CF E-188-06

CF (Capital)
Contract Details

SERVICE _____

NIFS ID #: CFPW 05000024 NIFS Entry Date: _____ Term: from 6/30/05 to 6/30/10

New ☐ Renewal ☐	
Amendment ☒	
Time Extension ☐	
Addl. Funds ☐	
Blanket Resolution ☐ RES# _____	

1) Mandated Program:	Yes ☐	No ☐
2) Comptroller Approval Form Attached:	Yes ☐	No ☐
3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☐	No ☐
5) Insurance Required	Yes ☒	No ☐

Agency Information

Vendor		County Department	
Name: Motorola	Vendor ID#: 361115800-01	Department Contact: D.I. Edmund J. Horace	
Address: 85 Harristown Rd Glen Rock, New Jersey 07452	Contact Person: Stephanie Walsh Phone: (201) 447-7525	Address: 1490 Franklin Ave, Mineola Phone: 573-7932	

Routing Slip

Date Rec'd	Department	Internal Certification	Date Approved	Signature	Date Approved Required
	Department	NIFS Entry (Dept) ☐ NIFS Appvl (Dept. Head) ☐ Contractor Registered	11/29		
	DPW (Capital Only)	CF Capital Fund Approval ☐	11/30		
11/30	OMB	Contractor Registered ___ NIFS Approval ☐	12/1		
12/4/06	County Attorney	CA RE & Insurance Verification ☑	12/4/06		
	County Attorney	CA Approval as to form ☐	12/5/06		
	Legislative Affairs	Fw'd Original Contract to CA ☐	12/5/06		
	County Attorney	NIFS Approval ☑	12/20		
	Comptroller	NIFS Approval ☐	1/16/07		
	County Executive	Notarization ☐ Filed with Clerk of the Leg. ☐	1/22/07		

CLPW06000010

Contract ID#: _____

Department: Police Department

	LEG	Legislative Affairs	*Fw'd Original K to CA* ☐			
		Rules ☐/ Leg. ☐	☐			
		County Attorney	*NIFS Approval* ☐			
		County Comptroller	*NIFS Approval* ☐			
		County Executive	*Notarization* ☐ *Filed with Clerk of the Leg.* ☐			

Contract Summary

Description: Contract Amendment to contract No. CFPW05000024

Purpose: The purpose of this contract amendment change is to upgrade radio consoles from Centra Com Gold Elite Serial Port radio consoles to "State of the Art " MCC 7500 IP radio consoles. The Centra Com Gold Elite serial port consoles are nearing end of life cycle and will not be subject to future upgrades by Motorola. MCC 7500 IP based functionality will afford the department with the ability to take advantage of new cutting edge technology at beginning lifecycle stages. IP technology is a proven standard for information distribution in current and future infrastructures. The adoption of IP technology will enhance the survivability of the radio system, provide flexibility of console distribution easy interface to required logging recorders as well as provide additional security and commonality of IT components enabling simpler repair and maintenance.

This change will include eighteen (18) dispatch console positions in the primary dispatch facility and thirteen (13) in the back-up facility. This change will also include two (2) dispatch positions in Suffolk County for NYMAC interoperability access

With this upgrade, all contracted maintenance and licensing costs will remain the same and will in no way modify agreed upon annual costs, nor scope of these provisions.

This IP technology was not available when the original contract was negotiated and approved.

This contract amendment will also amend Section 4. Payment Milestones. Milestone three (3) will be separated into two (2) parts as follows:

Part a) Delivery of Backbone (Infrastructure) All Transmit & Receive sites and Primary Dispatch with a payment of 70% of total of milestone three (3)

Part b) Delivery of all Microwave equipment with a payment of 30% of total of milestone three (3)

This amendment will insure a more coordinated system infrastructure build out and will eliminate the need to procure microwave equipment prior to time needed.

Method of Procurement: The MCC 7500 IP console technology has been researched and recommended by the radio projects Technical Evaluation and Cost Evaluation Teams with the assistance of project technical consultant Ted Allen of Booz Allen Hamilton. MCC 7500 IP console technology is proprietary to the contracted Motorola radio system and must be provided by Motorola. This MCC 7500 IP console technology will be funded by Capital Funds.

Procurement History: On June 30, 2005 Motorola was selected to provide the County with a "State of the Art" Trunked Digital ASTRO 25 radio system. Cost and technical proposals provided by Motorola were subjected to a rigorous five month evaluation process by Radio Project Cost and Technical Evaluation Teams, which operated completely independently from each other. It was determined that Motorola will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Contract ID#: CLPW06000013

Department: Police Department

Cost and technical analysis of MCC 7500 IP console was subject to the same scrutiny by the Radio Project Cost and Technical teams.

Due to enhanced radio system survivability, flexibility of console distribution and expansion, cost effective and easier interface with required recording systems, increased system security and commonality with IT components, the Technical Team recommends this IP console technology be adopted.

The Cost Evaluation Team has determined that although the cost of new IP console technology is $750,000, this new IP based technology will afford the Department with a cost savings of approximately $400,000 towards the implementation of mandatory integrated logging recorders. Savings on maintenance and more cost effective future upgrades will further offset this cost.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5,000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County.

This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems.

The adoption of MCC 7500 IP based console technology will increase capacity by expanding NYMAC consoles to Suffolk County, provide a fully redundant primary and back-up center and increase scalability of this system.

Impact on Funding / Price Analysis: The cost of this MCC 7500 IP console upgrade is $750,000. This will increase the total contract to $42,360,219. This console upgrade will be funded with Capital Funds.

Change in Contract from Prior Procurement: 1) MCC 7500 IP console upgrade. 2) Change in Milestone three (3) to include two (2) payment parts.

Recommendation: Approve as submitted.

Advisement Information

BUDGET CODES	
Fund:	CAP
Control:	50
Resp:	590
Object:	00003
Transaction:	CL

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	
County	$ 750,000
Federal	$
State	$
Capital	$
Other	$
TOTAL	$ 750000

CLIENT	FUNDING/OBJECT CODE	AMOUNT
1	PWCAPCAP 00003	$ 750,000
2		$
3		$
4		$
5		$
6		$
	TOTAL	$ 750,000

APPROVED: 12/4/05
INSURANCE SECTION

RENEWAL
% Increase
% Decrease

Document Prepared By: Deputy Inspector Edmund J. Horace, NCPD Date: 11/29/05

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name

PR5254 (8/03)

Contract ID#: CCPW060808

Department: Police Department

Name	Name	Date
Date: 1/8/07	Date	(For Office Use Only) E #:

E-18-06

RULES RESOLUTION NO. 232-2006

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AMENDMENT TO A PERSONAL SERVICES AGREEMENT BETWEEN THE COUNTY OF NASSAU ACTING ON BEHALF OF THE POLICE DEPARTMENT AND MOTOROLA, INC.

Passed by the Rules Committee
Nassau County Legislature
By Voice Vote on 12-18-06
VOTING:
ayes 9 **nayes** ___ **abstained** ___ **recused** ___
Legislators present: 9

WHEREAS, the County on behalf of the Police Department has negotiated an amendment to a personal services agreement with Motorola, Inc. in relation to upgraded radio consoles, a copy of which is on file with the Clerk of the Legislature; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said agreement with Motorola, Inc.

AMENDMENT NO. ONE

AMENDMENT, dated as of _____, 200___ (together with the exhibit hereto, this "Amendment"), between (i) Nassau County, a municipal corporation having its principal office at One West Street, Mineola, New York 11501 (the "County"), acting for and on behalf of the Nassau County Police Department, having its principal office at 1490 Franklin Avenue, Mineola, New York 11501, and (ii) Motorola, Inc., having its principal office at 1303 East Algonquin Road, Schaumburg, Illinois, 60196 (the "Contractor").

WITNESSETH:

WHEREAS, pursuant to County contract number CFPW05000024 between the County and the Contractor, executed on behalf of the County on June 30, 2005 (the "Original Agreement"), the Contractor performs certain services for the County in connection with the Nassau County Police Department Land Mobile Radio Modernization Project, which services are more fully described in the Original Agreement (the services contemplated by the Original Agreement, the "Services"); and

WHEREAS, the term of the Original Agreement is from June 30, 2005 to June 30, 2010 ("Original Term"); and

WHEREAS, the maximum amount that the County agreed to reimburse the Contractor for Services under the Original Agreement, as full compensation for the Services, was Forty One Million Six Hundred Ten Thousand Two Hundred and Nineteen Dollars ($41,610,219) (the "Maximum Amount"); and

WHEREAS, the County and the Contractor desire to increase the Maximum Amount to provide for the replacement and upgrade of radio console equipment to Internet Protocol based MCC 7500 consoles ("MCC 7500 IP consoles"). MCC 7500 IP consoles will improve the Motorola radio system by providing cutting edge technology, enhanced system survivability, flexibility of radio console distribution and expansion, and commonality of information technology (IT) across communications and network platforms; and

WHEREAS, the County and the Contractor desire to change the distribution of payment to insure the coordination of the installation of the system with the completion of the building infrastructure, and eliminate the need to procure microwave equipment prior to the time the equipment is actually needed.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained in this Amendment, the parties agree as follows:

1. Maximum Amount. (a) The Maximum Amount in the Original Agreement shall be increased by Seven Hundred Fifty Thousand Dollars ($750,000), so that the maximum amount that the County shall pay to the Contractor as full consideration for all Services provided under the Amended Agreement shall be Forty Two Million Three Hundred Sixty Thousand Two Hundred and Nineteen Dollars ($42,360,219) (the "Amended Maximum Amount").

(b) Pursuant to Section 30, Amendment, contained in the Original Agreement, a Change Order is attached hereto as Exhibit A setting forth the Amended Maximum Amount as state *supra* in paragraph 1(a).

2. Payment Terms. (a) The amounts paid by the County to the Contractor under Section 4(a) Amount of Consideration, of the Original Agreement, is amended to appear in its entirety as set forth in Exhibit B attached hereto (the "Amended Payment").

(b) Milestone Payment number 3 contained in Section 4(a) of the Original Agreement shall be increased an additional Four Hundred Twenty Thousand Dollars ($420,000), totaling Eight Million Eight Hundred Twenty Five Thousand Nine Hundred and Seventy Dollars ($8,825,970). In addition, Milestone Payment number 3 contained in Section 4(a) of the Original Agreement shall be broken down into two separate payments (a) and (b), and disbursed accordingly, as more fully set forth in Exhibit B attached hereto.

(c) Milestone Payment number 5 contained in Section 4(a) of the Original Agreement shall be increased an additional Three Hundred Thirty Thousand Dollars ($330,000), totaling Three Million Seven Hundred Eighty Five Thousand One Hundred and Sixty Nine Dollars ($3,765,169), as set forth in Exhibit B attached hereto.

2. Compliance With Law. The Contractor shall comply with all federal, state and local laws, including those relating to conflicts of interest, discrimination, and confidentiality, in connection with its performance under the Amended Agreement.

3. Full Force and Effect. All the terms and conditions of the Original Agreement not expressly amended by this Amendment shall remain in full force and effect and govern the relationship of the parties for the term of the Original Agreement.

QTY	NOMENCLATURE	DESCRIPTION
8	G361	ENH: ASTRO PROJECT 25 TRUNKING SOFTWARE
8	G114	ENH: ENHANCED DIGITAL ID DISPLAY
8	G73	ADD: W4 CONTROL HEAD
8	G93	ADD: CONTROL HEAD SOFTWARE, W4
8	W665	ADD: CONTROL STATION OPERATION
8	G91	ADD: CONTROL STATION POWER SUPPLY
8	G90	ADD: NO MICROPHONE NEEDED
8	G142	DEL: OMIT SPEAKER
8	G66	ADD: DASH MOUNT
8	HKN4191	POWER CABLE, 10 FT. (LOW/MID POWER) 30 & 35 WATT
8	DQ40624	RACK MOUNT 19 1/2" DEEP
8	HKN9087B	CABLE, 8' MINIUHF-M NM
100	L1702	1/2" SUPERFLEX POLY JKT PER FOOT
4	CDN6579	1/2" N MALE PLATED S FLEX
4	TDN8810	1/2" CONNECTOR N FEMALE JACK S FLEX PLTD
4	RRX4039A	ISB50HNC2MA BULKHEAD ARRESTOR 125-1000
600	L1709	7/8" LDF HELIAX POLY JKT PER FOOT
8	DSL5PNFRPC	7/8" CONN N FEMALE 1 PIECE CAPTIVATED
4	TDN9383	1/2" X 10' LDF WITH N MALE
4	TDE7280	ANTENNA UHF YAGI NFE 10:0 DB
8	3087810V02	XTL5000 CABLE (3 METER)
8	M20SSS9PW1 N	XTL 5000 UHF R2 450-520 MHZ 10-45 WATT
8	G806	ENH: SOFTWARE ASTRO DIGITAL CAI
8	G51	ENH: SMARTZONE OPERATION
8	G361	ENH: ASTRO PROJECT 25 TRUNKING SOFTWARE
8	G114	ENH: ENHANCED DIGITAL ID DISPLAY
8	G73	ADD: W4 CONTROL HEAD
8	G93	ADD: CONTROL HEAD SOFTWARE, W4
8	W665	ADD: CONTROL STATION OPERATION
8	G91	ADD: CONTROL STATION POWER SUPPLY
8	G90	ADD: NO MICROPHONE NEEDED
8	G142	DEL: OMIT SPEAKER
8	G66	ADD: DASH MOUNT
8	HKN4191	POWER CABLE, 10 FT. (LOW/MID POWER) 30 & 35 WATT
8	DQ40624	RACK MOUNT 19 1/2" DEEP
8	HKN9087B	CABLE, 8' MINIUHF-M NM
8	3087810V02	XTL5000 CABLE (3 METER)
4	F2840	SSRN GATEWAY UNIT
2	F2840	SSRN GATEWAY UNIT
14	3087810V01	RGU OPEN END CABLE (3 METER)
10	3087810V01	RGU OPEN END CABLE (3 METER)
6	FTN6726	SSRN 110V PS KIT
2	ST2500	S2500 MULTIPROTOCOL WAN ROUTER
3	ST2512	S2500 ROUTER T1/E1 DAUGHTER BOARD
1	FVN5385	CD W/ SIP APPLICATION -MAIN
1	DDN8227	CERTIFIED MOTOBRIDGE MAIN SIP SERVER WITH LINUX OPERATING SYSTEM
1	DSF1DZ104T	4 PORT BELKIN KVM SWITCH SE SERIES
3	DSF3X110506	PS/2 KVM 6FT ALL IN ONE CABLE SET BELKIN
2	DSJ4900B	HP PROCURVE SWITCH 2626
1	DSAJ4116A	HP PROCURVE SWITCH GIGABIT STACKING KIT (SWITCH)
2	DDN8230	CERTIFIED MOTOBRIDGE DISPATCH WORKSTATION WITH WINDOWS XP
2	DS019BLK	19" LCD, BLACK, NO-TOUCH
2	CDN6288	STARSET NOISE CANCEL HEADSET
2	B1912	MCC SERIES DESKTOP SPEAKER
2	FVN5370	CD W/ DISPATCHER APPLICATION
2	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
2	F2840	SSRN GATEWAY UNIT
2	FTN6726	SSRN 110V PS KIT
2	RDE5790	DBS-HC116P1-08F 400-475MHZ COMBINER
2	RDE5772	DB3176-C UHF BNDPSS FLTR 450-471MHZ
3	DDN8294	Symantec Anti-Virus 9.0 Corporate Edition

QTY	NOMENCLATURE	DESCRIPTION
3	L3476	Symantec pcAnywhere 11.5 Lic & Media
		MotoBridge @ Yaphank
2	F2840	SSRN GATEWAY UNIT
2	FTN6726	SSRN 110V PS KIT
2	ST2500	S2500 MULTIPROTOCOL WAN ROUTER
2	ST2512	S2500 ROUTER T1/E1 DAUGHTER BOARD
2	DSJ4900B	HP PROCURVE SWITCH 2626
1	DSAJ4116A	HP PROCURVE SWITCH GIGABIT STACKING KIT (SWITCH)
2	F2840	SSRN GATEWAY UNIT
2	FTN6726	SSRN 110V PS KIT
10	3087810V01	RGU OPEN END CABLE (3 METER)
2	DDN8230	CERTIFIED MOTOBRIDGE DISPATCH WORKSTATION WITH WINDOWS XP
2	DS019BLK	19" LCD, BLACK, NO-TOUCH
2	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
2	CDN6288	STARSET NOISE CANCEL HEADSET
2	B1912	MCC SERIES DESKTOP SPEAKER
2	FVN5370	CD W/ DISPATCHER APPLICATION
2	DDN8294	Symantec Anti-Virus 9.0 Corporate Edition
2	L3476	Symantec pcAnywhere 11.5 Lic & Media
		MCC 7500 Operator Position
18	B1908	MCC 7500 ASTRO 25 Secure Dispatch Console Processing Package
18	CA00287AA	ADD: MCC 7500 Dispatch Console Software License
18	CA00897AA	ADD: MCC 7500 ASTRO 25 Operation
18	CA00245AA	ADD: ADP Algorithm
18	CA00140AA	ADD: AC Line Cord, North American
18	B1911	MCC 7500 General Purpose I/O Module (GPIOM)
54	B1912	MCC Series Desktop Speaker
18	B1914	MCC Series Desktop Gooseneck Microphone
36	B1913	MCC Series Headset Jack
18	DSTWIN6328A	MCC Series Footswitch
18	DSFA1980BLKTS	19" LCD, Black, Touch Monitor
18	L3225A	Keyboard, American
18	DSCDN6171B	Trackball
1	DSMPS3216T1	32 PORT RJ-45 EIGHT WIRE MODULAR PROTECTORS.
1	DSMPS3216T1	32 PORT RJ-45 EIGHT WIRE MODULAR PROTECTORS.
13	B1908	MCC 7500 ASTRO 25 Secure Dispatch Console Processing Package
13	CA00287AA	ADD: MCC 7500 Dispatch Console Software License
13	CA00897AA	ADD: MCC 7500 ASTRO 25 Operation
13	CA00245AA	ADD: ADP Algorithm
13	CA00140AA	ADD: AC Line Cord, North American
13	B1911	MCC 7500 General Purpose I/O Module (GPIOM)
39	B1912	MCC Series Desktop Speaker
13	B1914	MCC Series Desktop Gooseneck Microphone
26	B1913	MCC Series Headset Jack
13	DSTWIN6328A	MCC Series Footswitch
13	DSFA1980BLKTS	19" LCD, Black, Touch Monitor
13	L3225A	Keyboard, American
13	DSCDN6171B	Trackball
1	DSMPS3216T1	32 PORT RJ-45 EIGHT WIRE MODULAR PROTECTORS.
		Instant Recall Recorder
18	DDN6629	Dual IRR Software
18	DDN6493	Sound Card
18	CDN6673	Set of 2 PC Speakers
13	DDN6629	Dual IRR Software
13	DDN6493	Sound Card
13	CDN6673	Set of 2 PC Speakers

QTY	NOMENCLATURE	DESCRIPTION
		MCC 7500 Conventional Interface
1	THN1013	RACK 7.5' OPEN
1	T7038	GCP 8000 Site Controller Chassis
1	CA00303AA	ADD: Qty 1 Site Controller Module
1	X153AW	ADD: rack Mount Hardware
1	CA01136AA	ADD: MCC7500 Conventional Site Operation Software
10	ST2513	Conventional IP Interface Kit
1	THN1013	RACK 7.5' OPEN
1	T7038	GCP 8000 Site Controller Chassis
1	CA00303AA	ADD: Qty 1 Site Controller Module
1	X153AW	ADD: rack Mount Hardware
1	CA01136AA	ADD: MCC7500 Conventional Site Operation Software
10	ST2513	Conventional IP Interface Kit
		MCC 7500 Centralized Archiving Server
1	THN1013	RACK 7.5' OPEN
1	B1918	MCC 7500 ASTRO 25 Standard Capacity Secure Archiving Interface Server
1	CA00288AA	ADD: MCC 7500 Archiving Interface Server Software License
1	CA00897AA	ADD: MCC 7500 ASTRO 25 Operation
1	CA00245AA	ADD: ADP Algorithm
1	CA00140AA	ADD: AC Line Cord, North American
1	TDN1113	Ethernet Cable 50ft
1	L3225A	Keyboard, American
1	THN1013	RACK 7.5' OPEN
1	B1918	MCC 7500 ASTRO 25 Standard Capacity Secure Archiving Interface Server
1	CA00288AA	ADD: MCC 7500 Archiving Interface Server Software License
1	CA00897AA	ADD: MCC 7500 ASTRO 25 Operation
1	CA00245AA	ADD: ADP Algorithm
1	CA00140AA	ADD: AC Line Cord, North American
1	TDN1113	Ethernet Cable 50ft
1	L3225A	Keyboard, American
		MCC 7500 Aux I/O Servers
1	F4543	SDM 3000 Remote Terminal Unit (RTU)
1	VA00297	SDM 3000 Application/Configuration Software
2	F4547	SDM 3000 Expansion Chassis
9	L3468	MCC Series I/O Shelf (includes one 6 Out/12 In)
12	TT04532AA	MCC Series I/O Module (6 Out/12 In)
4	CDN6233	10 BASE - T Plenum Cable 1000 FT
2	CDN6224	Snap On Plug, RJ-45 Pack of 10
1	F4543	SDM 3000 Remote Terminal Unit (RTU)
1	VA00297	SDM 3000 Application/Configuration Software.
2	F4547	SDM 3000 Expansion Chassis
9	L3468	MCC Series I/O Shelf (includes one 6 Out/12 In)
12	TT04532AA	MCC Series I/O Module (6 Out/12 In)
3	CDN6233	10 BASE - T Plenum Cable 1000 FT
2	CDN6224	Snap On Plug, RJ-45 Pack of 10
		MCC 7500 Dispatch Console System Software
1	B1905	MCC 7500 Software
		API Software Development Kits
1	B1925	MCC 7500 Dispatch API Software Development Kit
2	CA00968AA	ADD: 4 Hours Technical Support

QTY	NOMENCLATURE	DESCRIPTION
		MCC 7500 Domain Controller/DNS Server (for use at System, Zone and Site Levels)
4	L3422	Certified Network Transport Management Server
4	T7121	DCD/NTMS Configuration Software
4	TDN1113	Ethernet Cable 50ft
		MCC 7500 Networking Equipment
10	ST2500	MNR S2500 Router
3	DSJ4900B	HP Procurve 2626 24 Port Switch
3	TDN1113	Ethernet Cable 50ft
10	ST2500	MNR S2500 Router
3	DSJ4900B	HP Procurve 2626 24 Port Switch
3	TDN1113	Ethernet Cable 50ft
		MCC 7500 Network Security Applications
32	DDN8294	Symantec Anti-Virus 9.0 Corporate Edition
32	L3476	Symantec pcAnywhere 11.5 Lic & Media
20	DDN8294	Symantec Anti-Virus 9.0 Corporate Edition
20	L3476	Symantec pcAnywhere 11.5 Lic & Media
		Vega Equipment
4	DQ24HYBRID	2/4 wire Hybrid
0	DS0101137	Vega 1505 Audio Line Driver
1	DS0110174	Card cage Model 1211
1	DQSRM10	Power Supply
2	DS0101236	Telex card
1	DQ24HYBRID	2/4 wire Hybrid
4	DS0101137	Vega 1505 Audio Line Driver
1	DS0110174	Card cage Model 1211
1	DQSRM10	Power Supply
1	DS0101236	Telex card
0	DQ24HYBRID	2/4 wire Hybrid
5	DS0101137	Vega 1505 Audio Line Driver
1	DS0110174	Card cage Model 1211
1	DQSRM10	Power Supply
2	DS0101236	Telex card
0	DQ24HYBRID	2/4 wire Hybrid
1	DS0101137	Vega 1505 Audio Line Driver
1	DS0110174	Card cage Model 1211
1	DQSRM10	Power Supply
1	DS0101236	Telex card
0	DQ24HYBRID	2/4 wire Hybrid
2	DS0101137	Vega 1505 Audio Line Driver
1	DS0110174	Card cage Model 1211
1	DQSRM10	Power Supply
1	DS0101236	Telex card
2	DQ24HYBRID	2/4 wire Hybrid
0	DS0101137	Vega 1505 Audio Line Driver
1	DS0110174	Card cage Model 1211
1	DQSRM10	Power Supply
1	DS0101236	Telex card

QTY	NOMENCLATURE	DESCRIPTION
		Antenna System for Customer Supplied Consolette
1	TDF6481	800 Mhz Unity Gain Antenna
1	RRX4025	ISB50LNC2 BULKHEAD ARRESTOR 125-100
200	L1705	1/2" LDF
2	DSL4PNMRC	1/2" N Male
2	TDN9289	Cable Wrap Weatherproofing
2	TDN6673	Grounding Kit
		ATIA
1	CA00966AA	ENH: FLEXIBLE AIR TRAFFIC INFORMATION ACCESS
1	ZA00103AA	ADD: TECHNICAL ASSISTANCE, TEN HOURS
		SECURITY
1	T7279	CSMS SUPPLEMENTARY DISK
5	DDN8653	RSA 5 YEAR HARD TOKEN
		FIREWALL
1	T7225	IDS SUPPLEMENTARY DISK
1	T7280	CHECKPOINT UPGRADE KIT
		ZC - ADD ADDITIONAL 'SITES' FOR DISPATCH SITES
3	CA00963AA	ADD: SITE LICENSE/PORT LICENSE
		DMZ
1	CA01053AA	ADD: DUAL SITE LINK CAPABILITY
1	DSJ4900B	HP PROCURVE SWITCH 2626B
1	ST6000	S6000 MULTI-P LAN-WAN ROUTER
2	ST6010	S6000 4-PORT ULTRAWAN MODULE
1	ST6000	S6000 MULTI-P LAN-WAN ROUTER
1	ST6010	S6000 4-PORT ULTRAWAN MODULE
1	ST6000	S6000 MULTI-P LAN-WAN ROUTER
1	ST6010	S6000 4-PORT ULTRAWAN MODULE
1	ST6000	S6000 MULTI-P LAN-WAN ROUTER
2	ST6010	S6000 4-PORT ULTRAWAN MODULE
1	ST6000	S6000 MULTI-P LAN-WAN ROUTER
2	ST6010	S6000 4-PORT ULTRAWAN MODULE
		MINEOLA SITE ROUTERS
2	ST6000	S6000 MULTI-P LAN-WAN ROUTER
2	ST6010	S6000 4-PORT ULTRAWAN MODULE
		SECURE KVL
1	T6717	KVL 3000 PLUS HARDWARE
1	X795AH	ADD: ASN MODE
1	U239AC	ADD: ASTRO 25 MODE
1	CA00243AA	ADD: ADP ENCRYPTION SOFTWARE
1	C954	ADD: CABLE FOR SPECTRA/SPECTRO
1	C724	CABLE, KEYLOAD
1	C543	ADD: CABLE FOR RNC, DIU, MGEG
1	C542	ADD: CABLE FOR KVL TO KMC (KEYLOADING)
1	6881132E29	KVL3000 PLUS USER GUIDE
1	NTN1402	120V RAPID DUAL UNIT CHARGER - 3 STEP CHARGING CYCLE

Qty	Nomenclature	Item Description
1	B1842BA	CENTRACOM GOLD AMBASSADOR ELECTRONI
12	K994AJ	ADD: MODULE, AMBASSADOR
1	X762AB	ADD: INTERFACE, ZONE CONTROLLER (TW
1	X758AA	ADD: SPARES, AMBASSADOR ELECTRONICS
1	K762BC	ENH: EXTENDED WARRANTY, 1 CARD CAGE
1	CA00126AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
1	B1811BC	CENTRACOM GOLD CENTRAL ELECTRONICS
1	K995BC	ALT: MODULES, AMBASSADOR INTERFACE
3	K259	ADD: CABLE, 25-PAIR, 15 FOOT AND PU
1	X643AA	ENH: AEB-CEB LINK TYPE, CO-LOCATED
1	K837AC	ENH: EXTENDED WARRANTY, 3 CARD CAGE
1	B1824 A	CENTRACOM GOLD INTERFACE HARDWARE F
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1824 A	CENTRACOM GOLD INTERFACE HARDWARE F
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1850BB	CENTRACOM GOLD INTERFACE MODULES FO
1	B1827	CENTRACOM GOLD SOFTWARE LICENSE MAN
2	X295	ADD: SOFTWARE LICENSE, STAT-ALERT C
7	X597AE	ADD: SOFTWARE LICENSE, CONVENTIONAL
5	X293	ADD: SOFTWARE LICENSE, ELITE OPERAT
1	CA00125AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK

Qty	Nomenclature	Item Description
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
5	L3457	CERTIFIED ELITE INTERFACE WORKSTATI
5	ZA00268AA	ADD: DUAL IRR CARD & PC SPKER
5	DDN6629	SOFTWARE BASED DUAL IRR
1	L3429	CERTIFIED ELITE INTERFACE SERVER
6	L3235	ADDITIONAL 5 CLENT ACCESS LICENSES
1	CDN6281	BASE WITH PTT SWITCH
1	CDN6293	ENCORE MONAURAL NOISE CANCELLING
1	DSCDN1549D	17" CRT, BEIGE, NO-TOUCH
5	DS019BLKTS	19" PVA LCD, BLACK, W/SAW TOUCH MON
1	B1811BC	CENTRACOM GOLD CENTRAL ELECTRONICS
1	K995BC	ALT: MODULES, AMBASSADOR INTERFACE
2	K259	ADD: CABLE, 25-PAIR, 15 FOOT AND PU
1	X643AA	ENH: AEB-CEB LINK TYPE, CO-LOCATED
1	K837AC	ENH: EXTENDED WARRANTY, 3 CARD CAGE
1	B1824 A	CENTRACOM GOLD INTERFACE HARDWARE F
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1824 A	CENTRACOM GOLD INTERFACE HARDWARE F
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY

Qty	Nomenclature	Item Description
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1850BB	CENTRACOM GOLD INTERFACE MODULES FO
1	B1827	CENTRACOM GOLD SOFTWARE LICENSE MAN
2	X295	ADD: SOFTWARE LICENSE, STAT-ALERT C
6	X597AE	ADD: SOFTWARE LICENSE, CONVENTIONAL
5	X293	ADD: SOFTWARE LICENSE, ELITE OPERAT
1	CA00125AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
5	L3457	CERTIFIED ELITE INTERFACE WORKSTATI
5	ZA00268AA	ADD: DUAL IRR CARD & PC SPKER
5	DDN6629	SOFTWARE BASED DUAL IRR
5	DS019BLKTS	19" PVA LCD, BLACK, W/SAW TOUCH MON
1	B1811BC	CENTRACOM GOLD CENTRAL ELECTRONICS
1	K995BC	ALT: MODULES, AMBASSADOR INTERFACE

Qty	Nomenclature	Item Description
4	K259	ADD: CABLE, 25-PAIR, 15 FOOT AND PU
1	X643AA	ENH: AEB-CEB LINK TYPE, CO-LOCATED
1	K837AC	ENH: EXTENDED WARRANTY, 3 CARD CAGE
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1827	CENTRACOM GOLD SOFTWARE LICENSE MAN
13	X597AE	ADD: SOFTWARE LICENSE, CONVENTIONAL
5	X293	ADD: SOFTWARE LICENSE, ELITE OPERAT
1	CA00125AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB

Qty	Nomenclature	Item Description
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
5	L3457	CERTIFIED ELITE INTERFACE WORKSTATI
5	ZA00268AA	ADD: DUAL IRR CARD & PC SPKER
5	DDN6629	SOFTWARE BASED DUAL IRR
5	DS019BLKTS	19" PVA LCD, BLACK, W/SAW TOUCH MON
1	B1811BB	CENTRACOM GOLD CENTRAL ELECTRONICS
1	K995BC	ALT: MODULES, AMBASSADOR INTERFACE
4	K259	ADD: CABLE, 25-PAIR, 15 FOOT AND PU
1	X643AA	ENH: AEB-CEB LINK TYPE, CO-LOCATED
1	K837AB	EHN: EXTENDED WARRANTY, 2 CARD CAGE
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR

Qty	Nomenclature	Item Description
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	B1827	CENTRACOM GOLD SOFTWARE LICENSE MAN
13	X597AE	ADD: SOFTWARE LICENSE, CONVENTIONAL
3	X293	ADD: SOFTWARE LICENSE, ELITE OPERAT
1	CA00125AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K801CF	DEL: OP HARDWARE (KEEPS COIM)
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	BKN1001 200	CABLE, 7 PAIR, PLENUM, 200 FOOT
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
3	L3457	CERTIFIED ELITE INTERFACE WORKSTATI
3	ZA00268AA	ADD: DUAL IRR CARD & PC SPKER
3	DDN6629	SOFTWARE BASED DUAL IRR
3	DS019BLKTS	19" PVA LCD, BLACK, W/SAW TOUCH MON
1	B1811BC	CENTRACOM GOLD CENTRAL ELECTRONICS
1	K995BC	ALT: MODULES, AMBASSADOR INTERFACE
2	K259	ADD: CABLE, 25-PAIR, 15 FOOT AND PU
1	X643	ENH: AEB-CEB LINK TYPE, E1
1	K837AC	EHN: EXTENDED WARRANTY, 3 CARD CAGE
1	K565	ADD: INTERFACE, RS232 (BOARD AND CA
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K700	ADD: RELAY, PTT OUTPUT (M-LEAD CONT
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING

Qty	Nomenclature	Item Description
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY.
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY.
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1850BB	CENTRACOM GOLD INTERFACE MODULES FO
1	B1827	CENTRACOM GOLD SOFTWARE LICENSE MAN
8	X597AE	ADD: SOFTWARE LICENSE, CONVENTIONAL
6	X293	ADD: SOFTWARE LICENSE, ELITE OPERAT
1	CA00125AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
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1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
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1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
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1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
6	L3457	CERTIFIED ELITE INTERFACE WORKSTATI
6	ZA00268AA	ADD: DUAL IRR CARD & PC SPKER
6	DDN6629	SOFTWARE BASED DUAL IRR
6	DS019BLKTS	19" PVA LCD, BLACK, W/SAW TOUCH MON
1	B1811BD	CENTRACOM GOLD CENTRAL ELECTRONICS
1	K995BC	ALT: MODULES, AMBASSADOR INTERFACE
2	K259	ADD: CABLE, 25-PAIR, 15 FOOT AND PU
1	X643	ENH: AEB-CEB LINK TYPE, E1
1	K837AD	EHN: EXTENDED WARRANTY, 4 CARD CAGE
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
1	B1840	CENTRACOM GOLD INTERFACE MODULE FOR
1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
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1	K380	ADD: INPUT, CARRIER OPERATED RELAY
1	K744AA	ENH: PL STRIP FOR PAGING
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Qty	Nomenclature	Item Description
1	B1850BB	CENTRACOM GOLD INTERFACE MODULES FO
1	B1827	CENTRACOM GOLD SOFTWARE LICENSE MAN
8	X597AE	ADD: SOFTWARE LICENSE, CONVENTIONAL
7	X293	ADD: SOFTWARE LICENSE, ELITE OPERAT
1	CA00125AA	ADD: SOFTWARE LICENSE, ASTRO 25 TRU
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1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
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1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
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1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
1	B1822B	CENTRACOM GOLD ELITE INTERFACE ELEC
1	K704AE	ADD: HEADSET JACK, #2 W/13 FOOT CAB

Qty	Nomenclature	Item Description
1	K570AE	ADD: HEADSET JACK, W/13 FOOT CABLE
1	K572AF	ADD: FOOTSWITCH
1	K703	ADD: MICROPHONE, GOOSENECK, 9 INCH
1	B1875A	CENTRACOM GOLD SPEAKER MODULE, DESK
1	K735AA	ENH: DEDICATE AUDIO TO MONITOR SPEA
7	L3457	CERTIFIED ELITE INTERFACE WORKSTATI
7	ZA00268AA	ADD: DUAL IRR CARD & PC SPKER
7	DDN6629	SOFTWARE BASED DUAL IRR
7	DS019BLKTS	19" PVA LCD, BLACK, W/SAW TOUCH MON
1	3087810V02	XTL5000 CABLE (3 METER)
1	3087810V02	XTL5000 CABLE (3 METER)
1	3087810V02	XTL5000 CABLE (3 METER)
1	3087810V02	XTL5000 CABLE (3 METER)
1	3087810V02	XTL5000 CABLE (3 METER)
1	3087810V02	XTL5000 CABLE (3 METER)
2	F2840	SSRN GATEWAY UNIT
2	DSJ4900B	HP PROCURVE SWITCH 2626B
2	ST2500	S2500 MULTIPROTOCOL WAN ROUTER
2	ST2512	S2500 ROUTER T1/E1 DAUGHTER BOARD
1	L3416	CERTIFIED INFO VISTA NETWORK TRANSP
2	FTN6726	SSRN 110V PS KIT
6	3087810V02	XTL5000 CABLE (3 METER)
2	FTN6726	SSRN 110V PS KIT
1	T6679H	INFOVISTA NETWORK PERFORMANCE SFTW
1	DDN9001	INFO VISTA SOFTWARE V3.1 SP1 FOR A
2	B1896	MGEG WITH CPU, 120 CLEAR CALL CAPAB
4	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
2	CA00169AA	ADD: ASTRO 25 IMBE CAPABILITY
2	CA00245AA	ADD: ADP ALGORITHM
2	CA00147AC	ADD: SECURE CAPABILITY & SECURE SOF
1	DSCDN1549D	17" CRT, BEIGE, NO-TOUCH
1	L3225A	HP KEYBOARD FOR GOLD ELITE MGEG & I
1	L3226A	HP MOUSE FOR INFOVISTA SERVER
2	DSF3X110506	PS/2 KVM 6FT ALL IN ONE CABLE SET
2	DS11487719	CPU SHELF WITH SG KEYBOARD 19 INCH
1	B1852	CENTRACOM GOLD SPARES FOR EMBASSY C
1	B1821B	CENTRACOM GOLD SPARE POWER SUPPLY,
1	B1889	CENTRACOM GOLD FIELD-ADD REMOTE OPE
2	B1813	CENTRACOM GOLD SPARE MODULE, CONSOL
2	B1814	CENTRACOM GOLD SPARES FOR CLASSIC C
2	QRN4250	BD INTFC CEB W/O PILOT TN-OUT
1	B1850BB	CENTRACOM GOLD INTERFACE MODULES FO
1	DDN8229	CERTIFIED MOTOBRIDGE OMC SERVER WIT
1	L3428	ASF-5106 SWITCHED FIREWALL WITH LIC
1	L3354	LIC FOR FIREWALL MGMT 1 OR MORE BAR
1	FVN5372	CD W/ OMC APPLICATION
1	FVN5385	CD W/ SIP APPLICATION -MAIN
1	DDN8227	CERTIFIED MOTOBRIDGE MAIN SIP SERVE
1	TRN7342	SEVEN FOOT RACK

Qty	Nomenclature	Item Description
2	DSJ4900B	HP PROCURVE SWITCH 2626B
2	ST2500	S2500 MULTIPROTOCOL WAN ROUTER
2	ST2512	S2500 ROUTER T1/E1 DAUGHTER BOARD
2	DDN8230	CERTIFIED MOTOBRIDGE DISPATCH WORKS
2	DSFAP17BLK	17" LCD, BLACK, NO-TOUCH MONITOR, W
2	DDN8230	CERTIFIED MOTOBRIDGE DISPATCH WORKS
2	DSFAP17BLK	17" LCD, BLACK, NO-TOUCH MONITOR, W
2	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH
2	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH
2	CDN6288	STARSET NOISE CANCEL HEADSET
2	CDN6288	STARSET NOISE CANCEL HEADSET
2	B1912	MCC SERIES DESKTOP SPEAKER
2	B1912	MCC SERIES DESKTOP SPEAKER
2	FVN5370	CD W/ DISPATCHER APPLICATION
2	FVN5370	CD W/ DISPATCHER APPLICATION
2	F2840	SSRN GATEWAY UNIT
2	F2840	SSRN GATEWAY UNIT
2	DSJ4900B	HP PROCURVE SWITCH 2626B
2	ST2500	S2500 MULTIPROTOCOL WAN ROUTER
2	ST2512	S2500 ROUTER T1/E1 DAUGHTER BOARD
4	F2840	SSRN GATEWAY UNIT
2	F2840	SSRN GATEWAY UNIT
2	DSNSOP820B	120 VAC 20 AMP 8 DED CIRCUITS W/O S
2	DS1101378	RACK MOUNTING PLATE ADAPTER , DSOP8
1	DSNSOP820B	120 VAC 20 AMP 8 DED CIRCUITS W/O S
1	DS1101378	RACK MOUNTING PLATE ADAPTER , DSOP8
8	M20SSS9PW1 N	XTL 5000 UHF R2 450-520 MHZ 10-45 W
8	G806	ENH: SOFTWARE ASTRO DIGITAL CAI
8	G51	ENH: SMARTZONE OPERATION
8	G361	ENH: ASTRO PROJECT 25 TRUNKING SOFT
8	G114	ENH: ENHANCED DIGITAL ID DISPLAY
8	G73	ADD: W4 CONTROL HEAD
8	G93	ADD: CONTROL HEAD SOFTWARE, W4
8	W665	ADD: CONTROL STATION OPERATION
8	G91	ADD: CONTROL STATION POWER SUPPLY
8	G90	ADD: NO MICROPHONE NEEDED
8	G142	ADD: NO SPEAKER NEEDED
8	G66	ADD: DASH MOUNT
8	G193	ADD: ADP SOFTWARE DSP BASED CRYPTO
8	G89	ADD: NO ANTENNA NEEDED
8	G43CU	INT: MANUAL USER W4,5,7,9 CH
8	G881AA	INT: XTL5000 INSTAL MANUAL QUE
8	HKN4191	POWER CABLE, 10 FT. (LOW/MID POWER)
8	DQ40624	RACK MOUNT 19 1/2" DEEP
8	HKN9087B	ADAPTER CBL 800 MHZ
200	L1702--	1/2" SUPERFLEX POLY JKT PER FOOT
8	CDN6579	1/2" N MALE PLATED S-FLEX
8	TDN8810	1/2" CONNECTOR N FEMALE JACK S FLEX
8	RLN4700	IS50NXC2MA FLANGE ARRESTOR 125-1000

Qty	Nomenclature	Item Description
1200	L1709	7/8" LDF HELIAX POLY JKT PER FOOT
16	DSL5PNFRPC	7/8" CONN N FEMALE 1 PIECE CAPTIVAT
8	TDN9383	1/2" X 10' LDF WITH N MALE
8	TDE7280	ANTENNA UHF YAGI NFE 10.0 DB
8	3087810V02	XTL5000 CABLE (3 METER)
1	DSNSOP820B	120 VAC 20 AMP 8 DED CIRCUITS W/O S
1	DS1101378	RACK MOUNTING PLATE ADAPTER , DSOP8
8	M20SSS9PW1 N	XTL 5000 UHF R2 450-520 MHZ 10-45 W
8	G806	ENH: SOFTWARE ASTRO DIGITAL CAI
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8	TDN9383	1/2" X 10' LDF WITH N MALE
8	TDE7280	ANTENNA UHF YAGI NFE 10.0 DB
8	3087810V02	XTL5000 CABLE (3 METER)
1	DSNSOP820B	120 VAC 20 AMP 8 DED CIRCUITS W/O S
1	DS1101378	RACK MOUNTING PLATE ADAPTER , DSOP8
1	DDN8231	CERTIFIED MOTOBRIDGE ADMINISTRATOR
1	DSFAP17BLK	17" LCD, BLACK, NO-TOUCH MONITOR, W
1	FVN5371	CD W/ ADMINISTRATOR CONTROL PANEL A
1	DDN8231	CERTIFIED MOTOBRIDGE ADMINISTRATOR
1	DSFAP17BLK	17" LCD, BLACK, NO-TOUCH MONITOR, W
1	FVN5371	CD W/ ADMINISTRATOR-CONTROL PANEL A
1	DDN8229	CERTIFIED MOTOBRIDGE OMC SERVER WIT
1	FVN5372	CD W/ OMC APPLICATION
1	FVN5385	CD W/ SIP APPLICATION -MAIN
1	DDN8227	CERTIFIED MOTOBRIDGE MAIN SIP SERVE
1	DSFAP17BLK	17" LCD, BLACK, NO-TOUCH MONITOR, W
1	DSFAP17BLK	17" LCD, BLACK, NO-TOUCH MONITOR, W

Exhibit B- Amended Payment

Section 4. Payment.

(a) Amount of Consideration. The amount to be paid to the Contractor as full consideration for the Contractor's Services under this Agreement shall be paid upon completion of each milestone listed below and in the amount listed next to the milestone:

Milestone	Milestone Payment
1.) Detailed Design & Transition Plan	$1,986,600
2.)Completed Site Development Preparations for all Transmit & Receive sites	$4,587,000
3.) (a) Delivery of Backbone (Infrastructure) All Transmit & Receive sites, Primary Dispatch (*70% of Milestone payment*)	(a) $6,178,179(70%)
(b) Delivery of All Microwave Equipment (*30% of Milestone payment*)	(b) $2,647,791(30%)
	Total: $8,825,970
4.) Installation of all primary dispatch center equipment, microwave loop site equipment, and 16 TX/RX sites	$2,455,970
5) Installation, optimization, verification & acceptance of all backbone infrastructure. (Transmit receive sites, primary dispatch, microwave)	$3,765,169
6.) Backup Dispatch Center equipment installation, optimization, verification & acceptance	$993,300
7) Mobile Radio Equipment Installation & Acceptance	$5,020,900
8) CATP Completion and Critical Buildings	$4,997,200
9) Training Completed for Subscriber Units and Dispatch	$750,000
10) 50% Portable Radio Equipment Acceptance	$1,368,300
11) 50% Portable Radio Equipment Acceptance	$1,368,300
12) Final System Acceptance	$6,241,510
Total Agreement Price	$42,360,219

POLICE DEPARTMENT
COUNTY OF NASSAU, NEW YORK

INTERNAL CORRESPONDENCE

DATE: November 14, 2006 SNCC NO: 5310

TO: Commissioner of Police (Through Official Channels)

FROM: Deputy Inspector Edmund J. Horace, Serial No. 6909, Special Project Manager, Communications Bureau

SUBJECT: **REQUEST FOR CHANGE ORDER, MOTOROLA RADIO PROJECT CONTRACT CFPW05000024**

1. Attached is a Change Order regarding Motorola Radio Contract Number CFPW05000024 initiated on June 30, 2005.This change order will authorize Motorola to replace Centracom Gold Elite dispatch radio consoles as designated by the contract, with IP based MCC 7500 dispatch consoles. This change will include eighteen (18) dispatch console positions in the Prime Dispatch Facility and thirteen (13) positions in the Back-up Dispatch Center. It will also include two (2) dispatch positions in Suffolk County for NYMAC interoperability access.

2. The MCC7500 IP based console functionality has been researched by the radio projects Technical Evaluation and Cost Evaluation Teams with the assistance of project technical consultant Mr. Ted Allen of Booz Allen Hamilton.

3. The Technical Evaluation Team determined that the Centracom Gold Elite consoles are serial port connected consoles nearing end of product lifecycle. MCC 7500 IP based consoles will afford the Department the ability to take advantage of new cutting edge technology at beginning lifecycle stages. MCC7500 IP consoles will provide the County with enhanced radio system survivability, flexibility of radio console distribution and expansion, more cost effective and easier interface to logging recorders, and additional security and commonality of IT components enabling simpler maintenance and repairs. The Technical Evaluation Team recommends this change be implemented.

4. The Cost Evaluation Team has determined that although the cost of the new IP based console is $750,000, this new IP based console will afford the Department with cost savings of approximately $400,000 towards implementation of mandatory integrated Logging Recorders. Savings on maintenance future upgrades will further offset this cost during the life of this contract. The Cost Evaluation Team recommends this change be implemented.

5. This IP console technology was not available when this contract was negotiated and approved. This cost change will be funded with additional capital funds increasing the total cost of this project to $42,360,219.

6. As per Section Thirty (30) in the radio contract, the Commissioner of Police, or his designee, and the Commissioner of Department of Public Works, or his designee must approve change orders. As project manager of the 500 MHz radio project I recommend this Change Order be approved.

Edmund J. Horace
Deputy Inspector

DOCUMENT: N:\CO_Admin\horace\IP Console Change Order comm letter11-14-06.doc

Change Order # 004

Contract Number:	CFPW05000024
Contract Date:	06/30/2005
Change Order Number:	004
Change Order Name:	MCC7500 (IP) Console Replacement of CentraCom Gold Elite
Date of Change Order:	08/28/2006

Change Requested:

This Change Order authorizes Motorola to replace the contracted CentraCom Gold Elite Dispatch Radio Console with the new MCC7500 IP based Dispatch Radio Console. This includes the 18 dispatch positions for Prime Dispatch facility, 13 dispatch positions for Backup Dispatch facility, all associated back room hardware and the addition of two (2) remote MotoBridge dispatch positions to be installed in Suffolk County for NYMAC transceiver access. Motorola will install, optimize and test all MCC7500 hardware, software and associated interfaces. Nassau County has reviewed the MCC7500 initial release feature set limitations and releases Motorola from any contractual commitment to provide specific features identified in the original RFP PD0625-0441, as detailed in Attachment A. Equipment List changes appear in Attachment B

Reason for Change:

Nassau County has expressed a strong desire to move forward with the new IP based radio dispatch console as part of their current Radio System Replacement project.

Cost Impact:

Total: $ 750,00000

Current Contract Value:	**$41,610,219.00**
Net Change in Contract Value:	**$ 750,000.00**
Revised Contract Value:	**$42,360,219.00**

Schedule Impact:

None

Operational Impact:

Specific features originally required in RFP PD0625-0441 will not be provided in the ship accepted release that will be provided to Nassau County, as detailed in Attachment A.

Payment Terms:

The amount of this change order will be added to payment milestones 3 and 5 as follows:

Payment Milestone 3 (Delivery of Backbone Infrastructure):	$420,000
Payment Milestone 5 (Install, Optimize, Verify and Acceptance of Backbone Infrastructure):	$330,000

All other terms and conditions of the contract remain unchanged and in full force and effect.

Approved By:

(Signatures) NCPD Authorized Representative

NCPW Authorized Representative

Motorola Project Manager (Ken Weinberg)

Motorola Representative (Ray Murray)

Date: _____ Date: _____

Nassau County has reviewed the MCC7500 initial release feature set limitations and releases Motorola from any contractual commitment to provide specific features identified in the original RFP PD0625-0441 as detailed below. Features identified as being under consideration for a future release of the MCC 7500 IP based dispatch console are not guaranteed to be available in the future and are not provided as part of Change Order 004. If such features do become available in a future MCC 7500 release version, Nassau County may be required to purchase these new features.

15.2.1.2.2Dispatch from New CB (Possible Future Location TBD)

- The new dispatch center shall have the same functionality as the current CB.
  Exception
  The current CB utilizes Motorola's Centracom console platform. The proposed MCC 7500 IP based console platform currently does not have all of the same functionalities found in Motorola's Centracom platform.

15.4.2 Console Features

- Provides multiple alert tone generation
  Exception
  This feature is not included with the proposed MCC 7500 IP based Console. This feature is under consideration for future release of the MCC 7500.

- Incorporates programmable paging encoders and single button paging capability
  Exception
  This feature is not included with the proposed MCC 7500 IP based Console. This feature is under consideration for future release of the MCC 7500. The anticipated paging formats for conventional operation are: Quik Call I Format, Quik Call II Format, Single Tone Format, 5/6 Tone Format, Digital Dial Format and DTMF (Touch Code) Format. Any other paging formats would require an external paging encoder.

- Decodes inbound radio unit ID and the Emergency ID message and routes the ID to all consoles for display and activates the appropriate audio alarms at the consoles.
  Exception
  Only Trunked IDs are available for display at this time. Support for Conventional MDC 1200 ID display is under consideration for future release.

- Allows a priority channel marker to be placed on any of the talk groups/channels controlled by the system
  Exception
  This feature is not included with the proposed MCC 7500 IP based Console. This feature is under consideration and is not currently available.

- Displays the alias names of individual radio units and system ID's
  Exception
  Only Trunked IDs are available for display at this time. Support for Conventional MDC 1200 ID display is under consideration for future release.

15.4.3 Operator Control Capabilities

- All consoles shall have the ability to transmit an alert tone of 900 Hz, 1000 Hz, and 1500 Hz over the air for as long as the alert tone switch is depressed. Pulsed variations of this single tone shall be provided. The tones shall be transmitted over any selected talk group/channels.
  Exception
  This feature is not included with the proposed MCC 7500 IP based Console. Alert tone functionality is not available in the current release. However, it is under consideration for future MCC 7500 release. The MCC 7500 console does not at this time provide the ability to process MDC 1200 signaling.

- One VU meter shall be provided on the desktop unit of each operator console position.
  Exception
  This feature is not included with the proposed MCC 7500 IP based Console. A VU meter is not provided in this release, it is targeted for a future release and will be displayed on the dispatch GUI.

- The contractor will provide and install a wall-mounted transmitting indicator that will be conspicuously positioned within the communications center and will illuminate indicating radio talk group/channel activity.
  Exception
  This feature is not provided in the MCC 7500 IP based Console. As an alternate, the console system has a call/busy indication integrated in the console dispatch screen. Additionally, the back up mobile radio at each console position can be used to monitor and confirm the radio talk group/channel activity.

- The contractor will provide and install a console-mounted transmitting indicator that will illuminate indicating radio activity on each operator console.
  Exception
  This feature is not provided in the MCC 7500 IP based Console. As an alternate, the console system has a call/busy indication integrated in the console dispatch screen. Additionally, the back up mobile radio at each console position can be used to monitor and confirm the radio talk group/channel activity.

15.4.4 Console Electronics

- At a minimum, each interface shall consist of a plug-in circuit card that may contain control-related circuitry, line driver amplifiers; two-wire and four-wire receive amplifiers, digital automatic level adjustment circuitry and fault diagnostic circuitry. The module shall be capable of remotely controlling base stations using industry standard tone remote controls, E & M signaling, and/or DC remote control.
  Exception
  The Conventional Channel Gateway (CCGW) is a functional replacement of the plug-in circuit card concept. DC remote functionality is not supported in the CCGW.

15.4.6.1 Fault Tolerance and Redundancy

- Duplication of circuits necessary to attain this performance shall be provided. No single failure shall entirely disable more than one radio talk group/channel or one console, and the loss of one operator position shall not affect system operations.
  Exception
  As an example, the CCGW supports four (4) analog conventional interfaces. Failure of a CCGW will affect four (4) interfaces instead of a single interface. LAN components supporting multiple devices would have similar effects.

- All critical system components shall be duplicated to form a backup system supporting automatic changeover that will prevent loss of an operator position, a radio talk group/channel, a call in progress, or the system status. Failure of any data bus shall cause an automatic transfer to a redundant bus structure. A failed module shall be isolated from the system bus structure and readily identifiable as needing service.
  Exception
  A redundant bus structure is not applicable in the IP architecture. Motorola has used a diversification approach by utilizing multiple LAN switches, Routers and CCGWs.

- Integral power supplies shall be fully redundant, such that if a power supply failure occurs, it will automatically switch to the backup supply. Reserve power supplies shall be maintained in a cold-standby mode for isolation from transient spikes or surges.
  Exception
  Console equipment (monitors, CPU, Ethernet equipment, CCGW etc.) does not incorporate standby power supplies. However, the dispatch facility at Prospect and Mineola is planned to have back up Generators and UPS standby power sources provided by Nassau County.

- Where redundancy is employed, malfunctions will not be considered system failures if the system is restored to full operation within 2 seconds or less. System failure is defined as any malfunction that causes loss of system or subsystem to depart from acceptable standards.
  Exception
  Portions of the IP console system contain redundant Ethernet devices such as multiple routers and switches. The network is not able to consistently restore the affected system with a redundant device to full operation within 2 seconds or less. Furthermore, the SmartZone Controller plays a much larger role in the call assignment process with IP based consoles. If a switch occurs between the active and idle Zone Controller, the system will switch from 'wide area' operation to 'local operation' for about two [2] minutes until the system resumes operating in the 'wide area' mode.

- Contractors shall state the projected system reliability and mean time between failure (MTBF) for major subsystems and equipment, based on the system proposed.
  Exception
  Motorola is unable to supply Mean Time Between Failure values.

15.4.6.2 Operating Statistics and Reporting

- Visual and audible alarms shall be provided to the maintenance console. They shall also be presented to the dispatch consoles and appear on the designated supervisor console. Additionally, all console electronics alarms shall appear at a network interface to CAD.
  Exception
  Only the error status messages available to the standard operator position are available to the CAD.

- Capability for displaying hardware ID numbers of radio units transmitting on each of the channels/talk groups shall also be provided and will be capable of being displayed on the maintenance console. Up to 10 IDs shall be available for display on any selected channel/talk group. A separate display of activated emergency ID numbers shall be provided.
  Exception
  Only Trunked IDs are available for display at this time. A separate display of activated emergency Trunked ID numbers is provided with RCM (Radio Control Management) on a SZ User Terminal. Support for Conventional MDC 1200 ID display is under consideration for future release.

- The console electronics equipment shall periodically run audio diagnostics through each transmit and receive audio path in the system. The audio paths shall include the automatic audio level setting circuitry and the line coupling transformers. Should a fault be detected, the designated supervisory console and the maintenance console shall be notified through a user friendly English language display. Fault minimizing routines shall be automatically activated and diagnostic information shall be logged on an associated system printer or to an applicable storage device/repository for subsequent reporting.
  Exception
  The MCC 7500 IP based Console and ASTRO 25 system performs many different types of diagnostics on the network, but it does not perform audio diagnostics on transmit and receive paths.

15.5.3 Headsets

- Dual headset jacks capable of four-wire or six-wire operation.
- Dual operation of both radio and telephone

  Exception
  The MCC 7500 supports dual head set jacks. Only the primary head set can be shared between the radio system and an external telephone system. The secondary headset only works with the radio system.

Change Order # 004 – Attachment B

Nassau County Equipment List Changes for Change Order # 004

Additions: See file: Change Order #4 Equipment Add List.pdf

Deletions: See file: Change Order #4 Equipment Delete List.pdf

NCPD Technical Review of the MCC 7500 IP Console Change Order

1 Purpose

The Nassau County Police Department has requested a change to the contract for the purchase of the Land Mobile Radio System Modernization Capital Project (50590). This change pertains to the updating of the Network Management and Dispatch Console equipment to the state of the art IP technology. This document will discuss this Change Order request.

2 Background

The existing contract calls for the installation of Motorola's circuit-based technology and the Gold Elite Dispatch consoles. This technology has been in existence for over twenty years. In fact, this equipment is similar to what comprises the County's existing radio system.

The circuit-based technology relies heavily on hardware to process radio calls throughout the system. An independent audio path must be established for each radio channel at each site. Each of the audio paths has an associated card at the Network Management site. In addition, each console has a dedicated card to process the radio calls. These cards are all reside in a piece of equipment called a CEB. There are a total of 100 cards in six (6) CEB's in the system.

This circuit based technology has limited growth potential due to its design. Each audio path for a channel from a site or a console or a logging recorder takes up a time slot on the data buss. The current design has filled most of the available time slots inhibiting growth for additional consoles or channels.

Another disadvantage of the circuit based technology is a requirement for specialized cables for each card and consoles. These cables are expensive to maintain and bulky to install. This specialized cabling also limits where dispatch consoles can be installed.

The circuit-based technology will not allow for redundant Network equipment. As such, if the Network equipment is destroyed by fire or similar catastrophic event, the system will fall into conventional fail soft. This significantly impacts the operation of the radio system

Furthermore, Motorola will discontinue production of the circuit-based Gold Elite equipment in late 2009.

3 Internet Protocol (IP) System Upgrade

IP technology is a proven standard for information distribution for today's IT infrastructure. In addition, this technology will be the standard for information flow and processing for the future.

NCPD Technical Review of the MCC 7500 IP Console Change Order

An IP system differs from a circuit based system in the way information is processed. In the case of the radio system, the voice traffic is the information that is processed through the radio system.

An IP system digitizes the analog voice call of a user and processes this packet of information down a single pipe or LAN. This packetization of the audio calls allows the system to direct this information to multiple locations over a single LAN cable. The packet is then distributed through the system using standard IT components, i.e. routers, servers and hubs.

The utilization of standard IT components allows for easier installation and maintenance of the cabling infrastructure. It also allows for flexibility of maintenance since many of the elements are commercially available as off the shelf (COTS) components.

The IP console design facilitates the installation of additional consoles, whether at the current dispatch center or at a remote location such as a local village police department.

The amount of bandwidth available to the system is the basic limitation for the growth of additional consoles or interoperability devices (i.e. Motobridge). The IP system allows for greater growth potential.

The IP console allows 100% encryption from subscriber to console. This is another advantage compared to the circuit-based system that would require encryption devices at the network equipment room.

4 Recommendation

There are many advantages that the IP system provides to the County; enhanced survivability of the system, flexibility of console distribution, easy interface to logging recorder, additional security and commonality of IT components enabling simpler maintenance and repairs.

These features support a recommendation to approve the proposed Change Order.

CHANGE ORDERS - 2007 BUDGETARY ESTIMATE

Add Shelters

Site	Cost
Syosset	$274,618.00
East Hills	$319,170.00
Total	**$593,788.00**

Add Microwave Path (Spur)

Site	Cost
New Path From NUMC to Bethpage	$245,716.00
Total	**$245,716.00**

Move EAB & Data Far Rockaway & Sands Point

	Cost
Total	**$328,200.00**

Design Assumptions For MED:

- Reuse of Micor Receivers
- Reuse of Receiver Multicoupler
- Reuse of any filters and/or preselectors
- New antenna - one [1] omni (assuming multiple receivers are tied into a single receiver multicoupler)
- New line – 350 feet of 7/8" LDF
- New ground kits [qty = 4] & Polyphaser added

Design Assumptions for DATA:

- Reuse of Data Base Station
- Reuse of any filters / duplexer
- Reuse of modem
- New antenna – one [1] omni (assuming a duplexer is used per DBS)
- New line – 350 feet of 7/8" LDF
- New ground kits [qty = 4] & Polyphaser added

COUNTY OF NASSAU

INTER-DEPARTMENTAL MEMO

DATE: November 14, 2006

TO: Commissioner Raymond Ribeiro; Nassau County Department of Public Works

FROM: Deputy Inspector Edmund J. Horace: Nassau County Police Department

SUBJECT: **NASSAU COUNTY POLICE DEPARTMENT 500 MHZ RADIO PROJECT: CHANGE ORDER, IP BASED MCC-7500DISPATCH CONSOLES**

As per Motorola Radio Contract CFPW05000024 Section 30b, and Section 30g the Radio Contract Change Order Review Board must approve all change orders. The Radio Contract Change Order Review Board consists of the Commissioner of Police of Nassau County or his designee and the Commissioner of Public Works of Nassau County or his designee.

Attached is a change order request to authorize Motorola to replace Centracom Gold Elite dispatch radio consoles with IP based MCC 7500 dispatch consoles. This change will include eighteen (18) dispatch console positions in the Prime dispatch facility and thirteen (13) positions in the Back-up facility. It will also include two (2) dispatch positions in Suffolk County for NYMAC interoperability access.

The MCC7500 IP based console functionality has been researched by the radio projects Technical Evaluation and Cost evaluation teams with the assistance of project technical consultant Mr. Ted Allen of Booz Allen Hamilton. The Technical Evaluation Team included Deputy Inspector Edmund J. Horace N.C.P.D., Chief Peter Meade N.C. Fire Com., Sergeant Thomas Golder N.C.P.D. and Detective Kenneth Strigaro N.C.P.D. The Cost Evaluation Team included Deputy Chief George Gudmundsen NCPD, N.C. Dir of Purchasing Frank Ryan, N.C. Assist. Dir. OMB Paul Broderick, and Lieutenant James Bartscherer N.C.P.D.

The Technical Evaluation Team determined that the Centracom Gold Elite consoles are serial port connected consoles nearing end of product lifecycle. MCC 7500 IP based consoles will afford the Department with the ability to take advantage of new cutting edge technology at beginning lifecycle stages. MCC7500 IP consoles will provide the County with enhanced radio system survivability, flexibility of radio console distribution and expansion, more cost effective and easier interface to logging recorders, and additional security and commonality of IT components enabling simpler maintenance and repairs. The Technical Evaluation Team recommends this change be implemented.

The cost evaluation team has determined that although the cost of the new IP based console is $750,000, this new IP based console will afford the Department with cost savings of approximately $400,000 towards implementation of mandatory integrated Logging Recorders. Savings on maintenance future upgrades will further offset this cost during the life of this contract. The Cost Evaluation team recommends this change be implemented.

This IP console technology was not available when this contract was negotiated and approved

This cost change will be funded with additional capital funds increasing the total cost of this project to$42,360,219.

Contract ID#: _____

Department: Police Department

E-81-05

Contract Details

NIFS ID #: CFPW 050004 NIFS Entry Date: 6/10/05 Term: from 06/20/05 to 06/20/10

New ☒ Renewal	
Amendment ☐	
Time Extension	
Addl. Funds ☐	
Blanket Resolution ☐ RES#	

1) Mandated Program:	Yes ☐	No ☒
2) Comptroller Approval Form Attached:	Yes ☒	No ☐
3) CSEA Agmt. § 32 Comply		
4) Vendor Ownership		
5) Insurance Required		

Copy of Motorola Original Quote Dated 6/6/05 Amended 6/8/05 Per Stephanie Walsh

Agency Information

Vendor

Name	Vendor ID#
Motorola	
Address	**Contact Person**
85 Harristown Rd Glen Rock New Jersey 07452	Stephanie Walsh
	Phone
	(201) 447-7525

Routing Slip

DATE Rec'd	DEPARTMENT	Internal Verification	DATE Appvd	SIGNATURE	Fee Approvals if Required
	Department	NIFS Entry (Dept) ☐ NIFS Appvl (Dept. Head) ☐	6/9		
	OMB	NIFS Approval ☐	6/10		Yes ☐ No ☐
	Vertical DCE	NIFS Approval ☐	6/10		
	Department	Vendor Administration ☐ NIFS Appvl (Dept. Head) ☐			
6/13/05	County Attorney	CA RE&I Verification ☒	6/13/05		
	County Attorney	CA Approval as to form ☒	6/13/05		Yes ☒ No ☐

PR 5254 (8/02)

Contract ID#: _____

Department: Police Department

	LEG	Legislative Affairs	*Fw'd Original K to CA* ☐			
		Rules ☐/ Leg. ☐	☐			
		County Attorney	*NIFS Approval* ☐			
		County Comptroller	*NIFS Approval* ☐			
		County Executive	*Notarization* ☐ *Filed with Clerk of the Leg.* ☐			

Contract Summary

Description: New Contract

Purpose: The purpose of this contract is to provide Nassau County with a state of the art public safety Land Mobile Radio System on the Police Department's recently acquired 500 MHz frequency band. The new T-band, digital, trunked, turnkey radio system will replace the outmoded and outdated system that was installed in 1982. The old system shares a UHF band with another user in New Jersey and provides limited channels. As a result, Nassau County has been forced to transmit calls at levels that do not interfere with this co-user and limits the system's capacity to handle radio traffic, leaving officers with less effective communications. This system will provide first responders with critical communications capability by providing 97% in street-and 95% in-building portable radio coverage reliability throughout the entire county. The infrastructure for the County Police Department's new radio system will be accessible to other public safety agencies throughout Nassau County, including village police departments, volunteer fire departments and ambulance companies in Nassau county. This system will also provide interoperability with the New York City Police Department, Suffolk County Police Department, state and federal agencies as well as other agencies and villages in Nassau County

Method of Procurement: A Request for Proposals was issued on July 7, 2004. The RFP asked for proposals to furnish, design, install and implement a new public safety land mobile radio system on the Police Department's recently acquired 500 MHz frequency band that would guarantee 97% portable radio on-street coverage, 95% portable radio in-building coverage, along with inter-operability with local village and city police agencies and Nassau County's DPW system including 71 fire districts. Proposals were received from the two nationally recognized firms in the business of designing and implementing public safety land mobile radio systems: Motorola and M/A COM.

Vendors were required to submit separate cost and technical proposals. The cost and technical proposals were separately evaluated by a Cost Evaluation Team and a Technical Evaluation Team. These two teams were made up of different members and operated completely confidentially and independently of each other. The teams included representatives of the County Police Department, the County Department of Public Works, the Police Benevolent Association, and village police departments, and were advised by consultants from Booz Allen Hamilton.

After an exhaustive, five-month process, which included oral presentations, and written clarifications from both vendors, the Cost Evaluation Team and Technical Evaluation Team submitted final reports to the Contract Selection Committee, which also included representatives of the County Police Department, the County Department of Public Works and the Police Benevolent Association. The Contract Selection Committee

Contract ID#: _____ Department: Police Department

during system testing must be corrected by Motorola before system acceptance. This is a time-of-the-essence contract requiring installation and final acceptance testing in twenty-seven months.

Impact on Funding / Price Analysis: Payments will be made from County capital funds (Capital Project #50590). Forty Million Dollars ($40,000,000) has been included in the capital plan from County sources and an additional Six Million Dollars ($6,000,000) has been included in the capital plan from a federal Department of Justice Community Oriented Policing Services ("COPS") grant for a total of Forty-Six Million Dollars ($46,000,000).

Note: In compliance with COPS grant mandate, within the County capital funds of Forty Million Dollars ($40,000,000) Three Million Five Hundred Eighty-Seven Thousand Dollars ($3,587,000) has been earmarked as matching funds.

The Nassau County Police Department requests that the following funds be encumbered:

Base Contract	$41.6 million
Optional Ancillary Components	$ 1.4 million
Contingency Account	$ 1.6 million
TOTAL	$44.6 million

NOTE: The Base Contract covers the turnkey radio system. Optional Ancillary Components are comprised of specific items at guaranteed prices which the County may purchase at its option. The Contingency Account represents funding for unanticipated work, materials or equipment which must be approved by the Change Order Review Board comprised of DPW Commissioner Peter Gerbasi and NCPD Commissioner James Lawrence. The Review Board will ensure that the timeframe for system installation is as expeditious as possible in order to safeguard the safety of individuals relying on the radio system, while at the same time ensuring that only appropriate expenditures are made.

Change in Contract from Prior Procurement: None

Recommendation: Approve as submitted.

Advisement Information

BUDGET CODES	
Fund:	
Control:	
Resp:	
Object:	
Transaction:	

FUNDING SOURCE	AMOUNT
Revenue Contract	
County	$
Federal	$
State	$
Capital	$
Other	$
TOTAL	$ 44.6 million

LINE	INDEX/OBJECT CODE	AMOUNT
1		$
2		$
3		$
4		$
5		$
6		$
	TOTAL	$ 44.6 million

RENEWAL	
% Increase	
% Decrease	

APPROVED: [signature] 6/28/05
INSURANCE SECTION

Document Prepared By: Deputy Inspector Edward Moran, NCPD Date: 06/20/05

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged.	Name
Name	Name	Date
Date	Date	(For Office Use Only) E #:

PR5254 (8/03)

unanimously rated Motorola as the vendor that provided the County with the best value proposal.

Procurement History: As described above, the cost and technical proposals received from each vendor were subjected to a rigorous five month evaluation process by the Technical Evaluation Team and the Cost Evaluation Team, which operated completely independently from each other. Each vendor also made oral presentations to the Technical Evaluation Team and the Contract Selection Committee. The Technical Evaluation Team and the Cost Evaluation Team submitted final reports to the Contract Selection Committee in March 2005 and, after reviewing those reports, the Contract Selection Committee unanimously selected Motorola as the vendor that provided the County with the best value land mobile radio system. The Motorola proposal will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County.

Individual talk groups will be established at the precinct and command level to provide communications in the Nassau county police department. The system's infrastructure also will have capacity to accommodate all of the incorporated village police departments, all of the seventy-one (71) volunteer fire departments and all of the six (6) volunteer ambulance corps in the county that want to establish talk groups on it for their communications needs.

This system will have dispatch positions in Police Communications, Fire Communications and the Emergency Ambulance Bureau where communications operators will coordinate and control all voice communications of public safety providers on this system. Dispatch positions can also be expanded to Incorporated Village Police Departments as they migrate to this system.

This contract also allows all public safety providers to purchase radios and equipment any time during the next ten (10) years at reduced rates, as provided by this contract. This will provide an opportunity for individual public safety providers to migrate to this system.

As part of this procurement two (2) subscriber units (portable radios) will also be provided to each village police department, volunteer fire department and emergency ambulance corps to provide them with direct access to this system when necessary during emergency operations. As per RFP requirements this system and its components will also provide forty percent (40%) expansion capabilities for future growth.

This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems.

Extensive testing will be conducted on system components to verify system performance and insure that required specifications are met. This testing will include physically driving throughout the County to test reception of portable subscriber units. Particular attention will be given to areas where there are known reception problems and to critical in-building locations throughout the county. Any system performance or coverage shortfall found

E-8/-05

RULES RESOLUTION NO. 124-2005

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AGREEMENT BETWEEN THE COUNTY OF NASSAU AND MOTOROLA, INC., FOR THE FURNISHING, DELIVERY AND INSTALLATION OF A TURNKEY LAND MOBILE RADIO SYSTEM FOR THE POLICE DEPARTMENT.

Passed by the Rules Committee
Nassau County Legislature
By voice vote on 6-20-05
Voting: 9 ayes ___ nayes ___ abstained
Legislators present 9

WHEREAS, the County, on behalf of the Nassau County Police Department, has negotiated a personal services agreement with Motorola, Inc., for the furnishing, delivery and installation of a turnkey land mobile radio system; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said agreement with Motorola, Inc.

Howard S. Weitzman
Comptroller

OFFICE OF THE COMPTROLLER
240 Old Country Road
Mineola, New York 11501

COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

Attach this form along with all personal, professional or human services contracts, contract renewals, extensions, and amendments.

I. ( ) The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids. The contract was awarded after a request for sealed bids was published in_____ [newspaper] on _____ [date]. The sealed bids were publicly opened on _____ [date]. _____ [#] of sealed bids were received and opened.

II. (X) The contractor was selected pursuant to a Request for Proposals.
The Contract was entered into after a written request for proposal was issued on July 6, 2004. Potential proposers were made aware of the availability of the RFP by posting on the county website. A vendors conference was held on July 14, 2004. Ten (10) vendors attended. Subsequent to the vendors conference questions and answers were exchanged with interested vendors. Proposals were due on September 15, 2004. Two (2) proposals were received and evaluated.
The evaluation committee consisted of:

Technical Evaluation Team: Deputy Inspector Edmund J. Horace NCPD Chairperson, Chief Peter Meade Fire Com, Sergeant Thomas Golder NCPD, Sergeant Michael Doyle Garden City PD, Detective Kenneth Strigaro NCPD, Police Officer Charles Seich NCPD, Mr. William Ango DPW.

Cost Evaluation Team: Deputy Chief George Gudmundsen NCPD Chairperson, Sergeant James Bartscherer NCPD, Mr. Frank Ryan Dept of Purchase, Mr. Paul Borderick OMB.

Contract Selection Committee: Chief Stephen McDonald NCPD Chairperson, Ms Helena Williams Deputy County Executive, Mr. Timothy Driscoll Deputy County Executive, Mr. Peter Gerbasi DPW, Deputy Chief Robert McGuigan NCPD, Deputy Inspector Edmund Horace NCPD, Police Officer Charles Seich NCPD.

The proposals were scored and ranked by the Contract Selection Committee. As a result of the scoring and ranking, the highest-ranking proposer was selected.

III. ( ) This is a renewal, extension or amendment of an existing contract.
The contract was originally executed by Nassau County on _____[date]. This is a renewal or extension pursuant to, or an amendment within the scope of, that contract (copies of the relevant pages of the contract are attached). The original contract was entered into after_____

_____

_____

[describe procurement method, i.e., RFP, three proposals evaluated, etc.]

IV. ( ) **Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.**

( ) A. The contract has been awarded to the proposer offering the lowest cost proposal;

or

( ) B. The attached memorandum contains a detailed explanation as to the reason(s)why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

V. ( ) **Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.**

( ) A. There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.

( ) B. The memorandum explains that the contractor's selection was dictated by the terms of a federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).

( ) C. Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no._____, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.

VI. ( ) **This is a human services contract with a not-for-profit agency, and I.-V. above do not apply.** Attached is a memorandum that explains the reasons for entering into this contract.

VII. ( ) **This is a public works contract for the provision of architectural, engineering or surveying services.** The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No.928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.

James K. Hahn

Department Head Signature

6/9/05

Date

NOTE: Any information requested above may be included in the county's "staff summary" form in lieu of a separate memorandum.

Compt. form Pers./Prof. Services Contracts: 8/02

ACORD CERTIFICATE OF LIABILITY INSURANCE

REVISED DATE (MM/DD/YY) 05/31/2005

Serial # 2400

PRODUCER

AON RISK SERVICES, INC. OF ILLINOIS
1000 NORTH MILWAUKEE AVENUE
GLENVIEW, ILLINOIS 60025
ATTN: INSURANCE VERIFICATION CENTER
1-800-4-VERIFY/ FAX 1-847-953-5341

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

MOTOROLA INC. AND ITS SUBSIDIARIES
1303 EAST ALGONQUIN ROAD
SCHAUMBURG, IL 60196

COMPANIES AFFORDING COVERAGE

COMPANY A: LIBERTY MUTUAL INSURANCE COMPANY

COMPANY B: LIBERTY MUTUAL FIRE INSURANCE COMPANY

COMPANY C: LIBERTY INSURANCE CORPORATION

COMPANY D:

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY	RG2C41005169074	7/01/2004	7/01/2005	GENERAL AGGREGATE	$ 3,000,000
	[X] COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	$ 1,000,000
	[ ] CLAIMS MADE [X] OCCUR				PERSONAL & ADV INJURY	$ 1,000,000
	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE	$ 3,000,000
					FIRE DAMAGE (Any one fire)	$ 250,000
					MED EXP (Any one person)	$ 10,000
B	AUTOMOBILE LIABILITY	AS2C41005169014 (ALL OTHER STATES) AS1C41005169024 (OHIO)	7/01/2004	7/01/2005	COMBINED SINGLE LIMIT	$ 3,000,000
	[X] ANY AUTO				BODILY INJURY (Per person)	$
A	ALL OWNED AUTOS				BODILY INJURY (Per accident)	$
	SCHEDULED AUTOS				PROPERTY DAMAGE	$
	HIRED AUTOS					
	NON-OWNED AUTOS					
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY: EACH ACCIDENT	$
					AGGREGATE	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	UMBRELLA FORM				AGGREGATE	$
	OTHER THAN UMBRELLA FORM					$
C	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	WA7C4D005169084 (ALL OTHER STATES) WC7C41005169094 (AK,ID,MT,OR,WI)	7/01/2004	7/01/2005	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
C	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: [ ] INCL [ ] EXCL				EL EACH ACCIDENT	$ 1,000,000
					EL DISEASE - POLICY LIMIT	$ 1,000,000
					EL DISEASE - EA EMPLOYEE	$ 1,000,000
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

NASSAU COUNTY IS INCLUDED AS ADDITIONAL INSURED WITH RESPECT TO GENERAL LIABILITY POLICY

CERTIFICATE HOLDER

NASSAU COUNTY
1490 FRANKLIN AVE.
MINEOLA, NY 11501

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE OF AON RISK SERVICES, INC. OF ILLINOIS

ACORD CORPORATION 1988

CFPW050000 24
Contract ID#: _____

Department: Police Department

E-81-05

(Land Mobile Radio System)

Contract Details

NIFS ID #: CFPW050000 24 NIFS Entry Date: 6/10/05 Term: from 06/20/05 to 06/20/10 (pg #30 of written agreement)

New ☒ Renewal	1) Mandated Program:	Yes ☐	No ☒
Amendment ☐	2) Comptroller Approval Form Attached:	Yes ☒	No ☐
Time Extension	3) CSEA Agmt. § 32 Compliance Attached:	Yes ☐	No ☐
Addl. Funds ☐	4) Vendor Ownership & Mgmt. Disclosure Attached:	Yes ☒	No ☐
Blanket Resolution ☐ RES#	5) Insurance Required	Yes ☒	No ☐

Agency Information

Vendor		County Department	
Name: Motorola	Vendor ID#: 361115800-01	Department Contact: Deputy Inspector Edmund J. Horace Sgt Thomas Golder	
Address: 85 Harristown Rd Glen Rock New Jersey 07452	Contact Person: Stephanie Walsh Phone: (201) 447-7525	Address: 1490 Franklin Ave.	Phone 573-7604 (Horace) 573-7623 (Golder)

Routing Slip

DATE Rec'd.	DEPARTMENT	Internal Verification		SIGNATURE	Leg. Approval Required?
	Department	NIFS Entry (Dept) NIFS Appvl (Dept. Head)	☐ ☐	6/9	
	OMB	NIFS Approval	☐	6/10	Yes ☐ No ☐
	Vertical DCE	NIFS Approval	☐	6/10	
	Department	Vendor Administration NIFS Appvl (Dept. Head)	☐ ☐		
6/13/05	County Attorney	CA RE&I Verification	☑	6/13/05	
	County Attorney	CA Approval as to form	☒	6/13/05	Yes ☒ No ☐

PR5254 (8/03)

Contract ID#: CFPW050002-4

Department: Police Department

	Leg	Legislative Affairs	Fw'd Original K to CA	☐	4/13	M. Gottlieb
		Rules ☐/ Leg. ☐		☐		
		County Attorney	NIFS Approval	☐	6/27	
		County Comptroller	NIFS Approval	☐	6/29/05	
		County Executive	Notarization Filed with Clerk of the Leg.	☑ ☑	1/30/06	

Contract Summary

Description: New Contract - Land Mobile Radio System

Purpose: The purpose of this contract is to provide Nassau County with a state of the art public safety Land Mobile Radio System on the Police Department's recently acquired 500 MHz frequency band. The new T-band, digital, trunked, turnkey radio system will replace the outmoded and outdated system that was installed in 1982. The old system shares a UHF band with another user in New Jersey and provides limited channels. As a result, Nassau County has been forced to transmit calls at levels that do not interfere with this co-user and limits the system's capacity to handle radio traffic, leaving officers with less effective communications. This system will provide first responders with critical communications capability by providing 97% in street and 95% in-building portable radio coverage reliability throughout the entire county. The infrastructure for the County Police Department's new radio system will be accessible to other public safety agencies throughout Nassau County, including village police departments, volunteer fire departments and ambulance companies in Nassau county. This system will also provide interoperability with the New York City Police Department, Suffolk County Police Department, state and federal agencies as well as other agencies and villages in Nassau County

Method of Procurement: A Request for Proposals was issued on July 7, 2004. The RFP asked for proposals to furnish, design, install and implement a new public safety land mobile radio system on the Police Department's recently acquired 500 MHz frequency band that would guarantee 97% portable radio on-street coverage, 95% portable radio in-building coverage, along with inter-operability with local village and city police agencies and Nassau County's DPW system including 71 fire districts. Proposals were received from the two nationally recognized firms in the business of designing and implementing public safety land mobile radio systems: Motorola and M/A COM.

Vendors were required to submit separate cost and technical proposals. The cost and technical proposals were separately evaluated by a Cost Evaluation Team and a Technical Evaluation Team. These two teams were made up of different members and operated completely confidentially and independently of each other. The teams included representatives of the County Police Department, the County Department of Public Works, the Police Benevolent Association, and village police departments, and were advised by consultants from Booz Allen Hamilton.

After an exhaustive, five-month process, which included oral presentations, and written clarifications from both vendors, the Cost Evaluation Team and Technical Evaluation Team submitted final reports to the Contract Selection Committee, which also included representatives of the County Police Department, the County Department of Public Works and the Police Benevolent Association. The Contract Selection Committee

unanimously rated Motorola as the vendor that provided the County with the best value proposal.

Procurement History: As described above, the cost and technical proposals received from each vendor were subjected to a rigorous five month evaluation process by the Technical Evaluation Team and the Cost Evaluation Team, which operated completely independently from each other. Each vendor also made oral presentations to the Technical Evaluation Team and the Contract Selection Committee. The Technical Evaluation Team and the Cost Evaluation Team submitted final reports to the Contract Selection Committee in March 2005 and, after reviewing those reports, the Contract Selection Committee unanimously selected Motorola as the vendor that provided the County with the best value land mobile radio system. The Motorola proposal will give the County a reliable and powerful 21st century public safety radio communications system that will better protect the County's police officers and residents.

Description of General Provisions: The Motorola radio system will be an ASTRO 25 UHF digital trunked network. In order to meet the County's requirements for capacity, expansion, redundancy and control, this system will be configured with two (2) cells linked into a seamless countywide network. A redundant network controller and associated IP packet network controllers will provide automatic routing throughout the system. This system will operate on thirty (30) channels at 500 MHz and will provide capacity for over 5000 users. The system's robust infrastructure will be accessible to all public safety providers within Nassau County.

Individual talk groups will be established at the precinct and command level to provide communications in the Nassau county police department. The system's infrastructure also will have capacity to accommodate all of the incorporated village police departments, all of the seventy-one (71) volunteer fire departments and all of the six (6) volunteer ambulance corps in the county that want to establish talk groups on it for their communications needs.

This system will have dispatch positions in Police Communications, Fire Communications and the Emergency Ambulance Bureau where communications operators will coordinate and control all voice communications of public safety providers on this system. Dispatch positions can also be expanded to Incorporated Village Police Departments as they migrate to this system.

This contract also allows all public safety providers to purchase radios and equipment any time during the next ten (10) years at reduced rates, as provided by this contract. This will provide an opportunity for individual public safety providers to migrate to this system.

As part of this procurement two (2) subscriber units (portable radios) will also be provided to each village police department, volunteer fire department and emergency ambulance corps to provide them with direct access to this system when necessary during emergency operations. As per RFP requirements this system and its components will also provide forty percent (40%) expansion capabilities for future growth.

This system through Motobridge (an IP based soft switched radio network) will provide interoperability with the county's current Department of Public Works EDACs system, New York City and Suffolk County police radio systems as well as state and federal radio systems.

Extensive testing will be conducted on system components to verify system performance and insure that required specifications are met. This testing will include physically driving throughout the County to test reception of portable subscriber units. Particular attention will be given to areas where there are known reception problems and to critical in-building locations throughout the county. Any system performance or coverage shortfall found

Contract ID#: CFPW0500024

Department: Police Department

during system testing must be corrected by Motorola before system acceptance. This is a time-of-the-essence contract requiring installation and final acceptance testing in twenty-seven months.

Impact on Funding / Price Analysis: Payments will be made from County capital funds (Capital Project #50590). Forty Million Dollars ($40,000,000) has been included in the capital plan from County sources and an additional Six Million Dollars ($6,000,000) has been included in the capital plan from a federal Department of Justice Community Oriented Policing Services ("COPS") grant for a total of Forty-Six Million Dollars ($46,000,000).

Note: In compliance with COPS grant mandate, within the County capital funds of Forty Million Dollars ($40,000,000) Three Million Five Hundred Eighty-Seven Thousand Dollars ($3,587,000) has been earmarked as matching funds.

The Nassau County Police Department requests that the following funds be encumbered:

Base Contract	$41.60 million
Optional Ancillary Components	$ 1.40 million
Contingency Account	$ 1.60 million
TOTAL	$44.60 million

NOTE: The Base Contract covers the turnkey radio system. Optional Ancillary Components are comprised of specific items at guaranteed prices which the County may purchase at its option. The Contingency Account represents funding for unanticipated work, materials or equipment which must be approved by the Change Order Review Board comprised of DPW Commissioner Peter Gerbasi and NCPD Commissioner James Lawrence. The Review Board will ensure that the timeframe for system installation is as expeditious as possible in order to safeguard the safety of individuals relying on the radio system, while at the same time ensuring that only appropriate expenditures are made.

Change in Contract from Prior Procurement: None

Recommendation: Approve as submitted.

Advisement Information

BUDGET CODES	
Fund:	(CAP/GRT)
Control:	
Resp:	ST03 8C00
Object:	007/5C0
Transaction:	

FUNDING SOURCE	AMOUNT
Revenue Contract ☐	
County	$
Federal	$
State	$
Capital	$
Other	$
TOTAL	$41.6 million*

LINE	INDEX/OBJECT CODE	AMOUNT
(1)	PWCAP/5C-5903/000	$35,651,054
(2)	PDGRT8CY13FED/DE500	$ 5,959,165
3		$
4		$
5		$
6	$41,610,219	$
	TOTAL	$41.6 million

RENEWAL	
% Increase	
% Decrease	

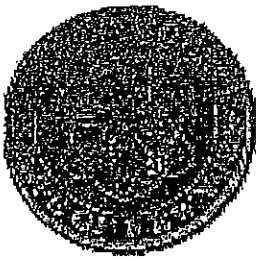
* This is the encumbrance requested as of 6/29/05. Note the Legislature has approved additional future encumbrances up to $3 million for ancillary components and contingency account.

Document Prepared By: Deputy Inspector Edmund J. Horace, NCPD Date: 06/20/05

NIFS Certification	Comptroller Certification	County Executive Approval
I certify that this document was accepted into NIFS.	I certify that an unencumbered balance sufficient to cover this contract is present in the appropriation to be charged. CFPW0500024	Name
Name BR	Name	Date
Date 6/29/05	Date 6/27/05	(For Office Use Only) E #:

PR5254 (8/03)

Howard S. Weitzman
Comptroller



OFFICE OF THE COMPTROLLER
240 Old Country Road
Mineola, New York 11501

COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

Attach this form along with all personal, professional or human services contracts, contract renewals, extensions and amendments.

I. ( ) The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids. The contract was awarded after a request for sealed bids was published in_____ [newspaper] on _____ [date]. The sealed bids were publicly opened on _____ [date]. _____ [#] of sealed bids were received and opened.

II. (X) The contractor was selected pursuant to a Request for Proposals.
The Contract was entered into after a written request for proposal was issued on July 6, 2004. Potential proposers were made aware of the availability of the RFP by posting on the county website. A vendors conference was held on July 14, 2004. Ten (10) vendors attended. Subsequent to the vendors conference questions and answers were exchanged with interested vendors. Proposals were due on September 15, 2004. Two (2) proposals were received and evaluated.
The evaluation committee consisted of:

Technical Evaluation Team: Deputy Inspector Edmund J. Horace NCPD Chairperson, Chief Peter Meade Fire Com, Sergeant Thomas Golder NCPD, Sergeant Michael Doyle Garden City PD, Detective Kenneth Strigaro NCPD, Police Officer Charles Seich NCPD, Mr. William Ango DPW.

Cost Evaluation Team: Deputy Chief George Gudmundsen NCPD Chairperson, Sergeant James Bartscherer NCPD, Mr. Frank Ryan Dept of Purchase, Mr. Paul Borderick OMB.

Contract Selection Committee: Chief Stephen McDonald NCPD Chairperson, Ms Helena Williams Deputy County Executive, Mr. Timothy Driscoll Deputy County Executive, Mr. Peter Gerbasi DPW, Deputy Chief Robert McGuigan NCPD, Deputy Inspector Edmund Horace NCPD, Police Officer Charles Seich NCPD.

The proposals were scored and ranked by the Contract Selection Committee. As a result of the scoring and ranking, the highest-ranking proposer was selected.

III. ( ) This is a renewal, extension or amendment of an existing contract.
The contract was originally executed by Nassau County on _____[date]. This is a renewal or extension pursuant to, or an amendment within the scope of, that contract (copies of the relevant pages of the contract are attached). The original contract was entered into after_____

_____

_____

[describe procurement method, i.e., RFP, three proposals evaluated, etc.]

IV. ( ) **Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.**

( ) A. The contract has been awarded to the proposer offering the lowest cost proposal;
or;

( ) B. The attached memorandum contains a detailed explanation as to the reason(s)why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

V. () **Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.**

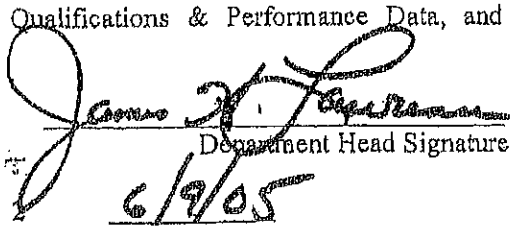
() A. There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.

( ) B. The memorandum explains that the contractor's selection was dictated by the terms of a federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).

( ) C. Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no._____, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.

VI. ( ) **This is a human services contract with a not-for-profit agency, and I.-V. above do not apply.** Attached is a memorandum that explains the reasons for entering into this contract.

VII. ( ) **This is a public works contract for the provision of architectural, engineering or surveying services.** The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No.928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.



Department Head Signature

6/9/05

County of Nassau
Inter-Departmental Memo

To: JANE LEVINE
Chief Deputy Comptroller

From: HELENA E. WILLIAMS
Deputy County Executive for Compliance

Date: June 28, 2005

Subject: Contract No. CFPW05000024 – Motorola Police Land Mobile Radio System

This memorandum confirms our understanding that purchase of optional ancillary components set forth in Exhibit E of the above-referenced Agreement (the "Agreement") may be made only by a change order to the Agreement approved pursuant to the procedure set forth in Section 30 of the Agreement. While the Legislature's approval of the Agreement authorizes the purchase of $1.4 million worth of optional ancillary components, as well as change orders for unanticipated contingencies in the amount of $1.6 million without further legislative approval, we understand that no moneys will be encumbered by the Comptroller until a change order has been approved for the purchase of an optional ancillary component or to pay for an unanticipated contingency. We further agree that the Comptroller should be invited to participate in the reviewing of each change order request and that no change order shall be approved without first consulting the Comptroller.

cc: James H. Lawrence
Peter J. Gerbasi

County of Nassau
Inter-Departmental Memo

To: JANE LEVINE
Chief Deputy Comptroller

From: HELENA E. WILLIAMS
Deputy County Executive for Compliance

Date: June 28, 2005

Subject: Contract No. CFPW05000024 – Motorola Police Land Mobile Radio System

This memorandum confirms our understanding that the amount of the current encumbrance will be for the base contract amount of $41.6 million. Please note that the Legislature approved future additional encumbrances up to $3 million for ancillary components and contingency account.

The purchase of optional ancillary components set forth in Exhibit E of the above-referenced Agreement (the "Agreement") may be made only by a change order to the Agreement approved pursuant to the procedure set forth in Section 30 of the Agreement. While the Legislature's approval of the Agreement authorizes the purchase of $1.4 million worth of optional ancillary components, as well as change orders for unanticipated contingencies in the amount of $1.6 million without further legislative approval, we understand that no moneys will be encumbered by the Comptroller until a change order has been approved for the purchase of an optional ancillary component or to pay for an unanticipated contingency. We further agree that the Comptroller should be invited to participate in the reviewing of each change order request and that no change order shall be approved without first consulting the Comptroller.

cc: James H. Lawrence
Peter J. Gerbasi

E-81-05

RULES RESOLUTION NO. 124- 2005

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AGREEMENT BETWEEN THE COUNTY OF NASSAU AND MOTOROLA, INC., FOR THE FURNISHING, DELIVERY AND INSTALLATION OF A TURNKEY LAND MOBILE RADIO SYSTEM FOR THE POLICE DEPARTMENT.

Passed by the Rules Committee
Nassau County Legislature
By voice vote on 6-20-05
Voting: 9 ayes ___ nayes ___ abstained
Legislators present 9

WHEREAS, the County, on behalf of the Nassau County Police Department, has negotiated a personal services agreement with Motorola, Inc., for the furnishing, delivery and installation of a turnkey land mobile radio system; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said agreement with Motorola, Inc.

OMB Approval by Budget miner_____

Date _____

SUPPLEMENTAL APPROPRIATION REQUEST

To: Office of Grants Management

Forward To: Sudha Malhotra

From: Captain Michael P. Cronin
Commanding Officer, Personnel & Accounting Bureau

Date: November 10, 2003

Re: Supplemental Appropriation Request – Interoperable Communications Technology Grant Program

---

The Police Department requests the supplemental appropriation of $6,000,000.00 in funds to be received from the U.S. Department of Justice, Office of Community Oriented Policing Services according to the following schedule.

NIFS Entry

Document ID #:	BAPD03000020
Grant Index # :	PDGRT8CY3FED
Document ID #:	BAPD03000020
Grant Detail:	00

Revenue

Fund:	GRT
Dept. Code:	PD
Object Code:	8C
Sub-Object Code:	R0901
Total Revenue:	$6,000,000.00

Expenses

Fund:	GRT		
Dept. Code:	PD		
Object Code:	8C		
Sub-Object Code:	DE547-$5,959,165.00	DD497 - $3,535.00	AA97Z - $37,300.00
Total Expenses:	$6,000,000.00		

Authorized by Department Head / Fiscal Officer

Michael P. Cronin

Date

11-12-03

SUPPLEMENTAL APPROPRIATION REQUEST
Grant Profile – Additional Information

Grant Name: COPS Interoperable Communications Technology Grant Program

Total Grant Funding: $6,000,000.00

Grant Purpose: Grant funding is provided by the U.S. Department of Justice, Office of Community Oriented Policing Services. Funds will allow the Police Department to develop a unique regional interoperability solution that will provide seamless real time communications to public safety personnel throughout Nassau and Suffolk counties.

Clients Served: Nassau County

Impact on Funding: Total budget for the interoperability portion of this project is $9,652,867.00. The COPS office has awarded Nassau County $6,000,000.00, requiring a county match of 25% ($1,500,000.00). Additional funding for the project is budgeted under Capital Project # 50-590.

Co, P+A 9

ORDINANCE NO. 91 -2003

SUPPLEMENTAL TO THE ANNUAL APPROPRIATION ORDINANCE APPROPRIATING MONIES NOT OTHERWISE APPROPRIATED IN CONNECTION WITH THE DEPARTMENT OF DRUG AND ALCOHOL ADDICTION, THE TRAFFIC SAFETY BOARD, AND THE POLICE DEPARTMENT.

Passed by Nassau County Legislature
on DEC 17 2003
votes for 18 : votes against 0
Became an ordinance on DEC 29 2003
with the approval of the Deputy
County Executive acting for the
County Executive.

APPROVED AS PER CHARTER
Deputy County Attorney

WHEREAS, Nassau County has received certain revenue; and

WHEREAS, such funds have not been otherwise appropriated; and

WHEREAS, the County Executive, by communication dated November 24, 2003, addressed to the County Legislature, has recommended the appropriation of such funds not otherwise appropriated; and,

WHEREAS, this supplemental appropriation is within the scope of section 307 of the County Government Law; now, therefore,

BE IT ORDAINED by the County Legislature of the County of Nassau, as follows:

Section 1. There is hereby appropriated from monies not otherwise appropriated, the following sums of money to the following accounts:

TOTAL AMOUNT (in dollars)	SOURCE OF FUNDS	APPROPRIATED TO:			
		FUND	DEPT. CODE	OBJ. CODE	AMOUNT (in dollars)
11,102,500	NYSOASAS	GRT	DR	AA	650,000
		GRT	DR	AB	200,000
		GRT	DR	DD	2,500
		GRT	DR	DE	10,250,000
700,000	NYSOASAS	GRT	DR	DE	700,000
850,000	NYSOASAS	GRT	DR	DE	850,000
2,390,000	NYSOASAS	GRT	DR	AA	1,000,000
		GRT	DR	AB	330,000
		GRT	DR	BB	5,000
		GRT	DR	DD	5,000
		GRT	DR	DE	1,050,000
2,167,000	NYSOASAS	GRT	DR	AA	90,000
		GRT	DR	AB	13,500
		GRT	DR	BB	1,000
		GRT	DR	DD	2,500
		GRT	DR	DE	2,100,000
1,524,000	NYSOASAS, NCTSB	GRT	DR	AA	850,000
		GRT	DR	AB	270,000
		GRT	DR	BB	1,000

165

TOTAL AMOUNT (in dollars)	SOURCE OF FUNDS	APPROPRIATED TO:			
		GRT	DR	DD	3,000
		GRT	DR	DE	400,000
2,483,000	NYSOASAS	GRT	DR	AA	1,150,000
		GRT	DR	AB	350,000
		GRT	DR	DD	3,000
		GRT	DR	DE	980,000
2,300,000	NYSOASAS	GRT	DR	DE	2,300,000
1,250,000	NYSOASAS	GRT	DR	AA	900,000
		GRT	DR	AB	270,000
		GRT	DR	DD	10,000
		GRT	DR	DE	70,000
872,500	NYSOASAS	GRT	DR	AA	600,000
		GRT	DR	AB	200,000
		GRT	DR	BB	1,000
		GRT	DR	DD	1,500
		GRT	DR	DE	70,000
5,690,000	NYSOASAS	GRT	DR	AA	3,500,000
		GRT	DR	AB	1,050,000
		GRT	DR	BB	25,000
		GRT	DR	CC	150,000
		GRT	DR	DD	135,000
		GRT	DR	DE	830,000
244,378	2004 Buckle up NY	GRT	TS	AA	140,000
		GRT	TS	DE	104,378
86,025	Misd. Forf.Revenue	GRT	PD	BB	40,000
		GRT	PD	DD	46,025
467,221.45	Fed. Forfeiture Act	GRT	PD	BB	467,221.45
434,743.06	Fed.Fofeiture Act	GRT	PD	DE	434,743.06
6,000,000	U.S.D.O.J.	GRT	PD	AA	37,900
		GRT	PD	DD	3,535
		GRT	PD	DE	5,959,165

Cops Cut

§ 2. This ordinance shall take effect immediately.

APPROVED DEC 29 2003

Deputy County Executive

Anthony Ancelliem

166

GRANT SUMMARY INQUIRY 12:16

ACTIVE BALANCE (Y,M,Q,A) : A FUNDING PERIOD : CURRENCY CODE :
FISCAL MO/YEAR : 06 2005 JUNE 2005 GRANT END DATE: 12/31/2005 A
GRANT : PD8C INTEROPERABLE COMMUNICATIONS TECH GRT
GRANT DETAIL : 00 INTEROPERABLE COMMUNICATIONS TECH GRT
CHARACTER :
OBJECT :
FUND TYPE :
FUND :
SUBFUND :

S	SUBOBJ	DESCRIPTION	BUDGET	ACTUAL	ENCUMBERED	BALANC
	R0901	REIMBURSED EXPEND	6,000,000	817		-5,999,18
	R1001	REIMBURSED EXPEND		1,505		1,50
		REVENUE TOTAL	6,000,000	2,322		-5,997,67
	AAZY8	OVERTIME		1,505		-1,50
	AA97Z	APPROPRIATION TRAN	37,300			37,30
	DD345	EDUCATION EXPENSE		817		-81
	DD497	APPROPRIATION TRAN	3,535			3,53

F1-HELP F2-SELECT F4-PRIOR F5-NEXT
F7-PRIOR PG F8-NEXT PG F9-LINK
G010 - PRIOR PAGE DISPLAYED

Jacobs
571 6216

Mgmt Clerk
1452 Expense

Steve Feiner
Analyst
35,795
271
5,959,165
5,997,678

Budget
AA = 37,300
DD = 3,535
PE = 5,959,165
6,000,000

< 1,505 >
< 817 >
< 0 >
2322

CFPWOS
000024

Helen
4/27

FAML4010 V4.2 NIFS PRODUCTION SYSTEM 06/29/200'
DOCUMENT HEADER 3:24 PI

DOCUMENT CATEGORY	: CF PERSONAL SERVICES CAPITAL CONTRACT		
ENTERED BY	: ALAGNA, JANET 16889		
DOCUMENT NUMBER	: CFPW05000024	INITIATING DEPT	: PW
INPUT PERIOD (MM YYYY)	: 06 2005 JUNE	RIMS CODE	:
VENDOR NUMBER / SUFFIX	: 361115800 01	APPROVAL TYPE	: 01
VENDOR NAME	: MOTOROLA INC		
VENDOR ADDRESS	: 13108 COLLECTIONS CENTER DRIVE		
	CHICAGO IL 60693		
COUNTRY	: USA		
ALPHA VENDOR	: MOTOROLA INC		
BANK NUMBER	:	TREAS NO	: RADIOS
DUE DATE	:	SINGLE CHECK	:
DOCUMENT AMOUNT	: 41,610,219.00	CURRENCY CODE	:
NUMBER OF LINES	: 2	RESPONSIBLE UNIT	:
TRANSACTION CODE HASH	:		
TERMS	:	NOTEPAD (Y OR N)	: Y
POSTING/EDIT ERRORS	:		

F1-HELP F6-DTL ENTRY
F7-VIEW DOC F10-SAVE F12-ADL FCTNS
G014 - RECORD FOUND

POLICE DEPARTMENT, COUNTY OF NASSAU, N.Y.
PURCHASE REQUEST

PDCN 113 - REV. 1/98

INSTRUCTIONS:
See full instructions on back of form. Forward original and one copy to Personnel and Accounting Bureau (Through Official Channels) and retain one copy.

FROM	DATE	PAGE NO.	COMMAND REQUEST NO.
Deputy Commanding Officer Communications Bureau	06/10/2005	1 OF 1	CB-61-05

IF REQUEST IS FOR EQUIPMENT: ARE SUPPLIES, INSTALLATION, TRAINING, MANUALS OR A SERVICE CONTRACT REQUIRED? ☒ YES ☐ NO IF YES, ORDER SIMULTANEOUSLY AND FORWARD TO P.A.B. WITH THIS REQUEST

DOES REQUEST REQUIRE A MATERIAL SAFETY DATA SHEET FROM VENDOR ☐ YES ☒ NO

C.O. INITIALS

CHECK THE APPROPRIATE BOX IF THIS REQUEST IS FOR ANY EQUIPMENT LISTED TO THE RIGHT. THE CORRESPONDING SUPERVISOR MUST APPROVE THE PURCHASE:

- ☐ COMPUTER EQUIPMENT - C. O., INFORMATION SYSTEMS BUREAU
- ☐ PERSONAL PROTECTIVE EQUIPMENT - CHAIRMAN, SUBSTANCES AND MATERIALS COMMITTEE
- ☒ COMMUNICATIONS EQUIPMENT - C. O., COMMUNICATIONS BUREAU
- ☐ VIDEO EQUIPMENT - C. O., PUBLIC INFORMATION OFFICE
- ☐ ELECTRONICS EQUIPMENT - C. O., ELECTRONICS SQUAD

CERTIFICATION OF CORRESPONDING C.O.

TITLE

DATE / /

SHIPPING ADDRESS (If billing address is different than shipping, record under Description.)

NCPD Communications Bureau
1490 Franklin Ave.
Mineola New York

SUGGESTED VENDOR (Name and Address)

Motorola
85 Harristown Rd.
Glen Rock New Jersey 07452

Tele. No., (800 no. if avail.) 2014477525 FAX No., (if avail.)

QUANTITY	UNIT	ITEM/SERVICE DESCRIPTION (Description must be detailed or form will be returned. Include catalog name, number and page.)	NO. ON HAND	USEFUL LIFE	LIST PRICE	EXTENDED LIST PRICE
		See Attached LFPWOT000024				

IF URGENT, CHECK HERE ☐ AND BELOW STATE REASON AND DATE NEEDED BY.

IS A BLANKET ORDER AVAILABLE FOR ITEMS IN THIS PURCHASE REQUEST? ☐ YES ☐ NO

STANDARD BLANKET ORDER NO. AND EXPIRATION DATE

TOTAL COST 44,600,000.00

LIMITED BLANKET ORDER NO.

STATE CONTRACT ☐ YES ☐ NO

STATE CONTRACT NO. (If known)

CAPITAL PROJECT NO.

IF GRANT, GIVE NAME

FOR USE BY P.A.B.
- ☐ DELIVERY ORDER
- ☐ REQUISITION
- ☐ L. P. O.
- ☐ CNTR. ADV.
- ☐ OTHER

SPECIFIC JUSTIFICATION
For installation of a new Land Mobile Voice Radio System

INDIVIDUAL TO CONTACT FOR FURTHER	RANK	NAME	COMMAND	TELEPHONE NO.
	D.I	Edmund J. Horace	Comm. Bureau	5737600

ENDORSES

COMMAND C.O.	DIVISION C.O.	OFFICE CHIEF

FOR USE BY OFFICE OF COMMISSIONER OF POLICE ☐ APPROVED ☐ DISAPPROVED SIGNATURE C.O.P.

FUND	RESP	OBJ

DATE RECEIVED AT P.A.B. / /

REASON RETURNED

☐ NOT INCLUDED IN BUDGET REQUEST

DATE ORDER TYPED IN P.A.B. / /

REFER DOCUMENT

☐ FUNDS AVAILABLE AND APPROVED FOR PROCESSING
☐ RESUBMIT FUNDS UNAVAILABLE

SIGNATURE C.O., PERSONNEL AND ACCOUNTING BUREAU

Copy

2 291.969

146
146

COPY

System Purchase Agreement

Between

Nassau County (County)

and

Motorola, Inc. (Contractor)

Date: JUNE __, 2005

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Exhibits

A. Certificate of Insurance

B. Surety Bond for Performance [Motorola is to provide]

C. Pre-Proposal RFP Clarifications

D. Contractor's Complete Disclosure of All Site Development, Contractor Installation, and Hardware to be Installed at Each Site, as modified by Exhibit E; Contractor's Removal and Disposal of Legacy Equipment from Each Site (All current NCPD LMR equipment that will not be left in operation—i.e., antennas, dishes, brackets, cables on towers, LMR equipment in buildings)

E. Pre-Contract Modification (Ancillary Components Proposal and Site Modifications)

F. Equipment and Services to Provide the Required Primary and Fully Redundant Backup Dispatch Centers

G. Coverage Acceptance Test Plan (CATP)

H. Oral Questions to Motorola and Motorola's Responses

I. CET and TET Clarifying Questions to Motorola and Motorola's Responses

J. COPS Grant Application and COPS Grant Award

K. Channel 19 Interference Resolution Process

L. Motorola Proposals (September 15, 2004, October 22, 2004, and January 28, 2005)

M. RFP

N. Microwave: Growth and Channel Plan

O. Project Milestone Schedule

P. Maintenance Option Pricing (8 one-year maintenance pricing agreements commencing after warranty expiration at the County's discretion).

Q. Subscriber Equipment

R. SSRN Documentation

SYSTEM PURCHASE AGREEMENT

THIS AGREEMENT, dated as of June ___, 2005 (together with the schedules, appendices, attachments and exhibits, if any, this "Agreement"), between Nassau County, a municipal corporation having its principal office at One West Street, Mineola, New York 11501 (the "County") and Motorola, Inc. having its principal office at 1303 East Algonquin Road, Shaumburg, Ill. 60196(the "Contractor").

WITNESSETH:

WHEREAS, the County desires to hire the Contractor to perform the services described in this Agreement; and

WHEREAS, the Contractor desires to perform the services described in this Agreement.

NOW, THEREFORE, in consideration of the premises and mutual covenants contained in this Agreement, the parties agree as follows:

RECITALS:

R-1. County issued a Request for Proposals entitled "Nassau County Police Department Land Mobile Radio System Modernization Project" ("RFP") on July 7 2004 requesting proposals to provide the County with a radio communications system and services as set forth in the RFP. The County issued clarifications to this RFP on September 2, 2004.

R-2. Contractor delivered a proposal entitled "Nassau County Police Department Land Mobile Radio Modernization Project Proposal" and originally dated September 15, 2004, to provide the radio communications system and services requested by the County in the RFP.

R-3. The County Cost Evaluation Team (CET) issued clarifying questions dated October 13, 2004, October 26, 2004, and October 27, 2004 and the Contractor submitted responses to these questions October 22, 2004, October 27, 2004, and October 28, 2004, which have been incorporated into this Agreement. The Technical Evaluation Team (TET) issued clarifying questions dated October 15, 2004, November 11, 2004, and December 17, 2004, and the Contractor submitted responses to these questions dated October 22, 2004, November 16, 2004, and January 28, 2005, which have been incorporated into this Agreement. On June 7, 2005, the Contractor submitted an Ancillary Components Proposal to the County.

R-4. The County has selected the Contractor to provide the County with the turnkey radio communications system and services set forth in the Contractor's Proposal.

R-5. The County and the Contractor desire to enter into this Agreement to set forth in writing their respective rights, duties, and obligations hereunder.

NOW, THEREFORE, WITNESSETH that for and in consideration of the mutual promises contained herein and other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, it is mutually agreed between the parties as follows:

Section 1. Definitions.

As used herein, the terms set forth below shall have the meanings set forth below.

A. "Acceptance Date" shall mean the date the System is accepted or deemed accepted as set forth in Section 24 hereof.

B. "Acceptance Schedule" shall mean the schedule as mutually agreed upon by the County and the Contractor, in writing, that is applicable to the tasks that begin at the completion of optimization of the system equipment and end with the Acceptance of the system.

C. "Acceptance Tests" shall mean all the testing procedures described in Section 20 of the County's RFP and in Section 24 of this Agreement and the exhibits hereto, to determine whether the System and each of its hardware and software components, both individually and collectively have met the acceptance criteria set forth in the County's RFP and this Agreement. The CATP contained in Exhibit G of this Agreement is one of the tests that is comprised within the Acceptance Tests.

D. "Certificate of Insurance" shall mean the certificate to be provided by the Contractor evidencing the insurance coverage of the Contractor and the form of which certificate is set forth in Exhibit A attached hereto.

E. "Change Order" shall mean a change to this Agreement made pursuant to Section 30 of the Agreement.

F. "Commissioner" shall mean the Commissioner of Police for the County of Nassau.

G. "Contractor" shall mean Motorola Inc.

H. "Contractor's Agent" shall mean any person authorized to act on behalf of the Contractor in relationship to this Agreement.

I. "Contractor's Proposal" shall mean the original Nassau County Police Department Land Mobile Radio Modernization Project Proposal, dated 09/15/2004 provided by the Contractor to the County, as clarified and modified by the Contractor in its responses to the CET and TET clarifying questions and the Ancillary Components Proposal, as described in the recitals of this Agreement.

J. "County" shall mean Nassau County, New York.

K. "Coverage Acceptance Test Plan (CATP)" shall mean the tests that shall measure the Radio Frequency (RF) system performance of the system.

L. "Decommissioning Schedule" shall mean the schedule as mutually agreed upon by the County and the Contractor, in writing, that is applicable to the tasks that involve the removal of all legacy equipment from systems sites and vehicles.

M "Deliverable" shall mean any material specifically created for the County or required to be delivered to the County by virtue of its description or specification in this Agreement or the Contractor's proposal. Deliverable shall include, without limitation, the System and all Hardware, Software, Services, training, support and maintenance that the Contractor is obligated to deliver under this Agreement.

N. "Department" shall mean the Nassau County Police Department.

O. "Design Schedule" shall refer to the design section of the Project schedule as set forth in this Agreement.

P. "Documentation Deliverables" shall mean the standard commercial quality manuals to be furnished by the Contractor to the County pursuant to the terms set forth in the Contractor's Proposal and this Agreement.

Q. "Effective Date of the Agreement" shall be a date fixed by the County Executive which shall be a date not later than 10 days after the date on which this Agreement is signed by the County Executive. The "Effective Date" shall be the date inserted on the first page of the Agreement.

R. "Hardware" shall mean the equipment, parts, and materials to be provided by Contractor for the System as listed in the Contractor's Proposal.

S. "Installation Schedule" shall refer to the installation section of the Project schedule as set forth in this Agreement.

T. "Legacy Equipment" shall include all equipment and cabling, unless otherwise agreed to by the County and the Contractor, that shall be replaced by the Contractor at/in all of the County's sites, vehicles, and other sites identified by the County.

U. "Maintenance" shall mean Contractor shall supply all supervision, labor, service facilities, repair parts, test equipment, supplies, and full service maintenance facility necessary to meet the service requirements of this Agreement.

V. "Notice" shall mean a written notice.

W. "Performance Bond" shall mean the surety bond for performance to be provided by Contractor pursuant to the terms of this Agreement, the form of which surety bond is set forth in Exhibit B attached hereto.

X. "Project" or "Work" shall mean the turnkey execution of all obligations of the Contractor hereunder, including but not limited to the performance of any labor or services, the supplying of any goods or materials, the furnishing or repair and/or remanufacture of any equipment or any other resources and requirements or deliverables, implementation, acceptance testing, training, decommissioning necessary to perform, design, construct, accomplish and complete this Agreement.

Y. "Project Director" shall mean the individual designated by the Department to administer this Agreement or his or her duly authorized representative and any successor or successors duly appointed or any deputy or substitute for him or her who shall be appointed by the Department.

Z. "Project Manager" shall mean the individual designated by the Contractor to administer this Agreement.

AA. "Quality Control Officer (Inspector)" shall mean any representative of the Project Director designated to act as an inspector.

AC. The "Board" shall mean the Radio Contract Change Order Review Board, which shall be the only entity authorized to approve or reject Change Orders processed in accordance with Section 30 of this Agreement. The Board shall be comprised of the Commissioner of the Police of Nassau County, or his or her designee, and the Commissioner of Public Works of Nassau County, or his or her designee.

AE. "Site" shall mean a location selected or approved by the County to be involved in the implementation of the project. A site may be located in Nassau County, Suffolk County, or New York City.

AF. "Site Development" shall mean that the Contractor shall provide a turnkey implementation of site improvements such as, but not limited to, new generators, site security (i.e. fences) and HVAC upgrades at each site, without the County's assistance, other than those items specifically addressed in the County's RFP and in the Contractor's proposal that require specific County participation.

AG. "Site Desense" shall mean the reduction in a receiver's sensitivity due to interference or RF that overloads the receiver.

AH. "Software" shall mean the proprietary computer software of Contractor as owned exclusively by the Contractor or the Contractor's suppliers, as appropriate, and as further defined in and licensed to the County pursuant to the terms of the Software License Agreement.

AI. "Software License Agreement" shall mean the Motorola System Software License Agreement set forth in Exhibit L attached hereto.

AJ. "Statement of Work" shall mean the description of the work to be performed by the Contractor to deliver the Hardware, install the System, and provide the Services, as described in Contractor's Proposal.

AK. "Subcontractor" shall mean an individual or organization which enters into an agreement to furnish labor, services, materials or apparatus in connection with the Work directly or indirectly for, or on behalf of, the Contractor in relationship to this Agreement.

AL. "System" shall mean the Hardware, the Software, and the Services to be furnished by the Contractor to the County pursuant to the terms set forth in this Agreement and Contractor's Proposal.

AM. "System Acceptance Test Plan (SATP)" shall mean the Plan detailing all of the tests that must be completed and passed prior to system acceptance. The CATP is one of these tests.

AN. "Total Agreement Price" shall mean the price of the Hardware, the Software license, and the Services to be furnished by the Contractor to the County pursuant to the terms set forth in the Contractor's Proposal and this Agreement.

AO. "Turnkey" shall mean that the Contractor shall perform all functions of design, installation, implementation, optimization, acceptance, and removal of legacy equipment without the County's assistance, other than those items specifically addressed in the Contractor's proposal and the County's RFP that require specific County participation.

Section 2. Scope of Work.

Contractor shall furnish, deliver, and install Turnkey the Hardware, Software, and Services for the P25 compliant System and provide the Documentation Deliverables, Supplies, and Services in accordance with the terms of this Agreement and as more fully set forth in the Contractor's Proposal and the RFP, attached hereto as Exhibit L and M.

Section 3. Order of Precedence.

The Contractor's Proposal and the following Exhibits are expressly incorporated herein by reference and, together with this Agreement, constitute the Agreement Documents. In the event of a conflict among or between the Agreement Documents, the documents shall control in the order of precedence set forth below:

1. This Agreement
2. Ancillary Components Proposal
3. Oral Presentation Questions, dated December 13, 2004, and Written Responses, dated January 14, 2005
4. Cost Evaluation Team questions dated October 13, 2004, October 26, 2004, and October 27, 2004 and the Contractor submitted responses to these questions October 22, 2004, October 27, 2004, and October 28, 2004, and Technical Evaluation Team clarifying questions, dated October 15, 2004, November 11, 2004, and December 17, 2004, and responses, dated October 22, 2004, November 16, 2004, and January 28, 2005
5. Contractor's Proposal, dated September 15; 2004
6. Pre-Proposal Clarification, 9/2/04, displayed in Exhibit [C]
7. County's Request for Proposals, dated July 7, 2004, as modified by clarifications to the RFP.

Section 4. Payment.

(a) Amount of Consideration. The amount to be paid to the Contractor as full consideration for the Contractor's Services under this Agreement shall be paid upon completion of each milestone listed below and in the amount listed next to the milestone:

Milestone	Milestone Payment
1.) Detailed Design & Transition Plan	$1,986,600
2.) Completed Site Development Preparations for all Transmit & Receive sites.	$4,587,000
3.) Delivery of Backbone (Infrastructure) All Transmit & Receive sites, Primary Dispatch & all Microwave Equipment)	$8,405,970
4.) Installation of all primary dispatch center equipment, microwave loop site equipment, and 16 TX/RX sites	$2,455,970
5) Installation, optimization, verification & acceptance of all backbone infrastructure. (Transmit.receive sites, primary dispatch, microwave)	$3,435,169

6.) Backup Dispatch Center equipment installation, optimization, verification & acceptance	$993,300
7) Mobile Radio Equipment Installation & Acceptance	$5,020,900
8) CATP Completion and Critical Buildings	$4,997,200
9) Training Completed for Subscriber Units and Dispatch	$750,000
10) 50% Portable Radio Equipment Acceptance	$1,368,300
11) 50% Portable Radio Equipment Acceptance	$1,368,300
12) Final System Acceptance	$6,241,510
Total Agreement Price	$41,610,219

b) Milestone Completion Schedule:

1. Detailed design and Transition Plan - Three (3) months after signing of this Agreement by the County Executive.
2. Completed Site Development Preparations - Seven (7) months after signing of this Agreement by the County Executive.
3. Delivery of Infrastructure - Nine (9) months after signing of this Agreement.
4. Install of Primary Dispatch Equipment - Thirteen (13) months after signing of this Agreement by the County Executive.
5. Acceptance of Infrastructure – Sixteen (16) months after signing this agreement by the County Executive
6. Backup Dispatch Center Equipment Acceptance - Eighteen (18) months after signing of this Agreement by the County Executive.
7. Mobile Radio Equipment Acceptance - Twenty-two (22) months after signing of this Agreement by the County Executive.
8. CATP Completion and Critical Buildings – Twenty-three (23) months after signing of this Agreement.
9. Training - Twenty-four (24) months after signing of this Agreement by the County Executive.
10. Portable Radio Equipment Acceptance - 50 % -Twenty-five (25) months after signing of this Agreement by the County Executive.
11. Portable Radio Equipment Acceptance – 50% - Twenty-six (26) months after signing this Agreement by the County Executive.
12. Final System Acceptance - Twenty-seven (27) months after signing of this Agreement by the County Executive.

(I) Work may proceed simultaneously on two or more Milestones.

(II) In the event that a Change Order is approved, pursuant to Section 30 of the Agreement, the Contractor may receive an additional payment to the extent authorized by that Change Order.

(c) Vouchers; Voucher Review, Approval and Audit. Payments shall be made to the Contractor in arrears and shall be contingent upon (i) the Contractor submitting a claim voucher (the "Voucher") in a form satisfactory to the County, that (a) states with reasonable specificity the services provided and the payment requested as consideration for such services, hardware, software, or other goods, (b) certifies that the services, hardware, software, or other goods provided and the payment requested are in accordance with this Agreement, and (c) is accompanied by documentation satisfactory to the County supporting the amount claimed, including a Certificate of Acceptance signed by the Project Director stating that all work and all hardware, software, or other goods delivered to the County in connection with the Contractor's performance of the specified milestone satisfied all the requirements of the Agreement; and (ii) review, approval and audit of the Voucher by the Department and/or the County Comptroller or his or her duly designated representative (the "Comptroller").

(d) Timing of Payment Claims. The Contractor shall submit claims no later than three (3) months following the County's receipt of the services that are the subject of the claim and no more frequently than twice a month.

(e) No Duplication of Payments. Payments under this Agreement shall not duplicate payments for any work performed or to be performed under other agreements between the Contractor and any funding source including the County.

(f) Payments in Connection with Termination or Notice of Termination. Unless a provision of this Agreement expressly states otherwise, payments to the Contractor following the termination of this Agreement shall not exceed payments made as consideration for services that were (i) performed prior to termination, (ii) authorized by this Agreement to be performed, and (iii) not performed after the Contractor received notice that the County did not desire to receive such services.

Section 5. Facilities and Sites.

(a) Any sites where Contractor will operate and perform System installation under the terms of this Agreement must be approved by the County, whose approval shall not be unreasonably withheld, delayed, or conditioned.

The Contractor shall comply with all the requirements regarding facilities and sites set forth in Section 2.5.1 of the RFP

(b) Exhibit D shall provide detailed and clear delineation of all work to be performed at each site including a responsibility matrix. Also to be included in Exhibit D are the Contractor's contingency plans for each site, (i.e. contingencies for placement of antennas on water towers if the top of the water tower is not accessible or available). Any deviation from work, services, and equipment specified in Exhibit D that shall be required to implement a turnkey system shall be at the Contractor's expense.

C. The backup Dispatch Center, as described in Exhibit F, shall be fully redundant to the primary Dispatch Center (Communications Building Site). The County shall notify the Contractor by the end of Detailed Design Review as to the location of the backup Dispatch Center location.

County reserves the right to change the primary dispatch location to the backup dispatch facility and the backup dispatch facility to the primary dispatch center. This shall be at no additional cost to the County provided notification is given at least 90 days prior to the planned installation of the Master Site equipment.

Adequate space for equipment installation will be provided at the dispatch facility that is not located at the current CB. The current CB space at Mineola is already deemed adequate by the Contractor.

If the new backup Dispatch Center is located at 1194 Prospect Avenue, Westbury, New York ("King Kullen"), then ***the County will provide Motorola with a sufficiently sized equipment room properly constructed to house the microwave and related equipment, with all of the required electrical, antenna, and RF preparation, including backup power. Motorola has not included building an equipment room, a shelter or generator in the pricing. In addition, it is assumed that the County will provide for an approved tower location on the King Kullen site within 150 feet of the provided microwave equipment room.***

(d) The Contractor shall ensure that all equipment used in the implementation of the System shall have been built within six (6) months of the shipping of the equipment to Nassau County.

(e) The Contractor shall provide to the County an inventory plan, two (2) weeks prior to the first shipment of equipment. Upon completion of the delivery, the Contractor shall confirm that all equipment identified in the Final System Design was shipped and received at the Contractors storage depot in Nassau County. The County's acknowledgement of receipt of the delivery of equipment shall not be deemed acceptance of the equipment. Equipment will be deemed accepted only in accordance with the Acceptance Test Plan set forth in Section 24 of this Agreement.

(f) The Contractor shall provide natural gas or diesel generators and appropriately sized fuel tank at all sites, in accordance with local laws, codes and ordinances and all necessary approvals.

(g) The Contractor shall identify each alarm that will be installed at the site and those that shall be remoted back to the central maintenance facility location.

Section 6. Independent Contractor.

The Contractor is an independent contractor of the County. The Contractor shall not, nor shall any officer, director, employee, servant, agent, or independent contractor of the Contractor (a "Contractor Agent"), be (I) deemed a County employee, (II) commit the County to any obligation, or (III) hold itself, himself, or herself out as a County employee or Person with the authority to commit the County to any obligation. As used in this Agreement the word "Person" means any individual person, entity (including partnerships, corporations, and limited liability companies), and government or political subdivision thereof (including agencies, bureaus, offices, and departments thereof).

Section 7. No Arrears or Default.

The Contractor is not in arrears to the County upon any debt or agreement and it is not in default as surety, contractor, or otherwise upon any obligation to the County, including any obligation to pay taxes to, or perform services for or on behalf of, the County.

Section 8. Compliance With Law.

(a) General. The Contractor shall comply with any and all applicable Federal, State, and local Laws, including, but not limited to those relating to conflicts of interest, discrimination, and disclosure of information, in connection with its performance under this Agreement. In furtherance of the foregoing, the Contractor is bound by and shall comply with the terms of Appendices U and EE attached hereto. As used in this Agreement the word "Law" includes any and all statutes, local laws, ordinances, rules, regulations, applicable orders, and/or decrees, as the same may be amended from time to time, enacted, or adopted. Any Hardware or Software furnished by Contractor under this Contract shall comply in all material respects with federal, state, and local Laws and regulations applicable to the manufacture, packing, sale, and shipment of such Hardware or Software as of the Effective Date of this Contract and shall comply with any amendments thereto that may have come into effect prior to the time such Hardware or Software is delivered.

(b) COPS Grant. The Contractor shall also comply with any and all applicable federal, state, and local laws, terms, and/or conditions relating to the COPS Interoperable Communications Technology Grant. The estimated payments to the Contractor that will be for purposes directly related to the COPS Grant (including Nassau County's grant matching payments) $9,587,167) have been incorporated into the Milestone Payment Table shown in Section 4 above and are separately listed below:

1. Site Engineering & Design $562,945 is in Milestone 1.

2.	Project Manage, Install & Test	$460,356	Is in Milestone 2.
3.	Optimization & Accept N.C. Interop	$844,418	Is in Milestone 3.
4.	System Simulcast & Backbone Accept	$4,195,884	Is in Milestone 3.
5.	System Simulcast & Backbone Accept	$2,841,056	Is in Milestone 5.
6.	MSA-Wide Interoperability	$692,508	Is in Milestone 5.

The Contractor shall cooperate with the County in its applications to obtain COPS Grant reimbursement for each of these estimated payments and shall provide the County with all documentation required to justify such reimbursement applications.

(c) Records Access. The parties acknowledge and agree that all records, information, and data ("Information") acquired in connection with performance or administration of this Agreement shall be used and disclosed solely for the purpose of performance and administration of the contract or as required by law. The Contractor acknowledges that Contractor Information in the County's possession may be subject to disclosure under Section 87 of the New York State Public Officer's Law. In the event that such a request for disclosure is made, the County shall make reasonable efforts to notify the Contractor of such request prior to disclosure of the Information so that the Contractor may take such action as it deems appropriate.

(d) The parties further acknowledge that in the course of this Agreement each may have access to and/or be in possession of proprietary or confidential Information of the other party. "Confidential Information" shall mean information regarded by the disclosing party as confidential; provided that, information deemed confidential by the disclosing party shall be clearly marked "Confidential", "Restricted" or with another similar legend. Each party agrees to use the Confidential Information of the other party solely for the purposes of this Agreement, and will not disclose such Confidential Information to any third party without the other party's consent. Each party shall maintain the Confidential Information of the other party in confidence using at least the same degree of care as it employs in maintaining in confidence its own proprietary and confidential information, but in no event less than a reasonable degree of care. Provided that, the receiving party shall have met the foregoing standard of care, an inadvertent or accidental disclosure by the receiving party of Confidential Information of the disclosing party shall not constitute a breach hereof.

The foregoing shall not prohibit or limit any party's use of information (including but not limited to ideas, concepts, know-how, techniques and methodologies) (i) previously known to it, (ii) independently developed by it, (iii) acquired by it from a third party without continuing restriction on use, or (iv) which is, or becomes, publicly available through no breach by it of this Agreement. Neither party shall use the Confidential Information of the other party for its own benefit or for the benefit of any third party, except as expressly permitted in this Agreement. A receiving party also may disclose Confidential Information to the extent required by an order of a court of competent jurisdiction, administrative agency or governmental body, or by any law, rule or regulation, or by court ordered subpoena, summons or other administrative or legal

process, or by applicable regulatory or professional standards, or in connection with any judicial or other proceeding involving Contractor and County relating to Contractor's Services for County or this Agreement. In the event that production of Confidential Information is required, reasonable notice of such judicial process, as heretofore described, shall be provided.

(e) All records compiled by the Contractor in completing the work described in this Agreement, including but not limited to, written reports, studies, drawings, blueprints, negatives of photographs, computer printouts, graphs, charts, plans, specifications, and all other similar recorded data, shall become and remain the property of the County. The Contractor may retain copies of such records in order to perform under this Agreement.

(f) The provisions of this Section shall survive the expiration or termination of this Agreement.

Section 9. Minimum Service Standards.

Regardless of whether required by law:

(a) The Contractor shall, and shall cause Contractor Agents to, conduct its, his, or her activities in connection with this Agreement so as not to endanger or harm any Person or property.

(b) The Contractor shall deliver services under this Agreement in a professional manner consistent with the best practices of the industry in which the Contractor operates. The Contractor shall take all actions necessary or appropriate to meet the obligation described in the immediately preceding sentence, including obtaining and maintaining, and causing all Contractor Agents to obtain and maintain all approvals, licenses, and certifications ("Approvals") necessary or appropriate in connection with this Agreement.

(c) In connection with the termination or impending termination of this Agreement, the Contractor shall, regardless of the reason for termination, take all actions reasonably requested by the County (including those set forth in other provisions of this Agreement) to assist the County in transitioning the Contractor's responsibilities under this Agreement. The provisions of this subsection shall survive the termination of this Agreement.

Section 10. Indemnification; Defense; Cooperation.

(a) The Contractor shall be solely responsible for and shall indemnify and hold harmless the County, the Department, and its officers, employees, and agents (the "Indemnified Parties") from and against any and all liabilities, losses, costs, expenses (including, without limitation, attorneys' fees and disbursements), and damages

("Loss(es)") arising out of or in connection with any negligent acts or omissions of the Contractor or a Contractor Agent, e; provided, however, that the Contractor shall not be responsible for that portion, if any, of a Loss that is caused by the negligence of the County.

(b) The Contractor shall, and shall cause Contractor Agents to, cooperate with the County and the Department in connection with the investigation, defense, or prosecution of any action, suit, or proceeding in connection with this Agreement, including the acts or omissions of the Contractor and/or a Contractor Agent in connection with this Agreement.

(c) The provisions of this Section shall survive the termination of this Agreement.

Section 11. Insurance and Performance Bond.

(a) Types and Amounts. The Contractor shall obtain and maintain throughout the term of this Agreement, at its own expense: (i) one or more policies for commercial general liability insurance, from an insurance company licensed to do business in the State of New York rated B+ or better, which policy(ies) shall name "Nassau County" as an additional insured and have a minimum single combined limit of liability of not less than three million dollars ($3,000,000) per occurrence, (ii) if contracting in whole or part to provide professional services, one or more policies for professional liability insurance, which policy(ies) shall have a minimum single combined limit liability of not less than one million dollars ($1,000,000) per occurrence and three million dollars ($3,000,000) aggregate coverage, (iii) compensation insurance for the benefit of the Contractor's employees ("Workers' Compensation Insurance"), which insurance is in compliance with the New York State Workers' Compensation Law, (iv) automobile liability insurance with a minimum limit of liability of three million dollars ($3,000,000), which insurance shall include the following coverages: (i) owned automobiles, (ii) hired automobiles, and (iii) non-owned automobiles; and (v) such additional insurance as the County may from time to time specify.

(b) Performance Bond. The Contractor shall provide and keep in effect a Performance Bond in an amount of 100% of the bid to the County simultaneously with its delivery of the executed Agreement. The Bond shall be in the standard County form and shall be provided by a surety that appears on the Department of the Treasury's listing of approved sureties (Department Circular 570), and is licensed to transact business in New York State. In the event such Surety ceases to appear on the US Treasury's listing of approved sureties (Department Circular 570) or ceases to be licensed to transact business in New York State or becomes insolvent or enters liquidations proceedings, the Contractor, as its sole cost, shall furnish a replacement bond from a surety satisfactory to the County. Failure to make any required payment or fulfill any material requirement of the Agreement shall result in forfeiture of the payment or performance bond.

(c) Acceptability; Deductibles; Subcontractors. All insurance obtained and maintained by the Contractor pursuant to this Agreement shall be (i) written by one or more commercial insurance carriers licensed to do business in New York State and acceptable to the County, and (ii) in form and substance acceptable to the County. The Contractor shall be solely responsible for the payment of all deductibles to which such policies are subject. The Contractor shall require any subcontractor hired in connection with this Agreement to carry insurance with the same limits and provisions required to be carried by the Contractor under this Agreement.

(d) Delivery; Coverage Change; No Inconsistent Action. Prior to the execution of this Agreement, copies of current certificates of insurance evidencing the insurance coverage required by this Agreement shall be delivered to the Department. Not less than thirty (30) days prior to the date of any expiration or renewal of, or actual, proposed, or threatened reduction or cancellation of coverage of any insurance required hereunder, the Contractor shall provide written notice to the Department of the same and deliver to the Department renewal or replacement certificates of insurance. The Contractor shall cause all insurance to remain in full force and effect throughout the term of this Agreement and shall not take or omit to take any action that would suspend or invalidate any of the required coverages. The failure of the Contractor to maintain Workers' Compensation Insurance shall render this agreement void and of no effect. The failure of the Contractor to maintain the other required coverages shall be deemed a material breach of this Agreement upon which the County reserves the right to consider this Agreement terminated as of the date of such failure.

LIMITATION OF LIABILITY

Except for the Contractor's gross negligence or willful misconduct, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed two (2) times the contract price. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT in no event shall either party be liable for any commercial loss; inconvenience; loss of use,, data, unless required to back up such data, good will, revenues, profits or savings; or other special, incidental, indirect, or consequential damages in any way related to or arising from this Agreement. This limitation of liability will survive the expiration or termination of this Agreement.

Section 12. Assignment; Amendment and Waiver.

This Agreement and the rights and obligations hereunder may not be in whole or part (i)

consent of the County Executive or his or her duly designated deputy, and any purported assignment, other disposal or modification without such prior written consent shall be null and void. The failure of a party to assert any of its rights under this Agreement, including the right to demand strict performance, shall not constitute a waiver of such rights.

Section 13. Termination.

(a) Generally. This Agreement may be terminated (i) for any reason by the County upon thirty (30) days' written Notice to the Contractor, (ii) for termination or pending termination of State or Federal funding for the services to be provided under this Agreement, (iii) for "Cause" by the County as provided in the immediately following paragraph of this subsection of the Agreement, (iv) upon mutual written Agreement of the County and the Contractor, or (v) in accordance with any other provisions of this Agreement expressly addressing termination.

As used in this Agreement the word "Cause" includes: (i) a breach of this Agreement; (ii) the failure to obtain and maintain in full force and effect all Approvals required for the services described in this Agreement to be legally and professionally rendered or (iii) an unexcused delay or the aggregate of unexcused delays which exceeds one hundred and twenty (120) days. In the event the Project Director determines that there is a Cause for terminating this Agreement and that Cause remains uncured for thirty [30] days after service on the Contractor of written Notice thereof, the County, in addition to any other right or remedy it might have, may terminate this Agreement, and the County shall have the right, power, and authority to complete the services provided for in this Agreement, or contract for their completion, and any additional expense or cost of such completion shall be charged to and paid by the Contractor and shall not be limited by the amount of the performance bond, provided, however, that in the event of an unexcused delay or unexcused delays that aggregate more than 120 days, the County shall have the right to terminate this Agreement effective immediately upon written notice to the Contractor without any further opportunity for the Contractor to cure the Cause for termination. Notice hereunder shall be effective on the date of receipt.

(b) By the Contractor. This Agreement may be terminated by the Contractor if performance becomes impracticable through no fault of the Contractor, where the impracticability relates to the Contractor's ability to perform its obligations and not to a judgment as to convenience or the desirability of continued performance. Termination under this subsection shall be effected by the Contractor delivering to the Commissioner or his or her designee, at least sixty (60) days prior to the termination date (or a shorter period if sixty (60) days' Notice is impossible), a Notice stating (i) that the Contractor is terminating this Agreement in accordance with this subsection, (ii) the date as of which this Agreement will terminate, and (iii) the facts giving rise to the Contractor's right to terminate under this subsection. A copy of the Notice given to the Commissioner shall be given to the County Executive on the same day that Notice is given to the Commissioner.

Section 14. Accounting Procedures; Records.

The Contractor shall maintain and retain, for a period of six (6) years following the later date of termination of or date of final payment under this Agreement, complete and accurate records, documents, accounts, and other evidence, whether maintained electronically or manually ("Records"), pertinent to performance under this Agreement. Records shall be maintained in accordance with Generally Accepted Accounting Principles and, if the Contractor is a non-profit entity, must comply with the accounting guidelines set forth in the federal Office of Management & Budget Circular A-122, "Cost Principles for Non-Profit Organizations." Such Records shall at all times be available for audit and inspection by the Comptroller, the Department, any other governmental authority with jurisdiction over the provision of services hereunder and/or the payment therefore, and any of their duly designated representatives. The Contractor's books and records relating to confidential personnel, payroll, profit, or internal cost data shall be excluded. Such exclusion shall not be deemed to include time sheets or any other documents related to the manner or amount in which the County is billed. The provisions of this Section shall survive the termination of this Agreement.

Section 15. Issue Escalation Procedure and Limitations on Actions and Special Proceedings Against the County.

A. Issue Escalation Procedure

(a) If any issue or disagreement should arise between the parties under or relating to this Agreement, including any claim by either party that the other is in breach, the parties shall use reasonable efforts to settle the matter in accordance with the escalation procedure set out in this Section. However, no issue or disagreement regarding the Contractor's passing or failing of an acceptance test pursuant to Section 24 of this Agreement be subject to this issue escalation procedure.

(b) When an issue or disagreement is identified by either party, such party shall provide written Notice of the matter in controversy to the other side's designated first-level representative. The designated first-level representative of the County shall be the Project Director and the designated first-level representative of the Contractor shall be the Project Manager.

(c) Issues or disagreements that are identified shall first be discussed between the County's Project Director and the Contractor's Project Manager who shall exercise good faith efforts to resolve the matter as expeditiously as possible.

(d) In the event that the matter remains unresolved fourteen (14) business days after the delivery of the complaining party's written notice, the complaining party shall request in writing a meeting or conference call between the parties' respective second-level representatives. The second-level representative of the Department shall be the Commissioner of Police or his or her designee and the second level representative of the Contractor shall be the Chief

Operating Officer of the Contractor or his or her designee. This meeting or teleconference shall occur within five (5) days of the written Notice.

(e) If the issue or disagreement remains unresolved following the meeting or teleconference between the second-level representatives, either party may initiate a mediation proceeding by a request in writing to the other party. The parties hereby designate [insert name] as the mediator for any issues or disagreements that are escalated to the level of mediation pursuant to this section. The cost of retaining the mediator shall be shared equally between the Contractor and the County. The proceeding will be conducted in accordance with the then-current Commercial Mediation Rules of the American Arbitration Association, except that efforts to reach a settlement with the assistance of the mediator shall not terminate until either:

i. A written settlement is reached; or

ii. The mediator concludes and informs the parties that further efforts would not be useful; or

iii. The parties agree in writing that an impasse has been reached.

(f) If the issue or disagreement remains unresolved after conclusion of the mediation procedures set forth in paragraph (e) above, the parties may pursue such remedies as they may have at law or equity, subject to the terms, conditions, exclusions and limitations of this Agreement.

(g) Nothing contained in paragraphs (a) through (f) of this Section shall be construed to limit the County's rights under Sections 13, 21 and 24 of this Agreement.

B. Limitations on Actions and Special Proceedings against the County

No action or special proceeding shall lie or be prosecuted or maintained against the County upon any claims arising out of or in connection with this Agreement unless:

(a) Notice. At least thirty (30) days prior to seeking relief, the Contractor shall have presented the demand or claim(s) upon which such action or special proceeding is based in writing to the County Executive for adjustment, and the County shall have neglected or refused to make an adjustment or payment on the demand or claim for thirty (30) days after presentment. The Contractor shall send or deliver copies of the documents presented to the County Executive under this Section to each of (i) the Department and the (ii) the County Attorney (at the address specified above for the County) on the same day that documents are sent or delivered to the County Executive. The complaint or necessary moving papers of the Contractor shall allege that the above-described actions and inactions preceded the Contractor's action or special proceeding against the County.

(b) Time Limitation. Such action or special proceeding is commenced within the earlier of (i) one (1) year of the first to occur of (A) final payment under or the termination of this

Agreement, and (B) the accrual of the cause of action, and (ii) the time specified in any other provision of this Agreement. The period of any mediation proceeding held pursuant to paragraph (e) of Subsection A of this Section shall be excluded from this limitation period.

Section 16. Consent to Jurisdiction and Venue; Governing Law.

Unless otherwise specified in this Agreement or required by Law, exclusive original jurisdiction for all claims or actions with respect to this Agreement shall be in the Supreme Court in Nassau County in New York State, and the parties expressly waive any objections to the same on any grounds, including venue and forum non conveniens. This Agreement is intended as an agreement under, and shall be governed and construed in accordance with, the Laws of New York State, without regard to the conflict of laws provisions thereof. The period of any mediation proceeding held pursuant to paragraph (e) of Subsection A of this Section to attempt to resolve the Contractor's claim shall be excluded from any such limitation period.

Section 17. Notices.

Any Notice, request, demand, or other communication required to be given or made in connection with this Agreement shall be:

(a) in writing;

(b) delivered or sent (i) by hand delivery, evidenced by a signed, dated receipt, (ii) postage prepaid via certified mail, return receipt requested, or (iii) overnight delivery via a nationally recognized courier service;

(c) deemed given or made on the date the delivery receipt was signed by a County employee, three (3) business days after it is mailed, or one (1) business day after it is released to a courier service, as applicable; and

(d)(i) if to the Department, to the attention of the Commissioner at the address specified above for the Department, with a copy to the Project Director at the address specified below for the Project Director, (ii) if to the County Executive, to the attention of the County Executive at the address specified above for the County, (iii) if to the Comptroller, to the attention of the Comptroller at 240 Old Country Road, Mineola, NY 11501, and (iv) if to the Contractor, to the attention of the person who executed this Agreement on behalf of the Contractor at the address specified above for the Contractor, or in each case to such other persons or addresses as shall be designated by written Notice.

Unless otherwise provided by this Agreement or by applicable law, rules, or regulations, Notices and other communications to the County shall be addressed to the Project Director and Notices and other communications to the Contractor shall be addressed to the Project Manager. Either party may change its address by giving Notice in writing thereof to the other party.

IF TO COUNTY:

Deputy Inspector Edmund J. Horace

1490 Franklin Avenue, Mineola, NY

Attn: Communications Bureau

Fax:

With a copy to:

Sergeant Thomas M. Golder, NCPD

Attn:

Fax: 516-573-7605

IF TO CONTRACTOR (Project Manager):

Motorola Inc.

85 Harristown Road

Glen Rock, NJ 07452

Attn: Ken Weinberg

Fax: 201-447-7800

WITH A COPY TO:

Stephanie Walsh, Motorola Inc.

Section 18 All Legal Provisions Deemed Included; Severability; Supremacy.

(a) Every provision required by Law to be inserted into or referenced by this Agreement is intended to be a part of this Agreement. If any such provision is not inserted or referenced or is not inserted or referenced in correct form then (I) such provision shall be deemed inserted into or referenced by this Agreement for purposes of interpretation and (II) upon the application of either party, this Agreement shall be formally amended to comply strictly with the Law, without prejudice to the rights of either party.

(b) In the event that any provision of this Agreement shall be held to be invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(c) Unless the application of this subsection will cause a provision required by Law to be excluded from this Agreement, in the event of an actual conflict between the terms and conditions set forth above, the signature page to this Agreement and those contained in any schedule, exhibit, appendix, or attachment to this Agreement, the terms and conditions set forth above the signature page shall control. To the extent possible, all the terms of this Agreement should be read together as not conflicting.

Section 19. Section and Other Headings.

The section and other headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

Section 20. Administrative Service Charge.

The Contractor agrees to pay the County an administrative service charge of Five Hundred Dollars ($500.00) for the processing of this Agreement pursuant to Ordinance Number 74-1979, as amended by Ordinance Number 201-2001. The administrative service charge shall be due and payable to the County by the Contractor upon signing this Agreement.

Section 21. Executory Clause.

Notwithstanding any other provision of this Agreement:

(a) Approval and Execution. The County shall have no liability under this Agreement (including any extension or other modification of this Agreement) to any Person unless (i) all County approvals have been obtained, including, if required, approval by the County Legislature, and (ii) this Agreement has been executed by the County Executive (as defined in this Agreement).

(b) Availability of Funds. The County shall have no liability under this Agreement (including any extension or other modification of this Agreement) to any Person beyond funds appropriated or otherwise lawfully available for this Agreement, and, if any portion of the funds for this Agreement are from the state and/or federal governments, then beyond funds available to the County from the state and/or federal governments.

Section 22. Delivery, Title, and Risk of Loss.

Contractor shall ship the Hardware to County at Contractor's expense on or before the dates set forth in the Project Schedule. Partial deliveries shall be permitted. Contractor shall retain title to each item of the Hardware and all risk of loss of damage until Final

System Acceptance. Contractor shall remain responsible until Final Acceptance of the System for loss or damage, irrespective of whether such loss or damage arises from acts or omissions (whether negligent or not) of the Contractor or other persons, or from any cause whatsoever (except loss or damage arising solely from negligent or willful acts or omissions of the County). Contractor shall keep the Hardware fully insured for the total amount of all monies then due, or yet to become due, with respect to this Contract. For equipment purchased as an add-on to this Agreement (after Final System Acceptance), title and risk of loss will pass upon delivery to the County.

Section 23. Subcontracting.

The Contractor may subcontract any portion of work to be performed by the Contractor hereunder provided that: (i) the Contractor obtains the prior written approval of the Project Director for the subcontract; and (ii) the Contractor shall be responsible for the performance and work of any such subcontractors. The Contractor shall comply with the requirements of Appendix EE regarding subcontracting.

Section 24. Testing and Acceptance.

(a) Scope. The Acceptance Test Plan (ATP) shall verify that the System has been installed and optimized in accordance with applicable procedures and practices. The ATP shall verify that the System is performing at the level as specified in the RFP Section 12. The ATP is comprised of the following tests:

(A) Factory Acceptance Testing (FAT)
(B) Operational Test
(C) Equipment Testing
  (i) Hardware Testing
  (ii) Software Testing
  (iii) Interconnect Testing
(D) Network Management System (NMS) Testing
  (i) Hardware Testing
  (ii) Software Testing
(E) SATP
  (i) Single Trunked Site Testing
  (ii) Simulcast System Testing
  (iii) Site Desense and Interference Testing
  (iv) CATP

(b) Procedure. The Contractor shall notify the County in writing that the System is ready for the start of the Acceptance Tests at least twenty (20) days before commencement of any tests. The County and the Contractor shall jointly commence the Acceptance Tests on the date specified in the Contractor's Notice (or other mutually agreeable date).The Project Director, or his designee, and the Project Manager, or his designee, shall, on the forms developed during the Detailed Design Review meetings, indicate whether each segment of the System Acceptance Test Plan (SATP) and the CATP passed or failed. Subsequently,

the Contractor shall provide written confirmation of the successful completion of each test and shall receive written approval from the County for each test prior to the commencement of the following test. The determination of whether the Contractor has passed any of the acceptance tests shall at all times be in the sole and absolute discretion of the County.

(c) Correction of Defects. If the System does not fulfill the requirements of the Acceptance Tests, the Contractor shall correct the defects (at no additional cost to the County) as soon as practicable but in no event shall more than fifteen (15) days elapse from the discovery of the defect before submission of a plan of corrective action. These corrective actions may include, but shall not be limited to, the following: (i) developing a previously unidentified RF site, (ii) converting an existing receive only site to a transmit/receive site, (iii) modifying a site's antenna system, (iv) installing an in-building radio system, and (v) modifying or adding any piece of hardware or software that would be required to correct the failure.

(d) Verification of Defect Correction. Upon correction of the defects, the Acceptance Tests for the applicable part of the System shall be repeated in accordance with the procedures set forth in this Section, as well as any other parts of the System that need to be retested as a result.

(e) Final System Acceptance. Successful completion of the SATP and CATP is the sole criterion for total System acceptance and the initiation of the warranty period. Final System Acceptance shall occur when the Hardware and Software for the System, Documentation Deliverables, Training, and Services have been furnished, delivered, installed, and tested.

Section 25. Warranties.

(a) Contractor warrants and represents that the Deliverables do not infringe upon or constitute a misappropriation of any U.S. copyright, trademark, patent, trade secret or other proprietary right of any third party. Contractor represents and warrants that any reports, documents, data, designs, drawings, photographs and/or any other materials produced pursuant to this Agreement and any and all drafts and/or other preliminary materials, in any format (hereinafter "Copyrighted Materials"): (a) are wholly original material not published elsewhere (except for material that is in the public domain); (b) do not violate any copyright law; (c) do not constitute defamation or invasion of the right of privacy or publicity, and are not an infringement of any kind, of the rights of any third party. To the extent that the Copyrightable Materials or Deliverables incorporate any non-original material, the Contractor has obtained all necessary permissions and clearances, in writing, for the use of such non-original material under this Agreement, copies of which shall be provided to the County upon execution of this Agreement.

(b) Contractor warrants and represents that all products or Deliverables specified in and furnished by or through Contractor under this Agreement substantially conform to the specifications set forth in the Exhibits to this Agreement and the proposal submitted to Nassau County by the Contractor and will continue to do so for a period of two (2) years

following the date of acceptance by the County of the final Deliverable (the " Warranty Period") provided that no modifications, other than modifications contemplated by or consented to by the Contractor, are made to the Deliverables or their System environment; provided however, the Contractor shall not be responsible for deficiencies in the System caused by (I) use of ancillary equipment, where the use of such equipment has not been consented to by the Contractor, (II) the addition of frequencies at System sites that cause RF interference or intermodulation, (iii) changes to load usage or configuration outside the Specifications and not consented to by the Contractor, or (iv) force majeure events.

(c) Contractor further warrants and represents that products or Deliverables specified and furnished by or through Contractor under this Agreement shall individually, and where meant to perform as a system, perform as a system and be substantially uninterrupted and error-free in operation and are guaranteed against faulty material and workmanship during the Warranty Period provided that no modifications, other than modifications contemplated by or consented to by the Contractor, are made to the Deliverables or their system environment.. During the Warranty Period, defects in the products or Deliverables specified and furnished by or through Contractor shall be repaired or replaced by Contractor at no cost or expense to the County.

(d) If an individual product type within the System exhibits the same failure three times within a three month period, Motorola will replace the individual unit of equivalent functionality at no cost to the County. This individual product will be warranted as new. If the System exhibits a significant loss of features, functionality or equipment performance that would qualify as a Severity 1 Condition for an extended period, defined as 1 week, Motorola agrees to extend service for the period of the failure at no cost to the County.

Response Time for Fixed Equipment Maintenance		
Service Severity	Response	Restore
1	1 Hr. remotely, 2 Hrs. on-site	2 Hrs or CBE
2	2 Hrs. on-site	2 Hrs or CBE
3	Within 4 Hrs.	4 Hrs.
4	Within 1 Day	1 Day
Severity Definitions		
Level 1	System or Site Down (no inbound or outbound audio)	
Catastrophic	System or Site In Failsoft	
	System or Site In "Site Trunking"	
	Computer System Down	
Level 2	25% or greater of the Trunked Channels Down within a zone	
Major Outage	Major or Minor Infrastructure Alarm (causes loss of some communications)	
	Console Op Position Down	
Level 3	Less than 25% of the Trunked Channels Down	
System Impaired	Loss of less than 25% of any System or Sub-System/Back-up Problems	
	Configuration Issue	
Level 4	Monitoring of Intermittent Issues	

requirements prescribed by the CATP or SATP or that is agreed between County and the Contractor to be defective.

The Contractor shall provide and install, at no additional cost, Hardware, Firmware, Software releases, or patches that are required to correct any latent functionality or Software defects that may exist in the proposed System (including System failures resulting from Software problems, functionality fixes, and Software upgrades to Nassau County's System), for a 10-year period (assuming the County continues to purchase the annual maintenance agreement) from the date any such Hardware, Firmware, or Software is placed in service. This shall include any upgrades to fixed network equipment, system management systems, and subscriber units

The Contractor shall maintain the System in such a manner that the system performance demonstrating features, functionality, and equipment performance measured during and at the completion of the SATP shall be maintained throughout the subsequent maintenance period. These features, functionality, and equipment performance shall be clearly documented and provided by the Contractor at the completion of the SATP.

This warranty shall also include repair or replacement of surrounding hardware, software, or facilities resulting from any damage done by the Contractor during installation or subsequent maintenance of System.

(a) Hardware and Services. The Contractor warrants for a period of twenty-four (24) months from the Acceptance Date (hereinafter referred to as the "Warranty Period"), that the Hardware and Installation Services furnished by the Contractor under this Contract shall be free from defects in material and workmanship and shall conform to the Contractor's published specifications.

(b) For purposes of this Warranty, the batteries supplied by the Contractor shall be deemed defective if: (1) the battery capacity is less than 90 percent of rated capacity, or (2) the battery develops leakage.

(c) Software. The Contractor warrants for a period of twenty-four (24) months from the Acceptance Date (hereinafter referred to as the "Warranty Period") that the software and software programming equipment furnished by Seller under this Contract shall be free from defects.

Section 26. Maintenance.

(a) The County has the option to obtain maintenance (extended warranty) from the Contractor upon the terms and conditions set forth herein. The County may exercise said option by giving written Notice to the Contractor at any time prior to the expiration of the two (2) year warranty period.

(b) The Contractor shall maintain the system in such a manner that the System

performance demonstrated during and at the completion of the SATP and CATP shall be maintained throughout the subsequent maintenance period.

(c) The initial term of maintenance shall be for a one (1) year term commencing upon the expiration of the applicable two (2) year warranty period. The County shall have the option to renew maintenance period for up to eight (8) additional one (1) year terms, by giving written Notice to the Contractor prior to the expiration of each one (1) year term. See Exhibit P for details.

(d) The provisions of this section shall survive the expiration of this Agreement.

Section 27. Patents.

The Contractor warrants and represents that the Deliverables do not infringe upon or constitute a misappropriation of any U.S. copyright, trademark, patent, trade secret or other proprietary right of any third party. The Contractor will indemnify, defend and hold harmless the County from and against all third party claims against, and any related damages, claims, expenses (including reasonable attorney's fees), judgments, liabilities and costs ("Losses"), which the County may suffer or incur relating to any claim or action alleging that the Deliverables, infringe any U.S. copyright, trade secret, patent right of design, or other third party intellectual property right. In the event of any third party claim against the County in respect of the Deliverables, the Contractor, at its option, may (i) obtain the right to use the Deliverables without obligation on the part of the County to the owner of the allegedly infringed intellectual property, (ii) modify the Deliverables, without materially diminishing the functionality or performance, thereof, to become non-infringing at the Contractor's sole expense or (iii) require that the County discontinue the use of infringing Deliverables and refund to the County all amounts paid to the Contractor in respect of the infringing Deliverable. The actions that the Contractor may take in accordance with the immediately preceding sentence are in addition to, and not in lieu of, its indemnification and defense obligations in connection with an infringement claim. Notwithstanding the foregoing, the Contractor shall have no liability for any third party claim of infringement based upon: (i) a modified version of any Deliverable, to the extent modifications were made without the Contractor's approval;or (ii) the use of the Deliverable in connection with another product or service (the combination of which causes the infringement) if the Contractor did not approve of such use.

Section 28. Term.

The term of this Agreement shall commence upon the Effective Date of this Agreement and shall have a duration of five (5) years. Certain portions of this Agreement by their logic survive the expiration this Agreement, including, but not limited to, the sections regarding compliance with the law, minimum service standards, indemnification, accounting procedures and records, limitations on actions and special proceedings against the County, consent to jurisdiction and venue and governing law, warranties, maintenance, patents,

amendments of the Agreement, liquidated damages and confidentiality.

Section 29. Entire Agreement.

This Agreement, together with all Exhibits and Contractor's Proposal, which is incorporated herein by reference, constitute the entire understanding and agreement between the County and the Contractor concerning the subject matter hereof and any negotiations, prior discussions, representations, promises, understandings, proposals, agreements, warranties, course of dealing or trade usage not expressly contained or referenced herein shall not be binding on either party.

Section 30. Amendment.

(a) General. No modification or amendment or other change to this Agreement shall be binding on either party unless set forth in writing and signed by both the authorized representative of the County and the authorized representative of the Contractor.

(b) Change Order Requirement. A Change Order shall be required to authorize the amendment of the Agreement in either Scope and/or Dollar value, or to expand or reduce the original scope of this Agreement's performance, features, hardware, software, or services. A Change Order Request shall be initiated by the Contractor. No work requested in the Change Order may be performed until the Change Order is approved by the Radio Contract Change Order Review Board.

(c) Contents of Change Order Requests. A separate Change Order Request must be completed for each requested change. The Change Order submitted must clearly state the scope of work requested, the responsible parties that will perform the work, a dollar amount of the costs of this request and net agreement impact, and the appropriate approval signatures. The Change Order Request must also specify any changes to the completion deadlines specified in Section 4 of this Agreement for each of the milestones specified in that Section.

(d) Change Order Procedure. The County's Project Director shall be responsible for processing all Change Order Requests. The time frame for review and designation of the Change Order Request as either accepted or rejected shall not exceed ten (10) days for either the County or the Contractor.

The Contractor's Project Manager shall be responsible for including all pricing and schedule impact information in every Change Order Request. The Contractor shall be responsible for maintaining an Implementation Plan document, which shall contain documented amendments denoting any changes agreed upon with the County.

(e) Radio Contract Change Order Review Board Approval. All Change Order requests must be approved in writing by both members of the Radio Contract Change Order Review Board.

(f) Change Order Contingency Account. Pursuant to this Agreement, the County shall establish a contingency account in the amount of $1.6 million. The Contractor and County agree that the exigent public safety purposes of this Agreement compel that this account be established to enable the expeditious processing of Change Orders deemed necessary by the parties to successfully complete the implementation of the System.

(g) Legislative Approval. Any Change Order Request that either: (i) increases the total amount payable under the Agreement, beyond the additional amount payable from the Change Order Contingency Account; or (ii) that materially extends the duration of the Agreement shall be subject to approval by the Nassau County Legislature.

Section 31. Severability.

The invalidity, in whole or in part, of any Section or part of any Section of this Agreement shall not affect the validity of the remainder of such Section or the Agreement.

Section 32. Liquidated Damages for Delay.

Time is of the essence to this Agreement. In the event of delay in performance of any Work under this Agreement beyond the Final System Acceptance date set forth in the Implementation Schedule (identified in Section 4 of this Agreement or beyond the period to which such time may be extended (i) by the County as herein provided, or (ii) by Excusable Delay as defined in Section 33 of this Agreement, the County shall be paid damages for such delay. Inasmuch as the amount of such damages and the loss to the County will be extremely difficult to ascertain, it is hereby expressly agreed that such damages will be liquidated and paid as follows:

1. The Contractor shall pay the County for each and every day (per day) not to exceed one hundred and twenty (120) days of unexcused delay, the sum of Three Thousand Dollars ($3,000) which sum is hereby agreed as liquidated damages and is not a penalty. In the event that an unexcused delay or the aggregate of unexcused delays exceeds one hundred and twenty (120) days, the County shall have the right to terminate for cause the Agreement. This right to terminate is in addition all other rights and remedies available to the County.

2. The County shall have the right to deduct such liquidated damage assessments from any monies due or which may thereafter become due to the Contractor under this Agreement; and in case the amount that may become due hereunder shall be less than liquidated damages due to the County, the Contractor shall pay the difference upon demand of the County.

Section 33. Excusable Delays.

(a) Neither party shall be liable for failure to fulfill its obligations under this Agreement (other than a failure to pay money) if that failure is caused, directly or indirectly, by flood, communications failure, extreme weather, fire, mud slide, earthquake, or other natural calamity or act of God, interruption in water, electricity, riots, civil disorders, rebellions or revolutions, acts of governmental agencies, quarantines, embargoes, malicious acts of third parties, acts of terrorism, labor disputes affecting vendors or subcontractors and for which the party claiming force majeure is not responsible, or any other similar cause beyond the reasonable control of that party.

(b) In the event of any delay or failure excused by this Section, the Contractor shall as soon as practical notify the County in writing. Within 5 days of receipt of this written Notice by the County, the Contractor and the County shall mutually agree upon revised delivery and performance dates which shall reasonably compensate for the time lost by Contractor by reason of the delay. Pursuant to Section 30 of this Agreement, the Contractor shall then submit the revised schedule as a Change Order request.

Section 34. Background Checks and Documentation.

Contractor is to provide certified background checks and supporting documentation to the County for each person that Contractor employs to perform work on Long Island for this Agreement twenty (20) days prior to that person's performing any work under this Agreement.

(a) Background checks on prospective personnel/applicants shall include screening of all current and prospective personnel including, but not limited to:

(I) Review of criminal convictions, criminal records, and pending criminal actions;

(II) For prospective personnel, inquiry with the applicant's three (3) most recent employers;

(III) Valid Motor vehicle license for class of vehicle that the individual is expected to use.

(IV) Educational Institution verification; and

(V) Drug Testing

(b) Contractor shall ensure that any Motorola contract worker (non-Motorola employees) fills out and submits a completed application form that NCPD will provide to the Contractor. These individuals must be approved by NCPD prior to the contract worker's being authorized to work on this System.

(c) The County reserves the right to reject the employment of any individual or

subcontractor on this project.

IN WITNESS WHEREOF, the Contractor and the County have executed this Agreement as of the date first above written.

MOTOROLA, INC.

CONTRACTS DEPT. APPROVAL 6/7/05 MOTOROLA

By: _____

Name: MARK SCHMIDL

Title: MOTOROLA MCEI Vice President

Date: 6/7/05

NASSAU COUNTY

By: _____

Name: Timothy S. Driscoll

Title: Deputy County Executive

Date: 6/30/05

PLEASE EXECUTE IN BLUE INK

STATE OF NEW YORK)
)ss.:
COUNTY OF NASSAU)

On the 7th day of June in the year 2005 before me personally came Mark Schmidt to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Nassau; that he or she is the Vice President of Motorola Inc. the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

NOTARY PUBLIC Diana Michell

Diana M. Michell
Notary Public, State of New York
Qualified in Nassau County
01MI5061917
My Commission expires 06/17/06

STATE OF NEW YORK)
)ss.:
COUNTY OF NASSAU)

On the 20 day of June in the year 2005 before me personally came Timothy S. Driscoll to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Nassau; that he or she is a Deputy County Executive of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

NOTARY PUBLIC Deborah Austin

DEBORAH AUSTIN
Notary Public, State of New York
No. 30-4729801
Qualified in Nassau County
Commission Expires Feb. 28, 2007

Appendix U – Collective Bargaining

Title 56

COLLECTIVE BARGAINING ACTIVITIES OF UNIONS IN NASSAU COUNTY

§ 1. Legislative Intent.

This Legislature hereby finds and determines that funds appropriated by the County Legislature for the purchase of necessary goods and services should ultimately be expended solely for the purpose for which they were appropriated and should not be used to deter, or promote union organizing.

This Legislature also finds that the use of County funds and property to assist, deter or promote union organizing causes conflicts and work interruptions which waste scarce County resources on issues of secondary importance.

This Legislature further finds and determines that where the County expends significant resources for the purchase of goods or the delivery of needed human services, the County's financial interests is advanced by the promotion of non-confrontational procedures which limit the economic and social disruptions associated with collective bargaining disputes.

This Legislature also determines that the State of New York has recently enacted amendments to the New York Finance Law to restrict the use of State funds in assisting, deterring or promoting union organizing.

Therefore, the purpose of this law is to protect the County's financial interests in connection with its commitment of economic resources by prohibiting funding of certain forms of labor/management conflict and is not intended to provide an advantage to either labor or management during the conduct of union organization campaigns, nor to express any generally applicable policy regarding labor/management relations.

§2. Definitions.

As used in this law, the following terms shall have the meanings indicated:

A) "Assist, Promote or Deter Union Organizing" shall mean any attempt by an employer to influence the decision of its employees in the County of Nassau or those of its subcontractors regarding either of the following:

1.) whether to support or oppose a labor organization that represents or seeks to represent those employees; and

2.) whether to become a member of any labor organization.

B.) "Binding Arbitration Agreements" shall mean a written agreement to submit any dispute arising out of the efforts of a labor organization to represent the employees of a County contractor to final and binding arbitration.

C.) "County Contractor" shall mean any employer that receives more than Fifty Thousand ($50,000) Dollars in County finds for supplying goods or services pursuant to a written contract with the County of Nassau or any of its agencies; pursuant to a Nassau County grant; pursuant to a Nassau County program; pursuant to a Nassau County reimbursement for services provided in any calendar year; or pursuant to a sub-contract with any of the above.

D.) "County Funds" shall mean any monies appropriated by the Nassau County Legislature.

E.) "County Property" shall mean any property or facility owned or leased to or by the County of Nassau or any Nassau County agency or authority.

F.) "Employee" shall mean any person employed by an employer other than a person employed in a supervisory, managerial or confidential position as defined by applicable law.

G.) "Employer" shall mean any individual, corporation, unincorporated association, partnership, government agency or authority, or another legal entity, whether a for profit entity, a not-for-profit entity or a public entity that employs more than one person in the County of Nassau.

H.) "Fair Communication Agreements" shall mean a written agreement requiring the parties to such agreement to refrain from providing employees with false and misleading information regarding the circumstances surrounding their employment.

I.) Human Services Contract" shall mean a County contract, grant or reimbursement of over Fifty Thousand ($50,000) Dollars for the provision of health, mental health, residential or day treatment services to the mentally ill and developmentally disabled, social services and other care and treatment services of the County.

J. "Labor Disputes" shall mean any concerted action concerning wages, hours and conditions of employment or concerning the representation of person in negotiating, maintaining changing or seeking to arrange wages, hours and conditions of employment.

K. "Labor Organization" shall mean an organization of any kind in which employees participate and which exists for the purpose, in whole or in part, or representing employees concerning wages, rates for pay, benefit, grievances, labor disputes, hours of employment, working conditions or other matters incidental to the employment relationship, and shall include the parent, national or international organization of a local labor organization.

L.) "Majority Authorization Card Agreement" shall mean a written agreement authorizing the recognition of a labor organization as the exclusive bargaining agent for a bargaining unit based on the presentation of a majority of authorizing cards.

M.) "Neutrality Agreement" shall mean a written agreement by a County contractor not to participate in or request or otherwise seek to influence, either in writing or orally, the decision of its employees as to whether or not to be represented by a labor organization.

N.) "Non-Intimidation Agreements" shall mean a written agreement prohibiting the parties from coercing or intimidating employees explicitly or implicitly in selecting or not selecting a bargaining representative.

O.) "Reasonable Access Agreement" shall mean a written agreement granting a labor organization reasonable access to employees and information necessary to be communicated therewith.

§3. Prohibitions

A) A County contractor shall not use any of County funds to assist, promote or deter union organizing.

B.) No County funds shall be used to reimburse a County contractor for any costs incurred to assist, promote or deter union organizing.

C.) The County of Nassau shall not use County funds to assist, promote or deter union organizing.

D.) All County contracts, grant applications, program guidelines and any other relevant documents shall contain the text of the prohibitions in this section.

E.) No employer shall use County property to hold a meeting with employees or supervisors if the purpose of such meeting is to assist, promote or deter union organizing.

F.) Prior to the award of a County contract or grant, and/or prior to authorization to participate in a County program, the potential awardee, recipient, and or program participant, as the case may be, shall provide a certification, subscribed by such awardee, recipient and or program participant and affirmed by said person as true under the penalties of perjury to the County agency or authority involved that none of the funds shall be used to assist, promote or deter union organizing.

G.) Every request for payment of County funds by a County contractor shall include a certification, subscribed to by such person seeking reimbursement and affirmed by said person as true under the penalties of perjury, that the contractor is not seeking reimbursement for costs incurred to assist, promote or deter union organizing.

H.) Every County Department, Agency, Authority or Office shall require those seeking County contracts, grants, awards, program participation and/or County reimbursement to certify and affirm as true under the penalty of perjury that such entities will take all action necessary to ensure that County funds are not used to assist, promote or deter union organizing.

I.) Any County contractor who makes expenditures or incurs costs to assist, promote or deter union organizing shall maintain records sufficient to show that no County funds were used for those expenditures and, as applicable, that no reimbursement from County funds has been sought for such costs. Such records shall be made available to the pertinent County agency or authority, the County Comptroller, or the County Attorney, upon request.

§ 4. Accounting.

Each County contractor shall account for funds spent on assisting, deterring or promoting union organizing activities as follows:

A) County funds designated by the County for use for a specific expenditure of the recipient shall be accounted for as allocated to the expenditure.

B.) County funds that are not designated as described in paragraph (A) of this section shall be allocated on a pro rata basis to all expenditures by the recipient that support the program for which the grant is awarded.

C.) If County funds and other funds are commingled, and the contractor fails to keep records sufficient to satisfy the requirements of paragraphs (A) or (B) of this section, any expenditure to assist, promote or deter union organizing shall be allocated between the County funds and other funds on the pro rata basis derived from the interplay of paragraphs (A) and (B) of this section.

D.) Any expense, including legal and consulting fees and salaries of supervisor and employees, incurred for research for, or preparation, planning or coordination of, carrying out, an activity to assist, promote or deter union organizing shall be treated as paid or incurred for that activity.

§ 5. Applicability.

A) This law shall apply to any contracts awarded on or after the effective date of this law.

B.) This law shall not apply to an activity performed or to an expense incurred in connection with any of the following:

1.) addressing a grievance or negotiating or administering a collective bargaining agreement;

2.) allowing a labor organization or its representative's access to the employer's facility or property;

3.) performing an activity required by Federal or State law or by a collective bargaining agreement; and

4.) negotiating, entering into or carrying out a voluntary recognition agreement with a labor organization.

§ 6. Implementation.

Every Nassau County Department, Agency; Authority or Office shall:

1.) Include in all bid documents, County grant applications, County program guidelines and County reimbursement documents, a statement informing potential and actual County contractors that the efficient, timely and non-disruptive provision of goods and services sought by such Department, Agency, Authority or Office is a paramount financial interest of the County of Nassau and as such the County expects the potential County contractor to protect the County's financial interest by adopting non-confrontational procedures for the orderly resolution of labor disputes. The statement shall also inform the potential and actual County contractors that such non-confrontational procedures may include, but are not limited to, neutrality agreements, majority authorization card agreements, binding arbitration agreements, fair communication agreements, non-intimidation agreements and reasonable access agreements.

2.) Require County contractors and those seeking County contracts, to certify and affirm as true under the penalty of perjury:

a.) that such contractor will not express to employees any false or misleading information that is intended to influence the determination of employee preferences regarding union representation;

b.) that such contractor will not coerce or intimidate employees, explicitly or implicitly, in selecting or not selecting a bargaining representative;

c.) that such contractor will not require an employee, individually or in a group, to attend a meeting or an event that is intended to influence his or her decision in selecting or not selecting a bargaining representative;

d.) that such contractor understands its obligation to limit disruptions caused by pre-recognition labor disputes through the adoption of non-confrontational procedures for the resolution of pre-recognition labor disputes with employees engaged in the production of goods or the rendering of services for the County; and

e.) that such contractor has and will adopt any or all of the above-referenced procedures, or their functional equivalent, to ensure the efficient, timely and quality provision of goods and services to the County. The contractor shall include a list of said procedures in such certification.

3.) Ensure that every County contract for the provision of services, when such services will be performed on County property, include as a condition of award, grant receipt or reimbursement, as the case may be, a requirement that such County contractor adopt a reasonable access agreement, a neutrality agreement, fair communication agreement, non-intimidation agreement, and a majority authorization card agreement.

4.) Ensure that every County contract for the provision of human services, when such services are not to be performed on County property, include as a condition of award, grant receipt or reimbursement, as the case may be, a requirement that such County contractor adopt, at the least, a neutrality agreement.

§ 7. Penalties.

A) A County contractor who expends funds and/or obtains reimbursement for funds spent in violation in Section 3 or 4 of this law shall be liable for any funds so expended plus a civil penalty equal to twice the amount of those funds. Such penalty shall not be paid by the contactor farm any other County funds. In addition, said County contractor shall be prohibited form bidding on County contracts for a period of five (5) years from the final determination of a violation, either by administrative action or judicial action.

B.) An employer that violates Section 3 of this law, shall also be liable for a civil penalty equal to One Thousand ($1,000) Dollars per employee per meeting. Such penalty shall not be paid by the employer from any other County funds.

C.) Any public official who knowingly authorizes the use of County funds in violation of Section 3 of this law, shall be liable to the County for those funds.

§ 8. Enforcement.

A) A civil action for a violation of this law may be brought by the County Attorney's office for injunctive relief, damages, civil penalties and other appropriate equitable relief.

B.) All damages and civil penalties collected pursuant to this law shall be paid to the general fund of the county;

C.) Any Labor Organization may file a complaint with the Nassau County Department of Labor or the Nassau County Attorney's office alleging violations of this law. Said complaint shall be promptly investigated and a written response shall be issued to the complaining Labor Organization.

§ 9. Rules and Regulations.

The Department of Labor shall promulgate such rules and regulations as it deems necessary and appropriate for the implementation and enforcement of any provision of this law.

§ 10. Severability.

If any clause, sentence, paragraph, subdivision, section or part of this law or the application thereof to any person, individual, corporation, firm, partnership, entity, or circumstance shall be adjudged by any court of competent jurisdiction to be invalid or unconstitutional, such order or judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section or part of this law or in its application to the person, individual, corporation, firm, partnership, entity or circumstance directly involved in the controversy in which such order or judgment shall be rendered.

Appendix EE - Equal Employment Opportunities For Minorities and Women

The provisions of this Appendix EE are hereby made a part of the document to which it is attached.

The Contractor shall comply with all federal, State and local statutory and constitutional anti-discrimination provisions. In addition, Local Law No. 14-2002, entitled "Participation by Minority Group Members and Women in Nassau County Contracts," governs all County Contracts and solicitations for bids or proposals for County Contracts. In accordance with Local Law 14-2002:

(a) The Contractor shall not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status in recruitment, employment, job assignments, promotions, upgradings, demotions, transfers, layoffs, terminations, and rates of pay or other forms of compensation. The Contractor will undertake or continue existing programs related to recruitment, employment, job assignments, promotions, upgradings, transfers, and rates of pay or other forms of compensation to ensure that minority group members and women are afforded equal employment opportunities without discrimination.

(b) At the request of the County contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, union, or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability, or marital status and that such employment agency, labor union, or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

(c) The Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the County Contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

(d) The Contractor shall make its best efforts to solicit active participation by "Certified business" enterprises (as defined in Section 101 of Local Law No. 14-2002).

(e) The Contractor shall be bound by the provisions of Section 109 of Local Law No. 14-2002 (entitled "Enforcement").

(f) The Contractor shall include the provisions of (a) through (d) above in every subcontract providing for a total expenditure in excess of twenty-five thousand dollars ($25,000) for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work"), except where the Work is for the beneficial use of the Contractor.

(g) The contractor shall be responsible for completing all standardized forms and reporting documents issued by the Executive Director of the Office of Minority Affairs pursuant to Local Law 14-2002, including any such forms for the reporting of subcontracts issued and payments made to such subcontractors.

The provisions of (a) through (g) above do not apply to: (i) work, goods or services unrelated to the County Contract, or (ii) employment or employment related activities outside of the County.

As used in this Appendix EE the term "County Contract" means (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of twenty-five thousand dollars ($25,000), whereby a County contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the County; or (ii) a written agreement in excess of one hundred thousand dollars ($100,000), whereby a County contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon. However, the term "County Contract" does not include agreements or orders for the following services: banking services, insurance policies or contracts, or contracts with a County contracting agency for the sale of bonds, notes or other securities.

As used in this Appendix EE the term "Contractor" means an individual, business enterprise, including sole proprietorship, partnership, corporation, not-for-profit corporation, or any other person or entity other than the County, whether a contractor, licensor, licensee or any other party, that is (i) a party to a County Contract, (ii) a bidder in connection with the award of a County Contract, or (iii) a proposed party to a County Contract.

Software License Agreement

In this Exhibit A, the term "Licensor" means Motorola, Inc., ("Motorola") ; "Licensee," means the Customer or County; " Agreement" means the agreement to which this exhibit is attached; "License Agreement" means this Exhibit and the applicable terms and conditions contained in the Agreement and "Software" means the definition provided in the Agreement, including without limitation, the Contractor's proposals as attached as Exhibits E and L to the Agreement. The parties agree as follows:

Section 1 SCOPE

Licensor will provide proprietary software and/or radio communications, computer, or other electronic products ("Products") containing embedded or pre-loaded proprietary software to Licensee. "Software" means such proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works thereof; such software may contain one or more items of software owned by a third party supplier ("Third Party Software"). Product and Software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which this information is provided) are collectively referred to as "Documentation." This License Agreement contains the terms and conditions pursuant to which Licensor will license to Licensee, and Licensee may use, the Software and Documentation.

Section 2 GRANT OF LICENSE

Subject to Section 1, Licensor hereby grants to Licensee a personal, non-transferable (except as permitted in Section 8 below), limited, and non-exclusive license under Licensor's applicable proprietary rights to use the Software and related Documentation for the purposes for which they were designed and in accordance with the terms and conditions of this License Agreement. The license does not grant any rights to source code. To the extent that the Software contains Third Party Software, the Licensor shall pass through all licenses and warranties, if any.

If the Software is or includes Integration Framework, Customer Service Request ("CSR"), or Cityworks software, such Software is licensed pursuant to this Agreement plus a separate document entitled "Software License Agreement Rider for Integration Framework, Customer Service Request, or Cityworks Software" (which document is incorporated by this reference and is either attached to this Agreement or will be provided upon Licensee's request).

Section 3 LIMITATIONS ON USE

3.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation and the Agreement. Any other use of the Software is strictly prohibited. Licensee may not for any reason modify, disassemble, peel components, decompile, otherwise reverse engineer or attempt to reverse engineer, derive source code, create derivative works from, adapt, translate, merge with other software, copy, reproduce, distribute, or export any Software or permit or encourage any third party to do so, except that Licensee may use, execute, reproduce, display, perform and make copies of Software provided by Licensor for internal business purposes, including archival, back-up, or disaster recovery purposes. Licensee must reproduce all copyright and trademark notices on all copies of the Software and Documentation.

3.2. Licensee may not copy onto or transfer Software installed in one Product device onto another device without the consent of the Licensor. Notwithstanding the preceding sentence, Licensee may temporarily transfer Software installed on one device onto another if the original device is inoperable or malfunctioning, provided that Licensee provides written notice to Licensor of such temporary transfer and such temporary transfer is discontinued when the original device is returned to operation. Upon Licensor's written request, Licensee must provide to Licensor a written list of all Product devices in which the Software is installed and being used by Licensee.

3.3. Concerning Motorola's Radio Service Software ("RSS"), if applicable, Licensee must purchase a copy for each location at which Licensee uses RSS. Licensee's use of RSS at an authorized location does not entitle Licensee to use or access the RSS remotely. Licensee may make one additional copy for each computer owned or controlled by Licensee at each such location. Upon Licensor's written request, Licensee must provide to Licensor a written list of all locations where Licensee uses or intends to use RSS. Is this correct?

Section 4 OWNERSHIP AND TITLE

Title to all copies of Software will not pass to Licensee at any time and remains vested exclusively in the copyright owner. The copyright owner owns and retains all of its proprietary rights in any form concerning the Software and Documentation, including all rights in patents, patent applications, inventions, copyrights, trade secrets, trademarks, trade names, and other intellectual properties (including any corrections, bug fixes, enhancements, updates, or modifications to or derivative works from the Software whether made by Licensor or another party, or any improvements that result from Licensor's processes or, if applicable, providing information services). Nothing in this Agreement is intended to restrict the proprietary rights of Licensor or to grant by implication or estoppel any proprietary rights. All intellectual property developed, originated, or prepared by Licensor in connection with providing to Licensee Software, Products, Documentation, or related services remain vested exclusively in Licensor, and

this Agreement does not grant to Licensee any shared development rights of intellectual property.

Section 5

CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Licensor's proprietary and Confidential Information and are Licensor's trade secrets, and that the provisions in the Agreement concerning Confidential Information apply.

Section 6 LIMITED WARRANTY

6.1. During the applicable warranty period, Licensor warrants that the unmodified Software, when used properly and in accordance with the Documentation and this License Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether such defect occurs will be determined solely with reference to the Documentation. Licensor warrants that Licensee's use of the Software or Products will be substantially uninterrupted and error-free and that the Software and the Products will meet Licensee's particular requirements. Notwithstanding the foregoing, all warranty and infringement provisions contained in the Agreement are applicable herein.

6.2. LICENSOR DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE TRANSACTION COVERED BY THIS AGREEMENT IS A LICENSE AND NOT A SALE OF GOODS.

Section 7 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Agreement.

Section 8 TRANSFERS

Licensee shall not transfer Software or the related Documentation to any third party without Licensor's prior written consent, which consent may be withheld in Licensor's reasonable discretion and which may be conditioned upon the transferee paying all applicable license fees and agreeing to be bound by this License Agreement. Notwithstanding the preceding sentence, if Licensee transfers ownership of radio Products to a third party, Licensee may assign its rights to use the Software (other than Radio Service Software and Motorola's FLASHport® Software) embedded in or furnished for use with those radio Products; provided that Licensee transfers all copies of

such Software and the related Documentation to the transferee, and the transferee executes a transfer form to be provided by Licensor upon request (which form obligates the transferee to be bound by this License Agreement).

Section 9 TERM AND TERMINATION

Licensee's right to use the Software and Documentation will begin when the Agreement is mutually executed by both parties and will continue during the life of the Products in which the Software is used, unless Licensee breaches this Agreement in which case it shall be terminated thirty (30) days after Licensor provides notice of the breach and Licensee has had an opportunity to cure. . Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Licensor that all copies of the Software and Documentation have been returned to Licensor or destroyed and are no longer in use by Licensee.

Section 10 NOTICES

Notices are described in the Agreement.

Section 11 UNITED STATES GOVERNMENT LICENSING PROVISIONS
In the event that the Licensee is the United States Government or a United States Government agency, then the provisions of this section also apply. Use, duplication or disclosure of the Software and associated Documentation under Licensor's copyrights and/or trade secret rights is subject to the restrictions set forth in subparagraphs (c)(1) and (2) of the Commercial Computer Software-Restricted Rights clause at FAR 52.227-19 (JUNE 1987), if applicable, unless being provided to the Department of Defense. If being provided to the Department of Defense, use, duplication, or disclosure of Software and associated Documentation is subject to the restricted rights set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 (OCT 1988), if applicable. Software and associated Documentation may or may not include a Restricted Rights notice, or other notice referring specifically to the terms and conditions of this Agreement. The terms and conditions of this License Agreement shall each continue to apply, but only to the extent that such terms and conditions are not inconsistent with the rights provided to the Licensee under the aforementioned provisions of the FAR or DFARS, as applicable to the particular procuring agency and procurement transaction.

Section 12 GENERAL

12.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption that public disclosure of the Software or any trade secrets associated with the Software has occurred.

12.2. COMPLIANCE WITH LAWS. Licensee will comply with all applicable laws and regulations regarding export laws and regulations of the United States. Licensee will not, without the prior authorization of Licensor and the appropriate governmental

authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government, or any agency thereof, at the time of such action, requires an export license or other governmental approval. Violation of this provision shall be a material breach of this Agreement, permitting immediate termination by Licensor.

12.3. GOVERNING LAW. This Agreement will be governed by the laws of the United States to the extent that they apply and otherwise by the laws of the State of New York.

12.4 DOCUMENT PRIORITY. Nothing contained in this License Agreement is intended to limit, in any way, the applicability of, or in case of ambiguity, conflict or inconsistency, the governing precedence of the Agreement.

IN WITNESS WHEREOF, Licensor and the County have executed this Agreement as of the date first above written.

MOTOROLA, INC.

CONTRACTS DEPT. APPROVAL 6/6/07 MOTOROLA

By: _____

Name: MARK SCHMIDL
Title: MOTOROLA MCEF VP.
Date: 6/7/05

NASSAU COUNTY

By: _____

Name: Timothy S Driscoll
Title: Deputy County Executive
Date: 6/30/05

PLEASE EXECUTE IN BLUE INK

STATE OF NEW YORK)
) ss.:
COUNTY OF NASSAU)

On the 30th day of June in the year 2005, before me personally came Timothy S. Driscoll to me personally known, who, being by me duly sworn, did depose and say that he resides in the County of Nassau; that he is the Deputy County Executive of Nassau County, the corporation described herein, and which executed the above instrument; and that he signed his name thereto by authority of the County Legislature.

Deborah Austin
Notary Public

DEBORAH AUSTIN
Notary Public, State of New York
No. 30-4729801
Qualified in Nassau County
Commission Expires Feb. 28, 2007

Exhibit E: Pre-Contract Ancillary Components

1 EAB Upgrade

This activity would involve the modernization of the MedCom communication equipment and Dispatch Console equipment for the EAB.

1.1 Scope of Work

This activity would include the following activities:

- Investigate the interface of the telemetry equipment with the XTL-1500 radio
- Investigate the use of the microwave system to transport the telemetry from the site to the hospital.
- Install MedCom frequencies (seven (7) simplex) at each of the thirteen (13) transmit/receive sites in association with the analog simulcast system. The MedCom channels are simplex conventional channels used to pass telemetry data between the ambulance and the hospital.
- Implement the MedCom channels through the County's infrastructure equipment.
- Install two (2) remote Dispatch Consoles at the EAB
- Interface the EAB Dispatch voice communications to the logging recorder
- Install new 500 MHz radios in ambulance (count already incorporated into the equipment estimates)
- Provide ambulance crews with new 500MHz Tier 2 portables (count already incorporated into the equipment estimates)

1.2 Cost

Remote Console:	$	150,000
Logging Recorder Interface	$	TBD
New Transmitters	$	TBD
New Infrastructure Equipment	$	TBD
Total Estimated Cost	$	150,000

Exhibit E: Pre-Contract Ancillary Components

2 FCC License

This activity includes modifying the existing license for the UHF and T-Band channels to reflect the new design (i.e. locations, antenna heights, ERP, etc).

2.1 Scope of Work

This activity includes, at a minimum:

- FCC 601 modification and submittal for NYMAC channels
- FCC 601 modification for existing UHF channels
- FCC 601 modification for the new T-Band channels
- FCC forms for microwave link submittals

2.2 Cost

Total Estimated Cost $20,000

Exhibit E: Pre-Contract Ancillary Components

3 1194 Prospect Avenue Site Upgrade

1194 Prospect Avenue, Westbury, New York, has been identified as the site for the Back-up Dispatch Center. This is a green site that shall require the construction of a new building to house the Back-up facilities for the Dispatch, Center, PSAP and FireCom dispatch.

3.1 Scope of Work

This activity shall be for, at least, the following equipment and services:

- Procurement, installation and testing of microwave equipment. This equipment shall be incorporated into the ring architecture of the proposed microwave system.
- Procurement, Installation and testing of the microwave antenna system
- Procurement, installation and testing of a new tower. The contractor shall determine the height of the tower during the part survey analysis for the site.
- Identification of site support requirements to support the microwave, console infrastructure and other ancillary radio system equipment that will be installed at this site. This information shall be incorporated into the design for the facility located at 1194 Prospect Ave, Westbury. This information shall include, but not be limited to, the following:
    - UPS requirements
    - Backup generator requirements
    - HVAC loading
    - Floor space requirements
    - Lighting
    - Room and site grounding requirements

3.2 Total Estimated Cost

Microwave Equipment cost	$183,000
Tower Procurement and Construction	$120,000
Total estimated cost =	$303,000

Exhibit E: Pre-Contract Ancillary Components

4 Radio System Logging Recorder

This activity will provide digital and analog voice logging recorder and instant playback recorder capabilities to the radio system.

4.1 Scope of Work

The following activities will be accomplished:

- Verify the capabilities of the existing logging recorder at the CB can accommodate the new trunked system requirements
- If necessary, procure additional ports and associated equipment for the CB logging recorder to meet the new radio system requirements
- Verify the capabilities of the existing instant playback recorder at the CB can accommodate the new trunked system requirements
- If necessary, procure additional ports and associated equipment for the CB instant playback recorder to meet the new radio system requirements
- Identify the logging and instant playback recorder capabilities for the back-up Dispatch Center
- Procure logging recorder and instant playback recorder equipment for the back-up Dispatch Center

4.2 Total Estimated Cost

Total estimated cost = $806,000

Note: State Grants and E911 funding shall be used for payment for any additional cost.

Exhibit E: Pre-Contract Ancillary Components

5 Hubbell Connector

The Hubbell Connectors will increase the reliability of sites by providing an alternative power source at each site.

5.1 Scope of Work

The Hubbell connectors shall be installed at each ground level radio site. The connector will allow the mobile generator to be easily connected to the power distribution system at the site. A manual switch shall be utilized to transfer power from the site power to the mobile generator power

5.2 Total Estimated Cost

Total estimated cost = $106,000

6 Mobile Data Upgrade

This activity will upgrade the mobile data capabilities of the Police Department

6.1 Scope of Work

The work identified under this activity will provide for, at least, the following equipment and services:

- Procure and install additional mobile data terminals
- Upgrade the County's RCN

6.2 Total Estimated Cost

Total Estimated cost = $ 500,000

Exhibit E: Pre-Contract Ancillary Components

7 Mobile Generator

This activity shall procure a 100 KW generator that can be transported to a site that has a commercial power and generator failure. The mobile generator shall:

- Have the same specifications as the site generators
- Have an outside electrical connections to connect the mobile generator to the site power distribution system
- Have sound muting options to minimize noise from the generator (maximum noise output: 75 dB)
- Have at least a 24 hour fuel supply

7.1 Scope of Work

Procurement of the following equipment:

- Procure a 100 KW generator

7.2 Total Estimated Cost

Total Estimate Cost = $41,000

Exhibit E: Pre-Contract Ancillary Components

8 FireCom Dispatch Console

8.1 Scope of Work

The contract shall install the following equipment in support of FireCom at the Communications Building (primary dispatch center) and back-up dispatch center.

- Eight (8) dispatch consoles (with an option to add six (6) additional consoles) for installation at the Communications Building. The Contractor shall provide a equipment list and line item cost to these consoles.

8.2 Total Estimated Cost

Total estimated cost = $600,000

Exhibit E: Pre-Contract Ancillary Components

9 Cost Summary Estimate

Item	Priority	Activity	Cost
1		EAB Upgrade	$ 150,000
2		FCC License	$ 20,000
3		1194 Prospect Avenue Site Enhancement	$ 303,000
4		Radio System Logging Recorder	$ 802,000
5		Hubbell Connector	$ 106,000
6		Mobile Data Upgrade	$ 500,000
7		Mobile Generator	$ 41,000
8		FireCom Support	$ 600,000
		Total Cost	$ 2,526,000

E-81-05

RULES RESOLUTION NO. 124 - 2005

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE AN AGREEMENT BETWEEN THE COUNTY OF NASSAU AND MOTOROLA, INC., FOR THE FURNISHING, DELIVERY AND INSTALLATION OF A TURNKEY LAND MOBILE RADIO SYSTEM FOR THE POLICE DEPARTMENT.

Passed by the Rules Committee
Nassau County Legislature
By voice vote on 6-20-05
Voting: 9 ayes — nayes — abstained —
Legislators present 9

WHEREAS, the County, on behalf of the Nassau County Police Department, has negotiated a personal services agreement with Motorola, Inc., for the furnishing, delivery and installation of a turnkey land mobile radio system; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said agreement with Motorola, Inc.

OMB Approval by Budget miner_____

Date _____

SUPPLEMENTAL APPROPRIATION REQUEST

To: Office of Grants Management

Forward To: Sudha Malhotra

From: Captain Michael P. Cronin
Commanding Officer, Personnel & Accounting Bureau

Date: November 10, 2003

Re: Supplemental Appropriation Request – Interoperable Communications Technology Grant Program

---

The Police Department requests the supplemental appropriation of $6,000,000.00 in funds to be received from the U.S. Department of Justice, Office of Community Oriented Policing Services according to the following schedule.

NIFS Entry
Document ID #: BAPD03000020
Grant Index # : PDGRT8CY3FED
Document ID #: BAPD03000020
Grant Detail: 00

Revenue
Fund: GRT
Dept. Code: PD
Object Code: 8C
Sub-Object Code: R0901
Total Revenue: $6,000,000.00

Expenses
Fund: GRT
Dept. Code: PD
Object Code: 8C
Sub-Object Code: DE547-$5,959,165.00 DD497 - $3,535.00 AA97Z - $37,300.00
Total Expenses: $6,000,000.00

Authorized by Department Head / Fiscal Officer

Michael P. Cronin

Date

11-12-03

SUPPLEMENTAL APPROPRIATION REQUEST
Grant Profile – Additional Information

Grant Name: COPS Interoperable Communications Technology Grant Program

Total Grant Funding: $6,000,000.00

Grant Purpose: Grant funding is provided by the U.S. Department of Justice, Office of Community Oriented Policing Services. Funds will allow the Police Department to develop a unique regional interoperability solution that will provide seamless real time communications to public safety personnel throughout Nassau and Suffolk counties.

Clients Served: Nassau County

Impact on Funding: Total budget for the interoperability portion of this project is $9,652,867.00. The COPS office has awarded Nassau County $6,000,000.00, requiring a county match of 25% ($1,500,000.00). Additional funding for the project is budgeted under Capital Project # 50-590.

Co, P+A 91

ORDINANCE NO. 91 -2003

SUPPLEMENTAL TO THE ANNUAL APPROPRIATION ORDINANCE APPROPRIATING MONIES NOT OTHERWISE APPROPRIATED IN CONNECTION WITH THE DEPARTMENT OF DRUG AND ALCOHOL ADDICTION, THE TRAFFIC SAFETY BOARD, AND THE POLICE DEPARTMENT.

Passed by Nassau County Legislature on DEC 17 2003
votes for 19 ; votes against 0
Became an ordinance on DEC 29 2003
with the approval of the Deputy County Executive acting for the County Executive.

APPROVED AS PER CHARTER
Deputy County Attorney

WHEREAS, Nassau County has received certain revenue; and

WHEREAS, such funds have not been otherwise appropriated; and

WHEREAS, the County Executive, by communication dated November 24, 2003, addressed to the County Legislature, has recommended the appropriation of such funds not otherwise appropriated; and,

WHEREAS, this supplemental appropriation is within the scope of section 307 of the County Government Law; now, therefore,

BE IT ORDAINED by the County Legislature of the County of Nassau, as follows:

Section 1. There is hereby appropriated from monies not otherwise appropriated, the following sums of money to the following accounts:

TOTAL AMOUNT (in dollars)	SOURCE OF FUNDS	APPROPRIATED TO:			
		FUND	DEPT. CODE	OBJ. CODE	AMOUNT (in dollars)
11,102,500	NYSOASAS	GRT	DR	AA	650,000
		GRT	DR	AB	200,000
		GRT	DR	DD	2,500
		GRT	DR	DE	10,250,000
700,000	NYSOASAS	GRT	DR	DE	700,000
850,000	NYSOASAS	GRT	DR	DE	850,000
2,390,000	NYSOASAS	GRT	DR	AA	1,000,000
		GRT	DR	AB	330,000
		GRT	DR	BB	5,000
		GRT	DR	DD	5,000
		GRT	DR	DE	1,050,000
2,167,000	NYSOASAS	GRT	DR	AA	50,000
		GRT	DR	AB	13,500
		GRT	DR	BB	4,000
		GRT	DR	DD	2,500
		GRT	DR	DE	2,100,000
1,524,000	NYSOASAS, NCTSB	GRT	DR	AA	850,000
		GRT	DR	AB	270,000
		GRT	DR	BB	1,000

TOTAL AMOUNT (in dollars)	SOURCE OF FUNDS	APPROPRIATED TO:			
		GRT	DR	DD	3,000
		GRT	DR	DE	400,000
2,483,000	NYSOASAS	GRT	DR	AA	1,150,000
		GRT	DR	AB	350,000
		GRT	DR	DD	3,000
		GRT	DR	DE	980,000
2,300,000	NYSOASAS	GRT	DR	DE	2,300,000
1,250,000	NYSOASAS	GRT	DR	AA	900,000
		GRT	DR	AB	270,000
		GRT	DR	DD	10,000
		GRT	DR	DE	70,000
872,500	NYSOASAS	GRT	DR	AA	600,000
		GRT	DR	AB	200,000
		GRT	DR	BB	1,000
		GRT	DR	DD	1,500
		GRT	DR	DE	70,000
5,690,000	NYSOASAS	GRT	DR	AA	3,500,000
		GRT	DR	AB	1,050,000
		GRT	DR	BB	25,000
		GRT	DR	CC	150,000
		GRT	DR	DD	135,000
		GRT	DR	DE	830,000
244,378	2004 Buckle up NY	GRT	TS	AA	140,000
		GRT	TS	DE	104,378
86,025	Misd. Forf.Revenue	GRT	PD	BB	40,000
		GRT	PD	DD	46,025
467,221.45	Fed. Forfeiture Act	GRT	PD	BB	467,221.45
434,743.06	Fed.Fofeiture Act	GRT	PD	DE	434,743.06
6,000,000	U.S.D.O.J.	GRT	PD	AA	37,300
		GRT	PD	DD	3,535
		GRT	PD	DE	5,959,165

Cons Ct

§ 2. This ordinance shall take effect immediately.

APPROVED DEC 29 2003

Deputy County Executive

Anthony Cancellieri

166

BLINK TO: GRANT SUMMARY INQUIRY 12:16 P

ACTIVE
BALANCE (Y,M,Q,A) : A FUNDING PERIOD : CURRENCY CODE :
FISCAL MO/YEAR : 06 2005 JUNE 2005 GRANT END DATE: 12/31/2005 A
GRANT : PD8C INTEROPERABLE COMMUNICATIONS TECH GRT
GRANT DETAIL : 00 INTEROPERABLE COMMUNICATIONS TECH GRT
CHARACTER :
OBJECT :
FUND TYPE :
FUND :
SUBFUND :

S	SUBOBJ	DESCRIPTION	BUDGET	ACTUAL	ENCUMBERED	BALANCE
	R0901	REIMBURSED EXPEND	6,000,000	817		-5,999,183
	R1001	REIMBURSED EXPEND		1,505		1,505
		REVENUE TOTAL	6,000,000	2,322		-5,997,678
	AAZY8	OVERTIME		1,505		-1,505
	AA97Z	APPROPRIATION TRAN	37,300			37,300
	DD345	EDUCATION EXPENSE		817		-817
	DD497	APPROPRIATION TRAN	3,535			3,535

F1-HELP F2-SELECT F4-PRIOR F5-NEXT
F7-PRIOR PG F8-NEXT PG F9-LINK
G010 - PRIOR PAGE DISPLAYED

Jacobs
571 6216

Mjoch
Clerk
1452 Expensed

Steverfeiner
Analyst
35,795
271
5,959,165
5,997,678

P

Budget
AA = 37,300
DD = 3,535
DE = 5,959,165
6,000,000

< 1,505 >
< 817 >
< 0 >
2322

CFPWOS
000024

Helen
4/27

FAML4010 V4.2 NIFS PRODUCTION SYSTEM 06/29/200
DOCUMENT HEADER 3:24 PM

DOCUMENT CATEGORY	: CF PERSONAL SERVICES CAPITAL CONTRACT		
ENTERED BY	: ALAGNA, JANET 16889		
DOCUMENT NUMBER	: CFPW05000024	INITIATING DEPT	: PW
INPUT PERIOD (MM YYYY)	: 06 2005 JUNE	RIMS CODE	:
VENDOR NUMBER / SUFFIX	: 361115800 01	APPROVAL TYPE	: 01
VENDOR NAME	: MOTOROLA INC		
VENDOR ADDRESS	: 13108 COLLECTIONS CENTER DRIVE		
	CHICAGO IL 60693		
COUNTRY	: USA		
ALPHA VENDOR	: MOTOROLA INC		
BANK NUMBER	:	TREAS NO	: RADIOS
DUE DATE	:	SINGLE CHECK	:
DOCUMENT AMOUNT	: 41,610,219.00	CURRENCY CODE	:
NUMBER OF LINES	: 2	RESPONSIBLE UNIT	:
TRANSACTION CODE HASH	:		
TERMS	:	NOTEPAD (Y OR N)	: Y
POSTING/EDIT ERRORS	:		

F1-HELP F6-DTL ENTRY
F7-VIEW DOC F10-SAVE F12-ADL FCTNS
G014 - RECORD FOUND

POLICE DEPARTMENT, COUNTY OF NASSAU, N.Y.
PURCHASE REQUEST

INSTRUCTIONS: PDCN 113 - REV. 1/98

See full instructions on back of form. Forward original and one copy to Personnel and Accounting Bureau (Through Official Channels) and retain one copy.

FROM	DATE	PAGE NO.	COMMAND REQUEST NO
Deputy Commanding Officer Communications Bureau	06/10/2005	1 OF 1	CB-61-05

IF REQUEST IS FOR EQUIPMENT: ARE SUPPLIES, INSTALLATION, TRAINING, MANUALS OR A SERVICE CONTRACT REQUIRED? ☒ YES ☐ NO IF YES, ORDER SIMULTANEOUSLY AND FORWARD TO P.A.B. WITH THIS REQUEST

DOES REQUEST REQUIRE A MATERIAL SAFETY DATA SHEET FROM VENDOR ☐ YES ☒ NO

C.O. INITIALS

CHECK THE APPROPRIATE BOX IF THIS REQUEST IS FOR ANY EQUIPMENT LISTED TO THE RIGHT. THE CORRESPONDING SUPERVISOR MUST APPROVE THE PURCHASE:

- ☐ COMPUTER EQUIPMENT - C. O., INFORMATION SYSTEMS BUREAU
- ☐ PERSONAL PROTECTIVE EQUIPMENT - CHAIRMAN, SUBSTANCES AND MATERIALS COMMITTEE
- ☒ COMMUNICATIONS EQUIPMENT - C. O., COMMUNICATIONS BUREAU
- ☐ VIDEO EQUIPMENT - C. O., PUBLIC INFORMATION OFFICE
- ☐ ELECTRONICS EQUIPMENT - C. O., ELECTRONICS SQUAD

CERTIFICATION OF CORRESPONDING C.O.

TITLE

DATE / /

SHIPPING ADDRESS (If billing address is different than shipping, record under Description.)

NCPD Communications Bureau
1490 Franklin Ave.
Mineola New York

SUGGESTED VENDOR (Name and Address)

Motorola
85 Harristown Rd.
Glen Rock New Jersey 07452

Tele. No., (800 no. if avail.) 2014477525 FAX No., (If avail.)

QUANTITY	UNIT	ITEM/SERVICE DESCRIPTION (Description must be detailed or form will be returned. Include catalog name, number and page.)	NO. ON HAND	USEFUL LIFE	LIST PRICE	EXTENDED LIST PRICE
		See Attached EFPW05000254				

IF URGENT, CHECK HERE ☐ AND BELOW STATE REASON AND DATE NEEDED BY.

IS A BLANKET ORDER AVAILABLE FOR ITEMS IN THIS PURCHASE REQUEST? ☐ YES ☐ NO

STANDARD BLANKET ORDER NO. AND EXPIRATION DATE

TOTAL COST 44,600,000.00

LIMITED BLANKET ORDER NO.

STATE CONTRACT ☐ YES ☐ NO

STATE CONTRACT NO. (If known)

CAPITAL PROJECT NO.

IF GRANT, GIVE NAME

FOR USE BY P.A.B.
- ☐ DELIVERY ORDER
- ☐ REQUISITION
- ☐ L. P. O.
- ☐ CNTE. ADV.
- ☐ OTHER

SPECIFIC JUSTIFICATION

For installation of a new Land Mobile Voice Radio System

INDIVIDUAL TO CONTACT FOR FURTHER	RANK	NAME	COMMAND	TELEPHONE NO.
	D.I	Edmund J. Horace	Comm. Bureau	5737600

COMMAND C.O.	DIVISION C.O.	OFFICE CHIEF

FOR USE BY OFFICE OF COMMISSIONER OF POLICE

☐ APPROVED ☐ DISAPPROVED

SIGNATURE C.O.P.

FUND RESP OBJ

DATE RECEIVED AT P.A.B. / /

REASON RETURNED

☐ NOT INCLUDED IN BUDGET REQUEST

DATE ORDER TYPED IN P.A.B. / /

REFER DOCUMENT

☐ FUNDS AVAILABLE AND APPROVED FOR PROCESSING
☐ RESUBMIT FUNDS UNAVAILABLE

SIGNATURE C.O., PERSONNEL AND ACCOUNTING BUREAU