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**EXHIBIT 1**

**NORTHEAST STATION  
BDA AND TAC-PAC STATEMENT OF WORK**

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# BDA & TAC-PAC IMPLEMENTATION

## NORTHEAST STATION



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# SYSTEM OVERVIEW

## 1.1 INTRODUCTION

The City of Los Angeles Police Department (LAPD) has requested a quote from Motorola for an In-Building Bi-Directional Amplifier (BDA) system as well as a Tactical Area Communications (TAC-PAC) system for the new Northeast Police Station.

The following section of this proposal provides a description for both of the systems and their components.

## 1.2 NORTHEAST BDA

The purpose of the proposed In-Building BDA system is to improve radio communications within the Northeast Police Station where radio propagation is blocked by either natural or manmade objects. The BDA does this by boosting radio signals with repeater amplifiers that pass several channels at one time and amplify signals in both directions. This system provides the capability for the officers in the police station using handheld ASTRO portable radios to communicate with the officers in the field or the dispatch center. A functional diagram of a BDA system providing in-building coverage is shown in Figure 1-1.

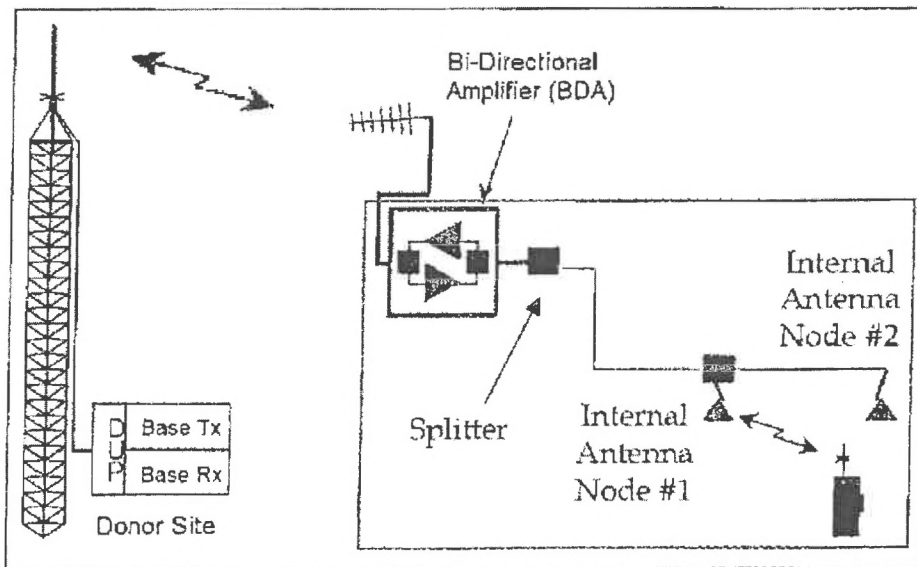


Figure 1-1: BDA System Diagram

Motorola has partnered with Bird Technologies and GPD Telecom to provide LAPD with an in-building BDA solution. While Motorola has installed similar BDA equipment in various other LAPD police stations in the past, the BDA equipment included in this proposal consists of newer models and components.

### 1.3 NORTHEAST TAC-PAC

The TAC-PAC system provides the officer's station at the Northeast Police Stations with a means to communicate with the officers in the field by remote desk set units on selected channels. The TAC-PAC system also functions as the backup communications system in the event that the LAPD's RF backbone becomes unavailable.

A high level block diagram showing the Connections from the Deskset to the Antenna is shown in Figure 1-2.

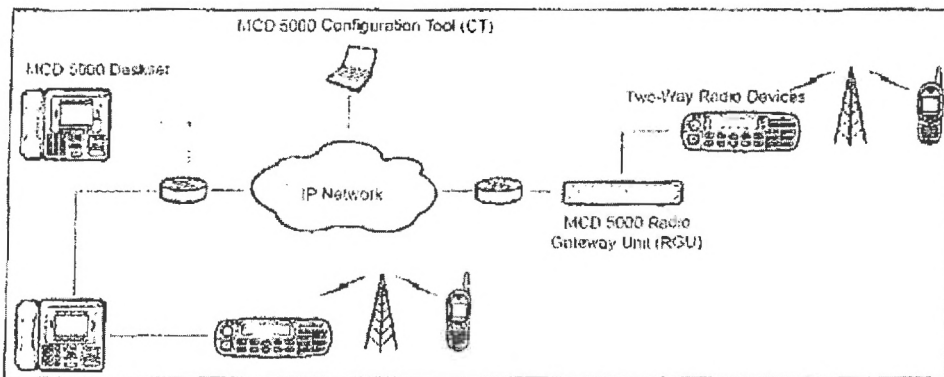


Figure 1-2: High Level Block Diagram Connections

The system will include three (3) MCD 5000 Digital Desktop Controllers (also known as desksets), which enable remote control of a Dual Band UHF/7-800MHz APX 7500 Console. A more detailed diagram showing the deskset connections to the APX 7500 Console is shown in Figure 1-3.

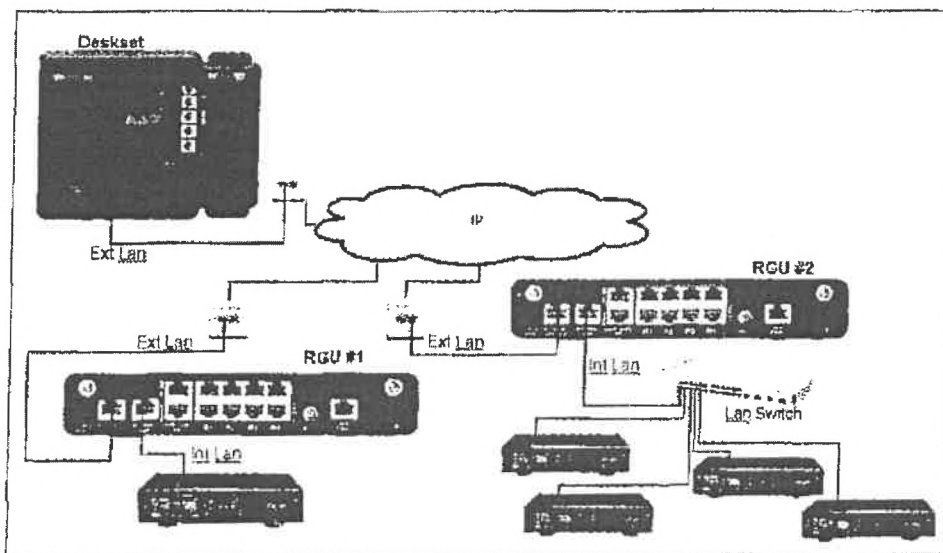


Figure 1-3: MCD 5000 Deskset Connections to Console

The Dual Band APX 7500 Consolette will be placed in a location designated by LAPD. RF peripherals for the consolette, which include the antenna, cables, connectors, lightning arrester and grounding apparatus are included as part of the quote. In previous TAC-PAC implementations for other LAPD police stations, the consolette had a battery revert option with battery back-up. Currently this option is no longer available, hence eight (8) hours of UPS backup will be provided for the consolette.

The MCD 5000 desksets utilize an IP backbone to communicate to a MCD 5000 Remote Gateway Unit (RGU). One (1) MCD 5000 RGU and three (3) LAN switches will be included in the system to enable the connection of multiple MCD 5000 desksets to the APX consolette. A CAT5 / CAT6 punch-block in the equipment room will serve as the demarcation point for the connection between the consolette, desksets, and LAN switches.

## 1.4 NORTHEAST POWER

LAPD will be responsible for providing power to the equipment at all stations. ITA will provide (1) NEMA 5-20R receptacle per rack.

## 1.5 NORTHEAST DRAWINGS

Drawings for this project will be included in the Detail Design portion of the project.



# SYSTEM COMPONENTS

## 2.1 NORTHEAST BDA

The BDA system designed for the Northeast Police Station utilizes a combination of indoor antennas and ½" plenum-rated coaxial cable to provide in-building coverage in the designated areas. The In-Building BDA system consists of the following components:

### Northeast Police Station

- Two (2) 7dBd UHF Yagi donor antennas.
- Transmission lines with connectors and combiners/splitters.
- One (1) Bi-Directional Amplifier (BDA).
- Nine (9) Indoor Antennas.
- Two (2) 19"W x 7.5'H floor-mount equipment racks.

The BDA system will provide in-building coverage for the LAPD channels.

Mt. Lee and Verdugo Peak have been identified as donor sites for the Northeast BDA. The donor antennas will be comprised of two (2) 7 dB gain Yagi antennas designed to operate in the frequency ranges 480-512MHz.

The BDA will be installed in a location designated by the City of Los Angeles LAPD and will be mounted in 7.5' equipment racks.

## 2.2 NORTHEAST TAC-PAC

The TAC PAC System will consist of the following equipment:

### Northeast Police Station

- One (1) 3dB UHF Omni-directional antenna.
- One (1) 3dB 7/800MHz Omni-directional antenna.
- Transmission lines with connectors.
- One (1) Dual Band UHF / 7-800MHz ASTRO APX 7500 Consolette.
- One (1) MCD 5000 Remote Gateway Unit (RGU).
- Three (3) MCD 5000 Digital Desktop Controllers.
- Three (3) LAN Switches (One Per Floor).
- One (1) 8-Hour Rack-Mount UPS.

SECTION 3

# SYSTEM DIAGRAMS

## 3.1 NORTHEAST BDA DIAGRAMS

Included in the proposal are the diagrams listed below:

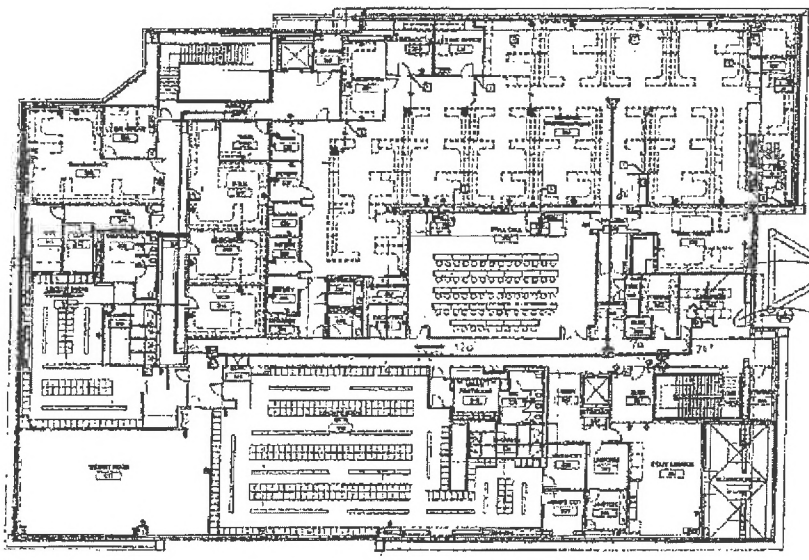
- Northeast Station Predicted Indoor Antenna Locations.
- UHF BDA Specifications Diagram - TX/RX.

### 3.1.1 Northeast Station Predicted Indoor Antenna Locations

TK 24251

5/10/15

**PLAN NOTES**  
1. See Section 2.1 for details of wall structure and wall



From Duplex Switch Room (30A)  
To/from Ground Floor

**COMMUNICATIONS EQUIPMENT GENERAL NOTES**

1. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
2. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
3. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
4. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
5. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
6. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
7. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
8. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
9. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.
10. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, 70E, AND 70F.

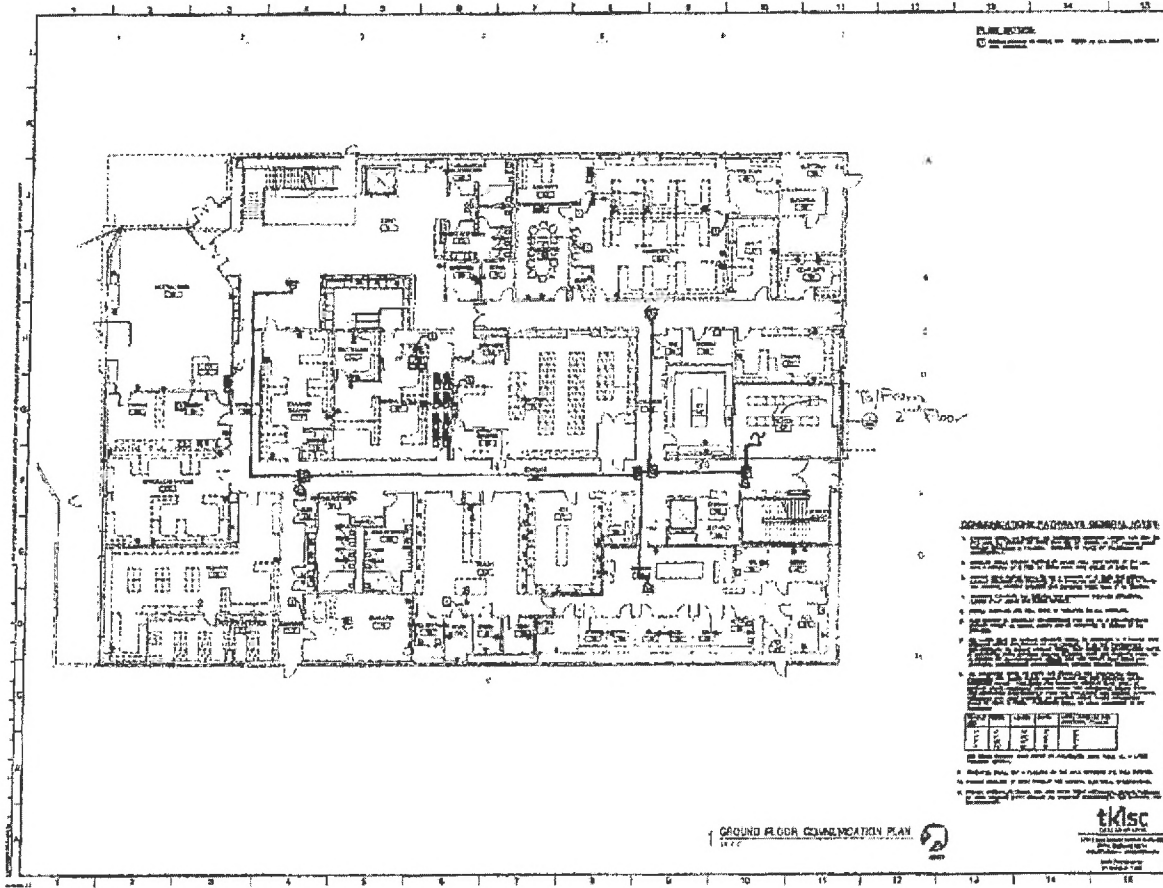
TYPE	LOCATION	DESCRIPTION	REMARKS

SECOND FLOOR COMMUNICATION PLAN



**TKSC**  
TELECOMMUNICATIONS  
SOLUTIONS CORPORATION  
10000 W. CENTRAL EXPRESSWAY  
SUITE 1000  
DENVER, CO 80231  
TEL: 303.755.1100  
WWW.TKSC.COM

PROJECT: TELECOMMUNICATIONS SOLUTIONS CORPORATION  
 CLIENT: TELECOMMUNICATIONS SOLUTIONS CORPORATION  
 PROJECT NO.: TK 24251  
 SHEET NO.: EC112  
 DATE: 5/10/15  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 APPROVED BY: [Name]



**PLANNING**  
 C

- GENERAL NOTES:**
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND ALL APPLICABLE LOCAL ORDINANCES.
  2. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARCHITECT.
  3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
  4. ALL UTILITIES SHALL BE PROTECTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION.
  5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND PUBLIC AREAS AT ALL TIMES.
  6. ALL STRUCTURAL WORK SHALL BE DONE IN ACCORDANCE WITH THE STRUCTURAL DESIGN DRAWINGS AND SPECIFICATIONS.
  7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF ALL EXISTING UTILITIES AND STRUCTURES TO REMAIN.
  8. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME AND BUDGET.
  9. THE CONTRACTOR SHALL MAINTAIN A NEAT AND SAFE WORKING ENVIRONMENT AT ALL TIMES.
  10. ALL MATERIALS AND EQUIPMENT SHALL BE STORED PROPERLY AND PROTECTED FROM THE ELEMENTS.
  11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF ALL EXISTING UTILITIES AND STRUCTURES TO REMAIN.
  12. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME AND BUDGET.
  13. THE CONTRACTOR SHALL MAINTAIN A NEAT AND SAFE WORKING ENVIRONMENT AT ALL TIMES.
  14. ALL MATERIALS AND EQUIPMENT SHALL BE STORED PROPERLY AND PROTECTED FROM THE ELEMENTS.
  15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF ALL EXISTING UTILITIES AND STRUCTURES TO REMAIN.

NO.	DESCRIPTION	DATE	BY

**GROUND FLOOR CONSTRUCTION PLAN**  
 1/17/77

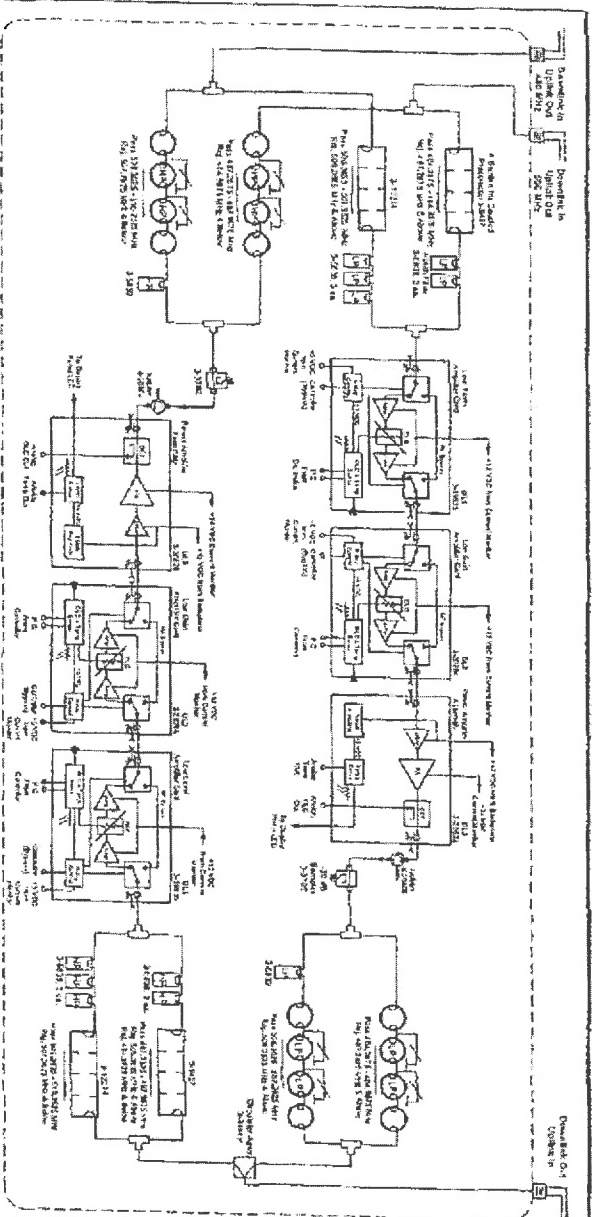


**PROFESSOR OF ARCHITECTURE**  
**GROUP ASSOCIATE**

**tkisc**  
 1700 BROADWAY, SUITE 1000  
 NEW YORK, NY 10019  
 TEL: (212) 512-1000  
 FAX: (212) 512-1001

**PROJECT NO.** EC111

### 3.1.2 UHF BDA Specifications Diagram - TX/RX



SPECIFICATIONS		DIMENSIONS		IPI NO.	
Part No.	6X4	Part No.	6X4	Part No.	6X4
Manufacturer	6X4	Manufacturer	6X4	Manufacturer	6X4
Model	6X4	Model	6X4	Model	6X4
Year	6X4	Year	6X4	Year	6X4
Weight	6X4	Weight	6X4	Weight	6X4
Material	6X4	Material	6X4	Material	6X4
Finish	6X4	Finish	6X4	Finish	6X4
Notes	6X4	Notes	6X4	Notes	6X4

SPECIFICATIONS		DIMENSIONS	
Part No.	6X4	Part No.	6X4
Manufacturer	6X4	Manufacturer	6X4
Model	6X4	Model	6X4
Year	6X4	Year	6X4
Weight	6X4	Weight	6X4
Material	6X4	Material	6X4
Finish	6X4	Finish	6X4
Notes	6X4	Notes	6X4

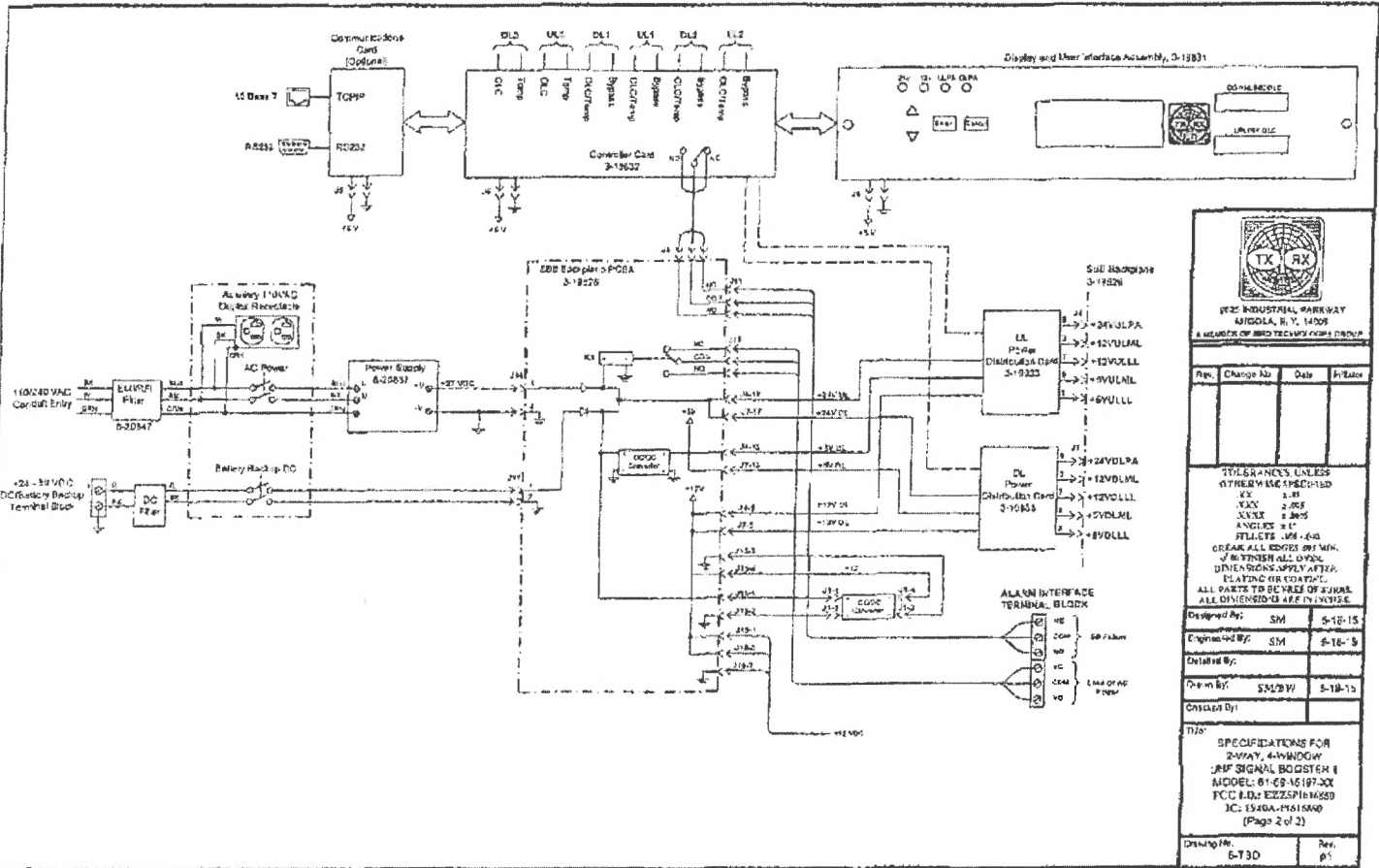
**INTERNATIONAL TELEPHONE CORPORATION**  
**AMERICA'S COMMUNICATIONS COMPANY**


Part Description	Part No.	Quantity
VACUUM TUBE	6X4	1
VACUUM TUBE	6AR5	1
VACUUM TUBE	6AV6	1
VACUUM TUBE	6BE6	1
VACUUM TUBE	6X4	1

**RESERVE ALL RIGHTS RESERVED**  
**NO PARTS TO BE USED IN REPAIRS**  
**ALL PARTS TO BE USED IN REPAIRS**  
**ALL PARTS TO BE USED IN REPAIRS**

Designed by: S.M.  
 Drawn by: S.M.  
 Checked by: S.M.  
 Date: 5-16-15

Copyright © 1965 RCA  
 Model No. 6X4-15  
 Part No. 6X4-15  
 Part No. 6X4-15  
 Part No. 6X4-15





**TEXAS INSTRUMENTS**  
 1500 INDUSTRIAL PARKWAY  
 MIDDLE BROOK, TEXAS  
 A MEMBER OF THE TEXAS INSTRUMENTS GROUP

Rev.	Change No.	Date	By	Checked

**TOLERANCES, UNLESS OTHERWISE SPECIFIED:**  
 RESISTORS: 1%  
 CAPACITORS: 5%  
 DIMENSIONS: UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.  
 BREAK ALL EDGES 90° MIN.  
 FINISH ALL OPEN DIMENSIONS WITH PLATING OR COATING.  
 ALL PARTS TO BE FREE OF SURF ALL DIMENSIONS ARE IN UNLESS OTHERWISE SPECIFIED.

Designed By:	SM	5-18-15
Engineered By:	SM	5-18-15
Detailed By:		
Checked By:	SM/BW	5-18-15

**TITLE:**  
 SPECIFICATIONS FOR  
 2-WAY, 4-WINDOW  
 JRP SIGNAL BOOSTER II  
 MODEL: 01-69-16197-02  
 FCC ID: E225161650  
 IC: 1540A-161650  
 (Page 2 of 2)

Drawing No.:	Rev.:
6-T3D	p1



# EQUIPMENT LIST

## 4.1 NORTHEAST BDA

Quantity	Nomenclature	Description
2	TRN7343	SEVEN AND A HALF FOOT RACK
1	DQ616915197G1	BIRD (TX/RX) NORTHEAST BDA
1	DSSY350SFXSNM	YAGI DIRECTIONAL ANT, 7 DBD GAIN BROADBAND 406-512 MHZ
1	DS245173	245173 COLD SHRINK WEATHERPROOFKIT, 1/2 TO 1/2
2	DSASPA320	CLAMP MOUNTING
1	DSMT657	CommScope Technologies LLC - 2-3/8" OD x 48" Long Aluminum Pipe
1	DSUGBKIT2	UGBKIT-2 GROUND BAR 1/4 X 2 1/2 X 12 1/2
2	TDN9668	223158-2 1/4" OR 3/8" CABLE GROUND CLAMP KIT
1	DSAL4RPV50500	500FT REEL - 1/2INCH AIR DI-ELECTRIC ALUMINUM CATVP HELIAX CABLE
1	DSAL4RPV50500	500FT REEL - 1/2INCH AIR DI-ELECTRIC ALUMINUM CATVP HELIAX CABLE
1	DSCNT400500	CNT-400 BRAIDED COAXIAL CABLE 500 FT (ON REEL)
8	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
25	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
6	DSRFN10063I	RF INDUSTRIES N MALE CONNECTOR FOR 9913, LMR-400 & 241543,CUS TL93605
6	DSRFN1028SI	RF INDUSTRIES N FEMALE CRIMP-9913 FOR LMR40
7	DSC6TCPUSEN	C-6-TCPUSE-N; 6 DB DIRECTIONAL COUPLER 380-2700 N
1	DSS2CPUSELNI	2-WAY LOW POWER SPLITTER 698-2700 N
1	TDN6670	40417 CABLE TIES NYLON (1 EA= 1 BAG = 50 TIES)
1	TDN9289	221213 CABLE WRAP WEATHERPROOFING
8	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK

## 4.2 NORTHEAST TAC-PAC

Quantity	Nomenclature	Description
1	L30TSS9PW1 N	APX7500 CONSOLETTTE DUAL BAND M
1	GA00345	ADD: UHF R2 MP PRIMARY BAND
1	GA00225	ADD: 7/800MHZ SECONDARY BAND
1	GA00579	ADD: ENABLE DUAL BAND OPERATION
1	G806	ADD: ASTRO? DIGITAL CAI OPERATION
1	G51	ENH: SMARTZONE OPERATION APX
1	G361	ADD: P25 TRUNKING SOFTWARE
1	GA00580	ADD: TDMA DPERATION
1	QA01648	ADD: ADVANCED SYSTEM KEY - HARDWARE KEY
1	W969	ADD: MULTIPLE KEY ENCRYPTION OPERATION
1	G851	ADD: AES/DES-XL/DES-OFB ENCRYPTION
1	G90	ADD: NO MICROPHONE NEEDED
1	CA01598	ADD: AC LINE CORD US
1	L999	ADD: FULL FP W/05/KEYPAD/CLOCK/VU
1	HKN6184C	CABLE CH, PROGRAMMING,USB
1	RVN5224M	CPS R07.00.00 ASTRO DIG APX POR MOB
1	DVN4046a	MASTER SYSTEM KEY PACKAGE FOR THE ADVANCED SYSTEM KEY CPS FEATURE
1	DSBA63120TESSCO	RFS (406-512MHZ) 3DBGAIN OMNIDIRECT- MUST SPECIFY FREQUENCY
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
1	DSL45GRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK

Quantity	Nomenclature	Description
1	DSCGXZ36NMNFA	RF SPD, 400-1200MHZ HYBRID +36 VDC PASS NM ANTENNA, NF EQUIPMENT
15	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	DDN9743	TK-TW TORQUE WRENCH KIT FOR 7-16 DIN & TYPE N COUPLING NUTS
1	DSCC80703	OMNI, CORPORATE COLLINEAR, 3 DBD, 746-870 MHZ, PIM & 25 KW PIP RATED
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
2	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2 IN CABLE
5	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180/EW220/EW-HANGER KIT STAINLESS-10PK
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 12 VDC PASS NM ANTENNA, NF EQUIPMENT
15	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY JKT PER FOOT
2	DDN9682	F4PNMV2-HC 1/2" TYPE N MALE PLATED CONNECTOR
1	DDN9743	TK-TW TORQUE WRENCH KIT FOR 7-16 DIN & TYPE N COUPLING NUTS
3	F2380	MCD 5000 DESKSET
3	FHN7469	MCD 5000 DESKSET / RGU POWER SUPPLY WITH USA POWER CORD
3	DSPOEINJ100	STARTECH 10/100 POE INJECTOR 48V/30W
3	FKN8695	ETHERNET CABLE 10' WITH RED & BLACK LABELS
1	F7979	MCD 5000 DESKSET RADIO GATEWAY UNIT (RGU)
1	FHN7469	MCD 5000 DESKSET / RGU POWER SUPPLY WITH USA POWER CORD

Quantity	Nomenclature	Description
1	FKN8695	ETHERNET CABLE 10' WITH RED & BLACK LABELS
1	FKN8695	ETHERNET CABLE 10' WITH RED & BLACK LABELS
1	FVN5847	MCD 5000 DESKSET SYSTEM CONFIG TOOL - SYSTEM W/OUT OMC
3	CLN1856	2620-24 ETHERNET SWITCH
1	DSGXTR0900N005	UPS, GXT3 RACKMT 1000VA/900W, 5 MIN RUNTIME

# ACCEPTANCE TEST PLAN (ATP)

## 5.1 NORTHEAST BDA

### 5.1.1 Test Objective

The Bi-Directional Amplifier Site Operation Acceptance Test Plan will verify, document and certify that all the areas of the Los Angeles Police Department in-building coverage system are receiving the required levels of RF coverage.

### 5.1.2 Setup/Methodology

#### Equipment to be tested

Equipment	Serial #
Bi-Directional Amplifier	

#### Test Equipment to be used

Equipment	Type	Serial #
Portable Radio		
Portable Radio		
Portable Radio		
Portable Radio		
Charged Spare Battery		
Charged Spare Battery		
Charged Spare Battery		
Charged Spare Battery		
UHF RF Signal Generator		
Signal Analyzer		

### 5.1.3 Test Procedures

#### 5.1.3.1 Installation

Proceed with a visual inspection of the equipment installation and mounting according to the acceptance criteria.



### 5.1.3.2 RF Coverage Testing

#### Description

A "grid" approach will be used to verify coverage throughout the facility. All of the areas will be divided into approximately 25'x25' grids. Each grid "area" will be given a designation on the installation drawings. The user will select the testing grids and visit each area to verify the coverage. Coverage must be provided from at least one point within each 25'x25' grid. Each test shall be made in both uplink and downlink paths, the test procedure shall require a count starting zero and continuing through five. Upon completion of this task the receiving party will acknowledge and describe the reception. This process should be repeated no less than three times per set in order to assure accurate results. Acceptance is acknowledged if the reception is satisfactory in both the uplink and downlink paths. Acceptance is on an area-by-area-basis. Once an area passes it will not have to be retested. As an area passes the coverage testing, the user will note and initial the area. Acceptance is achieved once all areas have individually passed acceptance. Testing will be done only after verifying that the donor base stations, Portable Radios and spare batteries are operating properly.

#### Specification

The criteria for "acceptable reception" is defined as follows:

CM3: Background noise is evident. Message is readable and understood even though there may be missing syllables. Occasional repetition is allowed.

#### Method

1. Verify the donor base stations are providing a RF signal using the Signal Analyzer.
2. Verify the Portable Radios can communicate on a selected channel.
3. Exchange the spare batteries with the Portable Radio batteries.
4. Repeat Step 2; verify the communications between them.
5. Record the signal level using the signal analyzer at the base of each indoor antenna.
6. Select a stationary position and locate radio #1. Locate the four Portable Radios in different locations. A portable radio will count from 0 to 5 within each grid.
7. Key-up Portable Radio #1. The user using Portable Radio #1 will count starting from zero and continuing through five
8. Verify that Portable Radios #2, #3, #4 receive audio. Each user will acknowledge, describe and note the reception. Dc-key Portable Radio #1.
9. Portable Radios #2, #3, and #4 shall report back to Radio #1 with a voice quality equal to a CM3 rating or better. The results shall be tabulated.
10. Repeat steps 7 and 8 three times.
11. Repeat steps 6 through 9 until all the selected grids for the area are covered.

### 5.1.4 Acceptance Criteria: BDA Site Operation

No.	To be tested	Test to perform	Pass	Fail	Channel #	Remarks
3.1	Installation	Was the equipment mounted securely?				
		Was the equipment easily accessible?				
		Was the wiring neatly run and tie wrapped?				
		Were the connections clean and tight?				
		Was the equipment properly ventilated?				
		Were the RF inputs and outputs correct?				
		Was the AC correctly wired?				
3.2	RF Coverage Testing	Were the donor base stations operating properly?				
		Were the Portable Radios and the spare batteries operational?				
		Did any of the Portable Radio's receive CM3 audio from Portable Radio #1 for the grid at test?				
		Was all the area covered satisfactorily?				

## 5.2 NORTHEAST TAC-PAC

### 5.2.1 Test Objective

The Tactical Area Communication Systems Acceptance Test will verify the correct communication between the officers in the police stations and the officers in the field by using remote desk set units programmed for selected channels. It will verify the correct installation, configuration, optimization and operation of the TAC-PAC equipment.

### 5.2.2 Setup / Methodology

#### Equipment to be tested

Equipment	Serial #	Software Version
APX 7500 Console		
MCD 5000 Remote Deskset		

#### Test Equipment to be used

Equipment	Type	Serial #
Portable Radio		

## Methodology

The Acceptance Test will consist of the following sections:

- Installation.
- Programming Configuration.
- Optimization Test Parameters.
- Operation Procedure.

The Installation Acceptance Test will review the station mounting of the desktop and its remotes, the antenna connections, as well as the remote and junction box connections and the power and ground connections.

The Programming Configuration Acceptance Test will examine the correct programming on the Console for the ACC station in test. This will reflect on the RF channels needed for that specific Bureau as well as their citywide communication needs.

The Operation procedure will provide the correct steps to accomplish transmit and receive communications as well as the main operative options.

## 5.2.3 Test Procedures

### 5.2.3.1 Installation:

Proceed with a visual inspection of the equipment installation and mounting according to the acceptance criteria.

### 5.2.3.2 Programming Configuration

Proceed with a visual inspection of the radio programmed channels according to the acceptance criteria.

### 5.2.3.3 Optimization

#### 5.2.3.3.1 AC Power Disconnect

##### Description

The Backup power for the console and remote desksets will be tested.

##### Specification

As soon as there is a main AC disconnect the console revert option should operate and allow operation on the batteries.

The remote desksets should operate using the backup Power over Ethernet (PoE) connection when there is no AC power.

##### Test Set Up

We need the following equipment for the test:

- No specific equipment needed.



#### **Method**

- Disconnect the main console AC plug from the power line.
- Key-up the console operating one of the remote desksets
- Verify the console is on and operational.
- Disconnect the AC power feeding the remote deskset
- Operate the deskset
- Verify the deskset is on and operational
- Repeat as necessary.
- If there are issues with the backup verify the power connections and repeat the steps above.

#### 5.2.3.3.2 Operation

##### **Description**

The correct operation needed for communication using the desksets will be tested.

##### **Specification**

The deskset should be able to communicate on the appropriate channels to a portable radio, both transmitting and receiving.

##### **Test Set Up**

We need the following equipment for the test:

- 1 Portable radio.

##### **Method:**

- With the deskset on, select the transmitting channel.
- Key-up the console by using one of the remote desksets
- Verify the portable radio to check if the communication went through.
- Repeat steps as necessary to check all the channels.
- Generate a call from the portable radio.
- Verify the remote deskset receives the call.
- Repeat steps as necessary to check all the channels.

## 5.2.4 Acceptance Criteria: TAC-PAC Site Operation

No.	To be tested	Test to perform	Pass	Fail	Channel #	Remarks
3.1	Installation	Was the equipment mounted securely?				
		Was the equipment easily accessible?				
		Was the wiring neatly run and tie wrapped?				
		Were the connections clean and tight?				
3.2	Programming Configuration	Does the station programming correspond to the site?				
3.3	Optimization					
		Was the console on and operational after AC disconnects?				
		Was the deskset on and operational after AC disconnects?				
3.4	Operation	Was the deskset communication received by the Portable Radio?				
		Was the Portable Radio Communication received by the deskset?				

# ASSUMPTIONS

Motorola has based the system design on information provided by the City of Los Angeles Police Department and an analysis of their system requirements. All assumptions have been listed below for review. Should Motorola's assumptions be deemed incorrect or not agreeable to the City of Los Angeles Police Department (LAPD), a revised proposal with the necessary changes and adjusted costs may be required. Changes to the equipment or scope of the project after contract may require a change order.

- All work is to be performed during normal work hours, Monday through Friday 8:00 a.m. to 5:00 p.m.
- 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 City of Los Angeles Police Department system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.
- All existing sites or equipment locations will have sufficient space available for the system described.
- All existing sites or equipment locations will have adequate electrical power and site grounding suitable to support the requirements of the system described.
- This includes available spaces for proposed cabinets, cables, and cable entry ports.
- All existing sites or equipment locations will have adequate electrical power and site grounding suitable to support the requirements of the system described.
- It is assumed that LAPD will provide AC power distribution units.
- LAPD is responsible for providing open conduit space for Motorola to route and install CAT6, RF and ground cables.
- All existing towers will have adequate space and be of adequate size to support the antenna network requirements of the system described. Specifically, a standard 50 ft. vertical separation space between the TAC-PAC antenna and the BDA donor antennas needs to be provided for optimal operation of both systems.
- Motorola Solutions will provide a LAN switch for an equipment room located at each floor. LAPD will provide a CAT5 connection between the equipment room and the MCD 5000 desksets.
- Any site/location upgrades or modifications are the responsibility of LAPD
- Any tower stress analysis or tower upgrade requirements are the responsibility of LAPD.
- Approved FCC licensing will be provided by LAPD.
- Approved local, State, or Federal permits as may be required for the installation and operation of the proposed equipment, are the responsibility of LAPD.
- Any required system interconnections not specifically outlined here will be provided by LAPD, including but not limited to dedicated phone circuits or microwave links.
- Where necessary, LAPD will provide a dedicated delivery point—such as a warehouse—for receipt, inventory, and storage of equipment prior to delivery to the sites.

# STATEMENT OF WORK

## 7.1 OVERVIEW

This Statement of Work (SOW) describes the deliverables to be furnished to the City of Los Angeles Police Department. The tasks described herein will be performed by Motorola, its subcontractors, and the City of Los Angeles Police Department to implement the solution described in the System Description. It describes the actual work involved in installation, identifies the installation standards to be followed, and clarifies the responsibilities for both Motorola and Customer during the project implementation. Specifically, this SOW provides:

- A summary of the phases and tasks to be completed within the project lifecycle.
- A list of the deliverables associated with the project.
- A description of the responsibilities for both Motorola and Customer.
- The qualifications and assumptions taken into consideration during the development of this project.

This SOW provides the most current understanding of the work required by both parties to ensure a successful project implementation. In particular, Motorola has made assumptions of the sites to be used for the new system. Should any of the sites change, a revision to the SOW and associated pricing will be required. It is understood that this SOW is a working document, and that it will be revised as needed to incorporate any changes associated with contract negotiations, Contract Design Review (CDR), and any other change orders that may occur during the execution of the project.

Motorola will be providing an In-Building Bi-directional Amplifier (BDA) and Tactical Area Communications (TAC-PAC) solution at the Northeast Police Station.

## 7.2 CONTRACT

### 7.2.1 Contract Award (Milestone)

- The Customer and Motorola execute the contract and both parties receive all the necessary documentation.

### 7.2.2 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 the Customer.

#### Customer Responsibilities:

- Assign a Project Manager, as the single point of contact responsible for Customer-signed approvals.



- Assign other resources necessary to ensure completion of project tasks for which the Customer is responsible.

**Completion Criteria:**

- Motorola internal processes are set up for project management.
- Both Motorola and the Customer assign all required resources.
- Project kickoff meeting is scheduled.

## 7.2.3 Project Kickoff

**Motorola Responsibilities:**

- Conduct a project kickoff meeting during the 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 the Customer.
- Review the resource and scheduling requirements with the Customer.
- Review the Project Schedule with the Customer to address upcoming milestones and/or events.
- Review the teams' interactions (Motorola and the Customer), meetings, reports, milestone acceptance, and the Customer's participation in particular phases.

**Customer Responsibilities:**

- The Customer's key project team participants attend the meeting.
- Review Motorola and Customer responsibilities.

**Completion Criteria:**

- Project kickoff meeting completed.
- Meeting notes identify the next action items.

## 7.3 CONTRACT DESIGN REVIEW

### 7.3.1 Review Contract Design

**Motorola Responsibilities:**

- Meet with the Customer 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.
- Discuss the proposed Cutover Plan and methods to document a detailed procedure.
- 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 the field.

- Establish demarcation point (supplied by the Motorola system engineer) to define the connection point between the Motorola-supplied equipment and the Customer-supplied link(s) and external interfaces.
- Finalize site acquisition and development plan.
  - Conduct (updated) site evaluations to capture site details of the system design and to determine site readiness (when necessary).
  - 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.

Restrictions:

- Motorola assumes no liability or responsibility for inadequate frequency availability or frequency licensing issues.
- Motorola is not responsible for issues outside of its immediate control. Such issues include, but are not restricted to, improper frequency coordination by others and non-compliant operation of other radios.
- Motorola is not responsible for co-channel interference due to errors in frequency coordination by APCO or any other unlisted frequencies, or the improper design, installation, or operation of systems installed or operated by others
- If, for any reason, any of the proposed sites cannot be utilized due to reasons beyond Motorola's control, the costs associated with site changes or delays including, but not limited to, re-engineering, frequency re-licensing, site zoning, site permitting, schedule delays, site abnormalities, re-mobilization, etc., will be paid for by the Customer and documented through the change order process.

**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.

**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.
- A Change Order is executed in accordance with all material changes resulting from the Design Review to the contract.

### 7.3.2 Design Approval (Milestone)

- The Customer executes a Design Approval milestone document.

## 7.4 ORDER PROCESSING

### 7.4.1 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 the Customer 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.

#### **Customer Responsibilities:**

- Approve shipping location(s).
- Complete and provide Tax Certificate information verifying tax status of shipping location, if applicable.

#### **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.

## 7.5 MANUFACTURING AND FIELD STAGING

### 7.5.1 Manufacture Motorola Fixed Network Equipment

#### **Motorola Responsibilities:**

- Manufacture the Fixed Network Equipment (FNE) necessary for the system based on equipment order.

#### **Customer Responsibilities:**

- None.

#### **Completion Criteria:**

- FNE shipped to either the field or the staging facility.

### 7.5.2 Manufacture Non-Motorola Equipment

#### **Motorola Responsibilities:**

- Procure non-Motorola equipment necessary for the system based on equipment order.

**Customer Responsibilities:**

- None.

**Completion Criteria:**

- Ship non-Motorola manufactured equipment to the field and/or the staging facility.

### 7.5.3 Ship Equipment to Field

**Motorola Responsibilities:**

- Pack system for shipment to final destination.
- Arrange for shipment to the field.

**Customer Responsibilities:**

- None.

**Completion Criteria:**

- Equipment ready for shipment to the field.

## 7.6 SYSTEM INSTALLATION

### 7.6.1 Install Fixed Network Equipment

**Motorola Responsibilities:**

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list and outlined in the System Description based upon the agreed to floor plans, at the sites where the physical facility improvement is complete and the site is ready for installation. 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 R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, Federal Aviation Administration (FAA, and FCC standards and regulations.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- During field installation of the equipment, any required changes to the installation will be noted and assembled with the final 'as-built' documentation of the system.
- Will provide storage location for the Motorola-provided equipment. Receive and inventory all equipment.
- Bond the supplied equipment to the site ground system in accordance with Motorola's R56 standards.
- Will interface with the following network connections:
  - Customer Provided CAT 5 cables.
- Will not remove existing equipment.
- Will not relocate existing equipment to a location designated by the Customer.
- Will provide a rack-mount UPS for 8 hours of backup.

**BDA System for the Northeast Station**

- Install copper ground at identified BDA location (#2 AWG copper with tinplating).
- Install antenna mounting hardware and two (2) Yagi antennas on the LAPD provided tower.



- Install conduit sleeve where cable passes through a firewall.
- Install cable mounting hardware.
- Run cables.
- Connect #2 AWG cable to ground.
- Install BDA in cabinet or rack.
- Install indoor antenna systems.
  - (9) antennas at the Northeast station.

#### **TAC-PAC System for the Northeast Station**

- Install one (1) Dual Band APX 7500 Console in cabinet in the RF equipment room.
- Install one (1) UPS backup for the console.
- Install one (1) MCD 5000 Remote Gateway Unit in the RF equipment room.
- Install three (3) MCD 5000 Digital Desktop Controllers, not including cabling, at specified location for PD operations (tentatively one on each floor of the PD).
- Install two (2) 3 dB gain omni-directional antennas, transmission line, and associated equipment for UHF R2 and 700/800 MHz frequency bands on the LAPD provided tower.

#### **Customer Responsibilities:**

- Provide access to the sites, as necessary.
- Provide CAT5 cabling on each floor from the Motorola provided Ethernet Switch to the MCD 5000 Deskset.

#### **Completion Criteria:**

- Fixed Network Equipment installation completed and ready for optimization.

### **7.6.2 Fixed Network Equipment Installation Complete**

- All fixed network equipment installed and accepted by the Customer.

### **7.6.3 Control Station Installation**

#### **Motorola Responsibilities:**

- Properly connectorize and ground the cabling, which will be run to the outdoor antenna location using the least obtrusive method.
- Protect the cabling by providing and installing a bulkhead lightning surge protector.
- Survey the exact mounting locations and develop control station installation plan.
- Perform the following tasks for the local control stations installations:
  - Create installation plan.
  - Assist the Customer to determine the locations of control stations and desk sets at each site.
  - Install RF local control stations identified in the equipment list. Install line (not greater than 100 feet in length) and antenna system (connectors, coax grounding kit, antenna, and surge protection).
  - Connect to the Customer-supplied ground point.
- Program the control station once, from the existing TAC-PAC template (provided by the Customer) prior to delivery.

#### **Customer Responsibilities:**

- Provide cable entry into the building through wall feed-through and seal with silicone, or provide an entry plate and boot.

- Provide ground point within 6 cable feet of the control station. Provide necessary space for installation of the local control station. Supply, exterior or internal, vertical spaces for installation of the control station antenna with no more than a 100-foot cable run.
- Provide an elevated antenna mounting location.
- Supply a dedicated 115 VAC grounded electrical outlet rated at 15 A to power the control station and remote control device. Provide an outlet within 6 feet of the unit.
- Supply a ground point of 5 ohms or less located in the immediate vicinity (within 6 feet) of the finalized location of the antenna and control station.
- Provide antenna-mounting facilities at each of the RF control station points specified, while providing an adequate means of feed-line routing and support.

**Completion Criteria:**

- Completion of all the control station installations, and approval by the Customer.

### 7.6.4 Control Station Complete

- Control Station installation completed and accepted by the Customer.

### 7.6.5 System Installation Acceptance (Milestone)

- All equipment installations are completed and accepted by the Customer.

## 7.7 SYSTEM OPTIMIZATION

### 7.7.1 Optimize System FNE

**Motorola Responsibilities:**

- Motorola and its subcontractors optimize each subsystem.
- Verify that all equipment is operating properly and that all electrical and signal levels are set accurately.
- Verify that all audio and data levels are at factory settings.
- Check forward and reflected power for all radio equipment, after connection to the antenna systems, to verify that power is within tolerances.
- Check audio and data levels to verify factory settings.
- Verify communication interfaces between devices for proper operation.
- Test features and functionality are in accordance with manufacturers' specifications and that they comply with the final configuration established during the CDR.

**Customer Responsibilities:**

- Provide access/escort to the sites.

**Completion Criteria:**

- System FNE optimization is complete.

### 7.7.2 Optimization Complete

- System optimization is completed. Motorola and the Customer agree that the equipment is ready for acceptance testing.

## 7.8 AUDIT AND ACCEPTANCE TESTING

### 7.8.1 Perform R56 Installation 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.

### 7.8.2 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 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.

### 7.8.3 Perform Functional Testing

#### **Motorola Responsibilities:**

- Verify the operational functionality and features of the individual subsystems and the system supplied by Motorola, as contracted.
- If any major task as contractually described fails, repeat that particular task after Motorola determines that corrective action has been taken.
- Document all issues that arise during the acceptance tests.
- Document the results of the acceptance tests and present to the Customer for review.
- Resolve any minor task failures before Final System Acceptance.

#### **Customer Responsibilities:**

- Witness the functional testing.

#### **Completion Criteria:**

- Successful completion of the functional testing.
- Customer approval of the functional testing.

## 7.8.4 System Acceptance Test Procedures (Milestone)

- Customer approves the completion of all the required tests.

## 7.9 FINALIZE

### 7.9.1 Cutover

#### **Motorola Responsibilities:**

- Motorola and the Customer develop a mutually agreed upon cutover plan based upon discussions held during the CDR.
- During cutover, follow the written plan and implement the defined contingencies, as required.
- Conduct cutover meeting(s) with user group representatives to address both how to mitigate technical and communication problem impact to the users during cutover and during the general operation of the system.

#### **Customer Responsibilities:**

- Attend cutover meetings and approve the cutover plan.
- Notify the user group(s) affected by the cutover (date and time).
- Provide Motorola with the subscriber information for input into the system database, for activation.
- Ensure that all subscribers are operating on new system.

#### **Completion Criteria:**

- Successful migration to the new system.

### 7.9.2 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.

### 7.9.3 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.

#### **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.

## 7.9.4 Finalize Documentation

**Motorola Responsibilities:**

- Provide an electronic as-built system manual on a Compact Disc (CD). The documentation will include the following:
  - System-Level Diagram.
  - Site Equipment Rack Configurations.
  - Antenna Network Drawings for the control station RF subsystem.
  - Functional Acceptance Test Plan Test Sheets and Results.
  - Equipment Inventory List.
  - Manuals (where applicable).

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.

## 7.9.5 Final Acceptance (Milestone)

- All deliverables completed, as contractually required.
- Final System Acceptance received from the Customer.

## 7.10 PROJECT ADMINISTRATION

### 7.10.1 Project Status Meetings

**Motorola Responsibilities:**

- Once a month or as agreed, Motorola Project Manager, or designee, will attend all project status meetings with the Customer, as determined during the CDR.
- 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.

## 7.10.2 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).

## 7.10.3 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, change in system configuration or adds time to the project's timeline 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.

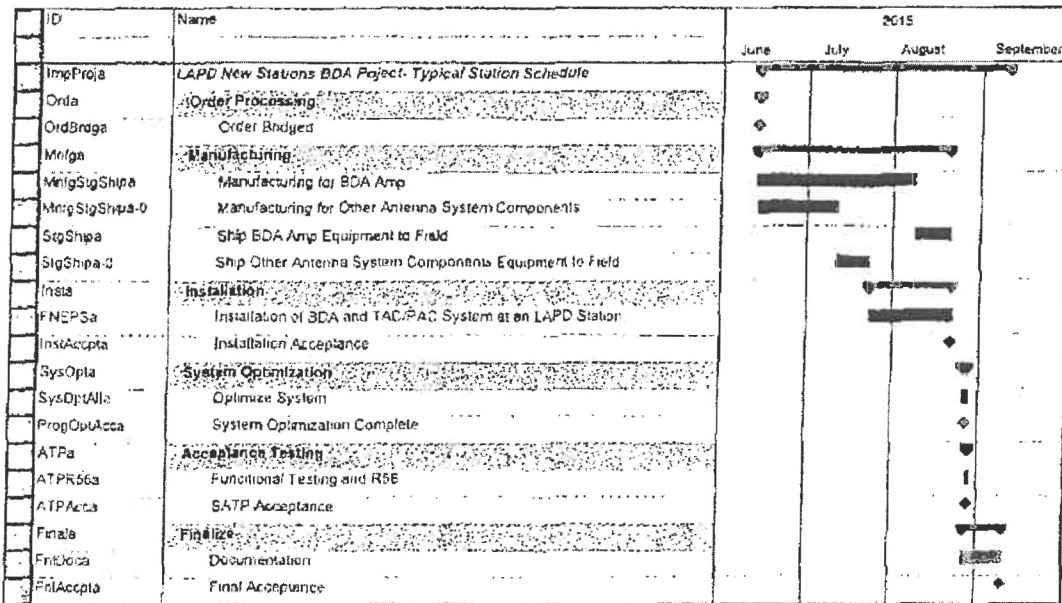


SECTION 8

# PROJECT SCHEDULE

Motorola has provided a project schedule on the following page.

### LAPD BDA/TACPAC Project Schedule - Gantt Chart





# CONTRACTUAL DOCUMENTATION

The City of Los Angeles (the "City") and Motorola Solutions, Inc. ("Motorola") have two master agreements that are relevant to this Motorola Proposal. Concerning Radio Communications Equipment, the City and Motorola have previously entered into Contract No. 59456 (the "Master Equipment Agreement"). Concerning services and systems, the City and Motorola have previously entered into a Master Services Agreement identified as City Contract No. C-123897 and Motorola Contract No. 1000409608 (the "Master Services Agreement").

The Master Services Agreement contains a Communications System Agreement, including its exhibits, as Exhibit C (referred to as the "Communications System Agreement"). Because in some respects this Project has system-like attributes, the Proposal includes various documents such as a Project Description, Equipment List, Statement of Work, Project Schedule, Payment Schedule, etc. Further, this Proposal is based upon the Communications System Agreement, the other applicable provisions of the Master Services Agreement, and the Master Equipment Agreement (to the extent necessary, applicable and not covered by the Communications System Agreement and the Master Services Agreement).

Pricing for the Equipment offered in the Motorola Proposal is based off of the Master Equipment Agreement and pricing for the services offered in the Motorola Proposal is based off of the Master Services Agreement, although the Motorola Proposal does contain additional discounts in favor of the City as permitted by Section 2.2 of the Master Services Agreement.

The City prefers to issue a Purchase Order for the equipment and a Contract Amendment for the services. Therefore, the City may accept this Proposal by issuing (i) a Purchase Order for the equipment that specifically refers to City Contract No. 59456 and incorporates by reference the Proposal by date and general description, and (ii) a Contract Amendment that specifically refers to City Contract No. C-123897 and Motorola Contract No. 1000409608 and incorporates by reference the Proposal by date and general description.

SECTION 9

# PRICING

## 9.1 PRICING SUMMARY

Equipment and Services	Pricing
Equipment (includes LA City Equipment Discounts)	\$ 82,434.00
Freight	\$ 1,030.00
Services	\$ 261,515.00
Tax @9%	\$ 7,419.00
<b>TOTAL</b>	<b>\$ 352,398.00</b>

## 9.2 PAYMENT TERMS

Pricing for the Equipment offered in the Motorola Proposal is based off of the Master Equipment Agreement and pricing for the services offered in the Motorola Proposal is based off of the Master Services Agreement, although the Motorola Proposal does contain additional discounts in favor of the City as permitted by Section 2.2 of the Master Services Agreement.