

**Lee County Board Of County Commissioners  
Agenda Item Summary**

**Blue Sheet No. 20041187**

**1. REQUESTED MOTION:**

**ACTION REQUESTED:** Approve award of project # EX040675 for the maintenance of telephone switches, repair services and equipment; parts purchases off Florida State Contract #730-650-99-1 through Seimens Information and Communications Network, Inc. for fiscal years 2004/2005 and 2005/2006. Estimated annual expenditures will be approximately \$112,000. Funding will come from the individual department or division's budget whom will be responsible for monitoring their individual expenditures.

**WHY ACTION IS NECESSARY:** All purchases that annually exceed \$50,000 must have board approval.

**WHAT ACTION ACCOMPLISHES:** Allows Lee County Telecommunications to continue to receive maintenance on telephone switches.

**2. DEPARTMENTAL CATEGORY:  
COMMISSION DISTRICT #**

*A6A*

**3. MEETING DATE:**

*09-28-2004*

**4. AGENDA:**

CONSENT  
 ADMINISTRATIVE  
 APPEALS  
  
 PUBLIC  
 WALK ON  
 TIME REQUIRED:

**5. REQUIREMENT/PURPOSE:  
(Specify)**

STATUTE  
 ORDINANCE  
 ADMIN. AC-4-1  
 CODE  
 OTHER

**6. REQUESTOR OF INFORMATION:**

A. COMMISSIONER *INDEPENDENT*  
 B. DEPARTMENT *County Administration*  
 C. DIVISION *ITG*  
 BY: Jim Desjarlais

**BACKGROUND:** On September 8, 2004 the Purchasing Division received a request to do a blue sheet for ITG for the maintenance of six Seimens telephone switches. The switches are located at the Justice Center, Emergency Ops Center, Human Services, Terry Park, Public Works Building and the Lee County Administration Building. The equipment and parts are proprietary products of Seimens Business Communications and past experiences has shown that the use of non-standard Seimens equipment and parts compromises the systems reliability.

**Please see attachments:**

- (1) ITG Justification Letter
- (2) Seimens Sole Source Letter
- (3) Florida State Contract #730-650-99-1

**8. MANAGEMENT RECOMMENDATIONS:**

**9. RECOMMENDED APPROVAL:**

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
<i>[Signature]</i> 9/10/04	<i>Janet Sheehan</i> 9-10-04 <i>[Signature]</i> 9-10-04			<i>Andria</i> <i>[Signature]</i>	QA <i>[Signature]</i> 9/10/04	NOM <i>[Signature]</i> 9/14/04	Risk <i>[Signature]</i> 9/14/04	GC <i>[Signature]</i> 9/13/04	<i>[Signature]</i>

**10. COMMISSION ACTION:**

APPROVED  
 DENIED  
 DEFERRED  
 OTHER

REC'D.  
 BY: [Signature]  
 11:50 AM  
 9/10/04  
 [Signature]

RECEIVED BY  
 COUNTY ADMIN: *[Signature]*  
 9/10/04  
 3:20 pm  
 COUNTY ADMIN  
 FORWARDED TO: *[Signature]*  
 9/15/04  
 9:30



**Lee  
County**

ATTACHMENT **ITG**

Information Technology Group-Telecom

3434 Hancock Bridge Pkwy, Ste 306, N. Ft Myers, Fl 33903  
OFC 239-689-7376, FAX 239-689-7375

Lee County Purchasing  
County-City Annex  
1825 Hendry St  
Ft Myers, Fl 33901

September 2, 2004

Re: Blue Sheet for Siemens Yearly Maintenance Contract

This letter will serve as the official request for Lee County Purchasing to prepare a Blue Sheet for Siemens maintenance contracts for a two year period covering fiscal years 2004/2005 and 2005/2006 totaling \$223,032.32 (\$111,516.16 per fiscal year). These contracts cover our telephone switches at the Justice Center, Emergency Ops Center, Human Services, Terry Park, Public Works Building, and Lee County Administration Building.

We need these contracts to keep our switches properly maintained since Siemens is the manufacturer and the sole source that is needed to maintain these switches. Please set up under our account string KC5133051500.504690.

Sincerely,

Mark Fuhrman  
Director, Client Services – Telecommunications  
Lee County Information Technology Group  
Office (239) 689-7373  
Fax (239) 689-7381

. cc Clint Dean, Jim Desjarlais, Kelly Ridenour

04 SEP - 8 PM 2:11

August 11, 2004

Lee County ITG  
Attn: Kelly Ridenour  
3434 Hancock Bridge Parkway  
Fort Myers, FL 33903-7094

770-822-7064


Dear Ms. Ridenour,

I would like to thank you for your renewed interest in Siemens Information and Communication Networks, Inc. ("Siemens") as your maintenance service provider. As you know, Siemens is a direct manufacturer of Siemens Products, and a direct distributor of Siemens' offered Products and Services. Siemens also utilizes certain authorized third party distributors to market Siemens offered Products and Services. Siemens' maintenance service offerings provide our customers with a broad range of choice to best meet their individual maintenance service requirements. Included in Siemens' maintenance offerings, and provided directly and solely by Siemens, is Siemens' ability to perform remote diagnostics and, in certain circumstances, corrective maintenance on Siemens Products through Siemens' Customer Support Center (SCSC). The SCSC is operational and available to you 24 hours a day, 7 days a week.

I would like to take this opportunity to thank you for the business you have conducted with Siemens in the past, and to let you know we look forward to the opportunity to continue to serve you in the future.

If you have any questions, or if I can be of any assistance to you, please do not hesitate to give me a call.

Sincerely,



Kevin Castora  
Southeast Region Business Administration Manager  
813-282-2827

## Siemens Enterprise Networks

A division of  
Siemens Information and  
Communication Networks, Inc.

5429 Beaumont Center Boulevard  
Suite 850  
Tampa, FL 33634

Tel: (813) 282-2800  
Fax: (813) 282-2806

[www.siemensenterprise.com](http://www.siemensenterprise.com)

JUSTIFICATION FOR SOLE SOURCE AND/OR WAIVER PURCHASE

REQUISITION NUMBER \_\_\_\_\_ DATE \_\_\_\_\_

DEPARTMENT ITG BUSINESS UNIT KC5133051500, 504690

SUGGESTED VENDOR

SIEMENS

ITEM DESCRIPTION AND REASON FOR SOLE SOURCE AND/OR WAIVER:  
(MAY ALSO BE ATTACHED AS A MEMO)

SEE ATTACHED MEMO

TECHNICAL CHARACTERISTICS:

REASON FOR REQUESTING SOLE SOURCE:

( ) ITEM MUST MATCH EXISTING EQUIPMENT, WHICH IS:

\_\_\_\_\_ *proprietary product*

( ) ITEM IS A REPAIR PART FOR EXISTING EQUIPMENT, WHICH IS:

*Janet K. Sheehan*  
*9-10-04*

\_\_\_\_\_ *O. S. S. S.*  
*9-10-04*

( ) ITEM IS TO BE ATTACHED TO EXISTING ITEM, WHICH IS:

(X) OTHER

SERVICE MAINTENANCE IS ONLY AVAILABLE THRU SIEMENS

Revision Date:

*Mark Lubman, Director Client Serv*



## FLORIDA DEPARTMENT OF MANAGEMENT SERVICES



JEB BUSH  
Governor

WILLIAM S. SIMON  
Secretary

Suite 315

### CERTIFICATION OF CONTRACT

TITLE: Telecommunications Equipment- Private Automatic Branch Exchange

CONTRACT NO.: 730-650-99-1

BID NO.: 43-730-650-W

EFFECTIVE: February 17, 1999 through February 16, 2004

RENEWAL: February 17, 2004 through February 16, 2005  
(Rev 2 Feb 04)

SUPERSEDES: 730-650-97-1

CONTRACTORS:

AVAYA Communication (A)

Siemens Information & Communications Network (A)

Sprint (A)

(Rev. 25 Oct. 00)

- 
- A. AUTHORITY - Upon affirmative action taken by the State of Florida Department of Management Services on February 5, 1999, a contract has been executed between the State of Florida and the designated contractors.
- B. EFFECT - This contract was entered into to provide economies in the purchase of Telecommunications Equipment - Private Automatic Branch Exchange by all State of Florida agencies and institutions. Therefore, in compliance with Section 287.042, Florida Statutes, all purchases of these commodities shall be made under the terms, prices, and conditions of this contract and with the suppliers specified.
- C. ORDERING INSTRUCTIONS - All purchase orders shall be issued in accordance with the attached ordering instructions. Purchaser shall order at the prices indicated, exclusive of all Federal, State and local taxes.

All contract purchase orders shall show the State Purchasing contract number, product number, quantity, description of item, with unit prices extended and purchase order totaled. (This requirement may be waived when purchase is made by a blanket purchase order.)

- D. PRIOR APPROVAL TO PURCHASE - In accordance with Section 282.102(16), Florida Statutes, all State agencies and institutions are required to submit all requests to purchase communications equipment, including the equipment covered by this contract, to the Division of Communications for review and approval prior to the issuance of a purchase order for Communications Services if the expenditures meet or exceed the Purchasing Category II level. Requests to purchase said equipment by State agencies and institutions shall be submitted per instructions on reverse side of Form COM-9008, which is supplied by the Division of Communications, 4040 Esplanade Way, Tallahassee, Florida 32399-0950, (850) 487-2000, Suncom 277-2000.

Law enforcement organizations or political subdivisions and municipalities (sheriff's offices, police departments, etc.) are also required to submit all requests to purchase communications equipment, including the equipment covered by this contract, to the Division of Communications for review prior to issuance of a purchase order. This requirement is in accordance with Section 282.111, Florida Statutes.

Emergency medical service organizations (hospitals, ambulance/rescue services, etc.) of political subdivisions, and of State agencies and institutions are required to obtain written approval from the Division of Communications prior to purchases of commodities. This requirement is in accordance with Section 401.024, Florida Statutes.

- E. CONTRACTOR PERFORMANCE - Agencies shall report any vendor failure to perform according to the requirements of this contract on Complaint to Vendor, form PUR 7017. Should the vendor fail to correct the problem within a prescribed period of time, then form PUR 7029, Request for Assistance is to be filed with this office.
- F. SPECIAL AND GENERAL CONDITIONS - Special and general conditions are enclosed for your information. Any restrictions accepted from the supplier are noted on the ordering instructions.
- G. CONTRACT APPRAISAL FORM - State Contract Appraisal, form PUR 7073 should be used to provide your input and recommendations for improvements in the contract to State Purchasing for receipt no later than 90 days prior to the expiration date of this contract.

---

Authorized Signature

MMC/mw/sec

Attachment

## **CONTRACT ADMINISTRATOR**

FOR ANY QUESTIONS, SUGGESTIONS, OR CONTRACT SUPPLIER PROBLEMS WHICH MAY ARISE SHALL BE BROUGHT TO THE ATTENTION OF:

**MARVIN WILLIAMS**

**PHONE: (850) 488-8366**

**SUNCOM 278-8366**

**E-MAIL: [william@dms.state.fl.us](mailto:william@dms.state.fl.us)**

## **SPECIAL CONDITIONS**

### **PURPOSE**

The purpose of this bid is to establish a sixty (60) month contract for the purchase of Private Automatic Branch Exchange (PABX) equipment by all State of Florida agencies and other eligible users in accordance with Eligible Users paragraph, General Conditions. It is anticipated that the contract will be in effect from August 5, 1998 through August 4, 2003.

### **ADDITIONAL ELIGIBLE USERS**

In addition to "Eligible Users" paragraph, General Conditions, use of State contracts shall be available to Federal agencies and private non-profit educational facilities as defined in Section 240.605, Florida Statutes, which may desire to purchase under the terms and conditions of the contract.

### **ESTIMATED QUANTITIES**

It is anticipated that the State of Florida agencies and other eligible users will purchase approximately \$6,500,000 per year under any contract resulting from this bid. These estimated figures are given only as a guideline for preparing your bid and should not be construed as representing actual figures under the contract.

### **FEDERAL GOVERNMENT AGENCIES**

In addition to "Eligible Users" paragraph, General Conditions, use of State contracts shall be available to Federal agencies which may desire to purchase under the terms and conditions of the contract.

### **OPTIONAL CONTRACT USAGE**

In addition to the eligible users referenced above and with the consent of the successful bidder(s) purchases may be made under the terms and conditions of this Invitation to Bid/Request for Proposal, by governmental entities located outside the State of Florida. Appropriate governmental entities' purchasing laws, rules and regulations shall apply to purchases made under this contract.

### **SPECIAL ACCOMMODATION**

Any person requiring a special accommodation at the Division of Purchasing because of a disability should call the Division of Purchasing at (904) 850-8440 at least five (5) workdays prior to the pre-bid conference and/or bid opening. If you are hearing or speech impaired, please contact the Division by using the Florida Relay Service which can be reached at 1 (800) 955-8771 (TDD).

### **PUBLIC ENTITY CRIMES**

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.



## **NOTICE TO CONTRACTOR**

The employment of unauthorized aliens by any contractor is considered a violation of section 247A(e) of the Immigration and Nationalization Act. If the contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

## **SURCHARGE USER FEE AND SUMMARY OF TOTAL SALES**

The Division of Purchasing hereby imposes a surcharge user fee of **1%** on contractors' sales under any contract resulting from this bid.

After receipt of payment from the contract purchases, all surcharge fees shall be payable to the State of Florida no later than 15 days after the end of each quarter.

Vendor user fee should be noted on the check and remitted to:

State of Florida  
Department of Management Services  
P.O. Box 5438  
Tallahassee, FL 32314-5438

Contract supplier shall furnish the Division of Purchasing a detailed summary of sales at the end of each quarter. By submission of these Sales Summary reports and corresponding surcharge deposits, the contractor(s) is certifying their correctness. All such reports and fee deposits shall be subject to audit by the State of Florida.

Failure to deposit fees in a timely manner and provide sales summary, even if there are no sales, within thirty (30) calendar days following the end of each quarter may result in the contract supplier being found in default, in which case any and all reprourement costs may be charged against the defaulting contractor.

## **VENDOR RESPONSE SYSTEM**

To access an interactive Voice Response System for vendor payment inquiry, Vendors may call (850) 413-7269 between 7 a.m. and 6 p.m. Monday thru Friday to check on the status of payments by State agencies. The system can accommodate English and Spanish speaking callers.

## **PURCHASING CARD PROGRAM**

The State of Florida has implemented a purchasing card program through NationsBank, using the Visa network. Vendors will receive payment from the purchasing card in the same manner as other Visa purchases. Please indicate your ability to accept Visa in the space provided on the Ordering Instruction sheet of the bid.

## **SCOPE**

This bid delineates the requirements for the design, purchase, delivery, installation, cutover, performance verification, training, warranty, follow-on maintenance, and additional services for digital Private Automatic Branch Exchange (PABX) telephone communications systems of four (4) configuration sizes with capacities of one hundred (100), two hundred (200), five hundred (500) and one thousand (1000) station lines. Each system shall consist of a baseline PABX switch with operational service features, equipped and wired to a demarcation point plug and station connecting block for a specific quantity of trunks, station lines, and attendant consoles. Station terminal equipment, station wiring, additional PABX printed circuit card modules, additional attendant consoles and wiring, additional main distribution frame (MDF) wiring, and additional operational service features are not a part of the "baseline system" and will be purchased as accessories.

The contract resulting from this bid will provide a PABX telephone system to enable a purchaser to procure a system configuration to meet present and future requirements.

Purchase of multiple systems at the same contiguous locations with station line quantities exceeding 1000, is not within the intent or scope of this contract. Exception to this provision requires approval of the Division of Purchasing and The Information Technology Program.

Subsequent to establishing a contract resulting from this ITB, if the State determines additional features, services, modifications, or deletions are needed and it is in the State's best interest, the State may enter into negotiations with the contractor to amend the contract.

#### **YEAR 2000 COMPLIANCE WARRANTY**

The contractor warrants that each item of hardware, software, and/or firmware delivered, developed or modified under this contract shall be able to accurately process date data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, including leap year calculations, when used in accordance with the item documentation provided by the contractor, provided that all items (e.g. hardware, software, firmware) used in combination with other designated items properly exchange date data with it. The duration of this warranty and the remedies available to the State for breach of this warranty shall be as defined in, and subject to, the terms and limitations of any general warranty provisions of this contract, provided that notwithstanding any provision to the contrary in such warranty provision(s), or in the absence of any such warranty provision(s), the remedies available to the State under this warranty shall include repair or replacement of any item whose non-compliance is discovered and made known to the contractor in writing within ninety (90) days after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the State may otherwise have under this contract with respect to defects other than Year 2000 performance.

#### **YEAR 2000 REMEDY CLAUSE**

In the event of any decrease in hardware or software program functionality related to time and date related codes and internal subroutines that impede the hardware or software programs from operating beyond the Millennium Date Change, Licensors and Vendors of Licensors products, agree to immediately make required corrections to restore hardware and software programs to the same level of functionality as warranted herein at no charge to the licensee, and without interruption to the ongoing business of licensee, time being of the essence.

#### **TECHNICAL DOCUMENTATION**

All products bid must meet or exceed all conditions and specifications of the Invitation to Bid (ITB). When technical documentation is required by this ITB, its purpose is to demonstrate compliance of the product bid with applicable technical requirements of the ITB and to allow a technical evaluation of the product. Failure to provide the required technical documentation with the bid submittal shall make the bidder non-responsive.

No Technical Documentation is required if the equipment Bid is identical to the equipment contained in Contract # 730-650-97-1.

## **BRAND NAME**

Certain components in this bid are specified by manufacturer's make, model, and part number. If bidder is offering the exact product so specified and so indicates in the bid response, technical documentation is not required. However, if bidder is offering an alternate approved manufacturer's product, documentation must accompany the bid, sufficiently detailed to substantiate equivalency to the specified approved product.

Examples: Tetrad TRD 560 Bus Bar assembly (no technical documentation required)

XYZ 123 Bus Bar assembly (technical documentation required to show equivalence)

## **SITE OF WORK**

The PABX Telephone Communications Systems shall be delivered within the state of Florida on the site of the ordering purchaser. The site shall be a building or a group of buildings contiguous to the site street address.

## **QUALITY ASSURANCE**

The contractor, during the contract term, upon mutual agreement, will provide reasonable travel and lodging accommodations for one (1) to three (3) government employees to perform an on site inspection of the manufacturing process(es) and review of the manufacturer's product quality control(s) and total quality management programs(s). The contractor will reimburse the State for actual transportation cost, per diem and incidental expenses as provided in Section 112.061, Florida Statutes. It is the State's desire that the contractor provide demonstration of quality control for improvement rather than post production detection.

## **EXAMINATION OF SITES AND TOTAL SYSTEM RESPONSIBILITY**

Prior to the issuance of the purchase order, the contractor shall visit the proposed site of work to become familiar with any local condition which may in any manner affect the work to be performed. This visit shall be accomplished within 14 calendar days after notification by the purchaser.

No allowances will be made because of lack of knowledge of these conditions. Ignorance of the requirements will not relieve the contractor of his liability and obligations under the contract.

Bidders shall take note of the following caveat; purchasers are responsible for supplying the A/C power and grounding facilities (see specification paragraph 3.7). On each PABX installation, bidders should obtain, before proceeding, written commitments from the purchaser as to when such facilities will be available.

The costs for additional equipment and services not covered in this contract shall be negotiated as non-contract options between the purchaser and contractor prior to issuance of the purchase order. Equipment and services identified as non-contract options required to provide a turnkey system do not require approval as contract exception.

Any additional equipment required for the installation and operation of the complete operating system not covered on the purchase order shall be provided and the cost borne by the contractor.

The contractor shall have total system responsibility to assure a "turn-key" operational system including inside and outside cabling and any necessary interfaces with the common carrier, including verifying the availability of all required central office facilities and installation of private lines. Upon request by the Information Technology Program, the contractor shall assist in providing the purchaser with descriptions, quantities, and prices of the telephone service required for the systems and for assisting the purchaser in filling out all forms that are required for Information Technology Program approval and necessary to (a) order telephone services from the local regulated telephone company, (b) order SUNCOM service from the Information Technology Program, and (c) order the removal of the existing telephone equipment and existing station wiring. The forms shall be completed within eighteen (18) consecutive days prior to the receipt of the purchase order. The forms shall consist of the Service Request Document form, the letter of agency, the Communication Purchase or Lease Authorization form COM 9008, and the Telephone Company Central Operations Group (COG's) form.

The contractor shall be responsible for submitting the Communication Service Authorization form COM 9001 for local telephone service, the Customer Provided Telephone Service Request form, the letter of agency, and the COG's form to the regulated telephone company and coordinating the need date for the service with the regulated telephone company in accordance with the contractors schedule for cutover.

Within (18) consecutive calendar days after receipt of the purchase order, the contractor shall also notify the Information Technology Program in writing if SUNCOM is involved in the installation. The written notification shall be addressed to Ms. Linda Nelson, Director, Information Technology Program, and contain the following minimum information:

- A. Purchase Order No.
- B. State Contract No.
- C. Contractor's Name
- D. Contractor's Representative (Name) and Telephone No.
- E. Purchaser's Name of Local Contact, Address, Local Telephone No., SUNCOM No.
- F. PABX System Manufacturer and Model Number
- G. Number of Station Instruments

The Information Technology Program shall be responsible for placing the order for SUNCOM service. The contractor shall plan for a lead time of 30 calendar days between the date of informing the Information Technology Program of SUNCOM involvement and the turn-up date of SUNCOM services in planning a cutover date with total telephone service availability.

Within thirty (30) calendar days after receipt of the written notification from the contractor, the Information Technology Program will provide the contractor with a supply of SUNCOM Station User Guides (SUNCOM dialing instructions) to be distributed by the contractor to the purchaser's employees during training session prior to the system cutover.

All necessary contractor interfaces with the regulated telephone company shall be through the Centralized Operations Group (COG) of the regulated telephone company serving the exchange area in which the equipment is installed.

Within seven (7) consecutive calendar days after receipt of the purchase order, the contractor will provide the purchaser with a complete "Schedule of Key Events" form showing planned dates of completion leading to system acceptance.

### **HAZARDOUS CONDITIONS**

Purchaser agrees to notify contractor and the contractor agrees to notify the purchaser, in writing, if to their knowledge any hazardous conditions or materials are encountered or have been encountered in the building where work is to be conducted. Contractor shall not be liable for any hazardous conditions or materials existing prior to its performance or increased levels beyond the control of the contractor during the performance. Purchaser shall provide full, free, and safe access to its site.

### **LIMITATION OF REMEDIES**

Contractor's entire liability and the State's exclusive remedy shall be as follows:

In all situations involving performance or non-performance of machines or programming (other than licensed programs) furnished under this Agreement, the State's remedy is (a) the adjustment or repair of the machine or replacement of its parts by Contractor, or at Contractor's option, replacement of the machine or correction of programming errors, or (b) if, after repeated efforts, Contractor is unable to install the machine or a replacement machine, model upgrade or feature in good working order, or to restore it to good working order, or to make programming operate, all as warranted, the State shall be entitled to recover actual damages to the limits set forth in this Special Condition. For any other claim concerning performance or non-performance by Contractor pursuant to, or in any other way related to the subject matter of, this Agreement or any order under this Agreement, the State shall be entitled to recover actual damages to the limits set forth in this Special Condition.

If this contract is for purchase of machines, then the following shall apply. Contractor's entire liability for damages to the State for any cause whatsoever, and regardless of form of action, whether in contract or in tort including negligence, shall be limited to the greater of \$100,000 or the appropriate price stated herein for the specific machines that caused the damages or that are the subject matter of or are directly related to the cause of action. The foregoing limitation of liability will not apply to (a) the payment of cost and damage awards referred to in the General Condition 14 entitled "Patents and Royalties", or to (b) claims for procurement costs or the cost of cover pursuant to Division of Purchasing Rule 60A-1.006(4) entitled "Default", or to (c) claims for personal injury or damage to real or tangible personal property caused by Contractor's negligence or tortious conduct.

If this contract is for the purchase of hardware maintenance services, then the following shall apply: Contractor's entire liability and the State's exclusive remedy for damages to the State for any cause whatsoever, and regardless of the form of action, whether in contract or in tort including negligence, shall be limited to actual damages up to the greater of \$100,000 or an amount equal to 12 months maintenance charges for the specific machines under this Agreement that caused the damages or that are the subject matter of, or are directly related to, the cause of action. Such maintenance charges will be those in effect for the specific machines when the cause of action arose. The foregoing limitation of liability will not apply to (a) the payment of cost and damage awards referred to in General Condition 14 entitled "Patents and Royalties" or to (b) claims for procurement costs or costs to cover pursuant to Division of Purchasing Rule 60A-1.006(4) entitled "Default", or to (c) claims by the State for personal injury or damage to real property or tangible personal property caused by the Contractor's negligence or tortious conduct.

If this contract is for purchase of software maintenance services, then the following shall apply: Contractor's entire liability and the State's exclusive remedy for damages to the State for any cause whatsoever, and regardless of the form of action, whether in contract or in tort including negligence, shall be limited to actual damages up to the greater of \$100,000 or an amount equal to 12 months maintenance charges for the specific software product under this Agreement that caused the damages or that are the subject matter of, or are directly related to, the cause of action. Such maintenance charges will be those in effect for the specific software product when the cause of action arose. The foregoing limitation of liability will not apply to (a) the payment of cost and damage awards referred to in General Condition 14 entitled "Patents and Royalties", or to (b) claims for reprocurement costs or the cost of cover pursuant to Division of Purchasing Rule 60A-1.006(4) entitled "Default", or to (c) claims by the State for personal injury or damage to real property or tangible personal property caused by Contractor's negligence or tortuous conduct.

If this contract is for services other than hardware or software maintenance, then the following shall apply: Contractor's entire liability and the state's exclusive remedy for damages to the state for any cause whatsoever, and regardless of the form of action, whether in contract or in tort including negligence, shall be limited to actual damages up to the greater of \$100,00 or an amount equal to the charges invoiced for the services which are the subject matter of, or are directly related to, the cause of action. The foregoing limitation of liability will not apply to (a) the payment of cost and damage awards referred to in "Patents and Royalties" or to (b) claims for reprocurement costs or costs to cover pursuant to Division of Purchasing Rule 60A-1.006(4) entitled "Default", or to (c) claims by the Department for personal injury or damage to real property or tangible personal property caused by the Contractor's negligence or tortuous conduct

If this contract is for the acquisition of licensed programs, including personal computer licensed programs, then the following shall apply: Contractor's entire liability and the State's exclusive remedy shall be as follows: In all situations involving performance or non-performance of licensed programs furnished under this Agreement, the State's remedy is (1) the correction by the Contractor of licensed program defects, or (2) if, after repeated efforts, the Contractor is unable to make the licensed program operate as warranted, the State shall be entitled to recover actual damages to the limits set forth in this section. For any other claim concerning performance or non-performance by the Contractor pursuant to, or in any way related to, the subject matter of this Agreement the State shall be entitled to recover actual damages to the limits set forth in this section. Contractor's liability for damages to the State for any cause whatsoever, and regardless of the form of action, whether in contract or in tort including negligence, shall be limited to the greater of \$100,000 or the one time charges paid for, or any monthly license or initial license charges which would be due for 12 months use of the licensed program that caused the damages or that is the subject matter of, or is directly related to, the cause of action and shall include any initial or process charges paid to the Contractor. This limitation of liability will not apply to (a) the payment of cost and damage awards referred to in General Condition 14 entitled "Patents and Royalties" or to (b) claims for reprocurement costs or the cost of cover pursuant to Division of Purchasing Rule 60A-1.006(4) entitled "Default", or to (c) claims for personal injury or damage to real or tangible personal property caused by the Contractor's negligence or tortuous conduct.

Contractor shall hold and save the State harmless for any and all suits and judgments against the State for personal injury or damage to real or tangible personal property caused by Contractor's tortuous conduct in the performance of this Agreement provided that, (a) the State promptly notifies Contractor in writing of any claim, and (b) Contractor shall be given the opportunity, at its option, to participate and associate with the State in the control, defense and trial of any claims and any related settlement negotiations and, provided further, that with respect to any claim, or portion thereof, for which Contractor agrees at the initiation of such claim that Contractor shall save and hold the State harmless, Contractor shall have the sole control of the defense, trial and any related settlement negotiations, and (c) the State fully cooperates with Contractor in the defense of any claim.

In no event, however, will Contractor be liable for (a) any damages caused by the State's failure to perform the State's responsibilities, or for (b) any lost profits or other consequential damages, even if Contractor has been advised of the possibility of such damages, or for (c) any claim against the State by any other party, except as provided in the hold harmless provision of the preceding paragraph of this Special Condition and except as provided in the General Condition entitled "Patents and Royalties", or for (d) any damages caused by performance or non-performance of machines or programming located outside the United States or Puerto Rico.

## **PURCHASE AND WARRANTY PROVISIONS**

### **A. Purchase**

Each purchaser will be authorized to enter into a contract for equipment by issuance of a purchase order referencing the contract number. State agencies will not issue purchase orders in excess of \$15,000 for new telephone systems prior to receipt of approval from the Information Technology Program. Accessories, features, optional features, and equipment options may be purchased at any time during the contract period, in any quantity, with or without having previously purchased the baseline system.

Maintenance agreements for PABX systems not procured from this contract may be obtained under the terms of this contract. Such agreements are subject to the approval of the contractor and a physical inspection of the equipment by the contractor.

Purchasers may opt to delete items from a baseline system and receive credit from the contractor for these deletions when it is deemed to be in the best interest of the purchaser.

The contractor remains the owner of this equipment and is responsible for all risk of loss or damage to the equipment from any source up to and including the date and time of acceptance by the purchaser. After the date of acceptance, the risk of loss or damage will be on the purchaser. Purchaser shall provide a secure area for the storage of equipment prior to installation.

### **B. Warranty**

#### **1. INITIAL SYSTEM PURCHASE**

All equipment including material used therein shall be warranted by the contractor against mechanical, electrical, and workmanship defects. In the event defects become evident within the warranty period, the contractor shall repair or replace the defective parts and materials at no additional cost to the purchaser. The contractor shall be liable to the purchaser for supply of information and material necessary for mandatory revisions determined by the manufacturer at no additional cost to the purchaser for the duration of the warranty period. The duration of this warranty period shall be at least one (1) year. During systems warranty period, contract prices shall remain firm for the purpose of moves, adds, and changes. The warranty period shall start with the date of equipment acceptance. The warranty shall apply to all equipment purchased under the provisions of this contract regardless of the location (Please refer to page 3, Optional Contract Usage paragraph). Warranties submitted with bids, either appearing separately or included in pre-printed literature and price lists, shall not be acceptable and provisions herein take precedence.

## 2. ADDITIONAL EQUIPMENT PURCHASE

All equipment covered under this contract and purchased subsequent to the initial installation but during the life of the contract shall be subject to paragraph 1 above. The warranty period for such additional equipment shall be at least one (1) year starting with the dates such equipment is installed in the system. It shall be the responsibility of the purchaser to maintain records of said dates of installation and warranty periods. The bidder agrees to honor these recorded dates and warranty periods upon presentation of a claim. Alternately, a bidder may elect to establish a system for tracking warranty periods. If so, a bidder shall so state an intention to do so in the bid response and discuss the mechanics of carrying out such a program. If no such intention is declared, the records of the purchaser shall govern as indicated above.

### **ACCEPTABLE EQUIPMENT**

Bid shall be for new equipment only. Newly manufactured (containing used or rebuilt parts), remanufactured, rebuilt, reconditioned, newly remanufactured, used, shopworn, demonstrator or prototype equipment is not acceptable and will be rejected. When equipment is available from the manufacturer in new and other than new status, i.e.: remanufactured, newly manufactured, etc., each system delivered under this contract must include a certification from the manufacturer stating the equipment is new and referencing the serial number of the delivered equipment. It is understood that the state will benefit from any revisions, alterations, additions, technical improvements, or necessary modifications in the systems offered during the term of this contract at no additional cost.

### **BALANCE OF LINE**

The bidder shall bid a balance of line which will include software, hardware, accessories and other equipment and features that are directly related to the PABX telecommunications operational capabilities that fall within the scope of this contract, at a fixed discount equal to or greater than the discount applied to numbered items bid. To be eligible for a balance of line award, the bidder must receive an award for one of the specified basic unit. Items in the balance of line which are duplicative of those specified will be deleted.

The Division of Purchasing reserves the right to accept or reject any individual item(s) offered as balance of line.

### **CERTIFICATION AND REFERENCES**

In the event a bid is submitted by other than the equipment manufacturer, a certification executed by the manufacturer, on the form provided, (Appendix A) shall be required stating the bidder is an authorized agent of the manufacturer.

The bidder shall have knowledge of and experience with the installation and maintenance of equipment having the same or similar technology as the equipment bid in a user's environment. Bidder shall list on Appendix B at least six (6) customers, names, addresses, and telephone numbers that have the same or similar systems already installed by the bidder.



## **AUTHORIZED DEALERS/DISTRIBUTORS, ETC.**

On any contract where orders will be directed to Authorized Dealers/Distributors or listing Service Locations, this information shall be provided by the BIDDER as part of the bid package in hard copy, and on a 3.5 inch diskette in a Word for windows file. Any subsequent revisions shall be submitted in the same format to the DOP CONTRACT ADMINISTRATOR, for review and approval prior to implementation.

Diskette must be formatted as:

- "Word for Windows"
- Font: Times New Roman 12
- Preset tabs only
- Margins: .5 Left and .5 Right, .5 Top and 1.0 Bottom
- Portrait only-no landscape
- No Tables
- No Headers or Footers
- No Excel Files

Failure to submit the information required in this section will be grounds for disqualification of your bid and/or removal from any resulting contract.

## **PRICES AND BIDDING INSTRUCTIONS**

The bidder may bid any or all configurations. The bidder shall enter on the price sheets the equipment manufacturer, model number, and price of the baseline system. Additionally, the station, trunk, attendant console, and port (if applicable) capacity and the quantity of station, trunk, attendant console, and port (if applicable) capacity which the system bid is equipped with shall also be listed on the price sheets for each configuration bid.

The bidder shall enter the name of the manufacturer, model or part number and price of the baseline system. Additionally, the quantity of stations, trunks, and port (if applicable) per printed circuit card module shall be entered in the spaces provided. Additional price pages may be included.

A trip charge and an hourly rate shall be bid on the price sheet for all configurations bid. Trip charge shall be bid on a unit basis as a fixed cost per trip and will not reflect any "installation" labor costs. This hourly rate will apply for post warranty maintenance work other than additional services, i.e. adds, moves, and changes when purchaser has opted not to purchase follow-on maintenance.

Bidder shall provide equipment and maintenance pricing (or NC) in all price spaces except for optional features and equipment. Failure to provide pricing (or NC) in any bracketed spaces shall result in the rejection of the bid for this configuration. The bidder is requested to bid other features, equipment, and services available in addition to those specified.

Vendor must complete and return with the bid package evaluation award criteria sheet (Appendix F) using prices from price sheet. The Division of Purchasing will verify all entries on the evaluation award formula sheet. Errors will be corrected by the Division of Purchasing. Entries on price sheet shall prevail.

## **PRICE LIST**

On any contract where pricing is based on a Manufacturer's or Dealer's published price list (net or discounted), the price list must be provided by the BIDDER as part of the bid package in hard copy, and on a 3.5 inch diskette as a Word For Windows file. Any subsequent revisions shall be submitted in the same format to the Division of Purchasing CONTRACT ADMINISTRATOR, for review and approval prior to implementation.

Diskette must be formatted as:

- "Word for Windows"
- Font: Times New Roman 12
- Preset tabs only
- Margins: .5 Left and .5 Right, .5 Top and 1.0 Bottom
- Portrait only-no landscape
- No Tables
- No Headers or Footers
- No Excel Files

The Division of Purchasing, at its discretion, may allow the CONTRACT HOLDER to configure its own PRICE LIST of eligible offerings and to post the prices on the CONTRACT HOLDERS Internet Home Page. However, all initial pricing and any subsequent price changes must be reviewed and approved by the Division of Purchasing Contract Administrator before they can be posted to the CONTRACT HOLDER Internet Home Page.

Failure to submit the information required in this section will be grounds for disqualification of your bid and/or removal from any resulting contract.

## **EQUIPMENT LIST/SPARE PARTS LIST**

A combined equipment list and spare parts list shall be provided with the bid for each configuration. Each list shall identify all equipment and quantities including all modular equipment within the PABX that comprise each baseline system. (See example on Appendix D attached.) Failure to provide with the bid package a complete list of all equipment and quantities will result in the rejection of your bid for that configuration.

## **BID GUARANTEE**

Each bid shall be accompanied by a bid guarantee in the form of a Bid Bond, Cashier's Check, or Certified Check. The bid guarantee shall be payable to the Division of Purchasing in the amount of 5% of total bid.\* The unsuccessful bidders' bid guarantees shall be returned within fifteen (15) consecutive calendar days after execution of the contract. The successful bidder's bid guarantee shall be returned upon execution of a legal contract and furnishing the Performance Bond as specified herein. If the successful bidder fails to deliver the Performance Bond as specified herein, the bid guarantee shall be forfeited to the Division of Purchasing.

\*(Total for each configuration and service area bid.)

## **PERFORMANCE BOND**

Within twenty (10) consecutive calendar days after notice of award under this contract, the successful bidder(s) shall provide the Division of Purchasing a performance bond from a reliable surety company authorized to do business in the State of Florida and acceptable to the Division of Purchasing for the following amounts:

Configuration 1	\$ 25,000.00	Per Service Area
Configuration 2	\$ 50,000.00	Per Service Area
Configuration 3	\$125,000.00	Per Service Area
Configuration 4	\$187,500.00	Per Service Area

The term of the bond shall be concurrent with the term of this contract. The amount of the performance bond shall be the cumulative total of the amounts above for all configurations awarded to the contractor.

If purchaser determines that the contractor is not in compliance with any of the specifications, general conditions, or special conditions, the contractor shall be found in default. Allowances shall be made if non-compliance arises out of causes beyond the control and without the fault or negligence of the contractor (acts of God, the public enemy, fires, floods, strikes, freight embargoes, regulated telephone company, etc.).

In the event the contractor should be found in default, the amount recoverable under the bond shall be the amount equal to any losses that the purchaser has sustained plus the cost of reprocurement where applicable.

To be acceptable to the Division of Purchasing as Surety for Performance Bonds, a Surety Company shall comply with the following provisions:

- A. The Surety Company must be admitted to do business in the State of Florida.
- B. The Surety Company shall have been in business and have a record of successful continuous operations for at least five years.
- C. The Surety Company shall have minimum Best's Policy Holder Rating of A and Required Financial Rating of VIII from Best's Key Rating Guide.
- D. All bonds shall be signed by a Florida Licensed Resident Agency who holds a current Power of Attorney from the Surety Company issuing the bond.

**LIQUIDATED DAMAGES**

- A. If the contractor fails to deliver, or install, or program, or checkout the equipment, or fails the performance period within the time specified in Special Conditions, it is understood and the contractor hereby agrees that the amount of 0.1% of the contracted value per day, up to the value of the contracted equipment and service, shall be deducted from the monies due the contractor for each intervening calendar day any work remains incomplete, not as a penalty, but as liquidated damages. Except the contractor shall not be liable if failure to perform arises out of cause beyond the control and without the fault of negligence of the contractor (acts of God, the public enemy, fires, floods, strikes, freight embargoes, regulated telephone company delays, existence of hazardous conditions or substances, etc.).
- B. If the contractor fails to complete on-site repairs of the equipment or provide like equipment on a loan basis within the time specified in Special Conditions, it is understood and the contractor hereby agrees that the amount of 0.1% of the contracted value per day up to the value of the contracted equipment and services shall be deducted from the monies due the contractor for each intervening calendar day, not as a penalty, but as liquidated damages. Except the contractor shall not be liable if failure to perform arises out of cause beyond the control and without the fault or negligence of the contractor (acts of God, the public enemy, fires, floods, strikes, freight embargoes, regulated telephone company delay, existence of hazardous conditions or substances, etc.).

**INSURANCE CONTRACTOR'S**

**INSURANCE.** The contractor shall not commence any work in connection with the contract until he has obtained all of the following types of insurance, nor shall the contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been so obtained and approved. All insurance policies shall be with insurers qualified and doing business in Florida.

**INSURANCE, WORKER'S COMPENSATION**

The contractor shall take out and maintain during the life of this agreement Worker's Compensation Insurance for all of his employees connected with the work of this project, and in case any work is sublet, the contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the contractor. Such insurance shall comply fully with the Florida Worker's Compensation law. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Workmen's Compensation statute, the contractor shall provide and cause each sub-contractor to provide adequate insurance, satisfactory to the Purchaser, for the protection on his employees not otherwise protected.

**INSURANCE, SERVICING DEALER PUBLIC LIABILITY AND PROPERTY DAMAGE**

The contractor shall take out and maintain during the life of this agreement COMPREHENSIVE GENERAL LIABILITY AND COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE as shall protect him from claims for damage for personal injury, including accidental death, as well as claims for property damages which may arise from operating under this agreement whether such operations are by himself or by anyone directly or indirectly employed by him, and the amount of such insurance shall be the minimum limits as follows:

- |    |   |  |
|----|---|--|
| A. | CONTRACTOR'S COMPREHENSIVE GENERAL LIABILITY COVERAGES, BODILY INJURY & PROPERTY DAMAGE | \$300,000.00<br>Each Occurrence,<br>Combined Single<br>Limit |
| B. | AUTOMOBILE LIABILITY COVERAGES, BODILY INJURY & PROPERTY DAMAGE                         | \$100,000.00<br>Each Occurrence,<br>Combined Single<br>Limit |

Insuring clause for both BODILY INJURY and PROPERTY DAMAGE shall be amended to provide coverage on an OCCURRENCE BASIS.

**INSURANCE, SUBCONTRACTOR'S PUBLIC LIABILITY, AND PROPERTY DAMAGE**

The contractor shall require each of his subcontractors to secure and maintain during the life of the subcontract insurance of the type specified above or insure the activities of his subcontractors in his policy as specified above.

## **INSURANCE, LOSS DEDUCTIBLE CLAUSE**

The purchaser shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the contractor providing such insurance.

Upon request, the contractor shall furnish the purchaser an insurance certificate which will evidence that all of the appropriate coverage's are in full force and effect.

## **LICENSES, PERMITS, AND TAXES**

The contractor shall pay for all licenses, permits, taxes, and inspection fees required for its performance under this contract; and shall comply with all federal, state, and local codes, laws, ordinances, regulations, and other requirements applicable to the work specified at no additional cost to the purchaser.

## **DELIVERY, INSTALLATION, PROGRAMMING, CUTOVER, AND INSPECTION CHECKOUT**

### **A. Delivery**

The contractor shall deliver, install, program, cutover, and checkout the system on an agreed upon need date within the following consecutive calendar days (see Special Conditions - Liquidated Damages) after receipt of the purchase order (Configurations 1, 2, and 3 - 120 days; Configuration 4 - 150 days). The system shall be available for inspection by the purchaser or his appointed agent on this date. A mutually agreed upon date beyond this point is acceptable.

### **B. Installation and Programming**

The contractor shall be responsible for installing the system in accordance with equipment manufacturer's instructions, standard industry practices, and as delineated herein, programming the system to the satisfaction of the purchaser. The cost of the installation, programming, and checkout shall be included in the cost of the equipment. The purchaser shall be responsible for providing a PABX equipment room including plywood backboards to the requirements specified by the contractors.

Inside station wiring shall be installed in conduit where conduit is provided by the purchaser. Station wiring between buildings shall be duct or buried service. The contractor shall be responsible for the removal and reinstallation of any type ceiling tile necessary for the installation of station wire. The contractor shall be fully responsible for any and all structural damages to new or existing buildings caused by contractors or subcontractors personnel.

Should installation be in a "new" building under construction, contractor will coordinate all scheduling and installation with the general contractor upon receipt of the purchase order.

The installation shall include the following:

1. Physical positioning of the equipment.
2. Interconnection of the equipment.

3. Connection to the purchaser provided power facilities electrical receptacle outlets.
4. Connection to the telephone company local and SUNCOM service.
5. Connection to the purchaser provided paging, dictation, music-on hold equipment at the station connection block.
6. Connection of the ground wire from the single point ground on the MDF to the building main service entrance equipment enclosure and the distribution panelboard on the load side of the building floor distribution stepdown transformer.
7. Identification of all line, station, DSS/BLF console, and other accessory equipment connections to the connector blocks provided by a wiring diagram schematic diagram, cable running list, or other approved manner.
8. Provide the power line surge protector to the purchaser's electrical contractor.
9. Connection of both ends of the interbuilding station cable shield and surge protector assemblies to ground.
10. Grounding and bonding of the unused inter-building cable pairs.

A system Interconnection Diagram is shown in attached specifications (Figure 1).

The purchaser shall be responsible for providing the required power facilities, sleeves, conduit (with pull wire), raceways, pull boxes, wall outlet boxes, and plywood backboards for the telephone equipment room, the apparatus closet room, and the satellite telephone apparatus closet room where stations may be installed. Other items required for the installation shall be negotiated between the purchaser and the contractor prior to issuance of the purchaser order.

All wiring and cabling shall be installed in a neat and workmanlike manner and shall be in accordance with the National Electrical Code. The contractor shall be responsible for meeting all applicable electrical building and fire codes in routing and choice of cable. Trunks, station lines, attendant console, and other equipment connections at the connector blocks shall be identified by a provided wiring diagram, schematic diagram, or cable running list.

Drawings, if available, of the site and building(s) floor plan(s) showing in particular the location of the telephone company service entrance, the telephone equipment room, the telephone apparatus closet room, satellite telephone apparatus closet room, raceway and conduit, also present and future telephone outlet boxes, may be obtained from the purchaser during the contractor's visit. The contractor shall specify any telephone apparatus closet room requirements to accommodate his system that exceed the requirements given in the building drawings and this specification.

The power facilities will consist of 1) a telephone equipment power panel with a dedicated branch circuit breaker (in the present or new power panel if necessary) to each electrical receptacle outlet as required by the vendor for the telephone and telephone auxiliary equipment, 2) telephone and telephone auxiliary branch circuit electrical receptacle outlets, each wired to a dedicated circuit breaker in the power panel, 3) outlet boxes, conduit, and wiring for 1) & 2).

The contractor shall be responsible for providing the purchaser with a description of the required power facilities. A copy of the required power facilities shall be included in the bid response. The need date of the required power facilities shall be given on the "Schedule of Key Events" (see special condition, Examination of Sites and Total System Responsibility).

At the discretion of the purchaser, the purchaser may direct the contractor to convey his power requirements to a minimum of 3 licensed electrical contractors for written price quotations which will be reviewed, awarded, and funded by the purchaser. Upon the successful selection of the electrical contractor, the PABX contractor shall direct and coordinate to insure the timely installation of the electrical service in accordance with the Schedule of Key Events. Should the purchaser elect to coordinate the electrical installation himself, he assumes the responsibility to meet the electrical installation date specified in the Schedule of Key Events.

Upon successful completion of all electrical requirements, the PABX contractor shall notify the purchaser, in writing, when the electrical contractor has completed his contractual obligation in accordance with the PABX manufacturer's requirements for payment authorization. This notification does not constitute an inspection of the electrical contractor's performance.

The installation of the PABX system in a state office building managed by the Department of Management Services and providing a Premise Distribution Wiring System shall fully utilize the existing PDWS, distribution, and station cable whenever possible. The baseline system shall connect with the PDWS cable by means of PDWS modular patch cables. The PABX system telephone sets shall connect with the PDWS NO. 24 AWG 4 pair station cable 8-position wall jacks with telephone line cord and modular plugs. The contractor shall be responsible to install the PDWS module patch cables between the jumper side of the PDWS cable termination blocks and the PABX baseline system to provide dial tone to the telephone sets. The end of the modular patch cable that connects with the baseline system will be provided with either modular plugs or fanned cable pairs according to the type of telephone service protector block and station block provided as part of the baseline system.

#### C. Cutover

Subsequent to system installation and prior to checkout, the system shall be cutover and operational in a maximum of two (2) working days except for delays "beyond the control of the contractor." The purchaser will specify the time and day for system cutover. The system shall be cutover within five (5) working days of physical completion of the installation.

Working days, for the purposes of this bid, are defined to be 8:00 a.m. - 5:00 p.m., Monday through Friday, excluding State holidays. A cutover during other than working days as defined herein shall be negotiated between the purchaser and the contractor prior to issuance of a purchase order. The contractor shall coordinate the cutover with the regulated telephone company.

#### D. Checkout

Subsequent to cutover, the contractor shall be responsible for "checking out" the system to verify that it is operating properly and performing in compliance with the equipment manufacturer's specifications and the attached specifications.

## **E. Inspection**

Within three (3) days after completion of checkout, the contractor shall notify the Information Technology Program and provide a completed copy of the System Inspection Checklist. Within five (5) working days after receipt of the completed checklist, an on-site inspection will be performed by the purchaser or his appointed agent. If inspection reveals non-compliance, contractor will be given seven (7) consecutive working days to correct problem areas. If corrections are not made, default procedures will follow. Upon satisfactorily completing this inspection, the purchaser shall notify the contractor that performance period can commence and the contractor shall inform the purchaser in writing of the performance period start date.

### **INFORMATION TECHNOLOGY PROGRAM INSPECTION**

At the discretion of the Information Technology Program or based on an agency's request, the Information Technology Program representative may choose to inspect an installed and operational system that, based on the vendor's report, has already passed inspection and is accepted. If the result of the inspection determines that the system is not in compliance with the special conditions and specification of this contract, the vendor will be contacted. The vendor will be given five (5) working days from the time the vendor is notified to correct the problem areas and submit a new completed System Inspection Checklist. The vendor will be accountable as the owner of the system from the date of installation of the system to the date that the problem is resolved. A new performance period is established and warranty will start after the system is accepted. The purchaser will be reimbursed for all related repair charges. Further, the Information Technology Program will be reimbursed in the amount of \$600.00 by the vendor for each inspection that results in failure to pass the installation specification.

### **INTERFACE REQUIREMENTS**

Contractors are responsible for identifying and resolving any system interface requirements that may be necessary to connect and satisfactorily operate the system with the regulated common carrier dialed switched network, Centrex, and Private Line Service including the State of Florida CCSA SUNCOM Network, the purchaser's PABX, and the purchaser's peripheral equipment. All interface problems are the responsibility of the contractor and should be discovered and resolved during the checkout period.

### **FINAL CLEANUP**

Upon completion of the work, the contractor shall reconnect any utilities, equipment, or appliances removed in the course of work and replace all furniture, etc., moved for the performance of the work. Debris and rubbish caused by the work shall be removed and the premises left clean.

### **PERFORMANCE PERIOD**

A performance period of ten (10) consecutive days of successful operation after system cutover and checkout shall constitute a successful performance period.

If a malfunction or an interface problem occurs, the contractor will evaluate the cause and remedy the problem. If purchaser is satisfied with the contractor's remedy, contractor will be allowed to continue the performance period as if no interruption had occurred. If not, contractor must restart the performance period.



The contractor shall inform the purchaser and the Information Technology Program through their certified system checklist of the completion of a successful performance period and inquire if there are any additional problems. (Any additional problems shall be resolved to the satisfaction of both the purchaser and the contractor before the system is deemed "accepted.") If there are none, the system shall be deemed "accepted" by both the purchaser and the contractor, and the contractor shall submit his invoice to the purchaser.

If a successful performance period cannot be accomplished within thirty (30) consecutive calendar days after system cutover, the purchaser reserves the right to find the contractor in default.

If the contractor is found in default, he shall remove his system equipment at no cost to the purchaser, the performance bond shall be forfeited, and the cost of reprocurement assessed.

### **INSTRUCTION MANUALS AND PAMPHLETS**

Two (2) sets of instruction manuals, attendant console user guide pamphlets, and station user guide pamphlets for all equipment purchased shall be provided to the purchaser. Additionally, a station and console user guide pamphlet shall be provided to the purchaser for each station instrument and attendant console purchased, respectively. The instruction manuals shall be sufficient to permit the purchaser's personnel to operate and program the equipment.

Within 20 days of notice of award by the Division of Purchasing, (2) sets of instruction manuals, console user pamphlets, and station user pamphlets and two sets of Technical Documentation shall be provided to the Information Technology Program for all equipment which the contractor has received an award, except as noted under Evaluation/Award. The cost of the manuals and pamphlets shall be included in the cost of the equipment.

The instruction manuals shall contain, but not be limited to:

- A. A section defining the capabilities of the equipment (specifications).
- B. A general section describing the technical operation of the equipment.
- C. A section pertaining to station user instructions.
- D. A section pertaining to procedures or instructions which the attendant console user must follow.
- E. System installation.
- F. All revision information pertaining to the contractors equipment shall be supplied to the purchaser and to the Division of Purchasing at no additional cost as it becomes available. (This includes corrections to the instruction manual, etc.)

### **TRAINING**

The contractor shall provide on-site training to the purchaser's personnel on the operational use of the features of the system and the use of all the purchased equipment. The cost of training shall be included in the cost of the equipment. One copy of the training material shall be submitted to the Information Technology Program at no additional cost. The Information Technology Program, shall be notified prior to training and may participate in training at its discretion. Training shall be as follows:

- (A) Two (2) Weeks Prior To Cutover - One session of a minimum of four (4) hours to certain key personnel of the purchaser.
- (B) One (1) Week Prior To Cutover - Group sessions for a maximum of 15 people, two (2) hours each, to the purchaser's personnel conducted by both the contractor and the purchaser's key personnel.
- (C) Day of Cutover - On-site availability of one representative of the contractor between 8:00 a.m. and 5:00 p.m. to provide any required assistance to the purchaser's personnel.

The contractor shall provide all material and equipment necessary to perform the training and shall utilize actual equipment.

### **TECHNICIAN TRAINING**

The contractor shall make available factory training for purchaser's technical personnel covering all aspects of equipment technical operation, installation, programming, administrative functions, maintenance and trouble shooting, and attendant operating procedures. Technician training may be purchased at any time during the contract period. The cost of technician training shall include the cost of a set of the necessary equipment manuals.

The contractor shall provide manufacturer's technical training for each configuration bid (if different systems are bid) for two of the Information Technology Program engineering staff. The cost of this technical training shall be borne by the contractor and be a part of the bid proposal.

### **PROGRAMMER TRAINING**

The contractor shall make available programming training to the purchaser's personnel assigned to make software changes to station operational features and obtain listings of the system configuration. The cost of the programming training shall include a set of the necessary equipment manuals.

### **ADDITIONAL SERVICES AND HARDWARE**

During the contract period and a purchased follow-on maintenance agreement period, the contractor shall provide additional services not covered by warranty or follow-on maintenance. Such services shall include all software programming associated with moves, changes, relocations, and feature changes of station terminals equipment, station wiring, and telephone service lines. The contractor shall be responsible for identifying and coordinating the supporting service required of the regulated telephone company; however, the purchaser shall order the services required of the telephone company. Services requiring programming of software existing in the system only shall be completed within three (3) working days following the day the service is requested. The additional services requiring software shall be operational within 30 consecutive calendar days after receipt of the purchase order.

The price for additional services shall be on a per occurrence basis (fixed price or cost per hour). These services may be purchased at any time during the contract period and during a purchased follow-on maintenance agreement.

Additional hardware required during the contract period (i.e. station terminal equipment, PABX printed circuit card modules wiring, hardware, etc.) ordered after installation of the baseline system (or ordered without having ordered a baseline system) shall be purchased at the contract price plus a "trip charge," for each trip necessary for its installation. The contractor shall inform the purchaser as to the number of trips that will be necessary to complete the work required of the purchase. The purchaser and contractor shall attempt to consolidate purchases to minimize the number of "trip charges" necessary. Additional hardware shall be operational within 30 consecutive days after receipt of purchase order. If hardware is purchased and delivery and installation is deemed unnecessary (by the purchaser), the equipment shall be mailed to the purchaser at no additional charge and the trip charge will not apply.

Upon the expiration of the warranty period and annually, thereafter, until the purchase of additional services is terminated, the contractor shall provide the purchaser one copy of an up-to-date record of the software status of the operational service features including all additions, moves, changes and relocations. Additionally, one copy of other records that define system hardware configuration shall also be provided. Such records shall include the correlation of station, line, and attendant console numbers to printed circuit card modules and their slot location within the PABX switch.

### **SOFTWARE RECONFIGURATION SERVICES**

During the warranty and follow-on maintenance periods when additional features necessitate reprogramming of the system with a new software package, the contractor shall provide this service within 15 working days of request. The price for these software reconfiguration services shall be on a per occurrence basis independent of the type and quantity of features ordered.

### **SOFTWARE LICENSE**

Bidder shall grant to the customer a non-exclusive/non-transferable license to use all software procured from the contract resulting from this Invitation To Bid. Use of this software is subject to the following provisions:

1. Copyrighted software provisions are contained in the General Condition entitled "Patents and Royalties".
2. Title to the software shall remain with the titleholder.
3. Customer may reproduce one (1) copy of each diskette based software package procured that is not copy protected, for archival and backup purposes only. Copyright and any proprietary notices shall be included on the backup copies.
4. Software that is provided on diskette for user work stations shall be supplied as one (1) copy per work station ordered, unless site licenses or volume discounts have been offered by the bidder and so ordered by the customer.
5. Software that is provided on the system and is down loaded to workstations, shall include a backup copy with documented procedures for reloading in event of software becoming unuseable by either a system malfunction or operator error.
6. Software updates or enhancements shall be made available to the customer in accordance with the Special Condition entitled "Addition/Deletion/Change".

7. Bidder shall provide for exchange of software provided on copy protected diskettes in event the distribution diskette is rendered unusable through either operator error or system malfunction. Exchange of software shall not include operator attempts to copy protected software.
8. Bidder shall indicate on the software pricing sheets if there is any cost associated with items 4 through 7 above.
9. The customer shall be responsible for: a) software selection to achieve the customers intended results; b) use thereof; and c) all results obtained there from.
10. Software may be used on only the single central processing unit (CPU) or system configuration for which the software was acquired. The software may be used on another single CPU or system configuration on a temporary basis when the primary CPU or system are inoperable due to hardware failure.
11. Customer shall not make the software available in any form to third parties. Only the customer's employees directly concerned with the licensed use of the software, shall have access to the software.
12. Contractor shall retain the option to terminate software licenses granted in accordance with this section, and require return of the software and all copies thereof if the customer fails to comply with the license provisions.
13. Customer shall not reverse assemble or reverse compile licensed software in whole or in part.
14. Bidder shall warrant the media on which the software is furnished, to be free from defects in materials and workmanship under normal use for a period of 90 days from date of receipt by the customer.
15. Software that is bid on as "AS IS" basis does not include any warranty of performance or quality, except that the media warranty included within this section shall apply. This type of software if bid shall be specifically identified on the price sheets.
16. Software documentation may not be copied without the express prior written approval of the bidder or titleholder as may be appropriate.

### **SECURITY DEVICES**

Bidders are to identify and price all available optional or installed security devices, such as key locks, plastic card readers, etc., on price sheets.

### **MAINTENANCE**

The contractor shall provide the necessary labor and transportation to maintain the system in compliance with the equipment manufacturer's specifications and the specifications contained herein during the warranty period (see also Special Conditions-Purchase Provisions). The price of the warranty period maintenance shall be included in the price of the baseline system and each accessory, optional equipment, and other operational service feature and equipment.

A first year follow-on maintenance agreement beginning at the end of the warranty period shall be bid as a monthly rate for the baseline system, all accessories, optional equipment, and other operational service features and equipment. The bidder is requested to bid follow-on maintenance prices for the second, third, and fourth years of follow-on maintenance. During the follow-on maintenance period, the contractor shall provide the necessary labor, parts, materials, and transportation to maintain the system in compliance with the equipment manufacturer's specifications and the specifications contained herein.

A follow-on maintenance agreement may be purchased at any time during the contract period. Purchasing a follow-on maintenance agreement is at the option of the purchaser for all or a portion of the total equipment. The contractor shall notify the purchaser 30 days before the contract expires that follow-on maintenance should now be ordered if desired.

Maintenance shall be provided as follows:

A. Preventive Maintenance

The contractor shall provide preventive maintenance as specified by the equipment manufacturer.

B. Trained Personnel

The contractor shall provide telephone equipment personnel trained and certified by the equipment manufacturer as qualified to service the equipment.

C. Response

In the event of equipment malfunction during warranty and follow-on maintenance agreement periods, the contractor shall respond to service calls and initiate on-site repair service within four (4) working hours after notification of equipment malfunction. In the event that on-site repairs are not possible or will exceed eight (8) working hours after notification of equipment malfunction, the contractor shall provide, at the purchaser's request, and at no additional cost to the purchaser, like equipment within sixteen (16) working hours after notification of equipment malfunction on a loan basis until repairs are completed.

Working hours, for the purpose of this bid, are defined to be those hours contained in a normal workday (8:00 a.m. - 5:00 p.m.) Monday through Friday, excluding state holidays.

All equipment which cannot be repaired on-site shall be transported at contractor's expense to and from the service station.

If equipment is not repaired within three (3) working days after notification of equipment malfunction, the contractor shall advise the purchaser, in writing, why the equipment has not been repaired, when the equipment will be repaired, and when the equipment will be returned to the purchaser.

D. Common Carrier Interface

The contractor shall be responsible for determining if problems in system operation are the fault of a regulated telephone common carrier and coordinate all services required. The contractor shall pay for any charges from the regulated common carrier to the purchaser when the problem has ultimately been found to be the fault of the contractor's system, as long as the contractor has been notified prior to notification of the regulated common carrier.

E. Spares

The contractor shall maintain a stock of repair replacement parts for all equipment purchased under any contract resulting from this bid.

A parts inventory, sufficient to keep equipment purchased under this contract in operational condition for a minimum of seven (7) years after equipment acceptance, shall be maintained.

F. Service Network

Bidder shall have in existence at the time of bid and shall maintain during the term of this contract a network of factory authorized service stations within the State of Florida to perform warranty service and follow-on maintenance repairs and adjustments. The service network shall, as a minimum, consist of one (1) service station in each of the four (4) service areas identified on the attached map (Appendix C).

A complete list of authorized service stations, including mailing addresses and telephone numbers, shall be submitted as part of the bid response (Appendix E). Should the service station not be owned and operated by the bidder, a signed statement from each service station sub-contractor verifying their association with the bidder and their willingness to comply to the service conditions of this bid for their entire service area shall accompany each bid.

G. Service Station Responsibility

The service station shall be responsible for repair and return of equipment and keeping the purchaser fully informed of progress whether repairs are made at the service station, factory, or other authorized location.

**MAINTENANCE, OPTIONAL FOLLOW-ON PLAN A (MONDAY THROUGH SUNDAYS, STATE HOLIDAYS, 8:00 A.M. TO 5:00 P.M.)**

All maintenance requirements previously delineated in Special Conditions - Maintenance shall apply except for the following modifications to Section C:

In SECTION C, the second paragraph, change "Monday through Friday, excluding state holidays" to "Monday through Sunday (seven days per week), including state holiday." Optional Follow-on Maintenance Plan shall be bid as a percentage (%) increase over the standard (Monday through Friday) follow-on maintenance costs as delineated in Special Conditions - Maintenance.

**MAINTENANCE, OPTIONAL FOLLOW-ON PLAN B (MONDAY THROUGH SUNDAYS, HOLIDAYS, 24 HOURS COVERAGE)**

All maintenance requirements previously delineated in Special Conditions - Maintenance shall apply except in Section C, in the first paragraph the work "working" will be deleted. The second paragraph shall be deleted and replaced with the following:

Hours of service (for Optional Maintenance Plan B) will be 24 hours per day, seven days per week, 365 days per year (including all State holidays).

Optional Follow-on Maintenance Plan B shall be bid as a percentage (%) increase over the standard (Monday through Friday) follow-on maintenance costs as delineated in Special Conditions Maintenance.

### **EXISTING WIRE AND CABLE**

Should purchaser determine that the existing intra and/or interbuilding wire or cable is in good working condition and is in compliance with local building and fire codes, purchaser may decide to utilize said wire with equipment procured from this contract. Under these circumstances, the contractor making the initial site inspection (see Special Conditions - Examination of Sites) shall advise the purchaser of any objections to this proposed action. Any disputes shall be resolved (with the assistance of the Information Technology Program if necessary), prior to the issuance of the purchase order. Should existing wire and/or cable be utilized, contractor shall still be responsible for providing and installing the required hardware, the "buzzing out" of all wire or cable pairs, and terminating and crossconnecting all utilized pairs appropriately (See 3.25.3) to complete a turn-key system. The contractor shall provide the cost per hour or cost occurrence to test and buzz out existing cable wire.

### **EXISTING EQUIPMENT**

Should the purchaser determine that the existing telephone equipment should be removed, the contractor shall provide the cost per hour to remove the equipment.

### **TRADE-INS**

Contractor may, at the discretion of the ordering agency, be required to accept trade-ins under the contract resulting from this bid. At no time shall the monetary allowance for trade-ins be less than the current market value or salvage value, whichever is greater. The contractor shall determine the value of the trade-ins except that all State agency trade-in transactions must comply with the Bureau of Surplus Property Rule Number 13F.

### **SUMMARY OF TOTAL SALES**

Summary information shall be provided each calendar quarter to the Division of Purchasing and shall include as a minimum the following information for each sale, including moves and changes made under this contract:

- A. Identity of Purchaser
- B. State Contract Number
- C. Configuration Number
- D. Model Number of System Sold
- E. Quantity of Station Voice Terminals (Analog and Digital)
- F. Quantity of Station Data Terminals Interface Units
- G. Total Price
- H. Total Sales Volume per Quarter
- I. Total Contract Sales Volume to Date

Failure to provide this information within thirty (30) calendar days following the end of each quarter may result in the contract supplier being found in default.

**INTERNET HOME PAGE**

The Contract resulting from this bid will become a public document. The State of Florida, Division of Purchasing (DOP) is using the Florida Communities Network (FCN) on the Internet World Wide Web (WWW) to distribute State Term Contracts and product information to eligible users and other interested entities who may subscribe to this service and pay the appropriate access fee.

While not required at this time, each CONTRACT VENDOR is encouraged to develop and maintain a HOME PAGE on the Internet WWW. The Home Page must be compatible with the most recent version of browser software being used by the Division of Purchasing. As of the writing of this solicitation, Netscape Navigator 3.0 is the DOP browser standard. The DOP intends to upgrade to new browser versions as they become available and fully tested, at its discretion.

The Universal Resource Locator (URL) for the INTERNET HOME PAGE must be listed in the space provided on the Ordering Instructions page of the bid.

**EVALUATION/AWARD**

Award shall be by manufacturer's brand statewide on a multiple or a single award basis, as determined solely by the Division of Purchasing to be in the best interest of the State of Florida. If the same manufacturer's brand is bid by more than one bidder, only the lowest bid shall be considered for an award. All other provisions of Awards Paragraph, General Conditions, shall prevail.

The only companies/brands to be considered for award are the following, recommended under Tier I by the Gartner Group: Lucent Technologies /aka/ AT&T, Northern Telecom, and Siemens Communications /aka/ Siemens-Rolm. No other companies or brands will be considered.



STATE OF FLORIDA

DEPARTMENT OF MANAGEMENT SERVICES  
DIVISION OF PURCHASING

Specification  
NO: 730-650  
Effective  
Date: 8-20-96

SPECIFICATIONS

TELEPHONE SYSTEMS, PRIVATE AUTOMATIC BRANCH EXCHANGE

COMMODITY

NUMBER(S): See Paragraph 1.0

1.0 SCOPE AND CLASSIFICATION

This specification covers Private Automatic Branch Exchange (PABX) Telephone Systems for four (4) configuration sizes with simultaneous voice and data applications as follows:

CAPACITY

	<u>SIZE</u>	<u>SIMULTANEOUS VOICE &amp; DATA CHARGE APPLICATION</u>	<u>CONFIGU- RATION NUMBER</u>	<u>COMMODITY NUMBER</u>
A.	100 Station Lines	10%	1	730-650-100
B.	200 Station Lines	10%	2	730-650-200
C.	500 Station Lines	10%	3	730-650-300
D.	1000 Station Lines	10%	4	730-650-400

Simultaneous voice and data applications shall be defined as the percent of the station lines having both voice terminal and data terminal equipment operation simultaneously.

2.0 APPLICABLE PUBLICATIONS AND STANDARDS

The following publications and standards of the current issue on the date of Invitation to Bid shall be a part of this specification. In the event of inconsistencies between this specification and these publications and standards, the requirements of this specification shall take precedence.

Federal Communications Commission Rules and Regulations

Application for copies should be addressed to:

Federal Communications Commission  
Washington, D.C. 20554

Applicable Manufacturer's Instructions and Standard Practices

Electrical Industries Association Standards

- EIA RS-232            Interface Between Data Terminal Equipment and Data Communication  
Equipment Employing Serial Binary Data Interchange
- EIA RS-464            Private Branch Exchange (PBX) Switching Equipment for Voice Bank  
Applications

Application for copies should be addressed to:

Electronic Industries Association  
Engineering Department  
Standard Sales Office  
2001 Eye Street, NW  
Washington, D.C. 20006

National Electrical Code

Application for copies should be addressed to:

National Fire Protection Association  
470 Atlantic Avenue  
Boston, Massachusetts 02210

American Telephone and Telegraph Company

Notes on the Network

Application for copies should be addressed to:

Western Electric Company, Incorporated  
Commercial Sales  
Post Office Box 20046  
Greensboro, North Carolina 27420

Technical Reference Private Line Interconnection - Voice Application PUB 43201

Application for copies should be addressed to:

Publishers Data Center, Inc.  
Post Office Box C 738  
Pratt Street Station  
Brooklyn, New York 11205

Institute of Electrical & Electronics Engineers Standards

ANSI/IEEE, C62.41 - 1980 IEEE Guide for Surge Voltages in Low Voltage AC Power Circuits

Application for copies should be addressed to:

IEEE Service Center  
445 Hoes Lane  
Piscataway, New Jersey 08854

Code of Federal Regulations

Title 47-Telecommunications,  
Part 68-Connection of Terminal Equipment to the Telephone Network

Application for copies should be addressed to:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

Underwriters Laboratories Standards

UL 1449 Standard for Transient Voltage Surge Suppressor

UL 497A Standard for Secondary Protectors for Communications Circuits

Application for copies should be addressed to:

Underwriters Laboratories, Inc.  
333 Pfingsten Road  
Northbrook, Illinois 60062

REA Telecommunications Bulletins

REA 345-50 PE-60 Specification for Trunk Carrier Systems

REA 345-83 PE-80 Specification for Gas Tube Surge Arresters

Application for copies should be addressed to:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

3.0 REQUIREMENTS

3.1 General: The system described herein shall be a digital Private Automatic Branch Exchange System (PABX) that shall provide non-blocking simultaneous voice and data switching and transmission. The system shall provide access to the regulated telephone common carrier exchange network, Common Control Switching Arrangement (CCSA) private networks, and private line service.

The system shall be compatible and operate properly with general exchange and private line services offered by the regulated telephone common carrier and other telephone carriers. Such general exchange services shall be two wire and four wire exchange trunks (one-way outward, one-way inward, two-way combination), foreign exchange (FX), Direct Inward Dialing (DID), WATS, and 800 service. Such private line services shall be tie-trunks (two wire, four wire), off-premise station (OPS), Direct Inward Access Trunk, Common Control Switching Arrangement (CCSA) SUNCOM access lines, T1 span lines, and ISDN trunks. The system shall provide voice only calling, data only calling, and simultaneous but independent voice and data calling. The system shall be transparent to the connection and operation of data terminal equipment of the same code, protocol, and transmission method, without the use of modems, at data transmission speeds up to 64 Kbps for station-to-station simultaneous voice and data calls. The system shall support data transmission speeds up to 4.8 Kbps asynchronous and synchronous for data calls with the dial-up exchange network and up to 9.6 Kbps asynchronous and synchronous with private line analog facilities using modem pooling. Data terminal equipment shall connect to a station line through a data terminal equipment interface adapter unit connected to a proprietary telephone where a simultaneous voice and data application is required and to a data terminal equipment interface unit where a data only application is required. Data terminal equipment may also be connected through a data terminal equipment interface unit to the same station line as a telephone where a simultaneous voice and data application is required and a data terminal equipment interface adapter unit is not provided.

The voice terminal equipment shall be the standard generic analog Type 2500 telephone set with a flash button, analog single and multiline telephones with fixed/programmable buttons, and proprietary single line and multiline appearance telephones with feature buttons utilizing digital or analog transmission through the station line to the PABX switch.

The data terminal equipment shall be purchaser provided equipment such as personal computers, printers, word processors, minicomputers, host computer front end, and other ASCII, EBCDIC, etc., coded asynchronous and synchronous data terminal equipment.

The system shall have provision that enables connection to purchaser provided terminal and/or peripheral equipment such as 1A2 and electronic key telephone systems, dictation, music-on-hold, radio pocket paging, external voice paging, and station message detail accounting equipment.

The PABX telephone switch shall be in accordance with EIA Standard RS-464.

The system shall consist of:

- A. A baseline system consisting of:
  - 1. A baseline telephone PABX Switch with a baseline operational service feature generic program and a simultaneous voice and data switching capability
  - 2. Attendant Console(s)
  - 3. Main Distribution Frame (MDF) Wire, Cable, and Hardware (connecting blocks, Telco Network Demarcation Point Plugs, etc.)

4. Telephone Service Surge Protector Modules and Protector Module Block
  5. Power Line Surge Protector
- B. Accessories and Features (See Section 3.25)
1. Voice Terminal, Single Line Telephone, (VTSL) Generic 2500 Type Pushbutton Flash, Analog with Fixed/Programmable Buttons, and Proprietary or Non-Proprietary with Function Buttons, Digital or Analog (See Section 3.25.1)
  2. Voice Terminal, Multi Line Appearance Telephone (VTMLA), Analog with Fixed/Programmable Buttons. Proprietary with Function Buttons, Digital or Analog (See Section 3.25.2)
  3. Station Wiring (See Section 3.25.3)
  4. Additional PABX Station Modules (See Section 3.25.4)
  5. Additional PABX Trunk Modules (See Section 3.25.5)
  6. Additional MDF Trunk Wiring (See Section 3.25.6)
  7. Additional MDF Station Wiring (See Section 3.25.7)
  8. Additional Attendant Console(s) (See Section 3.25.8)
  9. Attendant Console Wiring (See Section 3.25.9)
  10. Terminal Equipment Data Interface Adapter Units (See Section 3.25.10)  
Specification No.: 730-650
  11. Terminal Equipment Data Interface Units (See Section 3.25.11)
  12. Other Equipment (See Section 3.25.12)
  13. Additional Software Operational Service Features (See Section 3.25.13)
  14. Administrative Equipment (See Section 3.25.14)
  15. Direct Digital Interface (T1) Equipment (See Section 3.25.15)
  16. Intercept Announcer Equipment (See Section 3.25.16)
  17. Music-On-Hold Interface Equipment (See Section 3.25.17)
  18. Power and/or Common Control Failure Transfer Equipment (See Section 3.25.18)
  19. Remote Administration Interface Equipment (See Section 3.25.19)

20. Remote Testing Interface Equipment (See Section 3.25.20)
21. Speakerphone Equipment (See Section 3.25.21)
22. Traffic Measurement Recording Equipment (See Section 3.25.22)
23. Voice Paging Access Interface Equipment (See Section 3.25.23)
24. Modem Pooling Equipment (See Section 3.25.24)
25. Additional Length of Trunk Feeder Cable (See Section 3.25.25)

A schematic diagram of the system interconnection is shown in Figure 1.

3.1.1 Optional Features and Equipment: The following may be bid as optional features and equipment to the system. They are not a part of the system requirements and will not be used in the bid evaluation (See Section 3.26).

1. Optional Software Operational Service Features (See Section 3.26.1)
2. Automatic Trunk Testing Equipment (See Section 3.26.4)
3. Dictation Access Interface Equipment (See Section 3.26.5)
4. Radio Pocket Paging Access Interface Equipment (See Section 3.26.6)
5. Redundancy Equipment (See Section 3.26.7)
6. Station Message Detail Accounting Equipment (See Section 3.26.8)
7. Uninterruptible Power Supply (UPS) (See Section 3.26.9)
8. Voice Mail Equipment (See Section 3.26.10)

FIGURE 1

1. Purchaser Provided Power Facilities
2. Powerline Surge Protector
3. Power Cord
4. Telco Provided Network Demarcation Point Jack
5. Demarcation Point Plugs
6. Telephone Service Surge Protector Module Block and Modules
7. Trunk Connecting Block
8. Station Connecting Block
9. MDF Trunk Feeder Cable, 9A. MDF Wire and Cable
10. Purchaser Provided Plywood Backboard in Telephone Equipment Room, or Contractor Provided Stand-Alone MDF Frame
11. Single Point Ground
12. Contractor Provided Ground Wire
13. Interbuilding Cable Surge Protector Module Block and Protector Modules
14. Multipair Interbuilding Cable
15. Purchaser Provided Plywood Backboard in Telephone Apparatus Closet Room
16. Four (4) Pair Station Cable
- 16A. Modular Telephone Wall Jack Assembly
17. Multipair Distribution Cable
18. Distribution Connecting Block
19. Voice Terminal, Generic, Analog, Type 2500
20. Voice Terminal, Proprietary, Multiline, Singleline, Non-Proprietary Singleline.
21. Data Terminal Equipment Interface Adapter Unit
22. Purchaser Provided Data Terminal Equipment
23. Voice Terminal, Analog, Multiline, Singleline
24. Data Terminal Equipment Interface Unit
25. Purchaser Provided Key Telephone Equipment
26. Purchaser Provided Paging, Dictation, Music-On-Hold Equipment & Wiring
27. Attendant Console
28. Accessory Equipment
29. Modem in a Modem Pool Loop
- 29A. Twenty-Five (25) Pair Station Cable
30. Ribbon Jack for Key Equipment
31. RS232 Interface
32. Optional Equipment
33. Contractor Provided Ground Wire
34. Purchaser Provided Plywood Backboard in Far End Building

3.1.2

Technical Documentation: All equipment bid must meet or exceed all conditions and specifications of the invitation to bid (ITB).

When technical documentation is required by this ITB, its purpose is to demonstrate compliance of the equipment bid with applicable technical requirements of this ITB and to allow technical evaluation of the equipment. The submittal of the following technical documentation is a requirement of this bid, except as noted under "Evaluation/Award".

- A. System Description Specification Manual(s)
- B. Installation and Maintenance Manual(s)
- C. Feature Description Manual(s)
- D. Programming Manual(s)
- E. Station and Console User Guides
- F. Wire and Cable Specification Sheets
- G. Accessory Equipment Specification Manual(s)/Pamphlet(s)
- H. Optional Equipment Specification, Manual(s)/Pamphlet(s)
- I. Other Equipment Specification, Manual(s)/Pamphlet(s)
- J. Specifications of equipment offered as a brand name alternate.
- K. Specifications of surge protectors, and UL Test Results and UL Listing Report if necessary.

All technical manuals shall be supplied in loose leaf binders. The sentence and paragraph structure used in such manuals shall reflect conventional English usage. Vendors who propose equipment manuals translated from a language other than English shall state their internal plan for review of such documents to ensure clarity. Manuals intended to provide instruction for programming the PABX from a Maintenance Administration Terminal (MAT) shall be broken down into complete stand-alone instructions; i.e. no prior knowledge of other required programming steps should be required. All manuals shall be supplied complete with no requirement for the purchaser to assemble the manual, insert revision pages or any similar action.

Two (2) copies of the required technical documentation shall be provided with the bid, except as noted under "Evaluation/Award".

If Technical Documents is required the Technical literature reference sheet (Appendix G) shall be completed by the bidder and reference the technical manual(s), page(s), and paragraph(s) that will verify the equipment bid meets or exceeds specification for each specified section. If the technical documentation is at variance with the technical requirements, the bidder shall provide a written explanation that clarifies the variance and explains how the system will meet the specifications.

Individual specifications and requirements must be addressed; a general statement such as "complies with all requirements" is not acceptable. The clarification letter shall be signed by an Engineering or Marketing Manager (or equivalent or superior title).

Note: If miscellaneous equipment to be supplied by the vendor is to be the same as specified in the bid specifications, (i.e. make, model, part number and manufacturer are identical), no technical documentation is required for that equipment.



Example: XYZ Connector Block (technical documentation required to show equivalence).  
Tetrad TRD 560 Bus Bar Assembly (no technical documentation required).

3.2 Configuration

3.2.1 Capacity: Each system configuration shall have the capacity to accommodate a minimum of the station lines, trunks, consoles, and the percent of stations with both voice terminals and data equipment operating simultaneously as given below.

<u>CONFIGURATION</u>	<u>STATION LINES</u>	<u>ATTENDANT CONSOLE</u>	<u>STATIONS WITH SIMULTANEOUS VOICE &amp; DATA (PERCENT)</u>
1	100	1	10%
2	200	2	10%
3	500	4	10%
4	1000	6	10%

A station line shall be a communication path capable of carrying voice only, data only, and voice and data simultaneously. The sizing of the PABX for station line capacity is based upon ten percent of the station lines carrying voice and data simultaneously.

The sizing of the PABX for trunk capacity shall be based upon the following trunk types and minimum quantities of each:

<u>CONFIGURATION</u>	<u>CENTRAL OFFICE LS/GS*</u>	<u>DIRECT -IN- DIAL</u>	<u>4 WIRE E&amp;M</u>	<u>TOTAL</u>
1	12	12	12	36
2	20	16	20	56
3	44	32	40	116
4	76	60	72	208

\*Ground Start or Loop Start

A port oriented PABX bid with a port capacity to meet the station and trunk capacity requirements of this section shall ensure that the port capacity has included other features that also occupy a port, such as attendant consoles, conference trunks, tone receivers, etc.

3.2.1.1 ISDN: The PABX shall provide an NT12 termination for an ISDN trunk. An NT12 termination is defined as a termination which includes NT1 (Local Loop Terminator) and NT2 (Customer Premises Switching Equipment). Bidders shall list as options, with prices, all TE1 (ISDN Terminal Equipment) and TA (ISDN Terminal Adapter Equipment) which the bidder is prepared to supply. The cost of the ISDN NT12 termination shall be priced separately in order that agencies may delete it if not needed.

3.2.1.2 TI INTERFACE: The PABX shall provide an interface for a central office T-1 trunk. This feature shall enable the purchaser to replace analog central office trunks. Bidders shall price this feature separately in order that it may be deleted if not needed.

3.2.2

Equipped: The baseline system for each configuration shall be equipped with demarcation point plugs (Number 5 in Figure 1), a telephone service surge protector module block including protector modules (Number 6 in Figure 1), trunk connecting blocks (Number 7 in Figure 1), station connecting blocks (Number 8 in Figure 1) for the capacities bid in compliance with Section 3.2.1.

The voice terminal station lines shall be digital or industry standard analog. The baseline PABX shall be equipped with the following quantities of station lines, trunks, and attendant consoles.

<u>CONFIGURATION</u>	<u>DIGITAL/ANALOG VOICE TERMINAL STATION LINES</u>	<u>CENTRAL OFFICE TWO-WAY TRUNKS (VARIOUS)</u>	<u>ATTENDANT CONSOLES</u>
1	50	12	1
2	100	20	1
3	200	32	1
4	500	68	2

The baseline PABX shall be expandable to the capacity requirements of Section 3.2 as described in Section 3.3.

The demarcation point plugs shall provide for six (6) pin connections per 4 wire E&M trunk and the remainder two (2) pin connections per trunk utilizing USOC RJ21X, RJ2EX, RJGX, and RJ2HX connections to the telephone network.

The telephone service surge protector block including the protector modules shall provide for three (3) protector modules per 4 wire E&M trunk and the remainder one (1) protector module per trunk.

The trunk connecting blocks shall provide for three pair connections per 4 wire E&M trunk and the remaining trunks are (1) pair connection.

Station connecting blocks shall have the capacity to provide for the connection of four pair station wiring for each station. The station connecting blocks shall also have the capacity required by the operational service features that require the connection with purchaser provided peripheral equipment.

The trunk and station connecting blocks shall have the capacity to accommodate the maximum quantity of trunk-to-station power failure transfers provided by this operational service feature.

The connecting blocks and the telephone service surge protector block shall be located on the purchaser provided plywood backboard which serves as the MDF. The plywood backboard (Number 10 in Figure 1) and the PABX switch shall be located in the telephone equipment room. Stand alone double-sided main distribution frames on which are mounted the protector blocks and the connecting blocks may be provided. The demarcation point jack (Number 4 in Figure 1) will be located in the telephone equipment room a maximum of twenty-five (25) feet from the PABX. Cost of MDF trunk feeder cable in excess of twenty-five (25) feet from the demarcation point to the telephone service surge protector block shall be priced separately (See Section 3.25.25).

State office buildings with Premise Distribution Wiring System may not have the demarcation point jack located in the telephone equipment room. In this case, the telephone service surge protector block will be patched to the PDWS termination block that contains central office service.

The baseline PABX shall be equipped with cabinets or modules, shelf carriers, processors, memories, switching networks, power supplies, etc., for the operation of the quantities of stations, trunks, and attendant consoles bid in compliance with this section. The quantity of cabinets or modules or other "system building blocks" comprising the baseline shall be only that required to contain the quantities required of this section. The baseline PABX shall be equipped with a quantity of tone receivers, register/senders, etc., to meet the performance requirements of Section 3.6 for the equipped quantity of stations in this section.

Additional cabinets or modules, PABX station and trunk interface printed circuit cards, other printed circuit cards such as tone receivers and register/senders, to expand the baseline PABX within the capacity of the system bid may be ordered to suit the purchaser's needs (See Sections 3.3, 3.25.4, 3.25.5, 3.25.12).

The cost of station equipment and station wiring beyond the station connecting blocks and additional consoles and console wiring shall not be a part of the baseline system cost. However, the cost of these items shall be listed in the bid sheet as accessories (See Sections 3.25.1, 3.25.2, 3.25.3, 3.25.8 through 3.25.11).

The quantity of trunks, station lines, and service to be activated at system cut-over shall be specified on the purchase order.

The modular system design of the PABX equipment bid in compliance with the capacity requirements of Section 3.2.1 may or may not permit the installation of the optional redundancy equipment that provides this operational service feature.

If the redundant equipment cannot be installed within the baseline equipment without taking up trunk and station capacity, then the redundant equipment shall also include any additional cabinets, shelves, etc., to allow the baseline PABX to still be expanded to the bid capacity.

### 3.2.3

Automatic Call Distributor: The baseline system shall be capable of accommodating an Automatic Call Distributor (ACD) capable of distributing calls to up to 15 agents. The system shall be capable of handling 18 calls per hour per agent with an average call length of 2.5 minutes.

Additional features shall be as follows:

- A. Agent identification entry
- B. Individual agent "log in/out" entry
- C. ACD supervisor monitor of agent calls
- D. Capability for agent and supervisor communication by message display
- E. ACD traffic report printout

F. Agent performance report printout

3.2.4 Wire: The baseline system for each configuration shall be wired with MDF trunk feeder cable (Number 9 in Figure 1) from the demarcation point plugs (Number 5 in Figure 1) to the telephone service surge protector block (Number 6 in Figure 1) and from the telephone service surge protector block to the trunk connecting block (Number 7 in Figure 1) for the capacities bid in compliance with Section 3.2.1. Wire for the 4-wire E&M trunks shall be three (3) pair per trunk. The remainder shall be one (1) pair per trunk.

The baseline system for each configuration shall be wired with MDF wire and cable (Number 9A in Figure 1) from the trunk connecting block (Number 7 in Figure 1) to the PABX for the quantity of trunks given in Section 3.2.2. The wire shall be one (1) pair per trunk.

The baseline system for each configuration shall be wired with MDF wire and cable from the PABX to the station connecting block (Number 8 in Figure 1) for the quantity of station lines given in Section 3.2.2. The bidder shall specify the MDF wire and cable pair size required for each type of terminal (voice and data) equipment.

Additional quantities of trunk MDF wire and cable between the trunk connecting block may be ordered as accessories to meet the purchaser's requirements (see Sections 3.25.6 and 3.25.7).

3.3 Expansion: The baseline PABX shall be expandable to the capacity bid in compliance with Section 3.2.1 by the addition of cabinets or modules, shelves, assemblies, and printed circuit card modules. The bidder shall bid all PABX equipment that is necessary to expand the baseline system to capacity and a description of when each item is required during the expansion process.

3.4 Baseline Operational Service Features: The baseline system shall be provided with a baseline generic and an office data base software program providing the following operational service features by a feature software service package.

The baseline system will be equipped with all necessary hardware to support the features.

3.4.1 System Features:

- A. Automatic Diagnostics
- B. Automatic Station Release
- C. Call Waiting
- D. Exchange Trunks
- E. Class of Service (Programmable)
- F. Direct Outward Dialing (DOD)
- G. Flexible Numbering (Programmable)

- H. Foreign Exchange (FX) Access
- I. Hunting (Programmable)
- J. Intercept
- K. Night Service (Programmable)
- L. Restrictions - Full (Programmable)
- M. Restrictions - Miscellaneous Trunk (Programmable)
- N. Restrictions - Toll 0/1 (Programmable)
- O. Simultaneous Voice and Data
- P. Station-to-Station Calling
- Q. Switchhook Flash
- R. Trunk Answer From Any Station (TAFAS) (Programmable)
- S. Trunk Groups
- T. Trunk-to-Station-to-Tie-Trunk Access
- U. Trunk-to-Trunk Connection

3.4.2 Station Features:

- A. Automatic Callback - Station Busy
- B. Call Forwarding - All Calls
- C. Call Forwarding - Busy, Don't Answer
- D. Call Hold
- E. Call Pick-Up
- F. Conference
- G. Dial Access to Attendant
- H. Transfer - Consultation, add-on

3.4.3 Attendant Features:

- A. Alarm Display
- B. Busy Status Display
- C. Call Identification Display
- D. Call Splitting
- E. Call Waiting Display
- F. Camp On
- G. Controlled Conference
- H. Extension of Incoming Call
- I. Through Dialing
- J. Timed Reminder (Recall)
- K. Transfer All Calls
- L. Trunk Group Busy Indication

The operational service features that require programming (Items E, G, I, K through N, and R of Section 3.4.1 and Section 3.25.13, items A, G, R, and S) shall be programmable by the purchaser. Equipment required for programming shall be bid as accessories. Jumpers, straps or switch settings on printed circuit card modules are not an acceptable method of programming the operational service features.

Additional operational service features that the purchaser may wish to order are listed in Section 3.25.13.

A glossary of operational service feature descriptions is contained in Section 6.3.

- 3.5 Technology: The PABX telephone system switch shall be a digital switch with a solid state electronics switch network utilizing time division multiplexing and pulse code modulation (PCM). The switch shall be suitable for direct interface with T1 carrier and D3 Channel bank format with U255 Companding Law. The switch control system shall be stored program using either single or distributive processor solid state common control.

The software program stored in a volatile memory and subject to loss due to a commercial power interruption shall be reloaded from a magnetic tape cartridge drive unit or a disk drive after commercial power is restored. The bidder shall specify the reload time of his system.

Changes to the office data base portion of the software program and inclusion of features within the provided installation independent (generic) portion of the program not initially assigned shall be possible by the contractor (on-site or remote) or by the purchaser. The replacement of the installation independent (generic) portion of the program with a later program containing additional or advanced features is required. The method of making changes and the replacement shall be specified as part of the bid response to this action.

The system shall have the capability to automatically cause preassigned two-way central office trunks to be connected to preassigned stations to provide the system with limited telephone operation with the telephone dialed switched network when a failure within the stored program common control equipment (without redundancy) has occurred.

3.6 Performance: The PABX shall provide P.01 grade of service during the busy hour under the following conditions.

- A. 75% voice connections  
6 ccs per station connection  
30% internal voice traffic  
70% external voice traffic
- B. 25% data connections  
36 ccs per data connection  
80% internal data traffic  
20% external data traffic

The PABX shall be capable of carrying data traffic at rates up to 64 KB/s.

Not more than 1.5 percent of the originating calls placed during the busy hour shall have a dial tone delay greater than three (3) seconds. The performance specified in this Section 3.6 shall be maintained from the baseline system up to the maximum station lines and trunk capacity for each PABX switch configuration bid in compliance with Section 3.2.1.

3.7 Power: The system shall operate from 120 VAC two (2) wire and ground, 240 VAC three (3) wire and ground, or 120/208Y VAC four (4) wire and ground and 60 cycle commercial power. The bidder shall specify the type of power required, the power consumption, the quantity and NEMA designation of electrical receptacles required, and the circuit breaker rating for each receptacle as part of the bid response. The purchaser will provide the power facilities (No.1 in Figure 1) to these requirements. It shall be the contractor's responsibility to provide any wiring for system components such as rectifiers and inverters required on the system side of the electrical receptacle.

The PABX cabinet shall be grounded with a No. 6 AWG or larger solid copper insulated wire to a single point ground (Number 11 in Figure 1) located on the plywood backboard. The contractor shall provide and connect a No. 6 AWG solid copper insulated ground wire (Number 12 in Figure 1) between the single point ground and one of the following: a) the grounding terminal bar inside the building main service entrance equipment enclosure, b) the grounding terminal bar inside the distribution main panelboard on the load side of the building floor distribution step-down transformer providing service to the telephone equipment power panel. The ground wire shall be tagged and identified at the service equipment enclosure and panelboard.

The single point ground shall be bus bar assembly Tetrad 560 or equivalent.

- 3.8 Electrical Surge Protection: The system shall include a power line surge protector, central office telephone service surge protectors, and interbuilding cable surge protectors to protect user personnel and prevent equipment damage or total loss resulting from voltage and current surges superimposed upon the commercial power line and all telephone line circuits by lightning strikes, commercial power faults, and power line to telephone line faults.

The AC power line surge protector shall be a 120V, 220V, or 120/208V permanently connected device, UL listed and rated to the latest revised UL 1449 standard, utilize solid state components, have a maximum peak let-through voltage of 450 volts in both the Normal (L-N) and Common (L+N-G) modes when tested to the Transient-Voltage-Suppression Test and the Duty-Cycle Test of the latest revised UL1449 standard, and must have a UL Suppressor Voltage Rating of 330V or 400V. A rating of 500V is acceptable provided a copy of the UL Test Results and a copy of the UL Listing Report showing a maximum peak let-through voltage of 450 volts is submitted. The bidder shall specify the power line surge protector that will be provided.

The central office telephone service (including off-premise stations) and interbuilding cable surge suppressor shall be a direct plug-in type, UL listed to UL 497A, utilized a three electrode gas tube and/or solid state components, have a maximum peak let-through voltage of 300 volts for central office telephone service and interbuilding cable circuits for telephone sets requiring ringing voltage, have a maximum peak let-through voltage of 80 volts or as recommended by the bidder for interbuilding cable circuits for proprietary telephone sets. Consideration should be given to the effect of the line resistance and the DC holdover voltage of the surge protector upon the loop length and line current of the interbuilding cable circuit for the proprietary set. The maximum peak let-through voltage of the surge protector shall not be exceeded when subjected to at least one of the following tests:

- 1) The metallic voltage surge (between tip & ring) and the longitudinal voltage surge (between tip & ring tied together and ground) as specified in Part 68.302(d) and (e) of Title 47 Telecommunications of the Code of Federal Regulations.
- 2) The Category B 6kV and 3kA bi-wave of ANSI/IEEE C62.41-1980 (formerly IEEE Std. 587-1980) between tip and ground with ring grounded, between ring and ground with tip grounded, and simultaneously between tip and ground and ring and ground from individual parallel outputs.
- 3) The Voltage Surge Test in Paragraph 3.4 and the Current Surge Test in Paragraph 3.6 of REA Bulletin 345-50 (PE-60).
- 4) The Impulse Breakdown Voltage test in Paragraph 4.24 and the Impulse Life Test in Paragraph 4.32 of REA Bulletin 345-83 (PE 80).
- 5) 1000V peak 10X1000 microsecond 100A waveform between tip and ground with ring grounded, between ring and ground with tip grounded, and simultaneously between tip and ground and ring and ground from individual parallel outputs.



The surge protectors installed in the surge protector block end termination for interbuilding cable shall have a maximum peak let-through voltage of 300 volts; however, when and where necessary, the contractor shall provide surge protectors with a peak let-through voltage of 80 volts, or as recommended by the contractor. The bidder shall specify the telephone service surge protectors and protector blocks that will be provided.

The telephone service surge protector shall be installed in a suitable protector block.

The telephone service surge protector block (Number 6 in Figure 1) and the interbuilding cable surge protector module block (Number 13 in Figure 1) located on the plywood backboard (Number 10 in Figure 1) in the telephone equipment room shall be connected with a No. 6 AWG or larger solid copper insulated wire to the single point ground (Number 11 in Figure 1) on the plywood backboard. The interbuilding cable surge protector module block (Number 13 in Figure 1) located on the plywood backboard (Number 36 in Figure 1) in the far end of building shall be connected with a No. 6 AWG solid copper insulated ground wire (Number 33 in Figure 1) to the grounding terminal bar inside the far end building main service entrance equipment enclosure.

3.9 Environment: The equipment shall meet all requirements of this specification when subjected to any combination of the following conditions:

- A. Temperature range: 10°C to 32°C
- B. Relative humidity: 35% to 80% non condensing

3.10 Voice Transmission: Voice transmission shall be clear and free of distortion, crosstalk, and noise.

As part of the site survey, the bidder shall determine whether or not any magnetic or electric fields are present which would interfere with proper operation of the PABX. The bidder is responsible for notifying the purchaser if any such problems exist. If such problems are found after the installation, the purchaser shall have the right to reject the PABX if the bidder cannot remedy the problem.

3.11 Transmission Characteristics: The transmission characteristics of the PABX switch shall be in accordance with EIA Standard RS-464.

3.12 Address Signaling: The PABX switch shall be capable of accepting and generating incoming and outgoing dialed pulse and DTMF address signals in accordance with EIA Standard RS-464.

3.13 Call Progress Signals: The PABX switch shall provide call progress signals in accordance with IEA Standard RS-464.

3.14 Station Wiring Noise: The wiring installation shall be designed to minimize noise from external electromagnetic fields. The noise shall be 29 dBmC maximum at the station modular telephone wall jack assembly on a station-to-station connection.

3.15 Station Crosstalk: Crosstalk isolation between station wiring shall be 65 dB minimum at the station modular telephone wall jack assembly on a station-to-station connection.

3.16 Station Interface: The PABX switch interface operation with the station voice terminal equipment shall be in accordance with EIA Standard RS-464. The PABX shall accept flash signals to initiate internal calling features. The multiline appearance voice terminal shall function on four (4) pair station wire. The station conductor loop resistance shall accommodate voice terminals and data terminal equipment located at least 1000 feet from the PABX switch. The bidder shall specify the maximum distance that the station terminal equipment may be located from the PABX switch.

3.17 Exchange Trunk Interface: The PABX switch interface operation with exchange and foreign exchange trunks shall be in accordance with EIA Standard RS-464. The impedance of the PBX trunk unit shall be 600 or 900 ohms, selectable, as agreeable with the telephone common carrier.

3.18 Private Line Tie-Trunk Interface: The PABX switch interface with the telephone common carrier private line facilities for tie-trunk operation with other PABX switches shall be a Type 1 (2-way, 2-wire with E & M signaling) or a Type III (2-way, 4-wire with E & M signaling) tie-trunk interface as defined in bell system publication PUB 43201 where the transmission coupler and channel signaling unit are provided by the telephone common carrier.

The PABX switch shall utilize 2-wire E and M lead control signaling, Type 1 in accordance with Notes on the Network. Idle, seizure, answer supervision, call supervision, and disconnect status shall be indicated by the signal level of the E and M leads. When the tie-trunk is in the idle state, the M lead shall be at ground and the E lead shall be open. When the tie-trunk has been seized and answer supervision provided, the M lead shall be at negative battery and the E lead at ground. Start dialing signaling options of immediate, delayed, or wink shall be available. As a guide, start dialing timing shall be in accordance with Notes on the Network.

Tie-trunks shall receive or send dial pulse or DTMF address signaling in accordance with Section 3.13. The impedance of the tie-trunk unit, 2-wire or 4-wire, shall be 600 or 900 ohms, selectable, as agreeable with the telephone common carrier.

3.19 Private Line CCSA Trunk Interface: The PABX switch interface with the Common Control Switching Arrangement (CCSA) SUNCOM trunks shall be a Type III transmission tie-trunk interface as defined in Bell System Publication PUB 43201 and Type I E and M signaling interface, as defined in Notes on the Network. Start dialing signaling shall be wink start operation. The Bell Facility Interface Code (FIC) translator is TL31M. The interface jack normally utilized by the telco will be the RJ2GX. The contractor shall be responsible for obtaining all interface requirements from the telephone common carrier that may be necessary to assure satisfactory operation of the CCSA access feature.

3.20 Peripheral Equipment Interface: The system shall be compatible and operate properly with peripheral equipment that may be separately procured or provided by the purchaser. Such equipment shall be 1A2 and Electronic Key Telephone systems, Dictation equipment, Music-On-Hold equipment, Radio Pocket Paging equipment, External Voice Paging equipment, and Station Message Detail Accounting Equipment (SMDA). Special level dial access shall be provided for accessing the dictation and the paging equipment. The bidder shall describe the interface and connection requirements for operation of this equipment with the system.

3.21 Wire, Cable, and Hardware: Wire, cable, and hardware shall be provided to interconnect the system, connect the system to the purchaser provided wall service outlet power receptacle, and to connect the system to the telco network demarcation point. MDF wire shall consist of No. 24 AWG or larger copper conductors insulated with color coded thermoplastic insulation with pairs enclosed within a thermoplastic cable jacket.

Station wire shall be of two types, inside and outside, and shall consist of No. 24 AWG or larger copper conductors. Inside station wire shall be of three (3) types, Standard, Air Plenum, and Riser. The Standard type shall be suitable for installation in conduit and shall have conductors insulated with a color coded thermoplastic jacket. The Air Plenum type shall be wire suitable for installation without conduit in ceiling spaces that serve as a return air plenum. The Riser type shall be suitable for installation in vertical riser shafts without conduit. Cable installed in conduit shall be UL Listed as Type CM as being resistant to the spread of fire per NEC Article 800-3(b)(1).

Cable installed without conduit in ceiling spaces serving or not serving as a return air plenum shall be UL Listed as to Type CMP or UL Classified as to having adequate fire-resistant and low-smoke producing characteristics per NEC Article 800-3(b)(3). Cable installed in vertical riser shafts and runs shall be UL Listed as Type CMR as having fire-resistant characteristics capable of preventing the carrying of fire from floor to floor per NEC section 800 3(b)(2). The conductor insulation shall be color coded. Outside interbuilding station wire shall be of one type suitable for underground installation when placed in a duct or for direct burial in earth. The interbuilding station wire shall be in a cable with a jelly filled core of color coded plastic insulated copper conductors with a core binder, an aluminum shield, and an outer polyethylene jacket in accordance with REA specification PE-39.

Connecting blocks shall be Type 66, BIX, 110 Cross-Connect, Krone (or equivalent). Wall jacks shall be 8 conductor modular telephone jack assemblies for surface mounting and for flush mounting as the installation demands. The teleco network demarcation point plug shall mate with the fifty (50 position miniature ribbon RJ21X, RJ2EX, RJ2GX, and RJ2HX jacks provided by the telco.

3.22 Reserved

3.23 Equipment Description:

3.23.1 PABX Switching Equipment: The PABX switching equipment shall consist of a cabinet or cabinets containing all of the printed circuit card modules and other assemblies required to process and complete telephone calls utilizing the operational service features. Such modules and assemblies shall be the central processor memory, network service (receiver and tone), line and trunk, serial data input/output interface (programming equipment, traffic measurement recorder, etc.), console control units, software magnetic tape unit, and power supply and panel units. The switching equipment shall utilize connectorized cabling between cabinets and from the cabinets to the connector blocks. EIA Standard RS-232 port shall be provided for serial data input/output.

The switch shall be of modular design and functional packaging for ease of expansion and to permit rapid location and replacement of defective equipment. The PABX switch assemblies shall be housed in cabinets (or modules) with door(s) to provide access.

The cabinet, shelves, panels, etc., shall be constructed of metal of sufficient strength that the components will be securely supported and of a shape and form to assist heat dissipation and cooling. All metal edges shall be turned or finished such that no burrs or sharp edges remain. All metal surfaces shall be finished to resist rust or corrosion using the best commercial practices. All equipment components mounted within the cabinets shall be located no closer than six (6) inches to the finished surface of the equipment room floor or the cabinet(s) must be installed in an equivalent raised position above the floor.

The equipment shall be completely wired and equipped with self protection trouble signals, fuses, and associated equipment. Fuses shall be of an alarm and indicator type and their rating designated by legends, numerals, or color code on the fuse panel. Design precautions shall be taken to minimize the possibility of equipment damage arising from insertion of an electronic module into the wrong connector or the removal of a module from any connector. The equipment shall not be permanently damaged by accidental short circuits across the trunk or station terminals.

The cabinet size shall be compatible for installation in an equipment room with an eight (8) foot ceiling and a thirty-six (36) inch entrance door. The cabinet floor load shall not exceed 150 pounds per square foot. The switch shall be provided with a commercial power cord and plug for connection to the electrical power receptacle. The switch may be hardwired directly to a dedicated circuit breaker in the power panel.

The bidder shall specify the cabinet size, the quantity of cabinets to meet the baseline station line and trunk requirements, and the quantity of expansion cabinets to meet the capacity requirements for each PABX switch configuration. The bidder will also provide a sketch of a recommended telephone equipment room layout for each PABX switch configuration showing the location of the baseline switch, future expansion cabinets, and all other pertinent information with the bid. The bidder shall provide a face layout sketch of each cabinet showing the location and identification of each item in the baseline cabinet and the slots or spaces available for expansion in the baseline and expansion cabinets.

3.23.2 Attendant Console: The attendant console shall contain the necessary alphanumeric displays and operating buttons (keys) necessary for the attendant to process calls utilizing the attendant operational service features. The console shall also provide an alarm indication of a system malfunction.

The console shall have the capability of utilizing either a handset or a headset which shall be plugged into either end of the console. A plug equipped handset shall be provided with the console. The console shall be powered from the PABX switch.

The bidder shall specify the size of the console, the console wiring pair quantity and size, and the maximum distance the console may be installed from the switch.

3.24 Office Coordination: The purchaser shall assist the contractor in the development of marked floor plans and system worksheets for station instrument type and placement, station number appearances, applicable features, and other items necessary to establish the requirements of each station number such as class-of-service, pick-up group assignment, hunt group assignment, etc.

3.25 Accessories and Features: The following accessories and features enable the purchaser to equip and wire the baseline system to meet the purchaser's operational requirements. All items in Section 3.25 must be bid.

3.25.1 Voice Terminal, Single Line (VTSL): The VTSL shall be of four types - The first type shall be the industry standard generic analog Type 2500 desk telephone set with a flash button.

The second type shall be of the industry standard generic analog desk set with a minimum of seven fixed/programmable buttons that shall control switchhook flash, hold, last number redial, and PABX features.

The third type shall be a proprietary digital set if the PABX is designed for use with proprietary digital voice terminals, or a proprietary analog set if the PABX is designed for use with proprietary analog voice terminals only. The set shall be equipped with fixed and/or programmable buttons for operating PABX features including switchhook flash. The proprietary VTSL shall accept the connection of the data terminal equipment interface adapter unit and be able to provide simultaneous voice and digital data transmission with the PABX switch through a single modular line cord and a four (4) pair maximum station wiring run.

The fourth type shall be non-proprietary analog set if the PABX system does not include a proprietary analog set. The set shall be equipped with fixed and/or programmable buttons for operating PABX features including switchhook flash. The non-proprietary VTSL shall accept the connection of the data terminal equipment interface adapter unit and be able to provide simultaneous voice and digital data transmission with the PABX switch through the set's single modular line cord and a four (4) pair maximum station wiring run or through the data terminal equipment interface adapter unit line cord and a four (4) pair maximum station wiring run.

The VTSL shall have a standard 12-button touchpad with an audible ringer or tone device and volume control. The analog VTSL shall transmit and receive voice signals with the PABX switch in analog form and the digital VTSL in digital form.

The VTSL shall be full modular with a 6 foot minimum flat retractable handset cord and a 7 foot minimum four (4) pair (maximum) line cord with a miniature modular plug for connection to a modular telephone wall jack assembly.

3.25.2 Voice Terminal, MultiLine Appearance (VTMLA): The VTMLA shall be of two types. The first type shall be the analog "KSU less" type compatible with PABX, CO and CENTREX/ESSX analog loop start lines with a minimum of 2 line appearance buttons and a minimum of seven fixed/programmable buttons that shall control flash, hold, last number redial, and PABX features.

The second type shall be a proprietary digital set if the PABX is designed for use with proprietary digital and analog voice terminals, or a proprietary analog set if the PABX is designed for use with proprietary analog voice terminals only. The set shall be equipped with fixed and programmable buttons for line appearances and PABX features. The VTMLA shall have a standard 12-button touchpad, an audible ringer or tone device, a ringer volume control, and be capable of accepting a headset adapter and headset. The line appearances shall be the station number assigned to the voice terminal and the station number(s) assigned to other voice terminal(s). The analog VTMLA shall transmit and receive voice signals with the PABX switch in analog form and the digital VTMLA in digital form. The proprietary VTMLA shall accept the connection of the data terminal equipment interface adapter unit and be able to provide simultaneous voice and digital data transmission with the PABX switch through a single modular line cord and a four (4) pair maximum station wiring run. The transmission between the VTMLA and the PABX switch shall be in accordance with the system's digital communications protocol. The VTMLA shall have a four (4) pair maximum line cord and a miniature modular plug for connection to a modular telephone wall jack assembly. More than one VTMLA model, each with different quantities of line and feature pushbuttons and status lamps, may be bid.

3.25.3 Station Wiring: Station wiring shall connect the wall jack assembly for voice and data terminal equipment and the ribbon jack for key telephone equipment with the baseline system station connecting blocks (Number 8 in Figure 1). Station wiring shall include 4 pair station cable, 4 pair modular wall jack assemblies, 25 pair station cable, ribbon jack, 25 pair distribution cable, riser cable, 25 pair distribution connecting blocks, 10 and 25 pair interbuilding surge protector blocks with surge protector modules, 6, 12, 25, 50, and 100 pair interbuilding cable (Numbers 16, 16A, 29A, 30, 17, 18, 13, and 14 respectively in Figure 1).

3.25.3.1 Station Wiring Cable: The station wiring between the modular telephone wall jack assembly and connecting blocks shall be four (4) pair station cable.

The station wiring between the ribbon jack for key equipment and the station connecting blocks shall be twenty-five pair cable.

The station distribution wiring between connecting blocks and between interbuilding surge protector block and connecting block shall be 25 pair cable.

Interbuilding station wiring shall be 6, 12, 25, 50, and 100 pair duct or buried cable terminated on surge protector blocks.

Inside building type wiring shall be installed in conduit. Air plenum type inside building wiring shall be installed without conduit in return air plenum spaces. Riser cable shall be installed in riser spaces. Interbuilding station wiring shall be installed in the underground duct or shall be direct buried. A surge protector block shall be provided at each end of interbuilding station wiring. Surge protection modules shall be installed in the surge protector block across each pair. All cable pairs shall be terminated. Cable shield, protector blocks, and all inactive cable pairs shall be grounded at each end. Buried cable shall be trenched at a depth of no less than eighteen (18) inches below finish grade. The contractor shall restore the buried area to its original condition. If the area is covered by a permanent surface, (e.g. concrete, asphalt, etc.) the cost to restore this permanent surface shall be negotiated between the purchaser and the contractor prior to issuance of the purchase order.

3.25.3.2

Station Wiring Runs: Station wiring shall be of four inside building station run types and six interbuilding station run types. The bidder shall provide the cost of each inside building station run type on an inside building cost per foot basis from the modular telephone jack assembly and the ribbon jack to the station connecting block on the plywood backboard in the telephone equipment room. The cost shall include the installation and material cost of the: 1) cable, 2) modular telephone wall jack or ribbon jack, 3) necessary distribution connecting blocks, 4) termination of all cable pairs, and 5) the cross connection of all active cable pairs. The distribution connecting block shall be sized to terminate all cable pairs. An inside station wiring run may utilize distribution cable and riser cable in addition to the four (4) pair cable run to the wall jack.

The cost per foot for a station run shall be based upon a four (4) pair circuit in each of the cables utilized.

The bidder shall provide the cost of interbuilding station run type on a cost per foot basis for the cable and on a cost per surge protector block end termination. The cost for the cable shall include the material and installation cost of the cable. The cost for each surge protector block end termination shall include 1) the material and installation cost of surge protector block with a surge protector for each cable pair, 2) the cost to connect all interbuilding cable pairs to the surge protector block, 3) the cost to connect the surge protector block to ground, 4) the cost to connect all of the inside wiring cable pairs to the surge protector block, 5) the cost to connect the interbuilding cable shield to ground, and 6) the cost to ground all inactive cable pairs. The ten (10) station wiring types and the five (5) surge protector block types shall be defined as follows:

<u>Type</u>	<u>Location</u>	<u>End Termination Cable Type</u>	<u>Near End</u>	<u>Far End</u>
1	Inside Building	4 Pair Standard	*	4 Pair Wall Jack
2	Inside Building	25 Pair Standard	*	25 Pair Ribbon Jack
3	Inside Building	4 Pair Air Plenum	*	4 Pair Wall Jack
4	Inside Building	25 Pair Air Plenum	*	25 Pair Ribbon Jack
5	Interbuilding	6 Pair Duct	6 Pair Surge Protector Block	6 Pair Surge Protector Block
6	Interbuilding	12 Pair Duct	6 Pair Surge Protector Block	6 Pair Surge Protector Block
7	Interbuilding	25 Pair Duct	25 Pair Surge Protector Block	25 Pair Surge Protector Block
8	Interbuilding	50 Pair Duct	50 Pair Surge Protector Block	50 Pair Surge Protector Block
9	Interbuilding	100 Pair Duct	100 Pair Surge Protector Block	100 Pair Surge Protector Block
10	Interbuilding	6 Pair Buried	6 Pair Surge Protector Block	6 Pair Surge Protector Block
11	Interbuilding	12 Pair Buried	12 Pair Surge Protector Block	12 Pair Surge Protector Block
12	Interbuilding	25 Pair Buried	25 Pair Surge Protector Block	25 Pair Surge Protector Block



13	Interbuilding	50 Pair Buried	50 Pair Surge Protector Block	50 Pair Surge Protector Block
14	Interbuilding	100 Pair Buried	100 Pair Surge Protector Block	100 Pair Surge Protector Block

\* Station connecting block on the plywood backboard in the telephone equipment room or distribution block.

The bidder shall bid all station wiring run and surge protector block types.

The contractor shall determine the type and the length of each of the station wiring runs required.

3.25.4 PABX Station Lines - Additional Quantities: Additional quantities of PABX voice terminal station lines above the baseline quantity and other types of station lines such as digital lines for digital data terminal equipment interface units, and off-premise extensions for single line telephone instruments may be ordered. The bidder shall specify in the price sheets the quantity of PABX station line circuits that are provided on each type of station printed circuit card module and the cost of each type of additional station line printed circuit card module with installation. Installation shall include any necessary programming. The bidder shall provide any necessary footnotes on the price sheet describing their application.

3.25.5 PABX Trunks - Additional Quantities: Additional quantities of trunks above the baseline quantity, and other types of trunks such as DID, E&M tie-trunks (4&2 wire), CCSA SUNCOM Trunks (4 wire) and modem pooling trunks may be ordered. The bidder shall specify in the price sheets the quantity of trunk circuits that are provided on each type of trunk printed circuit card module and the cost of each type of trunk printed circuit card module with installation. Installation shall include any necessary programming. The bidder shall provide any necessary footnotes on the price sheet describing their application.

3.25.6 MDF Trunk Wiring: Additional quantities of PABX MDF trunk wiring above the baseline quantity may be ordered. The cost for each additional trunk wiring shall include the wire, installation, connection to the PABX, and connection to connector block. Trunk wiring shall be one (1) pair, two (2) pair, three (3) pair per trunk.

3.25.7 MDF Station Wiring: Additional quantities of PABX MDF station wiring above the baseline quantity may be ordered.

The cost for each additional station wiring shall include the wire, installation, connection to the PABX, and connection to the station connector block. MFD station wiring shall be bid as required by the proprietary VSTL & VTMLA, the industry standard generic analog VSTL, the "KSU less" VTMLA, and the DTEIU.

- 3.25.8 Attendant Consoles - Additional Quantities: Additional quantities of consoles (See Section 3.23.2) above the baseline quantity may be ordered. The bidder shall specify on the price sheet the cost of each additional console with installation. The cost shall consider the console and any additional PABX switch printed circuit card modules that may be required to support the additional console. Installation shall include any necessary programming.
- 3.25.9 Attendant Console Wiring: Quantities of attendant console wiring runs shall be ordered to the purchasers needs. A console wiring run shall be between the PABX switch equipment console jack and the console equipped plug-ended cord. The wiring may be inside standard or inside air plenum station wire. The pro rata cost per foot installed is required.
- 3.25.10 Data Terminal Equipment Interface Adapter Unit (DTEIAU): This unit shall connect to the proprietary VTSL and VTMLA and the non-proprietary VTSL and provide a RS232C interface connection to data terminal equipment (DTE) for use of the proprietary VTSL and VTMLA and the non-proprietary VTSL independently or simultaneously with other voice terminals and DTE connected to other station lines, or accessed through modem polling and analog transmission facilities. The unit shall support asynchronous data rates up to 19.2 Kbps and synchronous data rates up to a minimum of 19.2 Kbps. The unit may contain lamps and accessible controls to match the transmission characteristics of the data terminal equipment. More than one model of this unit may be provided according to the data transmission characteristics the unit can support. The VTSL and VTMLA with the DTEIAU shall be operable at a distance of at least 1000 feet from the PABX switch. The DTEIAU may have a power cord for connection to a 110 VAC outlet near the location of the VTSL and VTMLA.
- 3.25.11 Data Terminal Equipment Interface Unit (DTEIU): This unit shall connect to a station line and provide a RS232 interface connection to data terminal equipment (DTE) for operation with other DTE connected to station lines or accessed through modem pooling and analog transmission facilities. The DTE may also be used to connect a modem to the PABX in a modem pool. The transmission between the DTEIU and the PABX switch shall be in accordance with the system's digital communications protocol.
- The DTEIU shall support asynchronous data rates up to 19.2 Kbps and synchronous data rates up to a minimum of 19.2 Kbps. The unit may contain lamps and accessible controls to match the transmission characteristics of the DTE. More than one model of this unit may be provided according to the transmission characteristics the unit can support. The DTEIU shall be operable at a distance of at least 1000 feet from the PABX switch. The DTEIU may have a power cord for connection to a 110 Vac outlet.
- 3.25.12 Other Equipment: Each bidder shall bid other equipment that is necessary for the PABX switch bid to comply with the Simultaneous Voice and DATA, and the Modem Pooling features.
- 3.25.13 Additional Software Operational Service Features: One or more of the following operational service software features may be ordered with and become an integral part of the software package for the system. Each feature description is contained in Section 6.3. The descriptions shall be a part of these specifications. Equipment necessary for operation of the feature shall be provided separately under the applicable sections.

- A. Authorization Code (Programmable)
- B. CCSA SUNCOM Trunks (See Section 3.25.5)
- C. Customer Administration (See Section 3.25.14)
- D. Direct Digital Interface (T1), Per Connection, (See Section 3.25.15)
- E. Direct Inward Dialing (See Section 3.25.5)
- F. Direct Inward System Access (DISA)
- G. DISA Code Set-Up (Programmable)
- H. Distinctive Ring
- I. Intercept, DID
- J. Intercept, DID, to Announcer (See Section 3.25.16)
- K. Least Cost Routing - Modified
- L. Music-On-Hold (See Section 3.25.17)
- M. Off-Premise Station (See Section 3.25.4)
- N. Outgoing Trunk Queuing
- O. Power and Common Control Failure Transfer (See Section 3.25.18)
- P. Remote Administration (See Section 3.25.19)
- Q. Remote Testing (See Section 3.25.20)
- R. Restrictions - Origination (Programmable)
- S. Restrictions - Termination (Programmable)
- T. Restrictions - Toll 3/6 Digit
- U. Speakerphone (See Section 3.25.21)
- V. Speed Calling
- W. Station Message Detail
- X. Tie-Trunks (See Section 3.25.5)
- Y. Traffic Measurement (See Section 3.25.22)

Z. Voice Paging Access (See Section 3.25.23)

AA. Modem Pooling (See Section 3.25.24)

3.25.14

Administrative Equipment: This equipment shall enable the purchaser to perform the Customer Administrator feature function or the Remote Administration function. Additional equipment does not have to be bid if equipment comprising the baseline system can be used for administrative functions; however, it shall be possible to use the equipment in a room other than where the PABX switch is located. An administrative terminal shall be a keyboard send-receive data terminal capable of communicating with PABX switch common control central process unit and provide input commands and receive responses from the system during administrative procedures. English language prompts shall be provided to input commands and/or receive responses with the terminal during administrative procedures. Manuals supporting this function shall comply with paragraph 3.1.2. The characteristics of the keyboard, printer, and operator controls shall be compatible for operation with the PABX switch.

The data transmission characteristics and transmission rates shall be compatible with the switch. The data interface shall be in accordance with EIA Standard RS-232. The bidder shall specify if this equipment is capable of being used to record traffic measurement data and can be used in lieu of the associated traffic measurement recording equipment.

The administrative console shall contain all the necessary controls, indicators, and displays necessary for administration.

The bidder shall specify whether the equipment is a keyboard send-receive data terminal, an administrative console or other equipment, the size, the maximum distance the equipment can be located from the PABX switch, and the separate commercial power requirements of the equipment.

It shall be possible to command the system to print out a listing of all station numbers which shall include the characteristics of the station such as digital, analog, virtual number, etc. In addition, it shall be possible for the purchaser to record the following information associated with each number:

- A. Building designator: one character
- B. Room number: three characters
- C. Agency: six characters
- D. Individual's name: ten characters
- E. DID number transmitted when 9-1-1 or 9-9-1-1 call is made: seven characters. See 3.25.26.

The station listing shall include all information above.

The bidder shall specify on the price sheet the cost of the equipment with installation including all wiring.

3.25.15 Direct Digital Interface (T1) Equipment: This equipment and wiring shall enable the purchaser to transmit up to 24 voice grade circuits that are internal to the PABX over a T1 span line provided by the regulated telephone company or other common carrier to another PABX with the same capability. The equipment shall convert the signals into a DS-1 signal level for direct interface into the span line. The bidder shall specify the equipment to be provided for each T1 span line connection.

3.25.16 Intercept Announcer Equipment: This equipment shall provide a recorded announcement for DID Intercept. The equipment shall provide a single trunk route channel for Configurations 1 and 2 and two (2) trunk route channels for Configurations 3 and 4. The equipment shall provide a single announcement channel for Configurations 1 and 2 and two (2) announcement channels for simultaneous announcing for Configurations 3 & 4. Each announcement channel shall provide an announcement duration of at least 12 seconds. The equipment shall enable the purchaser to enter, check, erase and re-enter a new announcement. This equipment start/stop operation shall be under control of the DID Intercept to Recorder operational service feature. The bidder shall specify the size of the equipment and the maximum distance the equipment can be located from the PABX switch.

The bidder shall specify on the price sheet the cost of the equipment with installation including all wiring.

3.25.17 Music-On-Hold Interface Equipment: This equipment and wiring shall enable the purchaser provided music system to be accessed by the PABX when an outside call is placed on hold. The bidder shall specify the equipment to be provided.

3.25.18 Power and Common Control Failure Transfer Equipment: During a commercial power failure and a common control failure, the system shall enable designated station lines to be used to place an outside call or answer an incoming call on certain two-way exchange trunks on a one trunk per station basis. An audible indication of an incoming call on an assigned line when a transfer has occurred shall be provided by the station instrument or a separate bell at the station instrument location. A special version of the proprietary telephone instrument or a standard single line station instrument with ringer connected to a line is acceptable. The use of batteries to provide power for system operation during the commercial power failure shall be unacceptable. This feature shall be bid on a one trunk per station location basis. The bidder shall specify the equipment to be provided and the maximum number of trunks that can be transferred.

3.25.19 Remote Administration Interface Equipment: This on-site equipment and wiring shall enable the contractor and the purchaser to perform customer administrative functions on the PABX from a remote center at his premise by one or more of the following: a) direct-inward-dialing, b) dialing the PABX attendant, c) dialing a line directly connected to a modem. The bidder shall specify the equipment to be provided.

The PABX shall provide a capability for the purchaser to store a required password which shall consist of at least six alpha characters. Any attempt to gain access to the maintenance and administration feature shall require entry of the password. In addition, sequential entry attempts of non valid passwords exceeding three in any five minute period shall cause this feature to "lock up" and not accept any more entry attempts until a reset button on the PABX has been activated. A bright red light shall illuminate if such an event has occurred. There shall be no other way to gain access to this feature except through the password, i.e. there shall be no bypass methods supposedly known only to the bidder's technicians.

3.25.20 Remote Testing Interface Equipment: This on-site equipment and wiring shall enable the contractor to perform remote testing of PABX from a remote center at his premise by one or more of the following: a) direct-inward-dialing, b) dialing the PABX attendant, c) dialing a line directly connected to a modem. Remote testing may be performed during the non-business hours if interference with PABX operation will occur. The bidder shall specify the equipment to be provided.

3.25.21 Speakerphone Equipment: This equipment and wiring shall enable the station user to make, receive, and conduct calls without lifting the voice terminal handset. The equipment may be an adjunct unit connected to the voice terminal, an internal modification to the voice terminal, or a voice terminal in Sections 3.25.1 and 3.25.2 with a build-in speakerphone. The bidder shall specify the equipment to be provided.

3.25.22 Traffic Measurement Recording Equipment: This equipment shall print out the traffic data collected by Traffic Measurement service feature under control of the administrative equipment. The equipment shall be a printer compatible with the RS-232 output port of the PABX switch. It shall be possible to use this equipment in a room other than where the PABX switch is located. The bidder shall specify the equipment to be provided and the maximum distance the equipment can be located from the PABX switch.

It shall be possible to print out the hour by hour traffic in CCS of individual trunks without changing the configuration of any trunk group. The PABX shall also be capable of printing out the hour by hour traffic of any trunk group. The system shall be capable of accumulating traffic data over a 24 hour period, either single trunks or trunk groups, and printing it out either on site or remotely.

3.25.23 Voice Paging Access Interface Equipment: This equipment and wiring shall enable the purchaser to access the purchaser provided voice paging equipment. The equipment shall be wired to the station connecting block. The bidder shall specify the equipment to be provided.

3.25.24 Modem Pooling Equipment: The equipment and wiring shall permit a station with a DTEIAU (See Section 3.25.10) or a DTEIU (See Section 3.25.11) to contend for incoming and outgoing asynchronous and synchronous analog data calls over analog transmission facilities using a pool of modem loops. The bidder shall specify in addition to equipment previously covered in these specifications the equipment to be provided. Commercial available modems required shall not be bid but shall be identified by manufacturer and part number.

3.25.25 MDF Trunk Feeder Cable Additional: An additional length of MDF trunk feeder cable may be ordered if the distance between the demarcation point jack and the telephone service surge protector block exceeds twenty-five feet. Except interbuilding MDF trunk feeder cable, the feeder cable shall consist of individual twenty-five pair cables. Interbuilding MDF trunk feeder cable shall be in accordance with REA PE-39 and installed in accordance with Section 3.25.3. The bidder shall provide the cost of feeder cable by configuration and on a cost per foot basis in excess of twenty-five feet. The cost shall include the cable and installation.

3.25.26 Nine One One (9-1-1) Capability:

- A. **CAMA TRUNKS:** The PABX shall provide an interface for two telephone industry CAMA trunks for interconnection with a county enhanced E9-1-1 system. It shall be possible to dial from any PABX station the digits 9-9-1-1 or 9-1-1 and have the call routed over these trunks along with the assigned Direct Inward Dial (DID number) of that station. It shall be possible to program the PABX such that any station not having a DID number will have transmitted the DID number of a station in close proximity.

This capability shall be included for evaluation in the bidder's response. The price shall be identified in order that state agencies may delete it if necessary. It shall be the responsibility of the vendor to cooperate actively with the purchaser and the local telephone company to determine the feasibility of installing this feature.

- B. **ISDN TRUNKS:** The PABX shall have a capability for interconnection with a telephone company central office and a county E9-1-1 system using ISDN and Signalling System Seven. It shall be possible to dial from any PABX station the digits 9-9-1-1 or 9-1-1 and have the call routed over an ISDN trunk along with the assigned Direct Inward Dial (DID) number of that station. It shall be possible to program the PABX such that any station not having a DID number will have transmitted the DID number of a station in close proximity.

This capability shall be included for evaluation in the bidder's response. The price shall be identified in order that state agencies may delete it if necessary. It shall be the responsibility of the vendor to cooperate actively with the purchaser and the local telephone company to determine the feasibility of installing this feature.

- 3.26 Optional Features & Equipment: The bidder is requested to bid the following optional features and equipment that will enable the purchaser to equip the system to meet their special operational requirements. The features and equipment are not a part of the system requirements and will not be used in the bid evaluation.

- 3.26.1 Optional Software Operational Service Feature: One or more of the following service features may be ordered with and become an integral part of the software package for the system.

Each feature description is contained in Section 6.3. The descriptions shall be a part of these specifications. Equipment necessary for the operation of the feature shall be provided separately under the applicable sections:

- A. Automatic Call Distribution (ACD) (See Section 3.26.2)
- B. Automatic Identification of Outward Dialing (See Section 3.26.3)
- C. Automatic Trunk Testing (See Section 3.26.4)
- D. Call Park
- E. Class of Service Day/Night

- F. Control of Trunk Group Access
- G. Data Security
- H. Dictation Access (See Section 3.26.5)
- I. Direct-In Termination
- J. Executive Override
- K. Least Cost Routing - 3/6 Digit
- L. Radio Pocket Paging (See Section 3.26.6)
- M. Redundancy (See Section 3.26.7)
- N. Single Digit Dialing (Group Alert)
- O. Tandem Switching
- P. Tenant Service
- Q. Uniform Call Distribution
- R. Voice Mail (See Section 3.26.10)

3.26.2 Automatic Call Distribution (ACD) Equipment: This equipment (and software) shall enable operation of the ACD operational service feature. The bidder shall specify the equipment and software to be provided and whether any of the accessories can be utilized.

3.26.3 Automatic Trunk Testing Equipment: This equipment shall on site and remotely test the signaling integrity and transmission quality of the trunking facilities provided by the regulated telephone company and other common carriers. The equipment shall generate and print test reports. The bidder shall specify the equipment to be provided.

3.26.4 Dictation Access Interface Equipment: This equipment and wiring shall provide an access interface with the purchaser provided dictation equipment. The equipment shall be wired to the station connecting block. The bidder shall specify the equipment to be provided.

3.26.5 Radio Pocket Paging Access Interface Equipment: This equipment and wiring shall enable the purchaser to access the purchaser provided radio pocket paging equipment. The equipment shall be wired to the station connecting blocks. The bidder shall specify the equipment to be provided.

3.27.6 Redundancy Equipment: This equipment and wiring shall enable the PABX to function when critical modules such as central processors, local processors, memory, switching networks, power supplies, etc., fail. The bidder shall identify the equipment to be provided.



- 3.26.7 Station Message Detail Accounting Equipment: This equipment shall utilize station message detail from the RS232 data port on the PABX and generate and print accounting and management reports on telephone usage. The bidder shall specify the equipment to be provided, the format of the data and a definition of the "handshake" required to transfer data from the PABX SMDR output to external call accounting equipment. In the event of an AC power failure, either transient or extended, or in the event of a failure of the call accounting equipment, the SMDR output shall not cease operation. In no case shall it be necessary to physically reset a button on the SMDR output circuit after such a failure.
- 3.26.8 Uninterruptible Power Supply (UPS) Equipment: This feature shall provide uninterruptible power to the PABX switch during normal availability of commercial power and during commercial power transients and failure. The UPS may be either of the following types.
- The equipment shall be sized for the trunk/station capacity of the configuration. The inverter can be omitted if the total system requires only DC power. The bidder shall specify the equipment to be provided. The UPS may be either of the following types.
- 3.26.9.1 Prime Power: AC: The UPS shall consist of a battery rectifier/charger, sealed batteries, an inverter, and a UPS failure bypass transfer switch. The battery discharge time with 50% of the stations off hook shall be 90 minutes and the battery recharge time shall be 8-15 times the discharge time. The purchaser shall be responsible for providing a space for the battery pack meeting all applicable building and fire codes. If the purchaser does not do so, the vendor shall advise the purchaser and the Division of Communications in writing. The vendor shall state in the bid response the vendor's plan for ensuring that the batteries are operational throughout the life of the PABX.
- 3.26.9.1 Prime Power: DC: The UPS shall consist of a battery rectifier charger and sealed batteries. The PABX shall operate directly from the battery pack which is continuously being charged. The capacity of the batteries shall be sufficient to operate the PABX for 90 minutes with 50% of the stations off hook. The rectifier charger shall have sufficient capacity to recharge the batteries within 8-15 times the discharge time while simultaneously powering the PABX system. The purchaser shall be responsible for providing a space for the battery pack meeting all applicable building and fire codes. If the purchaser does not do so, the vendor shall advise the purchaser and the Division of Communications in writing. The vendor shall state in the bid response the vendor's plan for ensuring that the batteries are operational throughout the life of the PABX.
- 3.26.10 Voice Mail Equipment: This equipment shall enable callers to leave voice messages for the called station and enable the called station to retrieve the store message and add to and forward the message to another station. The equipment may be bid in channel, mail boxes, and hours of storage configurations suitable for the system capacity. The bidder shall specify the equipment to be provided.
- 3.27 Other Equipment and Features: Each bidder is requested to bid other equipment and features that will enhance the capability of the PABX system.

3.28 Federal Communications Commission (FCC) Registration: Registration in accordance with Federal Communications Commission (FCC) Rules and Regulations is required for all equipment connected to the regulated common carrier switched and private networks. The bidder shall submit with his bid the FCC registration number and the ringer equivalence of the applicable equipment.

4.0 SAMPLING, INSPECTION, AND TESTING

4.1 Sampling, Inspection, and Testing: Upon request, the contractor shall provide a sample, free of all charges, of each contract equipment item for nondestructive testing during the term of the contract. These samples will be checked for contract compliance and may be kept up to thirty (30) consecutive calendar days and thereafter returned at contractor's expense.

Upon completion of the contract compliance check, the Division of Purchasing shall notify the contractor, in writing, of noted deficiencies. This notification will state what will be required of the contractor and/or what action will be taken by the Division of Purchasing.

5.0 PREPARATION FOR DELIVERY

5.1 Packing: Items shall be packed in containers to insure safe delivery to the destination.

5.2 Marking: All containers delivered to the purchaser shall bear markings and/or a packing slip on the outside of the container showing:

- A. Contractor's name
- B. Purchaser Order Number

6.0 NOTES

6.1 Specification Deviation: Commodities procured under this specification shall not deviate from those originally contracted for without written approval from the Division of Purchasing.

6.2 Specification Revision: This specification shall, until revised or rescinded by the Division of Purchasing, apply to each future purchase and contract for the commodities described herein.

6.3 Glossary of Operational Service Feature Descriptions:

Alarm Display: Allows the attendant to be visually alerted that a malfunction has occurred within the PABX switch equipment or the attendant console.

Authorization Code: Allows a station user to override the class-of-service assigned to that station number by dialing a code number. The authorization code number may be recorded by the SMDR feature with the toll call detail. The authorization code shall be inspected for validity as a security check.

Automatic Call Distribution (ACD): This feature shall provide an equitable distribution of a large volume of incoming calls to answering positions. If all answering positions are busy, the calls will be answered by a recorded announcement and then held in order of their arrival in queue until an answering position becomes available. If more than one answering position is available, the call will be distributed to the answering position that has answered the fewest calls. This feature shall permit the answering position's supervisor to enter and monitor a call in progress without the knowledge of the answering position. This feature shall provide the following real and buffered time statistics: number of calls received, number of calls answered, number of calls in queue, duration of call in queue, duration of call answered, etc.

Automatic Callback Station Busy: Allows a station user calling a busy station to be automatically connected to the called station when the station becomes idle. A recall ring shall inform the calling station when the switch has completed the connection to the called station.

Automatic Diagnostics: The PABX switch shall automatically perform continuous on-line self testing diagnostics to detect circuit malfunctions, identify the faulty circuit card, and provide an alarm. An alarm signal shall be provided to the attendant console and information on the cause and location of malfunction shall appear on the equipment used for maintenance purposes.

Automatic Identification of Outward "911" Dialing: This feature shall enable stations to directly dial the 911 emergency number without any dial level access code. The system will also provide the 7-digit station number of the station dialing 911 to a special data line provided by the regulated telephone company.

Automatic Trunk Testing: This feature shall enable the purchaser to issue commands to the PABX to perform end-to-end test on C.O. trunks and tie-trunks, detect faulty trunks, and print out the test results.

Automatic Station Release: An off-hook station shall be released from an established transmission path and busied out if the station fails to dial, dial properly or completely, or is left off-hook after completing a call. The busied out condition shall terminate when the station is placed on-hook.

Busy Status Display: Allows the attendant to visually observe the busy or idle status of any station number.

Call Forwarding - All Calls: Allows a station user to program calls directed to his station to any other station or the attendant regardless of the busy or idle state of his station. This feature can be initiated from any station.

Call Forwarding - Busy Line, Don't Answer: Allows a station user to program calls directed to his station to any other station or the attendant whenever his station is either busy or does not answer within a prescribed number of rings. This feature can be initiated from any station.

Call Hold: Allows a station user on an established call to place the call on hold, replace the telephone handset or make another call, and then return to complete the call.

Call Identification Display: Allows the attendant to visually identify the station or trunk group number and class of service of the station or the trunk group of the call directed to or placed by the attendant position.

Call Park: Allows a station user on an active call to place the call on hold, replace the telephone handset, and then complete the call from any other station.

Call Pick-Up: Allows a group of stations to be assigned to Pick-Up group and allows any station within the group to pick up a call to any station within the group. The station picking up may be idle or on another established call.

Call Splitting: Allows the attendant to talk privately to either party of call established through the attendant position.

Call Waiting: The switch shall allow a call from a calling station to a busy station to be held while a tone burst is directed towards the busy station user. The busy station user may connect to the waiting call by hanging up whereby the called station will ring and will be connected to the calling station.

Alternatively, the busy station user can activate the call hold feature to hold the call in progress and answer the waiting call.

Call Waiting Display: Allows the attendant to visually identify the quantity of calls being held for disposition.

Camp On: Allows the attendant to extend an incoming call to a busy station. The incoming call shall be automatically connected to the station when the station becomes idle. The attendant shall be signaled if the busy station does not answer within a predetermined interval of time. The caller on the busy station shall hear a tone to indicate he has been camped on.

CCSA SUNCOM Trunks: The switch shall accommodate Common Control Switching Arrangement (CCSA) SUNCOM trunks provided by the telephone common carrier CCSA SUNCOM Network. This feature shall allow a station to access and direct-outward dial calls to the network and receive direct-inward dialed calls from the network without the aid of an attendant.

Class of Service: The system shall allow each station number to be assigned and identified with a level of class of service to control the station user degree of access to the local exchange, toll, and CCSA networks, and to service features and special services.

Class of Service, Day/Night: The level of class of service assigned to stations can be automatically altered to a predetermined night class of service when the attendant console is placed in the night service mode or when a predetermined time interval is reached.

Conference: Allows a station user to establish multi-station conference connections between stations within the system or outside the system.

Control of Trunk Group Access: Allows the attendant to restrict station dial access to trunk groups. When activated, such calls shall be routed to the attendant.

Customer Administration: This feature shall enable the purchaser's personnel to perform system administrative functions such as changes to the office data base (station number assignment/reassignment, authorization code assignment, class-of-service assignment, pick-up group assignment, hunt assignment, etc.) control of the traffic measurement feature, and activate portions of the installation independent (generic) program not initially activated.

Data Security: Allows a station with data terminal equipment to be protected from any intrusion that could cause damage to the transmission of data such as executive override and call waiting tones, etc. This feature shall be subject to a class-of-service assignment.

Dial Access to Attendant: Allows station users on the system to reach the attendant.

Dictation Access: Allows a station user to access purchaser provided dictation equipment by first dialing the appropriate access code. This feature shall be subject to class of service assignment.

Direct Digital Interface (T1): This feature provides a means of converting a group of up to twenty-four (24) PABX trunk circuits into a DS-1 signal level for direct connection to a T1 span provided by the regulated telephone or other common carrier at the demarcation point. The system shall be capable of connecting to at least two (2) T1 span lines. Both Master and Slave operation are required.

Direct-In Termination: Allows incoming trunk calls to be programmed to route directly to preselected stations without attendant intervention. The Hunting feature shall operate with this feature.

Direct-Inward Dialing (DID): The switch shall allow a station to receive incoming calls from the exchange network in conjunction with exchange network DID trunks and facilities without the aid of an attendant. DID service will be provided by and at the availability of the exchange network facilities.

Direct-Inward System Access (DISA): The PABX switch shall allow a caller using the regulated telephone common carrier exchange network to access the PABX switch using a special DISA trunk (and 7 digit number) and dialing a carrier code. After the code is dialed the PABX switch shall return dial tone to the caller who may then use the PABX with the class of service assigned to the DISA trunk.

DISA Code Setup: Allows the attendant to change the Direct-Inward System Access (DISA) security code number.

Direct Outward Dialing (DOD): This feature shall enable a station to access the exchange network or the CCSA Network without the aid of an attendant by first dialing an appropriate trunk access code. This feature shall be subject to class of service assignment. Access to the CCSA network shall be by dialing a single digit.

Distinctive Ringing: The PABX switch shall provide two (2) distinctive ringing patterns to the station instrument to allow the station user to determine if the call is an inside (station-to-station) call or an outside (trunk) call. A third ringing pattern to allow the station user to determine if the automatic callback feature is recalling the station (recall ring) is acceptable but not mandatory.

Exchange Trunks: The switch shall accommodate ground start or loop start local or foreign exchange and WATS trunks provided as part of the regulated telephone common carrier exchange network. The trunks shall be 1) two-way combination, 2) one-way incoming, 3) one-way outgoing, 4) one-way incoming (Direct-Inward Dialing). Toll calls will be billed to the Listed Directory Number assigned to the switch.

Executive Override: Allows a station user, upon encountering a busy station call, to bridge on to the call. Before the bridge is established, an executive override tone will be applied to advise the talking parties of the impending bridge. This feature shall be subject to class of service assignment.

Extension of Incoming Call: Allow the attendant to extend incoming trunk calls to the requested station or trunk group.

Flexible Numbering: Allows the station numbers assigned to station lines at the time of installation in accordance with the purchaser's numbering plan be reassigned to another station line when personnel are moved.

Foreign Exchange (FX) Access: The switch shall accommodate foreign exchange (FX) trunks and allow a station to access the FX trunk without the aid of an attendant. Incoming calls from the FX trunk will be answered and handled by the attendant.

Hunting: Allows a group of stations to be assigned to a hunt group and have calls routed to an idle station within a group when the called station in the group is busy. Hunting shall always start with the called station and terminate at the first idle station found. Hunting shall take place in the order in which the stations are assigned into the hunt group.

Intercept: The switch shall automatically route calls to the attendant which cannot be completed because of vacant or unassigned number, calling station number class of service restrictions, and dialing irregularities. The system shall provide an intercept tone to the calling station if attendantless operation is in effect.

Intercept, DID: Direct-inward dialed calls to reserved, idle, and unassigned DID station numbers shall be intercepted and routed to the attendant.

Intercept, DID, to Recorder: Direct-inward dialed calls to reserved, idle, and unassigned DID station numbers shall be intercepted and routed to a recorded announcement machine on one trunk channel for Configurations 1 and 2 and two (2) trunk channels for Configurations 3 and 4. Simultaneous calls shall be held in queue until the call(s) in progress with the recorded announcement is completed. The PABX shall provide an audible ringing to the callers in queue.

Least Cost Routing - 3/6 Digit: The switch shall automatically select the most economical route available for an outgoing call based upon the called number, the calling station class-of-service, available facilities, and time of day. The operation of this feature shall be transparent to the dialing of the trunk access code by the calling station.

Least Cost Routing, Modified: The switch shall automatically route any call which is dialed DDD as an off-net CCSA SUNCOM call if a CCSA SUNCOM trunk is available. This feature is applicable only to stations not restricted from Toll 0/1 access.

Modem Pooling: Allows the switched connection between stations with data terminal equipment and analog transmission facilities, such as central office trunks and private lines, through a pool of modems and data terminal equipment interface units. The feature shall provide more than one modem pool. Each modem pool shall be set up to support a specific set of data transmission characteristics or parameters such as synchronous or asynchronous, full duplex or half duplex, incoming and/or outgoing, and the data rate. The contractor shall provide a list of modems suitable for use with this feature.

Music-On-Hold: Allows a purchaser provided music source such as an AM/FM tuner to be provided to the PABX switch and provided to outside calls placed on hold.

Night Service: This feature shall provide arrangements to direct calls normally answered by or directed to the attendant(s) to preselected station(s) within the system when regular attendant positions are not occupied. The night answer station(s) shall be provided with call transfer capability. The selected station and the control of night service shall be controlled by the attendant console.

Off-Premise Station: The switch shall provide service to a station that is located on a premise other than that of the switch and connected through the regulated telephone common carrier private line facilities. The bidder shall specify the Bell Facility Interface Code (FIC).

Outgoing Trunk Queuing: Allows a station user accessing a busy trunk group to be held in a queue and to be signaled within a predetermined interval of time by a recall ring when a trunk in the group is available.

Power and Common Control Failure Transfer: During a commercial power failure and a common control failure, the system shall enable designated station users to place an outside call or answer an incoming call on certain two-way exchange trunks at designated station locations on a one trunk per station location basis. An audible indication of an incoming call on an assigned line when a transfer has occurred shall be provided by the station instrument or a separate bell at the station instrument location. A special version of the proprietary telephone instrument or a standard single line station instrument with ringer connected to a line is acceptable. The use of batteries to provide power for system operation during the commercial power failure shall be unacceptable. This feature shall be bid on a one trunk per station location basis.

Radio Pocket Paging Access: Allows a station user or attendant to access purchaser provided radio pocket paging equipment by first dialing the appropriate access code. This feature shall be subject to class of service assignment.

Redundancy: This feature shall improve the reliability of the PABX switch by providing redundant circuitry of critical functions such as central processors, local processors, memory, switching network, control, power supplies, etc.

The bidder shall identify on the price sheet with footnotes the function level of each redundancy provided.

Remote Administration: This feature shall allow the contractor and the purchaser to perform customer administrative functions from a remote center at his premise by dial-up access to the PABX switch.

Remote Testing: This feature shall allow the contractor (or equipment manufacturer) to remotely test system performance on a daily and monthly basis, or as requested, by dial-up access of the maintenance and self-test diagnostic capability of the PABX switch, analyze the results, and if necessary, conduct additional troubleshooting test programs to locate the source of trouble. These tests shall be performed during the non-business hours if interference with PABX switch operation is possible.

Restrictions - Full: Allows selected stations to be restricted only to placing or receiving station-to-station calls. All other call attempts shall be intercepted. This feature shall be subject to class of service assignment.

Restrictions - Miscellaneous Trunk: Allows selected stations to be restricted from dial access to preselected miscellaneous trunk group including CCSA SUNCOM trunks. Restricted call attempts shall be intercepted. This feature shall be subject to class of service assignment.

Restrictions - Origination: Allows selected stations to be restricted from originating any calls. However, terminating calls can be completed to this station line. This feature shall be subject to class of service assignment.

Restrictions - Termination: Allows selected stations to be restricted from receiving any calls. This feature shall be subject to class of service assignment.

Restrictions - Toll 0/1: Allows selected stations to be restricted from access to the toll operator or the DDD network. Restricted call "0" or "1" attempts shall be intercepted. This feature shall be subject to class of service assignment.

Restrictions - Toll 3/6 Digit: Allows a station to be restricted to dialing common unrestricted codes, specific area codes, exchange codes, and exchange codes within specific area codes over all or selected trunk group types.

Common unrestricted codes shall be for emergency assistance (911), local area directory assistance (411), and telephone repair service (611).

Simultaneous Voice and Data: Allows a station user to originate or receive any voice call using the station voice terminal and simultaneously originate or receive any data call using the station data terminal equipment.

The PABX station-to-station data calls shall be at data speeds up to 19.2 Kbps asynchronous and up to 19.2 Kbps synchronous.

Single Digit Dialing (Group Alert): Allows a group of stations to be assigned to an alert group and simultaneously called by dialing a single digit assigned to the group. The single digit shall not conflict with the system numbering plan.

Speed Calling: Allows a station user to place frequently called station, local, DDD, or CCSA SUNCOM calls by dialing fewer digits than normally required.

Station Message Detail: This feature shall enable the purchaser to identify the contribution of each station number to the total long distance bill (DDD and CCSA) rendered by the telephone company to the common number(s) assigned to the system and enable the purchaser to bill to each station number, department, etc.



The station message detail shall provide as a minimum the following detail on each outgoing call: the calling station number, the called number, date of call, call start time and duration, and a call accounting code. The call duration shall be measured from the establishment of the connection to the time the station goes on hook. The collected station message detail shall be available from a SMDR output data port in accordance with EIA Standard RS-232 on the PABX switch. This feature shall require additional station message detail accounting equipment.

Station-to-Station Calling: Allows a station to dial another station without the aid of an attendant if the called station is not termination restricted.

Switchhook Flash: The system shall permit a momentary on-hook switchhook flash to operate certain station features. An on-hook condition between 300ms and 1 second shall be recognized as a valid switchhook flash.

Tandem Switching: This feature shall enable the switch to be used as an intermediate switching point for calls between other PABX switches when connected by tie-trunks to the other switches by completing a tie-trunk to tie-trunk connection without attendant assistance.

Tenant Service: Allows the capabilities of the PABX to be partitioned or shared between two or more users where each user or tenant will have their own trunk groups and attendant console(s).

Through Dialing: Allows an attendant to select a trunk facility on an attendant handled outgoing call so that the station user can complete the dialing.

Tie-Trunks: The PABX switch shall accommodate interswitch tie-trunks to permit calling with another PABX or between two other PBX's using tandem switching. The PABX switch shall allow connection of the incoming tie-trunk call to the attendant and to local, FX WATS, CCSA, etc., trunk groups.

Timed Reminder (Recall): Allows the attendant to be automatically alerted after an assigned timeout period when a call that has been extended from the attendant console is waiting or unanswered.

Traffic Measurement: Allows traffic data to be measured and accumulated in the PABX switch over assignable time periods. The start time and run time shall be assignable. The data shall be available from a traffic output data port in accordance with EIA Standard RS-232 on the PBX switch. The control of this feature shall be by the customer administration feature.

As a minimum, traffic measurement data in the form of peg counts and usage (CCS) shall be provided for the following parameters:

Identified Trunk Groups

Outgoing Calls (peg count and usage)

Incoming Calls (peg count and usage)

All Calls, Busy (peg count and usage)

Quantity Working (peg count)

Identified Station Features

Each (peg count)

Identified Consoles

Calls Handled (peg count and usage)

Calls Waiting (peg count and usage)

PABX Switch

Calls Handled (usage)

Transfer All Calls: Enables the attendant to transfer a station on any call in progress to any other trunk or station on the switch.

Transfer-Consultation-Add On: Allows a station user, on any established call, to transfer the call to the attendant or a third station, to converse with a third station and return to the call, or add the third station to the call. The station user may hang up before the third station answers the transferred call. The third station may be a call established on a trunk group.

Trunk Answer From any Station (TAFAS): Allows incoming calls directed to the attendant to activate a common ring gong chime signal when the attendant positions are in Night Service and the night stations are unassigned or all busy. Any station may answer the call by dialing a special TAFAS code.

Trunk Groups: The switch shall accommodate at least eight (8) trunk groups. A trunk group shall be considered as combination two-way, one-way in, one-way out, CCSA SUNCOM, In-WATS, foreign exchange, tie-line, DISA, and terminating OPX from another PABX. Dial level access shall be provided to trunk groups.

Trunk Group Busy Indication: The attendant console shall provide an indication when all the trunks within a trunk group are busy.

Trunk-to-Station-to-Tie-Trunk Access: The PABX shall accommodate off-premise extension(s) (OPX) from other PABX's and enable a station user to access the OPX without the aid of the attendant. Incoming calls from the OPX will be answered and handled by the attendant.

Trunk-to-Trunk Connection: Allows the attendant to connect any two trunks together.

Uniform Call Distribution: Allows a group of station lines to be assigned to a group and have incoming CO calls, FX calls, and In-WATS calls to be directed without attendant assistance to the group. The call will be answered by the first idle station line available from a circular hunt sequence.

Uninterruptible Power Supply (UPS): This feature shall provide uninterruptible power to the PABX switch during normal availability of commercial power and during commercial power transients and failure.

The UPS shall be non-redundant and consist of a battery rectifier/charger, a sealed lead-calcium "gel-cell" type battery pack, an inverter, and a UPS failure bypass transfer switch. The battery discharge time shall be 90 minutes and the battery recharge rate shall be 8-15 times the discharge time. The purchaser shall be responsible for providing a space for the battery pack meeting all applicable building and fire codes.

Voice Mail: This feature shall enable callers to leave voice messages for the called station and enable the called station to retrieve the stored messages and add to and forward the message to another station.

Voice Paging Access: Allows a station user to access purchaser provided voice paging equipment by first dialing the appropriate access code for one or more paging zones. This feature shall be subject to class of service assignment.

**PRICE SHEETS**

AVAYA Communication

<http://www.lucentdirect.com/Florida>

Siemens Information & Communications, Inc.

<http://florida.siemenscom.com>

Sprint

<http://www.utelfla.com:81/fcn>

**PLEASE CLICK ON THE VENDOR HTML ADDRESS FOR PRICING.**

ORDERING INSTRUCTIONS

NOTE:

ALL ORDERS SHOULD BE DIRECTED TO:

SPURS VENDOR NUMBER: F22-3713430-002

VENDOR: AVAYA Communication

STREET ADDRESS OR P.O. BOX: 3116 Capital Circle N.E., Suite 8

CITY, STATE, ZIP: Tallahassee, FL 32308

TELEPHONE: 850-216-4010

TOLL FREE NO.: 888-422-8018

ORDERING FAX NO.: 850-216-2173

REMIT ADDRESS: 3116 Capital Circle, N.E., Suite 8

CITY, STATE, ZIP: Tallahassee, FL 32308

WILL ACCEPT THE STATE OF FLORIDA PURCHASING CARD

PRODUCT

INFORMATION: DIRECT INQUIRY TO:

NAME AND TITLE: Steven R. Becker, National Account Manager Gov't Markets

STREET ADDRESS OR P.O. BOX: 3116 Capital Circle N.E., Suite 8

CITY, STATE, ZIP: Tallahassee, FL 32308

TELEPHONE: 850-216-4010

TOLL FREE NO.: 888-422-8018

URL HOME PAGE ADDRESS: http://www.lucent.com/enterprise/florida

ELECTRONIC MAIL ADDRESS: becker1@avaya.com

(Rev. 30 April 02)

# Siemens Information & Communications Networks, Inc.

## ORDERING INSTRUCTIONS

### NOTE:

ALL ORDERS SHOULD BE DIRECTED TO:

SPURS VENDOR NUMBER: F522122392-002

VENDOR: Siemens Information & Communications Networks, Inc. (A)

STREET ADDRESS OR P.O. BOX: 400 Rinehart Road, Mailzone 5b

CITY, STATE, ZIP: Lake Mary, FL 32746

TELEPHONE: 407-942-2258

TOLL FREE NO.: 1-800-444-0344

ORDERING FAX NO.: 407-942-2261

REMIT ADDRESS: P. O. Box 99076

CITY, STATE, ZIP: Chicago, Illinois 60693

**WILL ACCEPT THE STATE OF FLORIDA PURCHASING CARD**

### PRODUCT

INFORMATION: DIRECT INQUIRY TO:

NAME AND TITLE: Deborah Alvarado, Sr. Administrator

STREET ADDRESS OR P.O. BOX: 400 Rinehart Road, Mailzone 5b

CITY, STATE, ZIP: Lake Mary, FL 32746

TELEPHONE: 407-942-2258

TOLL FREE NO.: 1-800-444-0344

URL HOME PAGE ADDRESS: <http://www.siemensenterprise.com>

ELECTRONIC MAIL ADDRESS: [debbi.alvarado@icn.siemens.com](mailto:debbi.alvarado@icn.siemens.com)

(Rev 3 Dec 03)

**AUTHORIZED SERVICE REPRESENTATIVES**

**WESTERN:**

H.B. Lush	1645 Metropolitan Blvd., Suite 2 Tallahassee, FL 32308	850-224-8100
-----------	---	--------------

**NORTHERN:**

Mark Caldwell Randy Logan	11250 Old St. Augustine Rd., No. 15-358 Jacksonville, 32257	904-565-2360
------------------------------	--	--------------

**CENTRAL:**

Bob Beninati Dale Bradford Alex Carrero Joe Chalmers Greg Falconer Joe Gale John Marincin Mike Masters Jim Miley Joe Santos Greg Schober	5429 Beaumont Center Blvd., Suite 850 Tampa, FL 33634	813-282-2800
--	--	--------------

**SOUTHERN:**

Frank Dono Don Fennell Ron Freed Jhimi Herrera Zainul Kudrati Ralph Martin Casey Miles Gary McLeary Tom Villianti Bob Zecman	900 Broken Sound Parkway, NW Boca Raton, FL 33487	954-776-7656
---	--	--------------

(Rev 3 Dec 03)

ORDERING INSTRUCTIONS

NOTE:

ALL ORDERS SHOULD BE DIRECTED TO:

SPURS VENDOR NUMBER: F590248365-001

VENDOR: SPRINT (A)

STREET ADDRESS OR P.O. BOX: 101 N. MONROE, SUITE 100

CITY, STATE, ZIP: TALLAHASSEE, FL 32301

TELEPHONE: 850-847-0290

TOLL FREE NO.: N/A

ORDERING FAX NO.: 850-847-0940

REMIT ADDRESS: P.O. BOX 165000

CITY, STATE, ZIP: ALTAMONTE SPRINGS, FL 32716-5000

**WILL ACCEPT THE STATE OF FLORIDA PURCHASING CARD**

PRODUCT

INFORMATION: DIRECT INQUIRY TO:

NAME AND TITLE: Richard Hartsfield

ADDRESS: 101 N. Monroe Street, Suite 100

CITY, STATE, ZIP: Tallahassee, FL 32301-1547

TELEPHONE: 850-599-1642

TOLL FREE NO.: N/A

URL HOME PAGE ADDRESS: www.sprint.com

ELECTRONIC MAIL ADDRESS: richard.c.hartsfield@mail.sprint.com