

STATE OF NEW HAMPSHIRE  
Dept. of Administrative Services  
Div. of Procurement and Support Services  
Bureau of Purchase and Property  
State House Annex  
Concord, New Hampshire 03301

Date: 07/01/2020

NOTICE OF CONTRACT

COMMODITY: TELEPHONE & DATA COMMUNICATION SERVICES

CONTRACT NO.: 8002687 NIGP: 915-0000

VENDOR: Consolidated Communications, Inc VENDOR #: 300703  
PO Box 11021  
Lewiston, ME 04243

CONTACT PERSON: Gregory Desjardin  
Tel. No.: (207) 329-5552  
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New billing requests: [sonhbilling@consolidated.com](mailto:sonhbilling@consolidated.com)  
**\*Note:** Billing will be sent with Consolidated Communications name on the invoice.

New order requests: [sonhorders@consolidated.com](mailto:sonhorders@consolidated.com)

EFFECTIVE FROM: July 1, 2020 **through** January 31, 2025

TERMS: Net 30

PRODUCTS & PRICES: SEE PRICING BELOW

QUESTIONS: Direct any questions to Ryan Aubert, 603-271-0580 or  
[Ryan.Aubert@das.NH.Gov](mailto:Ryan.Aubert@das.NH.Gov)

## **SCOPE OF WORK**

**Group 1:** Traditional Telephone Line Services as replacement for existing Centrex, measured service business, unlimited service business telephone lines and trunks. Inclusive are intrastate, interstate and international calling, voice mail, and multiple line features. All services must be installed as replacements to the incumbent vendor services prior to June 30, 2020.

**Group 2:** Legacy Line/Data Services as replacements for low speed data transfer, dry line operation, alarm lines and voice radio circuits. All services must be installed as replacements to the incumbent vendor services prior to June 30, 2020.

**Group 3:** Advanced Telephone Services are those providing multiple channel or high speed connectivity to the Public Switched Telephone Network (PSTN) intended as replacements to the following: ISDN PRI with DID, Dedicated T1 and SIP (Session Initiated Protocol) with DID technologies. All services must be installed as replacements to the incumbent vendor services prior to June 30, 2020

**Group 4:** High Speed Data Transfer Services inclusive of replacements for point to point and switched circuit operations. Current services include dedicated point to point T1, Frame Relay, switched Ethernet interface services, and ATM service.

**Group 5:** High Speed Internet Service Provider access. Broadband services shall include DSL. High Speed Cable Modem, Fiber Optic cable to the office, and Satellite services. All services must be installed as replacements to the incumbent vendor services prior to June 30, 2020.

## **SERVICE REQUIREMENTS**

The State shall determine the quantity required of any service offered by the Contractor.

The Contractor must fully cooperate with incumbent and future vendors for the replacement of services at the initiation and termination of contract to ensure service transfer with a minimum interruption of service.

Interfacing with Other vendors: During and after installation, Contractors shall contact alternate State vendors to resolve problems if they occur. The State will mediate in the event of unresolved conflicts.

Contractor shall attend any meetings called by the State to resolve such conflicts without additional charges being imposed on the State. New Service or Change Order: Contractor shall utilize and retain State issued Telecommunications Service Request numbers as a cross reference to any Contractor order number.

Contractor shall acknowledge receipt and acceptance of orders on the next State business day by means of an e-mail distributed to the State contacts. Maintenance/Service Hours: Contractor shall repair support/service restoration 24 hours per day, 7 days per week, 52 weeks per year. Reports shall be accepted via a toll free Contractor supplied number and e-mail. The Contractor shall perform 24 hour x 7 day monitoring, reporting and maintenance of its network in support of State services including addressing of system failure (full and component), network overload, network performance, alert management, management reports and other related items. Contractor will work with the State Project team to provide procedures for service acceptance and service disconnect.

### **Group 1 Voice Telephone**

Contractor's standard voice service is a voice-grade, analog telephone line that connects businesses to the public network through Contractor's network. Contractor's standard voice service shall include Long Distance services, Directory Assistance and facsimile (fax) machine compatibility. The service may be made available through a single redundant PBX, linked PBXs, IP based switches or any other proven technology. The State shall not act as an alpha or beta test site. Required interfaces shall not change with backup services, allowing continued use of State analog telephones and equipment unless the Contractor intends to supply replacements.

#### **1.1 Local Number Portability**

Contractor must ensure that existing telephone numbers are retained with service conversion. All number assignments shall be the responsibility of the Contractor, with strict coordination through the State. The Contractor must accept any telephone number (lines) used by the State prior to Contract to be transferred to the Contractor's network service. The Contractor shall be responsible for initiating all orders and requests for transferring services, ensuring that such orders are completed within the timeframe specified by the State, and completely operable to the satisfaction of the State. State offices shall retain telephone numbers when changing from current local exchange carrier to the Contractor's services as well as from the Contractor's

service to an alternate carrier. The Contractor must provide future telephone number portability with its line numbering.

### **1.2 Pre-Subscription for Local and Toll Services**

The Contractor shall provide local, intra-LATA and inter-LATA services. The Contractor shall ensure complete compliance with the North American dialing Plan and any international plans providing service. The State shall not be responsible for the payment of any bills generated due to Local Service Provider (LSP), Intra-LATA Primary Inter-exchange Carrier (LPIC) or Primary Interexchange Carrier (PIC) changes or associated with local or long distance trunking and carrier selection. The State shall not be billed for denial of long distance services on any line (per the selection of the State). All account errors that may result from "slamming" or other unauthorized activity shall be monitored by the Contractor. Any and all charges levied by the LEC or other entity for LPIC changes shall be invoiced to and paid directly by the service provider. All PIC selections defined by the State shall be "frozen" by the telephone service provider. Any charges resulting from changes performed by the Contractor or any other entity shall be invoiced to and paid by the telephone service provider.

### **1.3 Carrier Selection**

The State shall not be responsible for the payment of any costs generated due to Local Service Provider (LSP), Intra-LATA Primary Inter-exchange Carrier (LPIC) or Primary Interexchange Carrier (PIC) changes associated with local or long distance trunking and carrier selection. The State shall not be billed for denial of long distance services on any line (per the selection of the State). All account errors that may result from "slamming" or other unauthorized activity shall be monitored by the Contractor. Any and all charges levied by the LEC or other entity for LPIC changes shall be invoiced to and paid directly by the service provider. All PIC selections defined by the State shall be "frozen" by the telephone service provider. Any charges resulting from changes performed by the Contractor or any other entity shall be invoiced to and paid by the telephone service provider. The Contractor may offer services with unlimited toll calling including all of the above.

### **1.4 Toll Service Method**

Toll service must be completely transparent to telephone users, not requiring additional digits for dialing. Service must not require the use of dedicated lines or circuits (trunking) unless paid entirely by the Contractor, not resulting in one time or monthly charges to the State beyond usage charges. Assurance of service compatibility is entirely the responsibility of the inter-LATA long distance Contractor.

### **1.5 Carrier Verification Number**

The Contractor must provide a direct dial toll free number allowing a caller to verify the carrier used by a designated telephone.

### **1.6 Voice Call Billing Increments**

All Contractor invoices, call detail reports and charges shall be based upon six second or less billing increments, with charges rounded up to the nearest penny.. All costs shall be accurately defined and charged. 1 second billing shall be provided. No charges shall be incurred for incomplete call attempts.

### **1.7 Full Service Business Line**

Contractor must provide local exchange services at all State office locations as defined by the State and offered by the Contractor. LEC service consistent with State office locations shall be maintained, with no toll charges resulting from calls within the local exchange area. The Contractor is required to adhere, at a minimum, to the local calling area definitions for ILECs within New Hampshire.

The Contractor must not charge for Local Exchange service based upon usage fees on other but the fixed monthly line charge. Per minute and per call charges are not allowed. All charges for calls to and from exchanges common to ILEC Central Office access are inclusive of the monthly line charge.

### **1.8 Measured Service Business Line**

Contractor must provide local exchange services as defined by the State and offered by the Contractor. Calls on measured local service lines within the local exchange area may result in charges based upon per minute and per call usage charges.

### **1.9 Multiple Local Service Sites**

A single local exchange usage rate is priced for all local calling areas within New Hampshire. .

### **1.10 System Fraud Control**

The Contractor shall be responsible to monitor network traffic, validate fraudulent traffic, mitigate fraud, analyze fraud patterns and refer cases for investigation and utilize methods for fraud avoidance. The Contractor must provide a network security service, monitoring call fraud, 24 hours per day, 7 days per week, 52 weeks per year, to detect and prevent unauthorized service use. The State shall not be held liable for costs of suspected fraudulent calls. State accounts shall be credited for the cost of the fraudulent activity once detected. Monitoring shall include excessive call charges on a single line, account or calling card, excessive call duration, "third world" calls, high quantity of calls to the same geographic location and questionable third party charge-backs. Definition of methods employed for fraud detection shall include unauthorized changing of the primary intra-LATA and inter-LATA carrier (slamming) and assurance that unauthorized third party charges (cramming) do not result in charges to the State.

Contractor shall deploy the Equinox Protector which monitors all Contractor switches in Northern New England, including NH. Equinox Protector provides real time communications fraud protection and has thresholds to be set for monitoring calls – length of phone service, number of calls, charges for calls, etc. These are then captured for review. Collection representatives shall monitor the system for usage alarms and take appropriate actions by contacting the State, and to review long distance price plans or add toll blocks.

### **1.11 Compatible E911 Services**

Contractor must comply with State of New Hampshire RSA 374:22, I and make available the universal emergency telephone number 911 for seeking assistance from fire, police, and other related safety agencies through a single public safety answering point. Each telephone service provider shall assure that all requests for police, fire, medical, or other emergency services received by the provider or the provider's operator services shall be transferred to the public safety answering point. Such transfer shall include the calling party's telephone number in American Standard Code for Information Interchange (ASCII) in a format recommended for data exchange by the National Emergency Number Association (NENA).

### **1.12 Access to All Other n11 Services**

The network supporting voice services must be able to complete calls to n11 services (e.g. 411, 511). All telephone lines must allow dialing unless restricted by State request, with calls being answered by, n11 services. (911 is the only exception to this section. 911 calls shall not be restricted). This section does not infer n11 service itself, but access to and full compatibility with, all features and requirements of such systems. Inclusive must be:

- 211-Health and Human services information access;
- 311 non-emergency access to police, fire and government offices;
- 411 information services;
- 511 traveler information;
- 611 repair services;
- 711 telecommunications relay access services;
- 811 health services

### **1.13 Call Answer Supervision**

Contractor calling services must provide full call and answer supervision for both domestic United States and International calling, ensuring proper billing only for completed calls, and not based on duration of call attempt.

### **1.14 Dialing Plan Compatibility**

The local exchange service provided by the Contractor must adhere to all standards for the North American and International dialing plans. Local calls within the same calling area shall require a maximum seven-digit (NNX + XXXX) dialing plan. The Contractor must provide toll services that conform to the international dialing plan of the ITU for all international calls. The Contractor must accept transfer of all State used exchange and extension (XXX station number) to their services with no transfer fee billed to the State.

### **1.15 Service Grade P.01**

The Contractor shall be responsible to ensure that an apparent grade of P.01 is reflected to all users, resulting in a call blockage or service failure rate not to exceed one (1) call for every 100 calls placed.

### **1.16 Network Equipment**

Any and all equipment necessary for the Contractor to install to guarantee a high grade of service inclusive of, but not limited to, echo cancellers, noise filters, loop extenders, circuit loads, etc. shall be the responsibility of the Contractor, and not directly billable to the State.

### **1.17 Access Type**

For all services presented to the analog telephones, Contractor shall provide voice services that are fully compatible with single pair, two wire connectivity per station via loop and/or ground start services, requiring standard current draw via Bell Systems Technical Reference 41009 on standard 52-volt service. Any circuits may be connected either to single line, multiple line or PBX State-owned equipment at no additional cost to the State.

Contractor must ensure that telephones, faxes, modems and equipment currently used by the State operate in all facets with the Contractor's service unless Contractor includes replacement equipment.

### **1.18 Basic Rate ISDN Services**

The Contractor shall provide compatible (or substitute technology) ISDN services for the purposes of voice telephone and video data transport. All services allotted standard analog telephones shall be compatible and fully functional with State utilized telephones. Presently the services are defined as Bellcore "National" and "Custom" interface, with T and U interface operations. Fujitsu and Lucent manufactured telephones are widely used, but not exclusively.

Basic Rate ISDN services are currently designated by Verizon as "IBSD" service. Services shall allow (2) individual 64 Kbps basic rate or bonded 128 Kbps basic rate services and a 16 Kbps data channel. ISDN service must allow the establishment and control for circuit switched data connections between two basic rate interface (BRIs), in single channel or bonded (dual channel) operation. It shall also connect to one or two channels, as required, to an equal number of channels on a Primary Rate ISDN circuit.

Additional features shall include:

- Circuit Switched Data Call Hunting for BRI. Circuit Switch Data (CSD) call to a CSD Multi Line Hunt Group (MLHG) to be forwarded to a second CSD MLHG or line;
- Inter-switch Data Transport. Allow Circuit Switch Data calls between Vendor switches (at geographically diverse locations) carried on a clear data channel at data rates of 64 Kbps or 128 Kbps;
- Non-Invasive U-DSL Loop-Back. Service must allow loop-back testing without interruption of existing connection and communication transport services. Call cannot be interrupted by craft initiated loop-back tests.

### **1.19 Disconnection of Services**

The Contractor must provide local exchange service that allows for intercept messages and referrals to be associated with local exchange service that has been disconnected or is out of service. These intercept messages must include, but not be limited to, the following: number dialed which is not in service; number dialed not in service with referral to new number (10-digit format) and/or; number dialed temporarily out of service. A disconnected line shall be referred to an alternate telephone number with an intercept message after disconnection.

The Contractor must retain all State required intercept messages and referrals for a minimum of six months from the date of disconnection. The Contractor must provide all State required intercept messages and referrals at no cost to the State.

### **1.20 Operator Services**

The Contractor must provide local and intra-LATA human operator services for assistance in placing local, person-to-person, collect and local third party calls. All such services shall be programmable to allow or disallow services on a line-by-line basis. The Contractor must provide local operator service 24 hours per day, 7 days per week, 52 weeks per year with no holiday exceptions. The State must contact Contractor direct to issue a service order for blocking on a telephone line (e.g., TBE A – prevents incoming third number and collect calls).

### **1.21 Listing in Directory Assistance**

All published telephone numbers of State offices must be available to the general public through the use of telephone access to an automated or 'live' directory assistance at no additional cost. All directory information must be maintained and updated by the Contractor as directed by the State. The State may request, on a line by line basis, that any number be withheld from directory listings, at no additional line cost.

### **1.22 Printed Directory of Telephone Numbers**

The Contractor shall be provided a list of telephone numbers to be included in the present LEC (Currently published by Supermedia LLC) telephone directories as directed by the State. At present, only primary contact numbers are listed, but may be listed in multiple regional directories. The Contractor must, at a minimum, ensure that all such listings are continued. The State may request, on a line by line basis, that any number be withheld from directory listings, at no additional line cost.

The Contractor shall be responsible to coordinate with the State the inclusion or exclusion of all such directory listings. One listing per number shall be provided when directed by the State, at no charge to the State.

Additional listings may be invoiced as noted in Exhibit B Pricing Worksheets.

Contractor shall send the State of NH a Listing Verification Report, which the State of NH shall verify, revise as needed, and return to Contractor on or before the agreed upon deadline to ensure additions, deletions, or changes are published in the next issue of said directories. Contractor agrees that one listing per number shall be provided when directed by the State, at no charge to the State. Contractor agrees that the State may request, on a line by line basis, that any number be withheld from directory listings, at no additional line cost. A monthly recurring charge (MRC) would apply for additional listings as shown in Exhibit B.

### **1.23 Incoming Toll Free Services**

Contractor shall provide incoming toll free services that accommodate intra-LATA and inter-LATA calling. Line numbers assigned to incumbent carriers must be transferred to Contractor services.

The Contractor shall provide incoming toll free services on a virtual access basis. Virtual toll free dial service is that service which allows any call placed to a predefined toll free number to be connected to a designated telephone line.

### **1.24 Basic Network Service and/or Line Features**

Contractor must provide voice telephone services with, at a minimum, the following features that shall be inclusive of the basic monthly line cost. No additional charges shall be assessed lines utilizing any or all of these features. All feature assignments must be retained by the Contractor, whenever any line is modified or relocated. All features capabilities must be programmable, allowing assignments to lines on a line-by-line basis. A feature must be available to all devices used for audible communications on the Contractor's network, inclusive of ISDN (or alternate technology) services. Features defined with the term "ISDN" are specific to ISDN type telephones (or alternate technology) and may not apply to other services.

### **1.25 Call Waiting**

System must allow the release of an alert tone to a subscriber with a call in progress if a second call is placed to that subscriber. The user may then provide a "flash" or "switch-hook" command to the switch, allowing the primary call to be placed on hold and accessing the second call. A second switch-hook shall reverse the process. This feature must be programmable, and selectable on a per line basis.

### **1.26 Incoming Caller Identification**

The local exchange service must provide incoming caller identification (Caller ID) name and number allowing the display of calling telephone number and published name to an industry standard Caller ID device, telephone instrument or premises-based telephone system.

### **1.27 Outgoing Caller Identification**

Service must allow the State end user to define if or if not the originating Contractor subscribed line will release the originating caller ID to the called party. By default, each line shall be blocked. The Contractor must allow the State to permanently block or unblock ID information on a line-by-line basis and call by call basis.

### **1.28 Incoming Line Hunt**

Services must include unlimited line hunt of incoming calls to lines or trunks based upon a line busy scenario.

Forwarding shall be to any other line in the network. Line hunting is provided subject to the availability of suitable central office facilities.

### 1.29 Three Way Conference Call

Enables a station user to establish voice connection with two other parties. The user, by switch-hook (flash) operation, is able to place an existing call on hold and dial the telephone number of a third party, then merge both called parties into a single conference call.

### 1.30 Voice Messaging

The Contractor shall provide a voice messaging mailboxes utilizing DTMF prompts and permitting interaction with the service via any touch-tone telephone. The system shall recognize the station that the caller attempted to call, and provide a user customized message indicating that the called party is not available and to leave a message. The service must allow, at a minimum, up to 30 messages in a mailbox at any one time; message length of three minutes in duration and message retention of up to 30 days. The option to disallow incoming messages must also be provided.

Voice mail service shall be available 24 hours per day, 7 days per week, 52 weeks per year and utilizes the keys of a touch-tone telephone for feature activation and message manipulation. All user programmable features including outgoing message and message retrieval shall be password protected with a DTMF encoded password, selected by the user, of not less than four digits.

Voice mail message retrieval shall be per a dial-up access number. The user must be allowed to access his or her personal mailbox for message retrieval and message delivery via any telephone on the Contractor system and/or public switched network.

Voice mail shall be provisioned with the following features:

- **Voice Mail Message Notification:** Contractor shall provide voice mail notification via an audible message indication. Audible notification shall be in the form of a stutter dial tone that the telephone user hears when the phone is taken off hook to make a call. Stutter tones and duration must be unique enough for the common user to distinguish between stutter and typical dial tone.
- **Record a message:** System shall record messages up to three minutes in duration.
- **Replay a recorded message:** Allow a user to retrieve a message through DTMF commands.
- **Outgoing Message:** System must allow a user to record, modify, review and change an outgoing message at will, through DTMF telephones, connected directly on the Contractor's network, or remotely connected through the Public Switched Network.
- **Delete Recorded Messages:** Users shall be able to delete incoming messages at will by accessing the mailbox.
- **Mailbox Owner Features:** Mailbox owner must be able to perform the following when accessing voice mail:
  - ◆ Play messages;
  - ◆ Hear the time of day, day and date of message;
  - ◆ Save messages for future reference for a minimum of 20 days;
  - ◆ Erase a message;
  - ◆ Change password;
  - ◆ Create, edit, or delete personal greeting;
- **Non-blocking Operation.** Voice messaging shall be non-blocking, with the Contractor monitoring the occurrence of "busy" calls being rejected by the network, and expanding the service (ports) as necessary to maintain a P.02 grade of service under actual operating parameters;
- **Notification of Messages.** System shall provide message notification to users within three minutes of receipt of voice mail messages. Notification shall continue until user reviews such messages and deletes or stores messages for future reference;

### 1.31 Call Forwarding – Busy Line

Provides for the automatic routing of incoming calls to a pre-selected station line when the called station line is busy. This feature shall not be provided on a station line with Call Waiting.

### **1.32 Call Forwarding Don't Answer – All Calls**

Provides automatic routing of incoming calls to a pre-selected station line when the called telephone is not answered within a predetermined number of rings.

### **1.33 Call Forwarding Variable**

Allows a station user to redirect incoming calls to another line in the system or to a number outside of the system.

### **1.34 Call Pick up Groups**

This feature allows a user to answer any call within an associated preset pickup group. If more than one line within the pickup group has an unanswered incoming call, the call to be answered is selected by the switching system.

### **1.35 Call Transfer; All Calls**

Allows a station user to transfer any established call to another line within the system. It may also be arranged to transfer calls outside the system.

### **1.36 Conference Call-Six Way**

Contractor shall provide a six way conference calling feature which allows any station to sequentially call up to five other parties in a common call path is provided. The station should be able to add parties together to make a six-way call.

### **1.37 Outgoing Called Line Identification**

Provides a user originating call information about the calling party including name and number.

### **1.38 Incoming caller ID name and number.**

### **1.39 Message Waiting Indicators**

Informs a user that a message is waiting. Audible indicators provide an indication tone when the user goes off-hook. Visual indicators active-deactivate a message waiting indicator lamp on a station set.

### **1.40 Automated Attendant/Call Processor**

Contractor shall provide call processor services functioning as an automated attendant to greet callers, to inform callers of selection options through DTMF dialing, and transfer callers to a destination of their choice. The automated attendant/call processor may be used as a directory to present callers with a menu of choices and may be used in conjunction with other types of mailboxes inclusive of call answering and information only boxes. Automated attendant/call processors shall be available with a minimum 3 minute greeting and menu length. Contractor service must include the following items.

- Design and development of custom menus;
- Development support;
- Installation processes and support;
- Maintenance;
- Documentation;
- Performance monitoring and management reports;
- Security;
- Real time update;
- Scripting;
- Voice normalization.

### **1.41 Group 1 Services**

The following services shall be included in Group 1, all inclusive, with features as defined in this Group. These definitions shall apply to the Service Item denoted in the Contract.

**Centrex or Equal Full Feature Telephone Line with Unlimited Calling:** A full feature line with an analog appearance providing fixed call forwarding busy, call forwarding no answer, line hunts, and call pick-up groups and unlimited toll free US calling, all inclusive in the monthly cost. The line must be compatible with voice mail services.



**Centrex or Equal Full Feature Telephone Line Voice Mail Monthly:** Voice mail for Centrex or Equal Full Feature Telephone Line as defined within. The quoted cost is in addition to the line cost. No installation cost shall apply.

**Full Service Business Line (No toll charges within the US):** A standard business lines with limited services which include line hunting and unlimited toll calling within the US. The line must be compatible with voice mail services.

**Full Service Business Line Voice Mail:** Voice mail for Full Service Business Lines as defined within. The quoted cost is in addition to the line cost. No installation cost shall apply.

**Measured Service Business Line:** A standard business line with limited services. Local and toll charges shall apply.

**NH LATA Toll Calling (Per Minute):** The charge imposed for any service which charges for intrastate calls. Price must be listed per minute; Per call charges shall not apply.

**InterLATA Toll Calling (Per Minute):** The cost of calling anywhere within the continental United States. Price must be listed per minute; Per call charges shall not apply.

**Measured Service Business Line Local Calling Cost (per Call):** The per call rate for local exchange calling.

**Line Relocation (One time cost):** Relocation of any Group 1 line to a new address location (One time Cost)

**Toll Free Service:** Toll free number (e.g. 800, 888, 866, etc.) pointing to an analog line or DID.

**Toll Free Service Usage Charges, NH LATA Charges:** Cost per minute for line usage.

**Toll Free Service Usage Charges, InterLATA Charges:** Cost per minute for calls within the continental US.

**ISDN BRI Circuit/Line:** An unlimited service business line using ISDN technology.

**ISDN BRI Voice Mail:** Voice mail for ISDN BRI as defined within. The quoted cost is in addition to the line cost.

**Suspension of Number:** Temporary removal of service for a given number, referring the caller to a message that the line is not in service. Line suspension reserves the line for future use by the State. Typical applications include seasonal locations (Parks) and locations under remodeling.

**Directory Assistance:** Operator assistance allowing the caller to connect to a human operator who can assist callers to obtain telephone numbers and instruction them in the dialing method to connect to remote locations.

**Centrex or Equal Full Service Telephone Line Automated Attendant/Call Processor:** A Centrex or Full Feature Telephone Line automated service that provides a menu of Contractor shall provide call processor services functioning as an automated attendant to greet callers, to inform callers of selection options through DTMF dialing, and transfer callers to a destination of their choice.

**Directory Listing:** One Directory Listing for each main office line in the present LEC (Currently published by Supermedia LLC.) telephone directories as directed by the State. Any additional listings may result in a per listing charge.

**Unlisted Services:** The exclusion of given line numbers in printed telephone directories and directory assistance listings. All such numbers are withheld from release to directory assistance callers.

## Group 2 Legacy Line/Data Services

Contractor shall provide specialty services including analog data, alarm and radio circuits defined within this section. All services shall be fully compatible with current services utilized by the State. It shall be the sole responsibility of the Contractor to ensure that all services are installed as direct replacement of existing service, transparent to end users.

The following services are of limited use within the State, but required within Group 2 Legacy Circuit Services. The Contractor shall review each type circuit to determine the exact requirements based upon the current Contractor definition. Each service must be replaced entirely, with the awarded Contractor performing site audits to ensure replacement service operation without the installation of additional State owned Customer Premises Equipment (CPE). If such is required, the Contractor shall supply without additional charge to the State.

## **2.1 Standards**

All equipment and installations must meet National Equipment Building Standards (NEBS) compliant equipment with fully redundant hardware and automatic recovery resource switching. This does not infer backup circuit service, but a complete redundant network backbone.

## **2.2 Industry Standard Operation**

Contractor must utilize industry standard data transport formats, readily accessible from common industry equipment. Proprietary equipment may be used only if transparent to interfaces presented to the State at service demarcation points with prior approval by the State.

## **2.3 Standards Compliance**

Contracted services shall conform to all American National Standards Institute (ANSI) and International Telecommunications Union (ITU) standards including, but not limited to, service description, congestion management, core aspects, access signaling, data link control and application.

## **2.4 Service Definition and Inventory**

The Contractor is responsible to review each circuit provided, define circuit operating parameters and ensure replicated circuit operation. Contractor shall provide a listing each circuit, circuit type, definition of operation and circuit optioning required to provide operation under existing and conversion conditions. Lists shall be maintained current for all circuits throughout the duration of the contract. The State shall receive monthly updates via PC electronic media and remote access via internet connectivity

## **2.5 Legacy Services Network Management**

The Contractor must provide fully managed services including each of the following:

- Centralized monitoring of all facilities and real time reporting to State contact individuals when error or failures occur;
- Circuit test coordination, advising users when circuits require out of service tests or updates. Update notification shall be given to the State within a minimum of two State work days;
- Verification of services versus recommended industry standard parameters, inclusive of routing errors, network conflicts and compatibility of data and/or format of transmissions;
- Network programming and efficiency verification.

## **2.6 Legacy Circuit Quality of Service**

Contractor must specify and ensure a high Quality of Service (QoS) level for all services. Testing shall be performed immediately after circuit installation and on a demand basis when requested by the State. Test results shall be provided to the state within 48 hours of testing due to suspected trouble situations and within five days of new fully functional installations. Contractor shall maintain and prove continued circuit operation on a routine basis by monitoring QoS.

## **2.7 Intrusive Testing**

Contractor shall perform intrusive circuit testing whenever circuits are virtually out of service, without solutions found during routine testing. The State shall be notified 15 minutes before intrusive testing begins.

## **2.8 Demarcation Point**

Demarcation points (demarcs) for legacy data services shall be located in State designated computer rooms, server closets or terminating State data equipment locations within 150 lateral feet of the building penetration point or existing Main Distribution Frame (MDF) as defined by the State. It is the responsibility of the Contractor to provide any necessary cable, interface blocks, inside cable or other equipment required to connect Contractor services to State data equipment. Existing wire and cable may be used only if tested and certified for operation and maintained by the Contractor. The Contractor shall be responsible to maintain all such items and equipment throughout the duration of the contract. At the termination of the contract and any extension thereof, the Contractor shall remove all active (powered) components at their own expense. All passive (non-powered) devices shall be retained by the State.

Demarcs must be clearly labeled as such, including Contractor ID, circuit number, any associated test or demarc number and date of installation. Labels shall be on demarc devices. Contractor shall maintain an updated database of all such circuits, install dates, locations and programming parameters. The database and all updates shall be presented to the State on a weekly basis.

## **2.9 Contractor Service Review**

The Contractor shall review each type circuit to determine the exact requirements based upon the current Contractor definition. Incumbent Contractor if awarded a replacement contract shall review each site and verify circuit types, circuit number identifications and make recommendations for service updates. Each existing service must be replicated, with the awarded Contractor performing site audits to ensure replacement service operation without the installation of additional State owned Customer Premises Equipment (CPE). If such is required, the Contractor shall supply such equipment without additional charge to the State. In all cases, the Contractor shall be responsible to disconnect existing interfaces and connect new interfaces with associated equipment, test and verify complete operation at each location. The State shall retain the right to refuse any Contractor equipment and utilize State purchased equipment. The Contractor must work with the State to ensure circuit and equipment compatibility for full duplication of circuit and equipment operation.

## **2.10 Multipoint Private Line Digital Data**

This type of circuit is designated by the current Contractor Consolidated Communications as "HRDA", and " " for 9.6 Kbps, and for and "HWDA", and " " for 56 Kbps services. The service provides connectivity for two or more points of service. Service may alternate voice and data transmission and provide second channel (low speed) capability.

## **2.11 Multipoint Private Line Analog Data**

This type of circuit is designated by the current contractor Consolidated Communications as "FDDA" service. The service provides data transmission between two or more stations without access to the switched network. Voice transmission may be provided on an alternate or simultaneous basis. Data speeds are 56 Kbps or less, dependent upon application. Bellcore designations of 3002 circuits are included in this category.

## **2.12 Protective Alarm Circuits**

This circuit is designated by the current Contractor Consolidated Communications as a "BANA" service. The service provides a channel for an alarm system with a DC interface at the customer premises. The alarm points may be arranged in series or parallel configurations.

## **2.13 Fire Dispatch Circuits**

This circuit is designated by the current Contractor Consolidated Communications as a "FRNA" service. The service provides a group alerting system that operates warning devices at various locations from a central point. This service is used by fire or ambulance operations to alert their members.

## **2.14 Private Line Voice Circuit**

This circuit is designated by the current Contractor Consolidated Communications as a "PLNA" service.

The service provides full time transmission of voice only between two or more stations or order equipment, e.g. turrets, order tables, etc. A private line is for the exclusive use of certain stations or order equipment and has no access to the switched message network. Signaling between stations or order equipment may be voice, manual, automatic, dial or no signal condition.

#### **2.15 Radio Land Line Circuits**

This circuit is designated by the current Contractor Consolidated Communications as a "RTNA" or "GRNA" service. It provides voice grade way communications for voice radio communications. The service is used to access non-broadcast radio transceivers.

#### **2.16 Low Speed Digital Data**

The circuits are listed by the current Contractor Consolidated Communications as DDS services. Inclusive are 9.6Kbs, 19.2 Kbs and 56Kbs private line data services.

#### **2.17 Group 2 Services**

The following services shall be included in Group 2 offerings, all-inclusive with features as defined in this Group.

**Multipoint Private Line Digital Data:** Multipoint digital data transfer circuits with transfer rates up to 56Kbps. Circuits are typically designated by Consolidated Communications as FDDA services. No one time installation costs shall apply.

**Multipoint Private Line Analog Data:** Multipoint analog data transfer circuits with transfer rates up to 56Kbps. Circuits are typically designated by Consolidated Communications as HRDA or HWDA services. No one time installation costs shall apply.

**Protective Alarm Circuits:** Protective point to point alarm circuits typically designated by Consolidated Communications as BANA circuits. No one time installation costs shall apply.

**Fire Dispatch Circuits:** Circuits which provide multi-point connectivity to alarm systems from a single common point. This circuit is designated by the current Contractor Consolidated Communications as a "FRNA" service.

**Private Line Voice Circuits:** Private line voice grade services for point to point two way communications. No one time installation costs shall apply. Such services are referred to as PLNA circuits by the current Contractor, Consolidated Communications.

**Radio Land Line Circuits:** Voice grade land line circuits for two way radio communications typically designated by Consolidated Communications as RTNA services. No one time installation costs shall apply.

**Low speed Digital Data:** Inclusive are 9.6Kbs, 19.2 Kbs and 56Kbs private line data services. The circuits are listed by the current Contractor Consolidated Communications as DDS services.

#### **Group 3 Advanced Telephone Services**

The Contractor shall provide Direct-Inward-Dialing (DID) service as part of its local exchange service offering utilizing channelized T1, Integrated Services Digital Network Primary Rate Interface (ISDN PRI) or Session Initiated Protocol (SIP) circuits.

DID trunking must be provided for inward bound and two way inward/outward bound services. Inward/outward bound services must allow the transfer of originating number and dialed number information transfer. The inward bound Dialed Number Identification Service (DNIS) must be fully compatible to the receiving telecommunications equipment at State sites. The Contractor must specify the minimum and maximum number of digits being delivered to the State's premise equipment.

The Contractor shall provide DID service blocks of consecutive telephone numbers for the State. Existing numbers and 100 number blocks must be transferable to the Contractor network. The Contractor must describe the minimum and maximum number of consecutive telephone numbers available with the DID

service. All existing numbers currently used must be retained, and transferred to the new Contractor service. All numbers shall be maintained by the Contractor at the 100 number block rate.

Service must be kept below 60 ms (maximum) latency, 20 ms of jitter and .5% loss for any given circuit end to end in the Contractor's network.

### **3.1 Ownership of Equipment**

Contractor shall retain ownership of all equipment throughout the duration of the contract. In the event that a replacement subsequent contract is not awarded to the same Contractor, the existing Contractor shall supply all equipment and services for a period of up to 90 calendar days beyond the contract termination date. The State shall bear no costs for the removal and transfer of services.

### **3.2 Equipment Installation**

All wiring and connections to the Contractor equipment shall be made using Contractor supplied cable and equipment. The State shall not be responsible to mount equipment, program nor establish communications unless required by connecting to the service port (demarc).

### **3.3 Support of PSTN Operational Features**

Intercept Messages including line not in service, referral messages, etc. Fully compatible with all PSTN call setup, held calls through call completion.

### **3.4 Local Number Portability**

Contractor must negotiate with the incumbent Contractor to ensure that existing telephone numbers are retained with service conversion. All number assignments shall be the responsibility of the Contractor, with strict coordination through the State.

The Contractor must accept any telephone number (lines) used by the State prior to contract to be transferred to the Contractor network service. The Contractor shall be responsible for initiating all orders and requests for transferring services, ensuring that such orders are completed within the timeframe specified by the State, and completely operable to the satisfaction of the State. State offices shall retain telephone numbers when changing from current local exchange carrier to the Contractor's services as well as from the Contractor's service to an alternate carrier. The Contractor must provide future telephone number portability with its line numbering.

### **3.5 Pre-Subscription for Local and Toll Services**

The Contractor shall provide local, intra-LATA, inter-LATA and worldwide services. The Contractor shall ensure complete compliance with the North American Dialing Plan and any international plans providing service.

The State shall not be responsible for the payment of any bills generated due to Local Service Provider (LSP), Intra-LATA Primary Inter-exchange Carrier (LPIC) or Primary Interexchange Carrier (PIC) changes or associated with local or long distance trunking and carrier selection. The State shall not be billed for denial of long distance services for any line (per the selection of the State). All account errors that may result from "slamming" or other unauthorized activity shall be monitored by the Contractor, and services invoiced to the State at the contracted rates. Any and all charges levied by the LEC or other entity for LPIC changes shall be invoiced to and paid directly by the service provider. All PIC selections defined by the State shall be "frozen" by the telephone service provider. Any charges resulting from changes performed by the Contractor or any other entity shall be invoiced to and paid by the telephone service provider.

### **3.6 Toll Service Method**

Toll service must be completely transparent to telephone users, not requiring additional digits for dialing. Service must not require the use of dedicated lines or circuits (trunking) unless paid entirely by the Contractor, not resulting in one time or monthly charges to the State beyond usage charges. Assurance of service compatibility is entirely the responsibility of the Contractor.

### **3.7 Carrier Verification Number**

The Contractor must provide a direct dial toll free number allowing a caller to verify the carrier used by a designated telephone.

### **3.8 Voice Call Billing Increments**

All Contractor invoices, call detail reports and charges shall be based upon six second or less billing increments, with charges rounded up to the nearest penny. All other costs shall be accurately defined and charged. It is highly desirable that 1 second billing be provided. No charges will be incurred for incomplete call attempts.

### **3.9 Local Service**

Contractor must provide local exchange services at all State office locations as defined by the State and offered by the Contractor. LEC service consistent with State office locations shall be maintained, with no toll charges resulting from calls within the local exchange area. The Contractor is required to adhere, at a minimum, to the local calling area definitions for ILECs within New Hampshire.

The Contractor must not charge for Local Exchange service based upon usage fees on other but the fixed monthly line charge. Per minute and per call charges are NOT allowed. All charges for calls to and from exchanges common to ILEC Central Office access are inclusive of the monthly line charge.

### **3.10 Multiple Local Service Sites**

A single local exchange usage rate must be quoted for all local calling areas within New Hampshire. Alternative pricing methods are listed in Exhibit C Pricing Structure, Balance of Product Line.

### **3.11 Compatible E911 Services**

Contractors must comply with State of New Hampshire RSA 374:22, I or most recent rules regarding E911 services, and make available the universal emergency telephone number 911 for seeking assistance from fire, police, and other related safety agencies through a single public safety answering point. Each telephone service provider shall assure that all requests for police, fire, medical, or other emergency services received by the provider or the provider's operator services shall be transferred to the public safety answering point. Such transfer shall include the calling party's telephone number in American Standard Code for Information Interchange (ASCII) in a format recommended for data exchange by the National Emergency Number Association (NENA).

### **3.12 Access to All Other n11 Services**

The network supporting voice services must complete calls to n11 services (e.g. 411, 511) where supported by alternate sources. All telephone lines must allow dialing and call completion to n11 numbers. This section does not infer n11 service provisioning, only access to and full compatibility with, all features and requirements of n11 systems. Inclusive must be:

- 211 local assistance;
- 311 non-emergency access to police, fire and government offices;
- 411 information services;
- 511 traveler information;
- 611 repair services;
- 711 telecommunications relay access services;
- 811 health services
- 911 access to emergency services.

### **3.13 Dialing Plan Compatibility**

The local exchange service provided by the Contractor must adhere to all standards for the North American and International dialing plans. The Contractor must state whether local calls within the same calling area will require a seven-digit (NNX + XXXX) or ten-digit NPA+NNX+XXXX dialing plan. The Contractor must provide toll services that conform to the international dialing plan of the ITU for all international calls. The Contractor must accept transfer of all State used exchanges and local numbers to their services with no transfer fee billed to the State.

### **3.14 Operator Services**

The Contractor must provide local and intra-LATA human operator services for assistance in placing

local, person-to-person, collect and local third party calls. All such services shall be programmable to allow or disallow services on a line-by-line basis. The Contractor must provide local operator service 24 hours a day, 365 days-per -year with no holiday exceptions.

### **3.15 Access to Directory Assistance**

The Contractor must provide local and intra-state directory assistance service by direct-dial services. Services may be limited per direction of the State in defining Facility Restriction Levels (FRLs) and Automatic Route Selection (ARS) programming.

### **3.16 Disconnection of Services**

The Contractor must provide local exchange service that allows for intercept messages and referrals to be associated with local exchange service that has been disconnected or is out of service. These intercept messages must include, but not be limited to, the following: number dialed which is not in service; number dialed not in service with referral to new number (10-digit format) and/or; number dialed temporarily out of service. A disconnected line shall be referred to an alternate telephone number with an intercept message after disconnection.

The Contractor must retain all State required intercept messages and referrals for a minimum of six months from the date of disconnection. The Contractor must provide all State required intercept messages and referrals at no cost to the State.

### **3.17 Listing in Directory Assistance**

All published telephone numbers of State offices must be available to the general public through the use of telephone access to an automated or 'live' directory assistance. All directory information must be maintained and updated by the Contractor as directed by the State. The State may request, on a line by line basis, that any number be withheld from directory listings, at no additional line cost.

### **3.18 Printed Directory of Telephone Numbers**

The Contractor shall be provided a list of telephone numbers to be included in the present LEC telephone directories as directed by the State. At present, only primary contact numbers are listed, but may be listed in multiple regional directories. The Contractor must at a minimum, ensure that all such listings are continued. The State may request, on a line by line basis, that any number be withheld from directory listings, at no additional line cost.

The Contractor shall be responsible to coordinate with the State the inclusion or exclusion of all such directory listings. One listing for each main office numbers shall be provided when directed by the State, at no charge to the State. Additional listings may be invoiced as noted in Exhibit C.

### **3.19 Unlisted Services**

The exclusion of given line numbers in printed telephone directories and directory assistance listings. All such numbers are withheld from release to directory assistance callers. There shall be no additional charges for unlisted numbers.

### **3.20 Incoming Toll Free Services**

Contractor shall provide incoming toll free services that accommodate intra-LATA and inter-LATA calling. Line numbers assigned to incumbent carriers must be transferred to Contractor services.

The Contractor shall provide incoming toll free services on a virtual access basis. Virtual toll free dial service is that service which allows any call placed to a predefined toll free number to be connected to a designated telephone line.

### **3.21 Direct Inward Dialing (DID)**

The Contractor shall provide Direct-Inward-Dialing (DID) service inclusive of any geographic New Hampshire exchange service. DID trunking must be provided for inward bound and two way inward/outward bound services. Inward/outward bound services must allow the transfer of originating number and dialed number information transfer. The inward bound Dialed Number Identification Service (DNIS) must be fully compatible with the receiving telecommunications equipment at State sites. The DID service must provide blocks of consecutive telephone numbers and specified numbers currently used by the State. All existing numbers must be retained and transferred to the new Contractor's

service.

### **3.22 Incoming Caller Identification**

The local exchange service must provide incoming caller identification (Caller ID) name and number allowing the display of calling telephone number and published name to an industry standard Caller ID device, telephone instrument or premises-based telephone system.

### **3.23 Outgoing Caller Identification**

Service must allow the State to define if or if not the originating Contractor subscribed DID number will be released to the called party. The Contractor must allow the state to permanently block or unblock ID information on a circuit by circuit basis.

### **3.24 Incoming Line Hunt**

Contractor shall provide unlimited line hunt of incoming calls to lines or trunks based upon a line busy scenario. Forwarding shall be to any other line in the network.

### **3.25 Demarcation Point**

Demarcation points (demarcs) for legacy data services shall be located in computer rooms, server closets or terminating State data equipment locations within 150 lateral feet of the building penetration point or existing Main Distribution Frame (MDF) as defined by the State. It is the responsibility of the Contractor to provide any necessary cable, interface blocks, inside cable or other equipment required to connect Contractor services to State data equipment. Existing wire and cable may be used only if tested and certified for operation and maintained by the Contractor. The Contractor shall be responsible to maintain all such items and equipment throughout the duration of the contract. At the termination of the contract and any extension thereof, the Contractor shall remove all active (powered) components at their own expense. All passive (non-powered) devices shall be retained by the State.

Demarcs must be clearly labeled as such, including Contractor ID, circuit number, any associated test or demarc number and date of installation. Labels shall be on demarc devices. Contractor shall maintain an updated database of all such circuits, install dates, locations and programming parameters. The database and all updates shall be presented to the State on a weekly basis.

### **3.26 Call Quality**

Contractor shall insure a high quality of calling services, correcting noisy call problems and minimizing deficient call completion issues.

### **3.27 Connect Time**

The Contractor shall limit call connect time access (time period from the end of dialing to ringing at destination line, exclusive of messages and call acceptance processes) to 8 seconds or less.

### **3.28 Connectivity**

Contractor shall accept and complete all calls to all locations. Rejection of calls based upon local carrier, service reseller, called party registered long distance carrier, or Contractor selected long distance carrier is prohibited. Rejection due to failure of called party to complete payment for calls as in the case of prepaid calling or debit services is at the discretion of the Contractor.

### **3.29 Primary Rate ISDN Services**

The Contractor shall provide Centrex-compatible (or substitute technology) ISDN PRI services for connection of PBXs with foreign exchange, trunk DID or PBX interconnection operation. Services shall be 23-channel, 64 Kbps clear channel operation. Call setup and completion must be fully compatible with analog calling services.

Primary Rate ISDN services are currently designated by FairPoint as "IBZD" service. Service allows 23 individual 64 Kbps channels with the ability to bond two or more channels for synchronized data transmission. No per-minute charge for ISDN calls made within the LEC local exchange service area.



### 3.30 Public Switched Telephone Network (PSTN) Session Initiation Protocol (SIP) Connectivity

Contractor shall provide complete "turnkey" services, requiring no items ordered or provided by the State. Transport medium shall be provided by the Contractor along with Local Exchange Carrier (LEC) and Inter-Exchange Carrier (IEC) services required to meet contract requirements. Any and all charges levied by the LEC for PIC changes shall be invoiced to and paid directly by the Contractor. The State shall not provide labor, equipment or facilities to implement and maintain services. The total quantity of services will vary. No guarantee of service quantity is given or implied. Services locations may be added or deleted by the State at any time.

Service must abide by IETF Network Working Group Real-time Transport Protocol (RTP) RFC 1889 for transporting real-time data and providing QoS feedback, Real-Time Streaming Protocol (RTSP) RFC 2326 for controlling delivery of streaming media, the Media Gateway Control Protocol (MEGACO) RFC 3015 for controlling gateways to the PSTN, Session Description Protocol (SDP) RFC 2327 for describing multimedia sessions, RFC 3261 with associated updates, RFC 3265 defining Subscribe and Notify methods and relevant specifications.

Service must also abide by ITU-T G.711 for audio commanding to insure proper transmission of fax communications.

### 3.31 Group 3 Services

The following services shall be included in Group 3 offerings, all inclusive with features as defined in this Group.

**ISDN Primary Rate Interface Unlimited Service:** ISDN PRI services throughout geographic New Hampshire inclusive of local, state wide and North American LATA (Local Access and Transport Area) calling at no additional cost.

**SIP Interface Unlimited Service:** SIP interface to Public Switched Telephone Network at multiple transport levels, inclusive of local, NH LATA, national and international calling. The costs of calling within the US shall be included in the price of the service. Minimum channel capacity is reflected within Exhibit C.

**DID:** Cost of Direct Inward Dial numbers based on 100 numbers. Charges are based on the quantity of 100 numbers, and include sequential and non-sequential numbers.  
Line Relocation: Relocation of any Group 1 line to a new address location (One time Cost)

**Toll Free Virtual Service:** Toll free number (e.g. 800, 888, 866, etc.) pointing to an analog line or DID.

**Toll Free Virtual Service Usage Cost:** Cost of receiving calls on a virtual toll free line. Costs are rated per call and per minute. It is desirable that per call rates be \$0.00.

**Directory Assistance:** Operator assistance allowing the caller to connect to a human operator who can assist callers to obtain telephone numbers and instruction them in the dialing method to connect to remote locations.

**Directory Listing:** One Directory Listing for each main office line in the present LEC telephone directories as directed by the State. Any additional listings may result in a per listing charge.

**Unlisted Services:** The exclusion of given line numbers in printed telephone directories and directory assistance listings. All such numbers are withheld from release to directory assistance callers.

### Group 4 High Speed Data Transfer Services

Multiple types of data communications circuit services are currently deployed in the State network. The primary means of provisioning for switched services are through frame relay and point to point protocol over Ethernet or presenting an Ethernet interface and packetized ATM technologies. No installation service charges shall apply to circuits installed under this contract. Any and all services may be

terminated or replaced with alternate technology without penalty at any time during this Contract.

Contractor must survey the needs of the State to insure that existing services are replaced with compatible services. Contractor shall insure continued interface compatibility with existing hardware interfacing with the network. Contractor shall provide any media gateways or conversion equipment required to insure current hardware support. A complete report shall be created and forwarded to the State prior to service initiation defining each service selection, installation configuration, and programming, originating site locations and terminating site locations. The report shall be forwarded to the State monthly on the first day of the month throughout the duration of the contract.

All services and equipment must abide by National Equipment Building Standards (NEBS), with fully redundant hardware and automatic recovery resource switching. This does not infer backup circuit service, but does infer a completely redundant network backbone.

Service availability shall be throughout the geographic area of the state.

#### **4.1 Contractor Service Review**

Contractor shall review each site and verify circuit types, circuit number identifications and make recommendations for service updates. Each service location must be provided service, with the Contractor performing site audits to ensure replacement service operation without the installation of additional State owned Customer Premises Equipment (CPE). If such is required, the Contractor shall supply such equipment without additional charge to the State. In all cases, the Contractor shall be responsible to disconnect existing interfaces and connect new interfaces to associated equipment, test, and verify complete operation at each location. The State shall retain the right to refuse any Contractor equipment and utilize State purchased equipment. The Contractor must work with the State to ensure circuit and equipment compatibility for full duplication of circuit and equipment operation.

#### **4.2 Industry Standard Operation**

Contractor must utilize industry standard data transport formats, readily accessible from common industry equipment manufacturers. Proprietary equipment may be used only if transparent to interfaces presented to the State at service demarcation points with prior approval by the State.

#### **4.3 Demarcation Points**

Demarcation points (demarcs) for data services shall be located in communications rooms, data closets (IDF) or other terminating State data equipment locations within 150 lateral feet of the building penetration point or existing Main Distribution Frame (MDF) as defined by the State. It is the responsibility of the Contractor to provide any necessary cable, interface blocks, inside cable or other equipment required to connect Contractor services to State data equipment. Existing wire and cable may be used only if tested and certified for operation and maintained by the Contractor. The Contractor shall be responsible to maintain all such items and equipment throughout the duration of the contract. At the termination of the contract and any extension thereof, the Contractor shall remove all active (powered) components at their own expense. All passive (non-powered) devices shall be retained by the State. The Contractor is responsible for getting the Circuit terminated to the State of New Hampshire defined MDF Facility and the Contractor can extend that Circuit up to 150 feet from the MDF upon request from the State of New Hampshire at no charge. The Contractor must provide services to extend Circuits past the 150 foot mark when requested, which may incur additional cost to the State of New Hampshire.

Demarcs must be clearly labeled as such, including Contractor ID, circuit number, any associated test or demarc number and date of installation. Labels shall be on demarc devices. Contractor shall maintain an updated database of all such circuits, install dates, locations and programming parameters. The database and all updates shall be presented to the State on a monthly basis.

#### **4.4 Service Definitions and Inventory**

The Contractor is responsible to review each circuit utilized by the State to define proper circuit operating parameters. Contractor shall create data tables listing each circuit, circuit type, definition of operation and circuit optioning providing operation under conversion conditions. Tables shall be

maintained current for all circuits throughout the duration of the contract. The State shall receive monthly updates via PC electronic media and remote access via internet connectivity.

#### **4.5 Protocols**

Contractor must list the protocols supported by the services inclusive of X.25 packet service. Possibilities are IBM Systems Network Architecture (SNA)/Binary Synchronous Communications (BSC), Synchronous SNA/Synchronous DataLink Control (SDLC), Asynchronous Dial-up, Transmission Control Protocol (TCP)/Internet Protocol (IP), Internet Packet eXchange (IPX)/Sequenced Packet eXchange (SPX) and others.

#### **4.6 Data Services Network Management**

The Contractor must provide fully managed services including each of the following:

- Centralized monitoring of all facilities and real time reporting to State contact individuals when error or failures occur;
- Non-invasive testing, allowing a circuit to operate during testing;
- Circuit test coordination, advising users when circuits require out of service tests or updates. Update notification shall be given to the State within a minimum of two State work days;
- Real time report updates and availability based upon remote access to reports by the State via Internet services;
- Monthly network review covering service availability, network ability, congestion areas and recommendations for changes on a circuit by circuit basis;
- Verification of services versus recommended industry standard parameters, inclusive of routing errors, network conflicts and compatibility of data and/or format of transmissions;
- Network programming and efficiency verification;
- Weekly operation verification and routine testing of each network circuit; and
- Support for all available protocols and new industry standards.

#### **4.7 Management Reports**

The Contractor must provide complete management reports defining circuit locations, programming, capabilities, and operation. Preliminary reports for all locations shall be due to the State Department of Safety, Bureau of Statewide Telecommunications prior to the installation date of the first circuit installation date, with updates provided every calendar month thereafter. Reports shall be provided in PC based electronic files using MS Office Suite products. Items to be included shall be circuit number designation, locations, type, speed, programming, related Contractor equipment and ports, and any and all related information.

#### **4.8 Data Services Quality of Service**

Contractor must specify and ensure a high Quality of Service (QoS) level for all services. Testing shall be performed immediately after circuit installation and on a demand basis when requested by the State. Test results shall be provided to the state within 24 hours of testing. Contractor shall maintain and prove continued circuit operation on a routine basis by monitoring QoS.

The following minimum tests and related reports must be provided after installation and when requested by the State.

- Committed Information Rate (CIR): Service shall be tested and monitored by the Contractor to ensure transport availability at 100 % of the committed information rate. Contractors must provide reports identifying throughput on a sampled second basis and average per hour basis.
- Bit Error Rate (BER): The Contractor shall perform Bit Error Rate Tests (BERT) BER is considered the ratio of error bits to the total number of bits transmitted during a BERT test.
- Constant Bit Rate (CBR): The Contractor shall verify the actual circuit bit rate for services requiring a constant bit rate as provided through ATM or other services, and report to the State, transport levels and operating errors.
- Error Checking. Error checking must be performed by the Contractor to ensure constant operation at peak performance. The Contractor shall specify how tests are completed.
- Network Latency. The Contractor shall provide network latency specifications for all switched services. Latency shall be defined as the time to transfer data from the interfacing near end device to a remote far end device.

The Contractor shall provide daily QoS functions as defined below:

- Configuration Management. The Contractor shall advise, create and program network configuration on the Contractor network and State sub-networks. Seven main sub-networks using frame relay services currently exist. The Contractor shall maintain and modify all records concerning all such networks including committed information rates, burst rates, permanent virtual circuits, digital link connection identifiers and related parameters.
- Monitoring. The Contractor shall monitor services and report to the State failed or faulty services within one business hour of detection. The Contractor shall provide a help desk to answer State questions regarding performance and operation.
- Congestion. It is the Contractor's responsibility to assure that congestion within the Contractor's network does not affect the speed of transmission to/from the State.
- Predictive Control and Problem Avoidance. The Contractor shall provide proactive review of services and advise the State as to network or usage modifications and sub-network orientation and arrangements.

#### **4.9 Standards Compliance**

Contractor's services shall conform to all American National Standards Institute (ANSI) and International Telecommunications Union (ITU) standards including, but not limited to, service description, congestion management, core aspects, access signaling, data link control and application.

#### **4.10 Intrusive Testing**

Contractor shall perform intrusive circuit testing whenever circuits are virtually out of service, without solutions found during routine testing. The State shall be notified 15 minutes before intrusive testing begins.

#### **4.11 Installation Services**

The State shall require the Contractor to provide installation services which include connectivity to State owned and managed equipment. All field service technicians shall have obtained a Cisco Certificated Network Associate certificate of confidence prior to working on equipment. Installation services shall include:

- Placement of State configured equipment at installation sites inclusive of equipment racking and connectivity;
- Powering of State equipment and power on the device;
- Connection of purchased services to State equipment;
- Troubleshooting connectivity issues under the direction of State staff.

#### **4.12 Continued Support**

The State shall require the Contractor to provide operational support services which includes verification of connectivity and service operations. All field service technicians shall have obtained a Cisco Certificated Network Professional certificate of confidence prior to working on equipment. Services shall include:

- Troubleshooting of LAN/WAN connectivity issues;
- Working with other State Contractors to troubleshoot WAN connectivity issues;
- Migrate existing remote site router configurations to new routers and defining migration steps;
- Migration of existing remote site LAN's to new Router & WAN Circuit.

#### **4.13 Circuit Technology**

Contractors shall provide same or alternative advanced switched circuit technology as noted.

#### **4.14 T1 Rate Point to Point**

It is the intent of the State to replace all point to point services, yet may have the need to continue services on a limited basis. Current T1 point to point services are currently designated by FairPoint as "DHCC", "HCGL", "YBGA", "DHZA" and "DZZD" service. The service provides 1.544 Mbps throughput on a digital facility. Services are either channelized 56 Kbps with bit robbing or 64 Kbps clear channel. Circuits are configured to carry voice or data traffic per specific application. It is the intent of the State

to gradually replace all such services with Ethernet to the doorstep.

#### 4.15 Ethernet Interface Connectivity

All High Speed Data Services shall present an Ethernet interface providing 3 Mbps or faster full duplex services to State offices. Contractor shall provide interface device (if required) presenting a standard Ethernet handoff a standard RJ45 interface connection. Contractor shall also provide replacement devices in the event of failure. The Contractor must clearly define the technology, bandwidth, methods, procedures and equipment used to provide service.

Contractor must provide local access and support throughout the State and provide network Point of Presence to all Central Office centers in NH.

Contractor shall provide Circuits with incremental bandwidth steps up to 10gbps. Services must be available to be provisioned at all levels up to 10gbps.

Performance: Circuits must meet or exceed the following measurements:

- LESS THAN 150 milliseconds of delay;
- LESS THAN 50 milliseconds of jitter; and
- LESS THAN 1% of packet loss.

Dependability: All services must be maintained at a 99.99% dependability factor, reflecting that service access is available for use 99.9% of the time based upon a 30 day time period. If a service becomes intermittent in connection or transport, and repeatedly fails with total timeframe of failures accumulating to 120 minutes or more within a 30 day period (exclusive of planned maintenance outages), the State, at its sole discretion, may choose to terminate service at that location and seek replacement service from another Contractor, or pursue any or all remedies as set forth herein.

Contractor shall provide a Performance Monitoring package. All Tests must include a detailed document that shows all standards based tests that were run and their values as a proof of satisfactory completion

Contractor shall provision Network Operations Center managed CPE that is manageable and monitored at the carrier Network Operations Center. This manageability must include, but not be limited to, adjusting service parameters, initiating loopback testing, initiating performance testing and remote troubleshooting capability.

Service Termination: In the event that any service experiences a 10% or more dependability failure rate (10% of all services become unavailable per the 99.9% up time dependability rate) for a 24 consecutive hour period, the State at its sole discretion, may choose to terminate all services at all locations and seek replacement service from another Contractor, or pursue any or all remedies as set forth in herein.

Service must be kept below 60 ms (maximum) latency, 20 ms of jitter and .5% loss for any given circuit end to end in the Contractor's network.

The Contractor's core network shall have redundant connections between facilities within their infrastructure. The Contractor's core network shall use dynamic protocols for failover to redundant links which must occur without human interaction. Should any link(s) fail the redundant link(s) must automatically forward traffic in less than 50 milliseconds.

Contractor shall not block any ports or traffic between connections to State Agencies. Contractor shall not "break-in" or use protocol "sniffers" as methods of troubleshooting or any other purpose unless permission to do so is first obtained in writing from the state. Otherwise, Contractor must be transient and not examine the customer traffic in any way other than providing service prioritization based on markings defined by the customer and Contractor.

Contractor solution shall include OAM fault management test functions including the following: Continuity Check Message, Loopback Message, Link Trace Message, Remote Detect Indication, Locked Signal Function, Test Signal, Maintenance and Communications Channel. Contractor shall

provide manufacturer specifications of equipment used to provide customer and Contractor testing access to equipment

Contractor service must allow the integration of alternate technologies into the network inclusive of Time Division Multiplexed services, allowing data to flow into the Ethernet head end circuit.

Service must allow the integration with the Public Switched Telephone Network allowing the transport of traditional voice services through Voice over Internet Protocol technology.

#### **4.16 Frame Relay to ATM Service Internetworking (FRASI)**

Service in accordance with ITU-T I.122, Recommendation, for Wide Area Network connectivity on a switched network. Contractor shall abide by all ITU regulations and requirements.

#### **4.17 Asynchronous Transfer Mode (ATM)**

The Contractor shall provide ATM services a multiple bandwidths. Service shall be provided within Concord, NH and other locations as available from the Contractor.

##### **ATM Quality of Service**

The Contractor shall maintain the following quality of service measurements for an end-to-end connection from one State demarcation point to another State demarcation point:

Constant Bit Rate: OC3: 10 ms; DS3: 10 ms; DS1: 14 ms.

Variable Bit Rate (real time): OC3: 10ms; DS3: 10 ms; DS1: 14 ms.

Variable Bit Rate (near real time): OC3: 11ms; DS3: 12 ms; DS1: 16 ms.

Unspecified Bit Rate, OC3, DS3 and DS1, unbounded.

##### **Standards**

The Contractor must provide interfaces and network transport services that operate according to the following national and international ATM standards: UNI 3.0, 3.1, BISUP or BICI in NNI Interfaces and PNNI 1.0. Contractor shall maintain compliance with current revisions of these standards.

##### **Service Protocols**

End-to-end service protocols and encapsulation protocols must be supported by the service. Inclusive protocols are IEEE 802.3 Ethernet, IEEE 802.5 Token Ring, ANSI X3T9.5 FDDI, TCP/IP, and Frame Relay.

##### **ATM Features**

Frame Relay inter-working and transport;

Native LAN extension services;

WAN extension services;

Inter-work with IP networks;

Native ATM services;

Up to 64,000 nodes per network;

SONET Compatibility.

#### **4.18 Group 4 Services**

The following services shall be included in Group 4 offerings, all inclusive, with features as defined in this Group. These definitions shall apply to the Service Item denoted in Exhibit C.

**Network Professional Services:** The State shall require the Contractor to provide operational support services which includes verification of connectivity and service operations. Charges shall only apply to equipment conversion per direction of the state after initial installation. Troubleshooting due to Contractor services failures shall not result in charges.

**T1 Point to Point Services:** 1.544 Mbps digital transport form a given point to another.

**Ethernet to the Doorstep:** High speed switched data services with an Ethernet interface at various data rates as defined herein.

**Frame Relay to ATM Service Internetworking (FRASI)** at 56 Kbps and 1.5 Mbps, compatible with ATM Services

**Asynchronous Transfer Mode (ATM)** used in association with Frame Relay, available at multiple speeds inclusive of 45 Mbps

#### **Group 5 High Speed (Broadband) Internet Service Provider**

High Speed Internet Service shall allow the State of New Hampshire to access the Internet to conduct its business as defined in the State statutes (RSA's). This includes, but is not limited to, e-mail, access to federal and other state government web sites, video and voice applications, file downloads from various sources, web hosting, reliable transport of data between the state and its citizenry, transport of emergency communications as required, and the on-going demands of e-government.

Contractor must provide high speed internet services commonly referred to as broadband internet for use by the State. Service may be in the form of Digital Subscriber Line (DSL), Cable Modem, Fiber Optic Service (FIOS or Fiber to the Premise), Satellite or any other commercial technology providing repeatable, dependable levels of service. Services must be presented at 3 Mbps or faster with an Ethernet interface.

##### **5.1 Digital Subscriber Loop (DSL)**

Digital Subscriber Loop (DSL) services or alternate similar technology includes High bit rate Digital Subscriber Lines (HDSL), Single pair Digital Symmetrical Lines (SDSL) and alternate Subscriber Loop modem technologies.

Currently Asynchronous DSL is used in association with Asynchronous Transfer Mode (ATM) host circuits connected to the data network cloud or in association with an Internet Service Provider (ISP). The Contractor shall which version (either or both) is available and provide a technical definition of the equipment and software necessary to connect to their service with internet services provided through the Contractor ISP.

##### **5.2 High Speed Cable Modem Service**

Contractor shall make available a high speed service via cable modem technology. Contractor shall provide any interface device providing standard Ethernet handoff to the State via a Standard RJ45 interface connection. Contractor shall also provide replacement devices in the event of failure. The Contractor must clearly define the technology, bandwidth, methods, procedures and equipment used to provide any Ethernet to the Doorstep.

##### **5.3 Fiber Optic Service**

The fiber optic based service must bring direct delivery of services to the State office location.

##### **5.4 Satellite Service**

Satellite service shall not require the use of wired telephone or other hard wired technologies. Contractor shall be responsible for all equipment including the installation of satellite dishes, support and mounts.

##### **5.5 Service Availability**

Internet access service shall be provided, and guaranteed, at 99.99% or better availability (24hrs/day by 7days/week), at the throughput rate provisioned, through the term of any awarded contract. Internet access service is defined as all services that are provided by the Contractor which are, directly or indirectly, related to the connectivity to the State's network router from the ISP at the availability and throughput defined above. The Contractor is responsible to pay for any repairs and/or services needed to maintain and meet the described requirements.

##### **5.6 Emergency Service Failure Reporting**

Contractor shall provide 24/7 monitoring and contact, via pager or mobile phone, to a State representative within fifteen (15) minutes in the event of communication failure between the State and ISP, regardless of reason or fault causing such occurrence.

##### **5.7 Problem Determination Assistance**

Contractor shall provide Internet related problem determination assistance at no fee. At a minimum, the successful Contractor(s) shall demonstrate any related problem is not due to the Contractor's services/equipment. All fees that would be billed to the State regarding problem determination, or other services, shall be included in the cost/month.

#### **5.8 Configuration Technical Support**

Contractor shall provide configuration technical support to the State while the State implements the new service. All charges for this service shall be incorporated into the cost/month.

Contractor shall provide configuration technical support to the State for any upgrades or additional features purchased from the successful Contractor(s). There shall be no additional charges for this service.

#### **5.9 Effective Data Rate**

For all services, the State requires guaranteed Internet connectivity via a high-speed full duplex connection with a minimum end-to-end rate equal to that specified for the circuit in each direction to its head end location. This is the effective data rate, not a line speed designation.

#### **5.10 Connectivity**

The Contractor shall provide the State with Ethernet connections as the uplink to the ISP. Contractor is responsible to provide all physical cables that connects the Contractor's Equipment to the State of New Hampshire Routers.

Contractor shall not block any ports or traffic between the State connection and the Internet.

#### **5.11 Demarcation Point**

Demarcation points (demarcs) for services shall be located in state designated communications rooms, server closets or terminating State data equipment locations within 150 lateral feet of the building penetration point or existing Main Distribution Frame (MDF) as defined by the State. It is the responsibility of the Contractor to provide any necessary cable, interface blocks, inside cable or other equipment required to connect Contractor services to State data equipment. Existing wire and cable may be used only if tested and certified for operation and maintained by the Contractor. The Contractor shall be responsible to maintain all such items and equipment throughout the duration of the contract. At the termination of the contract and any extension thereof, the Contractor shall remove all active (powered) components at their own expense. All passive (non-powered) devices shall be retained by the State.

Demarcs must be clearly labeled as such, including Contractor ID, circuit number, any associated test or demarc number and date of installation. Labels shall be on demarc devices. Contractor shall maintain an updated database of all such circuits, install dates, locations and programming parameters. The database and all updates shall be presented to the State on a weekly basis.

#### **5.12 Dynamic and Static IP Addresses**

Contractor shall provide dynamic and/or static addresses for interfacing State equipment. Contractor shall insure forward compatibility with IPV6 and future Internet Protocol revisions as they become available.

#### **5.13 Group 5 Services**

The following services shall be included in Group 5 offerings, with features as defined in this Group.

**DSL:** Digital Subscriber Loop high speed ISP services provided over single pair subscriber loop cable.

**High Speed Cable Modem:** High speed ISP services provided over closed circuit cable services.

**Fiber Optic Service:** High speed ISP services provided either directly or indirectly to a State office via fiber optic facilities.

**Satellite:** High speed ISP services provided over wireless satellite communications technology.



**GENERAL REQUIREMENTS FOR ALL SERVICE GROUPS:**

The Contractor shall be responsible for all Services, network configuration and development associated with the services. The Contractor shall be responsible for the support and coordination, migrating from pre-existing vendor services, interfacing/integrating with Agency systems, testing, and support services.

Contractor shall provide services via its own network facilities, the cooperative use of a subcontractor's network facilities or the resale of another provider's network facilities. In all cases, the State of New Hampshire must be listed as the customer of record with the Contractor.

Contractor shall have all licenses, registrations and permits required by Federal, State or local laws for performance of these services prior to the award of a contract, and maintain such throughout the duration of the Contract. In addition, all Contractor, manufacturer, and industry certifications must be kept current, with personnel maintaining training updates as required for certification for the duration of the Contract. It is the sole responsibility of the Contractor to furnish the State with sufficient documentation to determine the capabilities of the Contractor and their ability to provide the services as defined.

**Personnel Access through E-mail:**

The Contractor shall maintain E-mail availability throughout the term of the Contract, with mail being verified and emptied every hour of operation. The State may communicate with the Contractor in all respects through E-mail as desired by the State. Contractor systems shall be capable of receiving and interpreting Adobe, MS Office Professional and Visio files.

Contractor and its employees assigned to service work requiring access to State computers or network will be required to sign a "Computer Access and Use Agreement." The State may require a detailed background check on any individual assigned to the Project, as this Project may involve confidential or sensitive information.

**Support Access:**

The Contractor agrees to maintain, repair, upgrade, and correct deficiencies in the vendor network at no cost to the State, in accordance with the specifications and terms and requirements herein, including without limitation, correcting all errors, destructive programming; and replacing incorrect, defective or deficient software and documentation.

**Availability:**

The Contractor shall warrant that the System and its related software, in whole or part, shall operate at or above the specified rate and with a 99.99 % or better up time measured over a 24 hour period.

**Power (Applies to all on site equipment)**

It is anticipated that no Contractor equipment located at a State site shall require power. In the event power is required, the State shall allow no more than a shared outlet, allowing a single, unconditioned, 115 volt, 60 Hz power source drawing no more than fifteen (15) amps. Power backup (UPS or battery with line conditioning) for up to two (2) hours in the event of power failure must be provided by the Contractor.

**Contractor Employees:**

The work staff shall consist of qualified persons completely familiar with the products and equipment they shall use. The Contracting Officer may require the Contractor to dismiss from the work such employees as deems incompetent, careless, insubordinate, or otherwise objectionable, or whose continued employment on the work is deemed to be contrary to the public interest or inconsistent with the best interest of security and the State. The Contractor or their personnel shall not represent themselves as employees or agents of the State. While on State property, employees shall be subject to the control of the State, but under no circumstances shall such persons be deemed to be employees of the State. All personnel shall observe all regulations or special restrictions in effect at the State Agency. The Contractor's personnel shall be allowed only in areas where services are being performed. The use of State telephones is prohibited.

**Service Orders:**

After the initial services are installed, it is expected that service quantities will increase and decrease as State demands and responsibilities change. The Contractor shall allow for future system changes including moves, adds, changes and deletions at no cost to the State.

**Single Point of Contact:**

The Contractor shall serve as the Single Point of Contact to the State for all maintenance issues regarding services. This shall be inclusive of any and all additional TSR, repair and report releases.

**Telephone Service Requests:**

The Contractor shall be responsible to perform all work requested through written Telephone Service Requests (TSR's) and emergency verbal telephone requests identifying the required actions. Only requests initiated from the Telecommunications Section Officer or designated agents shall be accepted by the Contractor. All Contractor correspondence and submission shall be sent to:

Department of Information Technology  
Statewide Telecommunications  
Room 300C  
27 Hazen Drive  
Concord, NH 03301

**Dispatch Personnel:**

The Contractor shall provide office dispatch personnel, accessible by dialing a single toll free telephone number. Dispatch personnel shall have direct access to technicians. Personnel shall be knowledgeable of service requests, scheduling, technician activity and customer billing. Said personnel shall be available at all times during the business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding State holidays. In addition, the Contractor shall provide call-forwarding services for emergency requests during all other times. When called, the State contact must receive a Contractor return call within 15 minutes of initial call.

**New Service or Change Order:**

Contractor must utilize and retain State issued TSR numbers as a cross reference to any Contractor order number. All such associations shall be provided to the State within one (1) State business day (8 work hours) of the placement of service request.

**Disconnect Orders:**

Disconnect orders (discontinuance of services) placed by the State shall be implemented on second State business day after transmission of TSR. Any usage of service not disconnected by the Contractor as requested by the State, shall not be invoiced to the State.

**Receipt of State Requests:**

The Contractor must confirm receipt of any TSR's through an E-mail listing each TSR received, TSR delivery date, service performance date and associated, telephone or calling card number. Upon receipt of a disconnection order, the Contractor must enact an immediate "cease billing" of the disconnected service. The State shall not be responsible for any charges incurred after the disconnect request is placed with the Contractor.

**Response to Maintenance Calls:**

"Response" to a maintenance call requires that the Contractor begin testing of the network service. The Contractor must notify the State within four (4) business hours of reinstated service as to the cause of the failure and corrective action.

**Repair and Installation Services:**

The Contractor shall make service available 24 hours per day, seven (7) days per week. The Contractor shall be responsible to implement appropriate maintenance. The Contractor shall have in their employ a sufficient number of trained personnel to ensure that emergency calls shall be answered promptly, 24 hours a day.

The Contractor agrees to comply with the following categories for maintenance of its network services:

1. Critical Maintenance and Escalation;
2. Emergency Maintenance;
3. New Services

**Critical Maintenance and Escalation:**

The Contractor shall provide critical maintenance for services designated by the State as critical to State operation and/or public safety. Critical Maintenance services shall be required when one of the following

situations occur:

1. Total system failure;
2. Loss of service to emergency services or life safety Agency;
3. Loss of service to any State Department, Division or Bureau;

Critical services shall be remotely verified within 15 minutes of report of service outage. Repairs shall be escalated to second level of support if not restored within one (1) hour of report. If services are not restored within two (2) hours of reports, the Contractor shall utilize all available support to ensure restoration of services. For that and every hour of failure thereafter, Contractor shall provide telephoned reports defining the methods used to restore services, and the Estimated Time to Restore (ETR) services. If services are not restored within 24 hours, the State may request an investigation and/or services from an alternate vendor. All charges for such services shall be the responsibility of the Contractor.

The State shall be the sole determinant in defining a "Critical Maintenance" report. Any repair may be upgraded to Critical once the initial repair timeframe has expired. If the Contractor fails to restore service within 72 hours, the State reserves the right to pursue its remedies as set forth in the agreement.

#### **Emergency Maintenance Requirements:**

The Contractor shall provide emergency maintenance for those network services designated by the State as important to the function of the State. All such reports shall be remotely tested by the Contractor within 30 minutes of report, with repairs initiated within the hour. If services are not restored within two (2) hours of report, second level support shall be obtained through the Contractor. If services are not restored within eight (8) hours, the Emergency Maintenance problem shall be escalated to Critical Maintenance.

#### **Typical Emergency Maintenance shall include:**

1. Loss of voice or data service to any State office;
2. Loss of main or primary line;
3. Work due to a "rush" situation as defined through an Executive office or emergency situation.

#### **New Service Requests**

Contractor shall install all new services on or before the State requested due dates. Scheduled installation day and time of day shall be provided to the State within three (3) business days of transmission of State TSR. If the Contractor fails to meet the above mentioned time frame, the State reserves the right to pursue its remedies as set forth in the Agreement. A failure in accordance with this section shall not constitute an Event of Default as defined in Section 8 of the Agreement of Terms and Conditions unless, in the State's sole judgment, the failure materially impacts the services required by the Contractor and the Contractor is provided written notification as defined in Section 8 of the Agreement Terms and Conditions.

All Group 4 and 5 services will be installed, tested and ready for cutover no later than 30 days after receipt of valid TSR from the State.

#### **Operational and Security Requirements:**

The Contractor shall have implemented various security measures based on actual security situations in the field. The Contractor is expected to learn from these experiences and ensure that their systems are secure to the best of its ability. Security measures shall include each of the following:

1. Network Traffic Security
2. Receipt and implementation of new service orders;
3. Access to the network service by the Contractor's service personnel and/or Technicians;
4. Access by the State to network service billing records.

#### **Post Implementation Review:**

The State shall be allowed five (5) days after Contractor installation of each service to review and accept each installation to insure installation and circuit performance within the specification defined herein.

The Contractor shall provide complete test plans defining how the Contractor will test individual installations and assist the State in troubleshooting any connection or operating problems.

#### **Compliance with Jurisdictional Authorities:**

The Contractor shall give all notices and comply with all codes, laws, ordinances, rules and regulations of any public authority having jurisdiction that bears on the performance and standards of its work. The Contractor shall obtain and pay for all licenses, permits, and inspection fees required for work being performed.

**Confidential Information:**

The Contractor agrees that all discussions or information gained during an engagement shall be considered confidential and that no information gathered by the Contractor shall be released without prior consent of the State

**General Requirements:**

All services performed under this Contract shall be performed between the hours of 7:30 A.M. and 4:00 P.M unless other arrangements are made in advance with the State. Any deviation in work hours shall be pre-approved by the Contracting Officer. The State requires ten-day advance knowledge of said work schedules to provide security and access to respective work areas. No premium charges shall be paid for any off-hour work.

The Contractor shall not commence work until a conference is held with each agency, at which representatives of the Contractor and the State are present. The conference shall be arranged by the requesting agency (State).

The State shall require correction of defective work or damages to any part of a building or its appurtenances when caused by the Contractor’s employees, equipment or supplies. The Contractor shall replace in satisfactory condition all defective work and damages rendered thereby or any other damages incurred. Upon failure of the Contractor to proceed promptly with the necessary corrections, the State may withhold any amount necessary to correct all defective work or damages from payments to the Contractor.

**PRICING:**

<b>Group 1 Traditional Telephone Line Services</b>	
<b>SERVICE ITEM</b>	<b>UNIT COST</b>
Centrex or Equal Full Feature Telephone Line with Unlimited Calling (No Toll within the US)	\$4.75 Monthly
Subscriber Line Charge*	\$7.01 Monthly
Federal Access Recovery Charge*	\$3.42 Monthly
Fed Universal Service Fund*	\$0.45 Monthly
E911 Surcharge*	\$0.75 Monthly
Fed Access Charge	\$1.62 Monthly
<b>Total CTX Line Charge:</b>	<b>\$18.00 Monthly</b>
Centrex or Equal Full Feature Telephone Line Voice Mail	\$2.95 Monthly
Full Service Business Line (No toll charges within the US)	\$11.99 Monthly
Subscriber Line Charge*	\$7.01 Monthly
Federal Access Recovery Charge*	\$3.42 Monthly
Fed Universal Service Fund*	\$4.09 Monthly
E911 Surcharge*	\$0.75 Monthly
Fed Access Charge	\$3.97 Monthly
<b>Total Full Business Line Charge:</b>	<b>\$31.23 Monthly</b>
Full Service Business Line Voice Mail	\$2.95 Monthly

Measured Service Business Line	\$10.99 Monthly
Subscriber Line Charge*	\$7.01 Monthly
Federal Access Recovery Charge*	\$3.42 Monthly
Fed Universal Service Fund*	\$4.09 Monthly
E911 Surcharge*	\$0.75 Monthly
Fed Access Charge	\$3.97 Monthly
<b>Total Measured Service Line Charge:</b>	<b>\$30.23 Monthly</b>
NH LATA toll Calling (Per Minute)	\$0.018 Per Minute
FUSF (Billed as a % of total usage)*	24.4%
InterLATA Toll Calling (Per Minute)	\$0.018 Per Minute
FUSF (Billed as a % of total usage)*	24.4%
Measured Service Business Line Local Calling Cost (per Call)	\$0.026 Per Call
Toll Free Service (Monthly)	\$5.95 Monthly
Toll Free Service Usage Charges, NH LATA Charges (per Minute)	\$0.012 Monthly
Toll Free Service Usage Charges, InterLATA Charges (per Minute)	\$0.012 Monthly
ISDN BRI Circuit/Line Monthly (Unlimited Local and US Toll Calling)	\$9.99 Monthly
Subscriber Line Charge*	\$7.01 Monthly
Federal Access Recovery Charge*	\$2.21 Monthly
Fed Universal Service Fund*	\$4.17 Monthly
E911 Surcharge*	\$0.75 Monthly
Fed Access Charge	\$1.62 Monthly
FCC Line Port Charge*	\$1.90 Monthly
<b>Total ISDN Circuit Charge:</b>	<b>\$27.65 Monthly</b>
ISDN BRI Voice Mail	\$2.95 Monthly
Suspension of Number	\$6.00 Monthly
Directory Assistance	\$0.40 Monthly
Centrex or Equal Full Service Telephone Line Automated Attendant/Call Processor	\$3.96 Monthly
Directory Listing (per Listing)	\$3.00 Monthly
Unlisted Services (No Charge)	\$0.00

<b>Group 2 Legacy Line/Data Services</b>	
<b>SERVICE ITEM</b>	<b>UNIT COST</b>
56K Multipoint Digital Data Monthly (per Point)	\$64.45 Monthly
Protective Alarm Circuit Monthly	\$32.00 Monthly
Fire Dispatch Circuit Monthly	\$32.00 Monthly
Private Line Voice Monthly	\$35.00 Monthly
Radio Circuit Monthly	\$32.00 Monthly

<b>Group 3 Advanced Telephone Services</b>	
<b>SERVICE ITEM</b>	<b>UNIT COST</b>
ISDN Primary Rate Interface Unlimited Service	\$100.00 Monthly
FCC Line Port Charge	\$46.01 Monthly
Subscriber Line Charge	\$35.05 Monthly
Federal Access Recovery Charge	\$17.10 Monthly
Fed Universal Service Fund	\$38.56 Monthly
E911 Surcharge	\$2.25 Monthly
Direct Inward Dial Per Block	\$0.01 Per Block
<b>Total ISDN Primary Rate Charge:</b>	<b>\$238.98 Monthly</b>
DID 100 Number Group	\$0.05 Per Number
Toll Free Virtual Services	\$5.95 Per Month
Toll Free Virtual Services per Minute-in-State	\$0.012 Per Minute
Toll Free Virtual Services per Minute-Inter-LATA	\$0.012 Per Minute
Directory Assistance	\$0.40 Per Call
SIP 100 Channel Unlimited Service	\$250.00 Per Month
SIP 200 Channel Access	\$450.00 Per Month
SIP 300 Channel Access	\$500.00 Per Month
Additional telephone number directory listing (1st Free) monthly	\$3.00 Per Month

<b>Group 4 High Speed Data Transfer Services</b>	
<b>SERVICE ITEM</b>	<b>UNIT COST</b>
T1 Point to Point Services	\$150.00 Monthly
Ethernet Interface Circuits at 3Mbps	\$164.74 Monthly
Ethernet Interface Circuits at 5Mbps	\$238.11 Monthly
Ethernet Interface Circuits at 10Mbps	\$329.82 Monthly
Frame Relay 56Kbps	\$20.00 Monthly
Frame Relay 1.5Mbps	\$35.00 Monthly
ATM at 45Mbps	\$100.00 Monthly
Demarc extension beyond 150 feet (quote price per foot)	\$0.00

<b>Group 5 High Speed (Broadband) Internet Service Provider</b>	
<b>SERVICE ITEM</b>	<b>UNIT COST</b>
DSL ISP Connection 3M Download/ 3M Upload Monthly	\$25.99 Monthly
Fiber Optic Interface Monthly	\$44.99 Monthly

**BALANCE OF PRODUCT LINE**

Balance of Product Line			
SERVICE GROUP	SERVICE ITEM	PRICE	DESCRIPTION
Note: All prices are per Month unless otherwise indicated			
Centrex / Business Line Calling feature / add-ons			
1	Collect Calling	\$1.05 /call	Collection calling associated with Traditional services from Group 1
1	Operator Assistance	\$0.55 /call	Operator Calls associated with Traditional services from Group 1
1	Third Party Billed Calls	\$0.55 /call	Third party calls associated with Traditional services from Group 1
1	Person to Person Calls	\$0.55 /call	Person to Person calls associated with Traditional services from Group 1
1	Centrex - Automatic Call Back/Distinctive Ring	\$0.21 /min	Optional Centrex Features
1	Centrex - Six Way Conference Calling	\$0.49 /min	Optional Centrex Features
1	Ground Start Compatibility	\$6.00	Optional Centrex Features
1	Information only Mailbox - 1 Min. Box	\$2.26	Additional Legacy Voicemail options
1	Information only Mailbox - 3 Min. Box	\$3.96	Additional Legacy Voicemail options
1	Information only Mailbox - 1 Min. Box w/ reply (120 Messages Max.)	\$11.31	Additional Legacy Voicemail options
1	Information only Mailbox - 1 Min. Box w/ reply (40 Messages Max.)	\$5.66	Additional Legacy Voicemail options
1	Information only Mailbox - 3 Min. Box w/ reply (120 Messages Max.)	\$16.97	Additional Legacy Voicemail options
1	Information only Mailbox - 3 Min. Box w/ reply (40 Messages Max.)	\$8.49	Additional Legacy Voicemail options
1	Relocation of a Line	\$55 /request	Phone line Relocation Charge
	<b>Additional Broadband Internet Services</b>		
5	Starter - 768K/128K	\$25.99	ADLS Technology

5	Broadband - Up to 1.5M/384K	\$28.99	ADLS Technology
5	Standard - Up to 3M/768K	\$33.99	ADLS Technology
5	Premium - Up to 7M/768K	\$43.99	ADLS Technology
5	Ultra - Up to 15M/1M	\$53.99	ADLS Technology
5	Broadband Static - Up to 1.5M/384K	\$38.99	ADLS Technology with Static Address
5	Standard Static - Up to 3M/768K	\$43.99	ADLS Technology with Static Address
5	Premium Static - Up to 7M/768K	\$53.99	ADLS Technology with Static Address
5	Ultra Static - Up to 15M/1M	\$63.99	ADLS Technology with Static Address
5	Business FAST (Dynamic IP) - 5/2	\$44.99	Fiber Optic Technology
5	Business FAST (Dynamic IP) - 15/2	\$54.99	Fiber Optic Technology
5	Business FAST (Dynamic IP) - 15/15	\$69.99	Fiber Optic Technology
5	Business FAST (Dynamic IP) - 30/15	\$84.99	Fiber Optic Technology
5	Business FAST (Static IP) - 15/2	\$64.99	Fiber Optic Technology with Static Address
5	Business FAST (Static IP) - 15/15	\$79.99	Fiber Optic Technology with Static Address
5	Business FAST (Static IP) - 30/15	\$94.99	Fiber Optic Technology with Static Address
5	ADSL2+ Bonded-Standard - Up to 3M/768K	\$33.99	Bonded ADSL Technology
5	ADSL2+ Bonded-Premium - Up to 7M/768K	\$43.99	Bonded ADSL Technology
5	ADSL2+ Bonded- Ultra - Up to 10M/1M	\$48.99	Bonded ADSL Technology
5	ADSL2+ Bonded- Ultra Plus - Up to 20M/1.5M	\$63.99	Bonded ADSL Technology
5	ADSL2+ Bonded- Ultra Plus - Up to 25M/2M	\$73.99	Bonded ADSL Technology



5	ADSL2+ Bonded- Static Standard - Up to 3M/768K	\$43.99	Bonded ADSL Technology with Static Address
5	ADSL2+ Bonded- Static Premium - Up to 7M/768K	\$53.99	Bonded ADSL Technology with Static Address
5	ADSL2+ Bonded- Static Ultra - Up to 10M/1M	\$58.99	Bonded ADSL Technology with Static Address
5	ADSL2+ Bonded- Static Ultra Plus - Up to 20M/1.5M	\$73.99	Bonded ADSL Technology with Static Address
5	ADSL2+ Bonded- Static Ultra Plus - Up to 25M/2M	\$83.99	Bonded ADSL Technology with Static Address
5	Business Broadband Service Suspend	\$5.00	Suspension of Broadband service
5	Dry Loop for install where no line exists	\$5.00	Dry loop for ADSL, where a phone line does not exist.
	<b>Hosted PBX &amp; Managed Service Products</b>		
1	Virtual Network Function Group 1 - Router Service up to 50Mb - VNFRTTRGP1-P	\$35.00	
1	Virtual Network Function Group 2 - Router Service 51 Mb to 150Mb - VNFRTTRGP2-P	\$75.00	
1	Virtual Network Function Group 3 - Router Service 151Mb to 300 Mb - VNFRTTRGP3-P	\$115.00	
1	Virtual Network Function - Optional Portal - 50Mb - VNFPORTAL-P	\$15.00	
1	Netvanta 3140 Basic	\$32.00	IP Gateway/Router for HPBX Solution
1	Netvanta 3140 Enhanced	\$36.00	IP Gateway/Router for HPBX Solution
1	Netvanta 3140 SBC - 50 Sessions	\$50.00	IP Gateway/Router for HPBX Solution
1	Netvanta 3140 SBC - 100	\$54.00	IP Gateway/Router for HPBX Solution

	Sessions		
1	Netvanta 3140 SBC - 300 Sessions	\$95.00	IP Gateway/Router for HPBX Solution
1	Netvanta 3448 POE Enhanced	\$76.00	IP Gateway/Router for HPBX Solution
1	Netvanta 3448 SBC - 50 Sessions	\$69.00	IP Gateway/Router for HPBX Solution
1	Netvanta 3448 SBC - 100 Sessions	\$79.00	IP Gateway/Router for HPBX Solution
1	Netvanta 4660 Enhanced (Gig Interface)	\$115.00	IP Gateway/Router for HPBX Solution
1	Netvanta 4660 SBC - 50 Sessions	\$130.00	IP Gateway/Router for HPBX Solution
1	Netvanta 4660 SBC - 100 Sessions	\$150.00	IP Gateway/Router for HPBX Solution
1	Netvanta 4660 SBC - 300 Sessions	\$180.00	IP Gateway/Router for HPBX Solution
1	Netvanta 5660 Enhanced (Gig Interface)	\$200.00	IP Gateway/Router for HPBX Solution
1	Netvanta 5660 SBC - 50 Sessions	\$210.00	IP Gateway/Router for HPBX Solution
1	Netvanta 5660 SBC - 100 Sessions	\$245.00	IP Gateway/Router for HPBX Solution
1	Netvanta 5660 SBC - 300 Sessions	\$280.00	IP Gateway/Router for HPBX Solution
1	Netvanta 6250 (8 FXS Ports)	\$125.00	IP Gateway/Router for HPBX Solution
1	Netvanta 6250 (8 FXS Ports) SBC 50 Sessions	\$135.00	IP Gateway/Router for HPBX Solution
1	Netvanta 6250 (8 FXS Ports) SBC 100 Sessions	\$140.00	IP Gateway/Router for HPBX Solution
1	Netvanta 6250 (24 FXS Ports)	\$145.00	IP Gateway/Router for HPBX Solution
1	Netvanta 6250 (24 FXS Ports) SBC 50 Sessions	\$150.00	IP Gateway/Router for HPBX Solution
1	Netvanta 6250 (24 FXS Ports) SBC 100 Sessions	\$160.00	IP Gateway/Router for HPBX Solution
1	Total Access 924E	\$125.00	
1	Total Access 924E SBC 50 Sessions	\$135.00	
1	Total Access 924E SBC 100	\$140.00	

	Sessions		
1	Netvanta 6410 SBC - 1000 Sessions	\$189.00	IP Gateway/Router for HPBX Solution
1	Managed Gateway Services-NRC/SITE - One Time NRC	\$200 /NRC	IP Gateway/Router for HPBX Solution
1	Netvanta 1238 (48 Port Switch)	\$48.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1238 POE (48 POE Port Switch)	\$50.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1531 (12 Port Gigabit Switch)	\$25.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1531 POE (12 Port Gigabit Switch/8 POE)	\$35.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1550-24 (24 port Gigabit Switch) Layer 3 Lite	\$35.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1550-24P (24 POE Port Gigabit Switch) Layer 3 Lite	\$42.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1550-48 (48 port Gigabit Switch) Layer 3 Lite	\$60.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1550-48P (48 POE Port Gigabit Switch) Layer 3 Lite	\$80.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1638 (48 Port Gigabit Switch) Layer 3	\$110.00	IP Gateway/Router for HPBX Solution
1	Netvanta 1638 POE (48 POE Port Gigabit Switch) Layer 3	\$115.00	IP Gateway/Router for HPBX Solution
1	Netvanta1535P Gigabit Active Reach Switch	\$110.00	IP Gateway/Router for HPBX Solution
1	Active Reach Media Converter	\$5.00	
1	IP Derived Analog FXS Line Port	\$9.95	FXS port option for Gateway or Analog Terminal Adapter (ATA) supported lines for HPBX
1	IP Derived Analog FXS Line	\$10 /NRC	FXS port option for Gateway for HPBX

	Port-NRC/Port - One Time NRC		
1	Business - Advantage Seat	\$7.95	Seat License for Hosted IP PBX
1	Business - Advantage PLUS Seat	\$15.95	Seat License for Hosted IP PBX
1	Business - Advantage Premium Seat	\$23.95	Seat License for Hosted IP PBX
1	Business - Advantage Virtual Seat	\$4.95	Seat License for Hosted IP PBX
1	Business Group Setup Provisioning / BG - One Time NRC	\$250 /NRC	Seat License for Hosted IP PBX
1	Aastra Standard, 2 LN Desk Phone - 6863i	\$4.00	IP Phone/Accessories for HPBX
1	Aastra Premium Plus Desk Phone - 6867i	\$7.00	IP Phone/Accessories for HPBX
1	Aastra Executive Desk Phone - 6869i	\$8.00	IP Phone/Accessories for HPBX
1	Voice Operator Panel - Receptionist App	\$25.00	IP Phone/Accessories for HPBX
1	Polycom Standard Gigabit Desk Phone - VVX310	\$7.50	IP Phone/Accessories for HPBX
1	Polycom Standard Gigabit Desk Phone - VVX410	\$7.00	IP Phone/Accessories for HPBX
1	Polycom Standard Desk Phone - VVX500	\$8.00	IP Phone/Accessories for HPBX
1	Polycom Standard Desk Phone - VVX600	\$11.00	IP Phone/Accessories for HPBX
1	Polycom Wireless DECT Phone w/Base Station - VVXD60	\$12.00	IP Phone/Accessories for HPBX
1	Polycom Wireless DECT Phone Additional Handset- VVXD60H	\$8.00	IP Phone/Accessories for HPBX
1	VVX Phone Camera	\$8.00	IP Phone/Accessories for HPBX

1	VVX Wall Mount Bracket - One Time NRC	\$25 /NRC	IP Phone/Accessories for HPBX
1	Aastra 68 Series Wall Mount Bracket - One Time NRC	\$40 /NRC	IP Phone/Accessories for HPBX
1	Aastra 68 Series Power Supply - One Time NRC	\$45 /NRC	IP Phone/Accessories for HPBX
1	Polycom VVX 300/400 Series Power Supply - One Time NRC	\$45 /NRC	IP Phone/Accessories for HPBX
1	Polycom VVX 500/600 Series Power Supply - One Time NRC	\$45 /NRC	IP Phone/Accessories for HPBX
1	Aastra Receptionist Side Car for 6867i and 6869i	\$6.00	IP Phone/Accessories for HPBX
1	Polycom Receptionist Color Display Side Car for VVX Series	\$10.00	IP Phone/Accessories for HPBX
1	Polycom Conference Phone - IP6000	\$20.00	IP Phone/Accessories for HPBX
1	Analog Terminal Adapter - One Time NRC	\$75 /NRC	IP Phone/Accessories for HPBX
1	ACD -Gold	\$79.99	IP Phone/Accessories for HPBX
1	ACD -Platinum	\$149.99	IP Phone/Accessories for HPBX
1	Telax Monthly Record 60 Day Archive Per Concurrent Agent	\$7.00	IP Phone/Accessories for HPBX
1	Telax Monthly Record 90 Day Archive Per Concurrent Agent	\$11.25	IP Phone/Accessories for HPBX
1	Telax Monthly Record 120 Day Archive Per Concurrent Agent	\$16.85	IP Phone/Accessories for HPBX
1	Telax Monthly Record 180 Day Archive Per Concurrent Agent	\$21.00	IP Phone/Accessories for HPBX

1	Telax Monthly Record 365 Day Archive Per Concurrent Agent	\$35.00	IP Phone/Accessories for HPBX
1	Telax - Coach - Agent Scoring Module Per Named Agent	\$35.00	IP Phone/Accessories for HPBX
1	Telax Workforce Management Module Medium - 16 to 29 Seats - One Time NRC	\$4500 /NRC	IP Phone/Accessories for HPBX
1	Telax Workforce Management Module Small - 1 to 15 Seats - One Time NRC	\$9100 /NRC	IP Phone/Accessories for HPBX
1	ACD -Gold - Provisioning and Set up - One Time NRC	\$79.99 /NRC	IP Phone/Accessories for HPBX
1	ACD -Platinum - Provisioning and Set up - One Time NRC	\$149.99 /NRC	IP Phone/Accessories for HPBX
1	Easy Attendant	\$12.99	IP Phone/Accessories for HPBX
1	Premium Attendant	\$24.99	IP Phone/Accessories for HPBX
1	Optional INFO ONLY MAILBOX	\$2.00	IP Phone/Accessories for HPBX
1	Optional General Delivery MAILBOX	\$2.00	IP Phone/Accessories for HPBX
1	ADVT-500 Min Block-Addl Min @\$.035	\$14.50	IP Phone/Accessories for HPBX
1	ADVT-1000 Min Block-Addl Min @\$.034	\$28.00	IP Phone/Accessories for HPBX
1	ADVT-2500 Min Block-Addl Min @\$.032	\$65.00	IP Phone/Accessories for HPBX
1	ADVT-5000 Min Block-Addl Min @\$.031	\$125.00	IP Phone/Accessories for HPBX
1	ADVT-7500 Min Block-Addl Min @\$.03	\$180.00	IP Phone/Accessories for HPBX
1	ADVT-10000 Min Block-Addl Min @\$.029	\$230.00	IP Phone/Accessories for HPBX
1	ADVT-50000	\$1,000.00	IP Phone/Accessories for HPBX

	Min Block-Addl Min @\$.026		
1	ADVT-Bronze Min Spend \$10,000 - All minutes @\$0.018	\$10,000.00	IP Phone/Accessories for HPBX
1	ADVT-Silver Min Spend \$20,000 - All minutes @\$0.015	\$15,000.00	IP Phone/Accessories for HPBX
1	ADVT-Gold Min Spend \$50,000 - All minutes @\$0.012	\$25,000.00	IP Phone/Accessories for HPBX
	Multi Protocol Label Switching (MPLS)		
	MPLS 3 MEG	\$220.00	
	MPLS 5 MEG	\$270.00	
	MPLS 10 MEG	\$330.00	
	MPLS 15 MEG	\$390.00	
	MPLS 20 MEG	\$450.00	
	MPLS 30 MEG	\$570.00	
	MPLS 40 MEG	\$690.00	
	MPLS 50 MEG	\$810.00	
	MPLS 100 MEG	\$990.00	
	MPLS 150 MEG	\$1,170.00	
	MPLS 200 MEG	\$1,350.00	
	MPLS 300 MEG	\$1,530.00	
	MPLS 400 MEG	\$1,710.00	
	MPLS 500 MEG	\$1,890.00	
	MPLS 1 GIG	\$2,150.00	
	MPLS 2 GIG	\$3,000.00	
	MPLS 4 GIG	\$5,300.00	
	MPLS 5 GIG	\$6,100.00	
	MPLS 10 GIG	\$10,000.00	
	<b>SD WAN Service</b>		
	<b>Basic</b>		
	10M	\$55.00	
	30M	\$85.00	
	50M	\$115.00	
	100M	\$150.00	
	200M	\$325.00	
	400M	\$505.00	
	1G	\$1,195.00	
	2G	\$1,540.00	
	5G	\$1,725.00	

	<b>Advanced</b>		
	10M	\$65.00	
	30M	\$100.00	
	50M	\$140.00	
	100M	\$180.00	
	200M	\$395.00	
	400M	\$605.00	
	1G	\$1,430.00	
	2G	\$1,845.00	
	5G	\$1,845.00	
	<b>Advanced</b>		
	10M	\$155.00	
	30M	\$250.00	
	50M	\$350.00	
	100M	\$440.00	
	200M	\$970.00	
	400M	\$1,515.00	
	1GB	\$3,575.00	
	2GB	\$4,615.00	
	5GB	\$4,615.00	
ALL	Any service or feature not specifically detailed in this table may be procured at prevailing rates. Some service elements may be replaced during the life of the contract.		

### **INVOICE**

Itemized invoices, in accordance with the requirements of Exhibit B Reports and Invoices, shall be submitted to the State after the completion of the job/services and shall include a detailed description of the services along with the location of work.

Contractor shall be paid within 30 days after receipt of properly documented invoice and acceptance of the work to the State's satisfaction.

The invoice shall be sent to the address of the using agency under agreement.