N. CONNECTION WITH CERTAIN FACILITIES AND/OR EQUIPMENT OF OTHERS

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N. CONNECTION WITH CERTAIN FACILITIES AND/OR EQUIPMENT OF OTHERS

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N.1.1.4 Customer provided inside wire may be connected to residence and business individual line basic local exchange service furnished by the Company at a specified point of demarcation called the Standard Network Interface. (T)

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N.1.1.6 The Company is not obligated to connect telephone institutions and standard modular jacks to customer-provided inside wires. (T)

N.1.1.7 Maintenance of customer owned premises inside wire may be performed by either the Company or the customer. (T)

N.1.2 Responsibility of the Customer (T)

N.1.2.1 Where the customer elects to provide the inside wire and standard jacks, the installation must be in accordance with the technical standards furnished to the Commission by the Company. (T)

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N.1 Customer Provided Inside Wiring (Cont'd) (T)

N.1.2 Responsibility of the Customer (Cont'd) (T)

N.1.2.2 In the event the customer maintains or attempts to maintain inside wire, the customer assumes the risk of loss of service, damage to property, or death to or injury of the customer or the customer's agent. The customer will save the Company harmless from any liability, claims, or damage suits arising out of the customer's wire maintenance activity. (T)

N.1.2.3 In those instances where the Company makes a repair visit to the customer's premises and the service difficulty or trouble results from customer provided inside wire that is not installed in accordance with the technical standards for such wire, the customer is responsible for the payment of an unregulated Maintenance of Service Charge. If the customer elects to have the Company replace such inside wire after determining that the trouble is located therein, the customer will be subject to the appropriate unregulated Service Charges. (T)

N.1.3 Responsibility of the Company (T)

N.1.3.1 The Company will make the technical standards and installation guidelines for customer provision of inside wire available to customers at the Business Office or other designated locations.

N.1.3.2 When notified by the customer, the Company will enter into a maintenance agreement and maintain all customer provided inside wire and standard jacks that have been properly installed in accordance with the technical standards and installation guidelines for such wire.

N.1.4 Violation of Regulations (T)

N.1.4.1 Where customer provided inside wire is in violation of this Tariff or technical standards, the Company will promptly notify the customer of the violation and will take such immediate action as is necessary for the protection of the telecommunications network and Company employees. (T)

N.1.4.2 The customer shall discontinue use of the customer provided inside wire or correct the violation and notify the Company in writing that the violation has been corrected within 10 days after receipt of such notice. (T)

N. CONNECTION WITH CERTAIN FACILITIES AND OR EQUIPMENT OF OTHERS

N.1 Customer Provided Inside Wiring (Cont'd) (T)

N.1.4 Violation of Regulations (Cont'd) (T)

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PEMBROKE TELEPHONE COMPANY, INC.

TECHNICAL STANDARDS FOR INSIDE WIRING

SCOPE

In the event the customer maintains or attempts to maintain inside wire, the customer assumes the risk or loss of service, damage to property, or death to or injury of the customer or the customer's agent. The customer will save the company harmless from any and all liability, claims, or damage suits arising out of the customer's wire maintenance activity.

This document sets forth minimum technical, material, and workmanship standards applicable to the provision of same premises inside wiring for connection to basic local exchange service, such wiring must be used only with FCC registered or grandfathered non-button and/or single button telephone sets and associated ancillary devices.

The standards set forth in this document are subject to change as technology and installation and maintenance methods evolve. The Telephone Company reserves the right to submit revised standards when a need arises.

All building and electrical codes applicable in the jurisdictions served by Pembroke Telephone Company, Inc., shall be complied with. Article 800, entitled Communications Circuits, of the National Electrical Code, and other relevant sections of that Code are hereby incorporated by reference and must be complied with.

Appendix A provides a Glossary of terms used herein.

MEANS OF CONNECTION TO THE NETWORK

The physical and electrical demarcation between customer provided inside wiring and the telecommunications network is a telephone company provided Standard Network Interface or other telephone company provided registration program jack as specified in FCC Tariff No. 5 or by other means agreeable to the Company and customer.

For those premises which only have hardwired connecting blocks, or non-nodular jacks, the customer must contact the Telephone Company for the installation of a Standard Network Interface device to be located at the demarcation point and used for maintenance and the connection of the customer's wire.

(1)

GENERAL CONSIDERATIONS

A. General Technical and Safety Considerations

Wiring may be used only to conduct the operating signals, voltages and currents normally found on basic telephone exchange service lines. Premises inside wire must be capable of being exposed to, and conducting without damage, possible induced lightning surges and 60hz power line disturbances. This standard requires that such wire and its associated hardware be designed, installed, and maintained so as to operate safely when conducting these signals, surges and disturbances.

Caution: Telephone connections may have varying amounts of electrical currents in the bare wires and terminal screws. Therefore, customer premises wiring must not be installed or maintained without first disconnecting inside wiring from the demarcation point, or other telephone company provided standard registration program jack, and also from any other power source.

B. Limitations

In the event any customer provided inside wiring fails to comply with the standards or conditions set forth herein, Pembroke Telephone Company, Inc. shall not be required to connect to or maintain such inside wiring until the customer achieves compliance.

MATERIAL STANDARDS

A. Wire

1. Two pair wire shall be twisted in a four conductor spiral or as two twisted pair. Three pair wire shall have the conductors twisted together to form pairs and then grouped together to form the cable core.

2. The wire pairs shall be covered with a jacket of polyvinyl-chloride or a functionally equivalent compound which has a 1500 V. RMS minimum breakdown rating.

3. Each conductor shall be solid annealed copper individually insulated with distinctly colored high density polyethylene or functionally equivalent compound.

4. Wire runs must be limited to 250 feet for 22 gauge wire, and 200 feet for 24 gauge wire.

5. Pairs within cables cannot be split. Table A sets forth typical wire types and appropriate pair color code matches used to insure pair integrity.

TABLE A

Type of Wire	**Pair No.**	**Pair Color Matches**	
2 Pair Wire	1	Green	Red
	2	Black	Yellow
3 Pair Wire	1	White/Blue	Blue/White
	2	White/Orange	Orange/White
	3	White/Green	Green/White

B. Jacks

1. All jacks used in conjunction with customer provided inside wire must comply with Subpart F or Part 68 of the Federal Communication Commission's Rules (i.e., the Registration Program).

WIRE CONNECTION, ROUTING AND SEPARATIONS STANDARDS

A. Wire Connections

1. The continuity of the wire color code must be maintained through all connections (e.g., red wire connected to red). Typical connections and wire coding for one line service are shown in Table B.

TABLE B

Inside Wire		Connecting Block	
One Line	Service	Terminations	
No Dial Light	Dial Light		
Tip	Tip	Green	White/Blue
Ring	Ring	Red	Blue/White
Not Used	Transformer	Black	White/Orange
Ground*	Transformer	Yellow	Orange/White

*For all party line installations.

2. Customer premises inside wire must be securely fastened by the appropriate means, to any surface encountered, without abrading or puncturing the insulating jacket. Typical fasteners and spacing intervals are shown in Table C.

TABLE C

Fasteners	Horizontal Spacing Feet	Horizontal Spacing Inches	Vertical Spacing Feet	Vertical Spacing Inches	From Corner Inches
Wire Clamp		16		16	2
Staples (Wire)		7.5		7.5	2
Bridle Rings**	4				2 through 8.5*
Drive Rings**	4		8		2 through 8.5*

* *When changing direction of wire runs, the fasteners should be spaced to hold the wire at approximately a 45 degree angle.*

** *To avoid possible injury do not use drive rings below a 6 foot clearance level, use bridge rings.*

3. Removal of wiring jacket or individual conductor insulation for connections or splices shall be accomplished by removing the minimum amount of insulation necessary to make the connection or splice. Insulation equivalent to that provided on the individual wire conductors and the jacket shall be suitably restored by placement of the splices in an appropriate enclosure or by using adequately insulated splicing means. If any point where the jacket or insulation has been removed is concealed, it must be accessible without disturbing permanent building finishes (e.g., by removing a cover).

B. Wiring Routing

1. Wire shall be installed so as to assure that there is adequate insulation of telephone wiring from commercial power wiring and grounded surfaces. Wiring is required to be sheathed in an insulating jacket in addition to the insulation enclosing individual conductors. It shall be assured that this physical and electrical protection afforded by the insulating jacket and insulation enclosing individual conductors shall not be damaged or abraded during installation.

2. Telephone wire shall not be placed in the same conduit or raceways with wires that conduct electricity.

3. Judgment should be used in selecting the locations for placement of inside wire. The following are examples of locations which should be avoided:

   a. Damp locations.

   b. Wire runs which provide support for any objects.

   c. Excessively hot locations, steam pipes, heating ducts, hot water pipes, etc.

d. Locations where wires will be subjected to abrasion or corrosion.

e. Between two structural studdings when electrical wiring is present.

f. Areas above suspended ceilings used for return air plenums.

4. Place wiring where it will be least likely to be broken or detached. Provide protection if necessary. Wiring shall always be suitably supported by means which do not affect the integrity of the wiring insulation.

5. Wiring should follow joists; however, if it becomes necessary to span joists, run no more than three (3) inches from a wall to avoid possible damage to the wire.

6. Whenever wire conduit is available or is required by applicable codes, it should be used. However, be sure conduit does not contain electrical wires that are not associated with telephone equipment. If it does, do not use the conduit.

C. Wire Separations

1. Minimum separations are required in or on buildings, between telephone wiring and other conductors or metallic objects. The wiring separations specified in Table D (see below) are required for crossing and parallel runs. For wire crossings, alternatives to the minimum separations are also shown on Table D.

2. Separations of less than six (6) feet between inside wiring and lightning wire on rods are permissible under the following conditions:

a. Where telephone, power, and lightning rod ground connections are all made to the metallic cold water pipe that is properly grounded.

b. Where separately driven ground rods are used for telephone, power, and lightning rod installations, the ground rods are bonded together.

In no case shall the separation be less than four (4) inches.

3. An explanation of the terms used in Table D is provided in Appendix A, Glossary of Terms.

WIRING OPERATIONAL TESTS

1. Upon completing an installation or change in the inside wiring, the customer should perform an operational test. This test should consist of lifting the handset of a functioning telephone which has been connected to the newly placed wire, listening for dial tones, dialing a digit to eliminate dial tone, and hanging up.

2. If any excessive noise occurs during testing, or if dial tone cannot be heard or eliminated, or if trouble develops subsequent to installation of or changes in the wiring, disconnect the wiring from the telephone company provided demarcation point or modular jack and plug the functioning telephone directly into that jack. If the telephone works, the trouble condition is in the inside wire. If the telephone does not operate, contact the Telephone Company.

TABLE D

Separation and Physical Protection for Premises Inside Wiring

This table applies only to telephone wiring from the demarcation point or other telephone company providing modular jack to telephone equipment. Minimum separations between telephone wiring whether located inside or attached to the outside of buildings, and other types of wiring involved, are as follows. Separations apply to crossings and to parallel runs (minimum separations).

Type of Wire Involved	Minimum Separations	Wire Crossing Alternatives
Electric Supply		
Bare light or power wire of any voltage	5 ft.	No Alternative
Open wiring not over 300 volts	2 in.	See Note 1
Wires in conduit, or in armored or nonmetallic sheath cable, or power ground wires.	None	N/A
Radio & Television		
Antenna lead in and ground wires	4 in.	See Note 1
Signal or Control Wires		
Open wiring or wires in conduit or cable	None	N/A
Communications		
Community television system coaxial cables with grounded shielding	None	N/A
Telephone Drop Wire		
Using fused protectors	2 in.	See Note 1
Using fuseless protector or where no protector wiring from transformer	None	N/A

Type of Wire Involved	Minimum Separations	Wire Crossing Alternatives
Signs		
Neon signs and associated wiring from transformer	6 in.	No Alternative
Lightning System		
Lightning rods and wires[1]	6 ft.	See Wiring Separations

Note[1]: If minimum separations cannot be obtained, additional protection of a plastic tube, wire guard, or two layers of vinyl tape extending two inches beyond each side of the object being crossed must be provided.

GLOSSARY OF TERMS

1. Ancillary Equipment: Equipment which provides supplementary features, such as answering sets, speaker-phones, and dialers.

2. Armored or Nonmetallic: An assembly of two or more insulated conductors having an outer sheath of moisture resistant, flame retardant, nonmetallic material.

3. Bare Wire: An electrical conductor having no covering or insulation whatsoever.

4. Bridle Ring: A device used to loosely hold telephone wiring where appearance is not a factor. The bridle ring screws into the supporting surface. It is usually used where the wire is run below six feet and contains no sharp or hazardous edges. The telephone wire is inserted after the ring is in place.

5. Cleats: Porcelain fasteners which are used to fasten electric power wires that are insulated but do not have an outer protective jacket.

6. Coaxial Cable: A two conductor cable for transmitting electrical signals that consists of a tube or conducting material surrounding a second centrally located conductor which is held in place by insulators.

7. Conduit: A plastic or metal pipe or tube used to carry telephone or electrical wiring.

8. Connecting Block: A device used for terminating premises telephone wiring and a means of connecting telephone sets to such wiring.

9. Demarcation Point: The point of interconnection provided by the Telephone Company between terminal equipment or premises inside wire and the telecommunications network. Usually takes the form of the Standard Network Interface.

10. Dial Light: A small light bulb powered by low voltage and used to illuminate a telephone set dial in dark locations.

11. Drive Rings: A device used to loosely hold telephone wiring in place where appearance is not a factor. The nail in a drive ring is driven into the supporting surface and the ring is open to permit placing of the wires. A drive ring must be used at least six (6) feet from the floor so that its nail will not present a hazard.

12. Drop Wire: Wire used to transmit telephone service into a customer's premises. It may be aerial or buried.

13. Ground: Earth ground. Part of an electrical path or connection.

GLOSSARY OF TERMS (Cont'd)

14. Ground Connections: Metal paths (wires, metal water pipes, rods and clamps) which connect electrical circuits to earth ground, usually for protective reasons.

15. Ground Rods: A solid metal rod or pipe which is driven into the earth in order to provide an earth ground for electrical circuits.

16. Hardwired: The term "hardwired" as applied to a telephone set line (mounting) cord to a connection block with screw termination. Under the FCC's Registration Program for terminal equipment only those telephone sets which were connected to the telecommunications network in a "hardwired" manner prior to July 1, 1979, may remain connected or be reconnected in such a fashion.

17. Inside Wires: Wire designed to carry a telephone circuit(s) around a customer's premises. Typically, it consists of four insulated conductors encased in an insulated jacket.

18. Knobs: Porcelain fasteners used to affix electric power lines which are insulated but do not have an outer protective jacket to a surface.

19. Modular: The term "modular" as used herein applies to the connection of a telephone set mounting cord to the telecommunications network via plugs located on the end of such cords and jacks used to terminate premises inside wire.

20. Non-modular: The term "non-modular" as used herein applies to the connection of a telephone set mounting cord to the telecommunications network via a four (4) pin plug and matching jack or via hardwiring.

21. Open Wiring: A wiring method using cleats, knobs, tubes, or flexible tubing for the protection and support of insulated conductors run in or upon buildings and not concealed by the building structure.

22. Premises: Definition as stated in Pembroke Telephone Company's General Subscriber Services Tariff.

23. Party Line: A basic telephone exchange service line whose use is shared by two or more residential or business subscribers.

24. Protector: A device used as protection from hazardous voltages. It may be mounted either inside or outside the premises. If mounted outside it will be covered with a plastic or metal housing.

25. Raceways: A metal or plastic channel used for loosely holding electrical and telephone wires in buildings. A raceway is usually located in the floor and is usually encased on three or four sides by concrete.

GLOSSARY OF TERMS (Cont'd)

26. Registered Terminal Equipment: Terminal equipment which is registered for connection to the telecommunications network in accordance with Sub-part C of Part 68 of the FCC's rules. If a terminal device has been properly registered it will have an identification number permanently affixed to it.

27. Ring: As used herein, "ring" refers to that side of a two wire telephone circuit which is connected to the negative side of a battery located at the telephone company central office. It is like the "hot" side of a residential lighting circuit.

28. Telecommunications Network: The switched telephone network.

29. Tip: As used herein, "tip" refers to that side of a two wire telephone circuit which is connected to the positive side of a battery at the telephone company central office. It is like the material side of a residential lighting circuit.

30. Transformer: As used herein, a transformer is an electrical device which reduces the voltage in electrical house wiring to a low voltage in order to operate a dial light. It plugs into an electrical outlet and has externally located low voltage connections which are extended by inside wiring to the telephone set dial light.

31. Wire Clamp: A device used to secure telephone wires to a surface. One end is U shaped for placement over the wire. The other end contains a tab which is affixed to the mounting surface with a nail or screw.

32. Wire Guard: A length of plastic (round or U-shaped) used to protect telephone wiring from abrasion or foreign voltages.