

MISCELLANEOUS MATERIALS

1. Acids

1.01 Store acids in acid-proof containers. Use only acid-proof stoppers.

1.02 When using or handling acids, wear goggles, approved acid-proof rubber gloves, and other rubber protective devices. Gloves designed for electrical protection shall never be used in handling acids.

1.03 If acid gets on the skin, flush it off with running water immediately.

2. Explosives

2.01 Explosives shall be handled and used only by licensed powdermen and their designated helpers. The precautions and rules contained in Bell System Practices shall be followed rigidly. In addition to these requirements, all Federal and local laws, ordinances, and regulations covering the transportation, handling, use, and disposal of explosives and associated equipment shall be strictly observed.

3. Acetylene gas

3.01 Acetylene gas is inflammable. Any leakage, of acetylene gas in a confined area is dangerous.

3.02 In using acetylene gas, employees shall be alert to detect any indication of leakage. The liquid soap test on the hose and hose attachment is a safe method. Never use an open flame to test for leaks. Any part of the equipment found defective upon inspection shall not be used.

3.03 Before using, make certain that the burner hose is securely fastened to the tank and to the burner of soldering iron.

3.04 The gas flow shall be shut off only at the tank itself.

3.05 Acetylene gas cylinders shall not be dropped or struck violently as this may cause an explosion or damage to the tank or valve. When used or stored, the cylinders should be laid in a horizontal position, if practicable. Where they are used or stored vertically, the cylinders shall be secured individually against falling.

4. Nitrogen gas

4.01 When using nitrogen gas in pressure testing work in a manhole or confined space, be alert to detect any excess leakage. If there is any evidence of excess leakage, shut off the nitrogen gas pressure, if practicable. Thoroughly ventilate the manhole before re-entering. Nitrogen gas escaping in a manhole may reduce the amount of oxygen to such an extent that respiration cannot be sustained.

4.02 If, upon inspection, any part of the pressure testing equipment appears defective, it shall not be used.

4.03 Nitrogen cylinders shall not be dropped or struck violently as this may cause an explosion or damage to the tank or valve. When used or stored, the cylinders should be laid in a horizontal position, if practicable. Where they are used or stored vertically, the cylinders shall be secured individually against falling.

4.04 When handling cylinders, use proper lifting methods to avoid strains.

5. Gasoline and kerosene

5.01 Red safety cans shall be used for the transportation and storage of gasoline. Green safety cans shall be used to transport or store kerosene.

5.02 Keep gasoline and kerosene containers away from combustible materials, open flames, and excessive heat. Do not smoke, use a flame or any spark-producing device within ten feet of any location where gasoline is being handled.

5.03 Most commercial gasolines contain tetraethyl lead which is injurious to the skin. Do not use gasoline for washing hands.

5.04 Engines shall be stopped before filling gasoline tank.

5.05 Any spillage of gasoline shall be wiped up immediately. When pouring gasoline from one container to another, always maintain constant contact between containers.

5.06 Lights other than those of approved design shall not be used while handling gasoline.

5.07 Fire extinguishers on or adjacent to gasoline dispensing equipment shall be kept fully charged at all times.

5.08 Where gasoline odors are detected, an inspection shall be made immediately to determine their source and steps taken to correct the condition.

6. Lumber

6.01 To avoid getting splinters in the hands when handling lumber, leather-faced gloves should be worn.

6.02 Remove protruding nails from lumber.

6.03 Avoid walking on loose lumber.

6.04 Store lumber in an orderly and safe manner.

7. Nails and tacks

7.01 Nails and tacks should always be kept in approved containers. They shall never be placed in the mouth.

7.02 Nails and tacks which have been removed shall not be left lying around. They shall be picked up immediately and proper disposition made of them.

8. Cold stripping oil

8.01 Cold stripping oil shall not be heated as it is an inflammable liquid.

9. Paints

9.01 Paints should not be used in poorly ventilated places or near open flames.

9.02 Paints should be stored in tightly sealed cans or containers and away from heat. Cans of paint which have been opened shall be stored in approved metal lockers.

9.03 Rags used for wiping up paint spots or for cleaning the hands shall be disposed of outside the building.

10. Carbon tetrachloride

10.01 Carbon tetrachloride or approved substitutes having similar characteristics shall be used in small quantities only. It should never be poured into open containers.

10.02 The quarters where it is in use should be well ventilated. Employees shall avoid inhaling its fumes, as evaporation is very rapid and the breathing of the fumes may cause nausea or headache. When carbon tetrachloride is used in any confined space where ventilation is poor, some means of improved ventilation shall be afforded by the use of equipment such as portable electric fans.

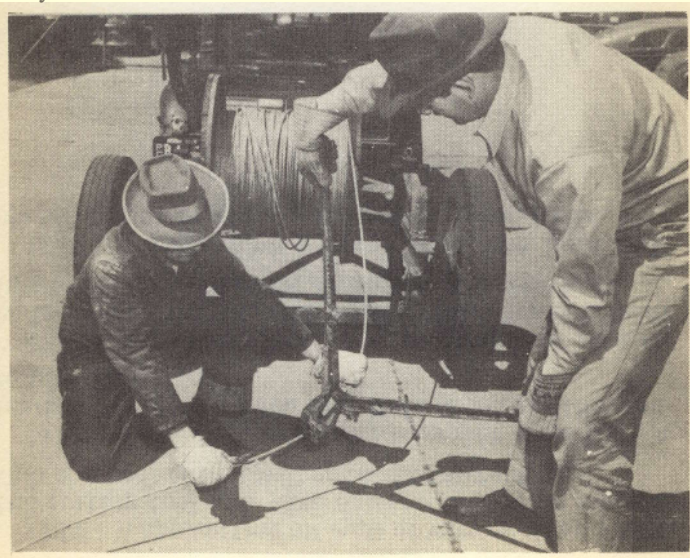
11. Strand and wire

11.01 When strand is being transported or when it is to be stored in coils, the ends shall be taped and tied securely to the coil.

11.02 When paying out strand from a coil, care shall be taken that the hands or arms are not caught and pinched between the turns of strand. Wearing gauntlet gloves and keeping the shirt sleeves rolled down will help in preventing this type of injury.

11.03 When the end of a messenger strand is released from a spool or coil it will tend to recoil. Care must be taken to avoid injury from this source. Hold the loose end.

11.04 As an added precaution, all strand should be served with friction tape before cutting. Care should be taken that the strand will not strike and injure anyone when it is cut.



11.05 When cutting off ends of wire or strand, hold the cutting tool and wire or strand in such manner that the ends cut off will not strike anyone.

11.06 Steel and hard drawn copper wire have a tendency to recoil when cut. Hold or secure the ends to prevent injury.

11.07 When handling, transporting, or storing coils of line wire, the ends of the coils should be bent into small loops to avoid scratches or lacerations.

11.08 When coiling covered wire, the bare ends should be cut to avoid scratches or lacerations.

WORK OPERATIONS

1. General

1.01 When the conditions surrounding the work being performed constitute a hazard, extraordinary care shall always be taken. Some examples of conditions where extraordinary care shall be taken are:

- (a) Working in the vicinity of electric light and power wires and associated apparatus.
- (b) Work involving exposure to highway traffic.
- (c) Working on or about any outside plant which may be weakened by storm or other causes.
- (d) Working in trenches.
- (e) Working in close proximity to machinery.

1.02 Life jackets shall be provided for all persons engaged in performing work operations while on boats, barges, rafts or other similar means of water transportation.

1.03 Each employee shall make a careful inspection of his working tools and apparatus before commencing work. He should satisfy himself that any plant on which he is working is sound and in a safe condition.

1.04 Unauthorized persons and vehicles shall be kept at a safe distance from a place where work is being done. Unauthorized persons shall not be permitted to touch moving parts such as ropes and blocks, and they shall be kept away from company vehicles, open manholes, pole raising and lowering operations, locations where men are working aloft, kerosene furnaces, hot solder and paraffin.

1.05 Work should be planned to reduce heavy lifting and straining to a minimum. Employees unaccus-

tomed to heavy work should be especially careful to avoid strains. Where practicable, use power tools. The following precautions should be observed in lifting:

- (a) Get sufficient help if the object is too heavy or cumbersome.
- (b) Face the object with feet far enough apart to give a good base of operation without placing undue strain on the abdominal muscles—the length of a shoe is a good guide. Adopt a stance which is comfortable and which will permit the object to be lifted vertically.
- (c) Bend the knees and take a firm grip on the object and straighten the legs slowly. This allows the strain to come on the strong muscles of the arms, shoulders, and legs.

1.06 Employees shall not overload themselves when carrying tools or materials. Additional trips should be made where necessary. Use a handline to raise and lower tools and materials aloft. Where small tools or materials cannot be fastened securely to the handline, they should be placed in a canvas bucket or other approved container.

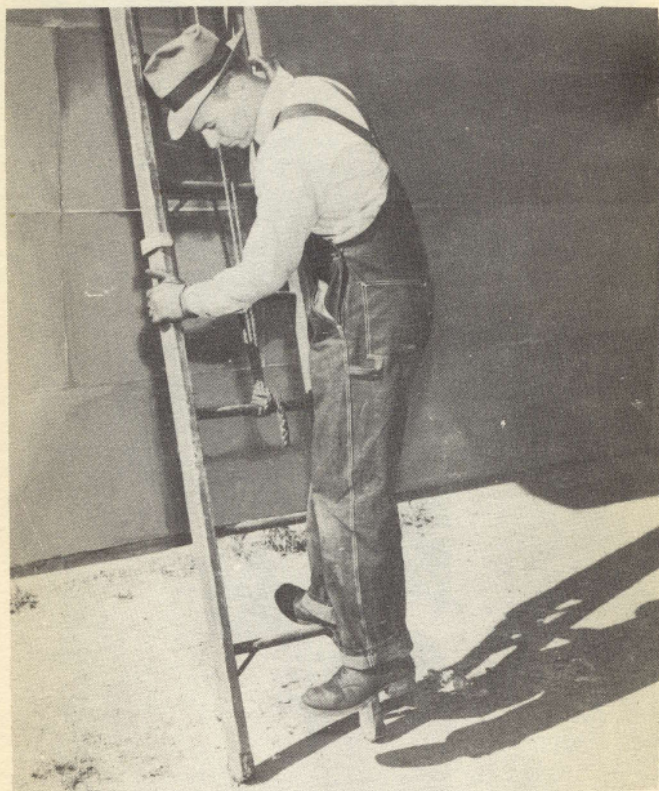
1.07 Employees engaged in loading, unloading or handling tools and materials shall take every reasonable precaution to protect their fellow workmen, the public and themselves. In these operations, suitable safety devices and approved methods shall be used.

1.08 To warn pedestrians and traffic of work in progress, proper guards shall be used to protect employees and the public from accident hazards. Warning flags and other visual signals shall be displayed by day and lighted red lanterns or other illuminated signals at night. Barricades shall also be placed where required.

1.09 When not in use, digging bars, pike poles or other sharp and pointed tools shall be placed in a position where they cannot slide or fall.

1.10 Care should be exercised by all employees when stepping off poles or other elevations. **LOOK WHERE YOU STEP.**





1.11 Employees should learn to recognize poison oak and poison ivy and take all precautionary measures to avoid direct or indirect contact with them.

1.12 When exposure to poison oak or poison ivy is expected, it is advisable for employees to immunize themselves by taking Oral Immunizing Extract

Broemmel in accordance with the printed directions furnished with each bottle. These directions are as follows :

“Give two teaspoonsful of the Oral Immunizing Extract ‘Broemmel’ at once and follow with one teaspoonful three times daily until 90 C.C.’s have been taken.” In order to comply with the requirement that 90 C.C.’s be consumed, it is necessary to begin the treatment about two weeks prior to exposure. Any of the other treatments outlined in the printed directions on the bottle should be carried out only under the direction of a physician.

Regardless of their taking the Broemmel Extract, employees shall wash all exposed parts of the body with an alkaline soap following each exposure to poison oak or poison ivy. When working for extended periods in a poison oak or poison ivy area, the exposed parts of the body should be washed at least every two hours during the progress of the work and again at the termination of the exposure. A thorough bath upon arriving home is also advisable.

1.13 In storing tools and materials over night, select a location least likely to cause interference to the public, and store the tools and materials in safe manner.

1.14 Employees should dress according to the work, the weather and the season.

1.15 Where advisable, keep the head covered as a protection from the sun and inclement weather.

1.16 Wear substantial shoes free from badly worn soles and loose or run down heels. As a further protection against possible foot injuries, it is advisable to wear safety shoes. When climbing poles, it is advisable to wear heavy shoes in preference to oxfords.

1.17 When working around rotating machinery, avoid wearing loose flowing clothing, neckties and sleeves.

*1.18 Where hand or arm injuries might occur, wear suitable gloves and keep sleeves down, especially when ascending, descending and working on poles.

1.19 It is generally advisable to remove rings or metal wristbands before performing certain work operations such as climbing poles, handling hot solder, working on distributing frames, batteries and power boards.

1.20 Before crossing a street or alighting from a vehicle, look to left and right for approaching vehicles. Streets should be crossed only at designated cross-walks or street intersections. Always observe traffic signals.

1.21 Before crossing in front of or behind a stopped vehicle, observe that it is not about to move forward or backward and that there is no danger from approaching vehicles.

1.22 Quarantined buildings should not be entered by employees. Where new service is to be established in premises under quarantine or present service is in trouble, the measures of providing service should be taken at the discretion of and under the guidance of the supervisor.

WORK OPERATIONS

1. Electrical hazards

1.01 Supervisors shall see that employees who work on outside plant have been instructed in and thoroughly understand the practices relating to clearances for aerial plant and foreign wires, as stated in Bell System Practices and other instructions.

1.02 Knowledge of unusual electrical hazards disclosed by engineering surveys, field surveys, or by other plant activities, shall be given promptly to the plant forces involved. This information should be placed on work orders or work prints. Where electrical tests or other information indicate that foreign currents exist or have existed on the telephone plant, the deskman or other dispatching employee shall inform the field workmen of the existence or previous existence of such foreign currents.

1.03 All employees engaged in performing outside plant construction or maintenance operations shall inspect the immediate vicinity of every job location for electrical hazards, created by electric light and power wires, transformers, and other power hazards, before attempting to perform any of the work operations.

1.04 Where electrical hazards are observed or detected, it shall be the responsibility of each employee to make certain that all precautionary measures have been taken before proceeding with the work. It shall also be the responsibility of each employee to make certain that he does not jeopardize the safety of his fellow workmen during the performance of his work.

1.05 When a workman detects any evidence that an electrical power contact exists, or has existed, on any telephone equipment, he shall take all necessary precautions. When in doubt, stay clear of all such equipment and refer the matter to the supervisor at once for advice and instruction before proceeding with the work. Such evidence of electrical contact may be identified by impaired clearance or by the condition of protector blocks, drop or bridle wires burned, blown fuses, inside wires or station cords burned or partially burned.

1.06 Whenever unusual electrical hazards are encountered, the supervisor shall be notified and he shall come to the job location and direct the work.

1.07 As an added safety precaution in those cases where evidence of electrical contact is not apparent, it is suggested that employees test all wire, cable or strand, or any other conductor involved in the work operations (WITH THE BACK OF THE HAND) before taking hold of them.

1.08 Trolley feeders, trolley contact and suspension wires are frequently below or in relatively close proximity to the telephone wires, cables or terminals. The same precautions shall be observed to avoid contact with them as is followed in the case of other power wires. Insulation on these circuits and all other foreign wires must not be depended upon for protection.

1.09 CIRCUITS CARRYING 110 VOLTS ARE DANGEROUS AND REQUIRE THE USE OF RUBBER PROTECTIVE EQUIPMENT WHEN AN EMPLOYEE MAY BE EXPOSED TO THEM.

1.10 When climbing or working on poles that might expose one to light and power wires, rubber gloves should be worn and every possible precaution-

any measure taken to avoid contacting the light and power wires.

1.11 It occasionally becomes necessary to erect or remove wires, suspension strand, guys, and other parts of the telephone aerial plant in close proximity to foreign wires and associated equipment. When work is performed under these circumstances, the necessary guards, protective devices and methods shall be used as provided in Bell System Practices.

1.12 When using steel fish tapes or wire, precaution shall be taken to prevent the tape or wire from coming in contact with exposed bus bars, light or power wires, or associated equipment.

*1.13 Electric light and power wires, electric railway contact wires, and "third" rails carrying current of high voltage may sometimes be found near the telephone plant. Contact with these wires or leakage of current from them is likely to occur by reason of storms, sagging or breaking of wires, defective insulation, or the dampness of poles, crossarms and insulators, and from other causes. Guy wires, span wires, and other wires of electric light, power or trolley systems that normally do not carry current may be energized and should be so considered until proved otherwise. When necessary to work on plant exposed to electric light and power circuits during storms, every precaution shall be taken to avoid electric shock. If wet rope must be used in work around electric light and power wires operating at 300-750 volts, wear rubber gloves, rubber boots and rubber raincoats.

1.14 Employees shall not handle electric light and power wires or any associated power equipment of the foreign outside plant unless it becomes necessary to prevent serious injury or loss of life. Workmen who are acting in such an emergency shall wear rubber

gloves so long as they are exposed to electric shock. When handling wires that may be "hot", use only one hand. in so far as it is practicable, and keep the other hand and other parts of the body away from grounded objects.

1.15 Power wires and fixtures in telephone buildings shall be handled only by employees who have been trained and are authorized to do so. Power wires and fixtures in other than telephone buildings shall not be handled by telephone employees.

1.16 Broken wires' shall not be handled without taking proper precautions, even though they may not appear to be carrying currents. When broken telephone wires are discovered, they shall be removed only by an employee experienced in the work. When discovered by employees not experienced in the work, the condition shall be reported to the Supervisor or Repair Service and, when necessary, should be guarded to keep others away until the condition is corrected. Broken service wires of other companies should be reported to the Plant Supervisor or Repair Service at once.

1.17 Before riding suspension strand, a workman shall make a preliminary survey and look for electric light wires passing over or under, or along the route of the strand which may come in contact with his body or the material or tools he is carrying. Special care shall be taken that the cable car or anything in contact with it shall not touch any power, light or trolley wire. If there is a possibility of this occurring, due to the added weight of the workman riding the strand and thereby changing the normal clearance, the workman shall return at once to the nearest pole and complete the work from a ladder.

1.18 Dry tape lines free of metallic thread shall be used in all cases where there is a danger of contact

with electric light and power wires or associated equipment. Metal rules or tape lines shall never be used on poles.

WORK OPERATIONS

1. Customer's premises

1.01 Particular care shall be exercised while working in buildings under construction or in buildings under reconstruction or being removed. Temporary stairways or ladders shall not be used unless they are known to be safe. When there is insufficient lighting, a flashlight shall be used to avoid loose boards, temporary guards, nails, scaffolding or other obstacles. Workmen shall not ride in material hoists unless specifically authorized by the supervisor to do so.

1.02 When working in attics or other rooms without flooring, do not step on or place tools and materials on ceiling construction between joists, beams and joints.

1.03 Conditions on the customer's premises that are hazardous to telephone work shall be corrected before proceeding with the work. The workman should request the customer to arrange for the correction of the unsafe conditions or refer the problem to the supervisor.

1.04 When furniture, material or equipment on a customer's premises obstructs the work and must be moved, the workman shall inform the customer or his representative. Where the objects are of such a nature that the employee cannot move them safely, he shall request the customer to arrange to have the objects moved or refer the problem to the supervisor.

1.05 Doorways, passageways or stairways should not be obstructed with tools or materials. Where this

cannot be avoided, adequate precautions shall be taken.

1.06 Employees shall not use matches, candles, or other open flames for illumination purposes in buildings. Flashlights or standard extension lights shall be used where necessary. Particular care shall be taken when working in dark basements to avoid pipes, wiring, beams, pits, stored furniture, debris and other obstacles.

1.07 Work shall not be performed in shafts except under the direction of the supervisor. Employees shall guard against injury when opening and passing through doorways.

1.08 Avoid working on roofs or about skylights wherever possible. When it becomes necessary for employees to work over or upon roofs or skylights, the roofs or skylights shall be carefully inspected to be sure that the weight can be supported. The owner or his representative shall be notified in advance of performing such work.

1.09 When it is necessary to perform work on sloping roofs, every precaution shall be taken against slipping. Use particular care when going from ladder to roof and from roof to ladder. Materials, tools, trap doors or covers shall be so placed that, they will not slide off sloping roofs.

1.10 Before working on roofs, employees shall inspect the attic ceiling for flush-type skylights which might be overlooked from the outside if they are covered with soot, snow or roofing paper.

1.11 Trap doors opened by the employee in the course of his work shall not be left unguarded.

1.12 When working in industrial plants or on railroad premises, be constantly on the watch for and

observe all danger signals, warning, and caution signs.

1.13 When it is necessary to work in close proximity to unguarded moving machinery, such as, belts, pulleys and shafts, work should be deferred until machinery is guarded or shut down.

1.14 Exercise care while using stairways. Be alert for missing, loose or defective steps or treads. Look out for any debris that may have been left on stairways.

1.15 Employees should be alert to detect the presence of dogs on the customer's premises. When a dog is observed or is known to be on the premises, customer should be courteously requested to tie the dog or lock it up until the work is completed. Such a request should be made even though the customer states that the dog is not vicious.

1.16 Wherever possible avoid climbing on or over fences on public or private property. Ladders shall be used where normal access to poles or other portions of the plant is not possible. In instances where ladders will not permit access to the plant, the employee shall notify the supervisor and ask for further instructions.

1.17 Employees should not climb ladders attached to buildings where the use of standard ladders is practicable.

1.18 Industrial plants engaged in manufacturing or producing munitions, synthetic rubber, high octane gasoline, or other explosive products, present extraordinary hazards. It is essential that all employees exercise extraordinary care when working on the premises of such plants. The following outlines the procedure to be followed:

- (a) Before telephone employees are assigned to do work in hazardous locations, the supervisor responsible shall survey the premises and the job to appraise the working conditions and to insure that all necessary precautions are taken from a telephone viewpoint. Responsible workmen who are known to be careful and competent should be selected for assignments in plants of this kind. In addition to following strictly our telephone safety rules, any special rules of the customer shall be observed scrupulously; to this end, arrangements shall be made to have the telephone workman accompanied by an authorized representative of the customer.
- (b) In locations considered extra hazardous, special arrangements may sometimes be necessary, such as suspension of operations in the particular portion of the plant where telephone work is to be done. The management of the company involved is in the best position to know what arrangements should be made for telephone company workmen to perform their work under the least hazardous conditions, both from the standpoint of the men's safety and protection of the customer's plant.

WORK OPERATIONS

1. Cable construction and maintenance

1.01 Accidents in connection with cable splicing, cable placing, and cable removal can, and often do, result from :

- (a) Failure to properly plan the work.
- (b) Failure to test for presence of gas and deficiency of oxygen in manholes.
- (c) Failure to guard work operations properly.
- (d) Contact with electric light and power wires.
- (e) Lack of proper care in handling and working with materials and tools.
- (f) Improper handling of manhole covers.
- (g) Lack of proper precaution in climbing and working aloft.

1.02 Because of the variation of hazards presented through work operations aloft, on the street, on the water, and underground, it is essential that all employees engaged in such operations know and observe the proper precautions for their own protection and for the protection of other employees and of the public as well.

1.03 Before removing any cable sheath or doing any work which will disturb the normal continuity of a cable sheath, adequate devices for bridging the break shall be used. The use of the temporary cable bond is recommended. The device used for maintaining sheath continuity shall remain in use until the cable sheath has been made continuous.

1.04 Before wiping or unwiping joints or doing any other solder work on a cable under gas pressure, a hole shall be drilled in the lead sleeve with a cable-boring tool. If there is a valve on the sleeve, the valve core shall be released so that gas may escape. When this work is done in a manhole or cable vault, make certain that the manhole or vault is ventilated adequately during the entire operation.

1.05 In making a resistance measurement with a megger, the conductors become charged. To prevent shocking the tester or splicer, they shall be discharged as soon as the measurement is made. The resulting arc at the time of discharge may be sufficient to ignite an explosive mixture of gas, and therefore the conductors shall not be discharged in a manhole. Care shall also be exercised to assure that the leads do not become short circuited while in the manhole. Use a discharging switch if there is one available.

1.06 If a cable reel trailer is used, see that the trailer wheels are chocked and that the safety jack is in place before starting to pull the cable.

1.07 When using lubricant in pulling in cable, make sure it is not spilled or dropped where it will cause slipping hazards to employees or the public. If it is spilled or dropped, it should be cleaned up at once.

1.08 If the hands have cable lubricant on them, they should be cleaned before attempting to handle tools or materials, or do any other work.

1.09 When pulling in cable with a power reel, do not handle the winch line while it is in motion.

1.10 Tools and materials stored in cable carts should always be kept in the space provided for them. Sharp edged or pointed tools shall have protective guards placed in the proper protective position before storing them in the cart.

1.11 Cable splicer's carts shall be placed as near the work as is safely possible. To avoid having to cross the highway to get to the tool cart it should be placed, whenever possible, on the side of the highway where the work is to be done.

1.12 When the cable cart lid is left open, all lid supports shall be used to support it. The hinged portions of hasps on the lid shall be laid back to prevent head injuries.

***1.13** When splitting lead sleeves with a cable saw or a chipping knife, and when using a shave hook, care should be taken to avoid injury in case the tools or the sleeve should slip. Never use your hand or leg as a work bench. Chipping knife with mushroomed head shall not be used.

1.14 Care shall be taken in the handling of acetylene equipment to prevent mechanical damage to the tank and its fittings. Valves shall be closed on empty tanks.

1.15 Inspection shall be made before each use of the equipment to assure that no leakage of acetylene gas occurs. If at any time the odor of acetylene gas is detected, soapy water shall be used for testing for leaks. The hose associated with the torch shall be handled carefully to prevent the introduction of kinks and other damage.

1.16 Remember that acetylene gas is highly inflammable and anaesthetic. If breathed in sufficient quantities the gas can cause death.

***1.17** Soldering coppers or torches equipped with needle control valves in the handles may be used if the tank is equipped with approved pressure regulator and pressure gauge.

1.18 The torch shall be ignited only at the location where the torch is to be used. It should never be trans-

ported while lighted. The torch flame shall be extinguished immediately upon completion of any work requiring the use of a torch. When igniting the torch, point the nozzle away from the body or any inflammable material.

1.19 In using the torch, care shall be taken to avoid contact between the flame and any material which may be damaged or ignited. Do not allow the flame to come in contact with any part of the tank or associated equipment.

1.20 Goggles should be worn when using an acetylene torch. No torch or open flame shall be used in manholes.

*1.21 Goggles shall be worn when using the carbon electrode to make repairs on aerial cable. The carbon electrode method must not be employed in manholes.

*1.22 UNDERGROUND CABLE-All open manholes, handhole or splicing boxes and conduit pull boxes shall be protected with approved guards, barricades, and warning signals.

1.23 Employees shall not carry lighted lanterns, tent heaters, lighted cigars, cigarettes, pipes, acetylene torches, or any open flame into, or within 10 feet of a manhole or cable vault.

1.24 When the open manhole is located on a highway, approved warning signals shall be placed in the direction of approaching vehicular traffic and far enough from the manhole to permit ample warning for divergence of traffic.

1.25 Approved guards and warning signals shall be in place when removing or placing manhole covers. Two men should be used in the removal of manhole covers.

1.26 Manhole covers shall be placed or removed in the approved manner and with the standard tools

provided for the purpose.

1.27 Manhole covers should be placed where they will not obstruct traffic or cause interference to workmen or pedestrians. They should be placed preferably in the work area where they will be protected by a cart, truck, or other equipment bearing a signal to warn any traffic approaching the open manhole.

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1.28 Manhole hooks shall be placed in a safe location immediately after the manhole cover has been removed.

1.29 Before entering any manhole, the workman shall determine if gas is present by making the necessary tests as outlined in Bell System Practices. A manhole which has been closed temporarily shall be tested for gas each time it is opened. Gas detector ampoules shall not be used after the expiration of the date marked on each container.

1.30 Where it is necessary for workmen to perform work in manholes considered hazardous or in hazardous locations, sufficient employees shall be assigned to that location to permit one workman to be present on the surface at all times to guard the manhole and insure the safety of the workmen below.

1.31 An employee guarding an open manhole is responsible for the safety of the man or men working in-the manhole-he shall make observations sufficiently often to insure that the workmen in the manhole are all right. He shall also warn them of all approaching danger. Workmen shall not emerge from the manhole until the guarding employee tells them it is entirely safe to do so.

1.32 While in a manhole, if any irritation of the eyes, nose, or throat, is experienced or if any difficulty in breathing is noted, leave the manhole at once.

1.33 When necessary, manholes shall be ventilated with approved ventilators.

1.34 When artificial light is necessary in a manhole, an electric light operated by an approved lighting outfit shall be used. Where portable generators are used, they shall be insulated from ground. When

batteries are used, they shall be located outside the manhole where the battery cannot be pushed, kicked, or tilted into the manhole.

1.35 Workmen entering or leaving a manhole shall use the ladder provided for that purpose—they shall avoid stepping on cable or cable hooks.

1.36 In double deck manholes, the permanently installed wooden platform should be inspected for evidence of dry rot or other deterioration before a workman places his weight on it.

1.37 When using manhole shields where there is any possibility of liquids entering the manhole, seal the opening around the shield with duct seal or other approved equivalent.

1.38 A standard underground handline shall be used in lowering or raising tools or materials in a manhole and employees working below shall be in the clear before doing so. In passing hot metal, compound, or paraffin, the ladle or other tools to be used with the pot's contents shall be handled separately.

1.39 Workmen shall keep manholes reasonably free from paper and other inflammable materials.

1.40 Upon completion of each job, the manhole shall be left free of materials, boxes, and other objects. The street surface around the manhole shall be cleared of melted paraffin and other materials.

1.41 When pulling in or removing underground cable, adequate warning signs and protective devices shall be placed around pulling lines for protection of employees and the public as required by laws, ordinances, and the rules of good judgment.

1.42 Power equipment shall not be used to place wooden duct rods. When rodding by hand, take the utmost care to prevent being thrown against the rod or manhole wall should the rod break while it is being pushed.

1.43 When removing underground cable, all workmen shall leave the manhole before the initial or test pull is made and at any other time when the tension in the pulling line is abnormally high.

1.44 AERIAL AND BLOCK CABLE-To avoid slipping, splicer's platforms, pole seats, pole steps, and ladders shall be kept free from paraffin or compound.

1.45 When pulling in cable, the sag in the suspension strand will greatly increase with the added weight of the cable. Make certain that this added weight will not result in impaired clearance between the cable and any light or power wires in the span when the cable is pulled into place.

1.46 Workmen should keep clear of the drag line while pulling in aerial cable under a heavy strain, in case it should 'break.

1.47 Proper precautions shall be taken as set forth in the Bell System Practices when removing aerial cable where the poles are not definitely known to be strong enough to withstand additional loads.

1.48 When placing house cable, all necessary precautions shall be taken to avoid injury from electric light or power circuits, moving machinery, belts, elevators, counter weights, or other similar hazards.

1.49 Avoid placing aerial cable splices over light and power wires, street car, and railroad tracks.

1.50 Locate block cable splices so that they may be worked on conveniently, if possible to do so. They should not be placed over cellar steps, driveways, doors, or similar locations.

1.51 When placing terminals, avoid locations near electrical circuits, cutouts, switches, moving machinery, hoists, doors, shutters, or other similar hazards.

1.52 BURIED CABLE-Buried cable placing involves the use of heavy equipment, such as tractors, trailers, and plows not commonly used in other phases of telephone work. Each job shall be planned carefully and all employees shall use care to perform their work safely. The following outlines the precautions to be observed when performing this work:

- (a) Employees shall be familiar with the methods and procedures for operating this equipment as outlined in Bell System Practices and other instructions.
- (b) Special supervision and training shall be given to employees engaged in this work.
- (c) Tractors shall be operated only by authorized drivers.
- (d) When tractors have to be maneuvered through woods or brush, the driver shall wear goggles and watch out for branches whipping back.
- (e) Keep all spectators at a safe distance from work operations.
- (f) Eyes in winch lines used with heavy duty winches shall be properly prepared as covered by standard instructions.
- (g) Trailer tongues shall be raised by means of a winch line or suitable jack.
- (h) No employee shall get on or off any part of the trailer while it is in motion, except in emergencies.
- (i) No person shall be allowed to work between any two units of the train when it is in motion or make a last minute adjustment after the "all clear" signal has been given.
- (j) Never work so close to the equipment that an

involuntary movement will place you in the path of a moving tractor or trailer.

- (k) Stay at sufficient distance from the rooter plow when it is in operation. Obstructions may cause it to overturn.
- (l) A suitable platform shall be provided on the lead winch loading trailer for employees who are required to ride the train during laying operations.
- (m) When anchoring cable, and if circumstances permit, thread the plowshare with suitable rope, wire, or small winch line before the plow is run over the starting trench.
- (n) In transferring reels from auxiliary loading trailer to the winch loading trailer, employees shall not get between the trailers.
- (o) Keep clear of the trailer when the automatic loading arm mechanism is operated.
- (p) A metal bar, hook, or short wrecking bar shall be used in operating the spindle latches and in placing or releasing the track lock on the trailers.
- (q) At least two men shall be assigned to lifting an empty spindle.
- (r) Due to the noise of the operating machinery and the possibility of considerable space between the individual units of a train, the system of approved visual or sound signals shall be used as covered in standard instructions.
- (s) If sound signals are used, the signaling devices shall be:
 - 1. Loud enough to be heard over the noise of the machinery.
 - 2. Distinctive enough to avoid confusion with other sounds.

3. Arranged so that they may be operated safely.

(t) All signals shall be given as follows :

1. In general, all signals shall be given by the man in charge.
2. An employee before giving a signal shall make sure that all other employees are clear of the train.
3. In an emergency, any employee may give a signal to stop.

(u) All employees shall be familiar with the approved signals.

1.53 SUBMARINE CABLE-Care shall be taken to insure that the equipment used in all submarine cable operations is adequate and of substantial construction.

1.54 All instructions during the cable operations should be given by the one supervisor in charge of the work.

1.55 The supervisor, at the beginning of each job, shall instruct the workmen on the safe method of doing the work. Specific duties shall be assigned to each man for rescuing anyone who falls overboard. The instructions shall be repeated when any new workman comes on the job and shall be reviewed whenever circumstances warrant.

1.56 When boats or barges are used in cable operations, the supervisor, captain of the barge or boat, and the captain of tug boat should arrange in advance the method of handling the vessel, signals and other matters requiring the cooperation of these parties.

1.57 All tools and apparatus used on the deck of the barge or boat in connection with such operations

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shall be maintained in an orderly manner and so placed as to be readily accessible for use without presenting a hazard.

1.58 Sufficient life preservers to care for all persons aboard the barge or boat should be provided and located in approved receptacles, ready for emergency use.

1.59 One or more ring buoys equipped with a Water-Lite shall also be available in case of emergency.

1.60 While working on the deck, workmen shall wear a jacket-type life preserver when, in the judgment of the supervisor, it is necessary to insure safety.

1.61 When cable operations are in progress, a life boat, either a row boat or small power boat, shall be kept in the water at the cable boat or barge and so stationed and equipped that it can be manned immediately in case of emergency.

1.62 When handling jute or jute protected cable, gloves should be worn and sleeves worn wrist length to afford adequate protection to the hands and forearms. In warm weather, exposed skin surfaces should be coated with an approved protective cream to prevent vapor burns from creosote.

1.63 When handling rope or cable that is being paid out, care shall be exercised to avoid being caught in a bight. Never stand in the angle of lines under tension.

1.64 To minimize slipping, the deck shall be kept free from ice, oil, and petroleum. To avoid possible accidents, tools and materials no longer needed should be placed in a safe location.

1.65 A first aid kit, adequately stocked, shall be kept on the barge or cable boat at all times.

1.66 Government and local navigation regulations must always be observed.

2. Conduit construction and maintenance

2.01 Before starting conduit operations, appropriate warning signs and barricades shall be placed.

2.02 In loosening boulders, stand above them and see that no one is below.

2.03 The feet should be kept well in the clear of tools being used.

2.04 Goggles shall be worn when using pavement breakers, rotary drills, air hammers, or other similar tools, or where the nature of the work may get dirt or other objects in the eyes.

2.05 Where there is any possibility of drilling into foreign current conductors, rubber gloves shall be worn.

2.06 Shoring shall be placed when in the opinion of the supervisor in charge this is necessary for safety. The following are some of the factors to be considered in determining the proper course of action to be taken:

- (a) Study the condition of the soil to determine if it is uniformly hard from top to bottom. Will it hold after a rain ?
- (b) As the excavation progresses, watch for signs of crumbling which may result in a "cave-in".
- (c) Consider the amount of vibration from street cars or heavy traffic.
- (d) A heavy weight, such as a tractor or a reel of cable, near the edge of the trench may dislodge the side walls.
- (e) The slope of the wall is a determining factor in placing shoring.

2.07 Place shoring wherever there is the least doubt about the holding quality of the wall.

2.08 Trench jacks or timbers shall be used on shoring work and the shoring shall be braced properly.

2.09 When removing shoring, proceed cautiously, work from above, back fill promptly, and abandon shoring if necessary.

2.10 Carry on the excavation work within a barricade. Display red flags in the daytime and red lanterns at night. Lanterns should be placed far enough apart to be individually distinct.

2.11 When leaving the job, make certain the excavation is guarded adequately and a sufficient number of lighted red lanterns or warning flags are in place. When considered necessary, a watchman should be stationed.

2.12 State laws governing safety requirements in connection with excavation work shall be strictly observed.

3. Pole construction and maintenance

3.01 Because of the hazards associated with work on or with poles, all precautions shall be taken to guard against possible accidents.

3.02 Falling poles are due to:

- (a) Deterioration.
- (b) Unbalanced loads.
- (c) Not set to sufficient depth.
- (d) Damaged poles.

*3.03 An employee, before climbing any pole, shall make certain it is safe to climb or work upon. If the condition of the pole is not known, or the pole is not sufficiently supported, it shall be tested by the pike test method, which employs a standard pike pole or a

test pike and 2 or 3 sections of tree pruner handles. If the pole is found unsafe, or the pike test is not applicable, the pole shall be safeguarded in accordance with the instructions in the Bell System Practices before climbing or working on it.



3.04 Many poles are marked with the supplier's brand ten feet from the bottom of the pole. This mark

shall be used in determining the depth of the pole in the ground. Nail markers denoting height and date of placement should be taken into consideration also.

3.05 Temporary supports shall be placed before climbing if there is any doubt that poles are not set to a depth at least equal to that provided for by standard practices, or if the depth of setting may have become decreased to an unsafe degree by the washing away of earth from embankments or by excavations alongside of the poles.

3.06 When placing temporary guys on a pole for support during replacements or other operations, the points of attachments on the pole shall be as close as possible to each other or to the existing load, to avoid creating an unbalanced load.

3.07 An employee shall not be permitted to climb a pole by means of climbers for the first time except under the direction of a supervisor or a competent instructor. A learner shall not be allowed to climb without supervision until he has satisfied the instructor that he can do so safely.

3.08 The instructor shall see that all tools used are of the proper size and in good condition. The instruction shall be given at a location where there is a minimum of hazards. The learner shall not be allowed to climb too high or perform tasks beyond his ability.

3.09 Before climbing a pole, employees shall make a visual inspection of the equipment thereon for apparent defects or irregularities which may be a hazard to themselves or others. When such defects or irregularities are observed, employees shall take every precaution to avoid injury.

3.10 Workmen when climbing poles with climbers and particularly when descending, shall be continually on the lookout for cracks, knots, metal number

plates, nails, splinters, gains, or anything else that may cause a gaff to cut out or otherwise cause an injury. When taking the last step from the pole to the ground, be careful not to step into holes or depressions in the ground or on rocks, broken glass or other debris.

3.11 Climbers shall not be used in lieu of pole steps when climbing stepped poles. Climbers shall not be used on the butts of stepped poles except where the poles are not equipped for temporary pole steps and other means of reaching the permanent steps are not practicable.

3.12 In climbing stepped poles, be sure that the pole steps are not loose or otherwise defective before placing full weight upon them. Stepped poles with defective or missing steps should be reported immediately for correction or the defective or missing steps replaced before leaving the pole. Before ascending the pole, remove mud or other slippery substances from the bottom of shoes or rubber footwear.

3.13 Never grasp a crossarm brace, extension fixture, brackets, or other fixtures or fastenings. The use of a pin in a crossarm, a crossarm brace, a pole bracket, or a terminal as a support shall be avoided. In general, foreign attachments shall not be used as a means of support.

3.14 Attachments affixed to poles, such as clothes lines or radio aerials, are a definite pole-climbing hazard. Reasonable attempts, without incurring customers' resentment, should be made to have them removed. If such a support cannot be removed, necessary precautions shall be taken by the workman-the supervisor should be advised of the details of the case.

3.15 Care shall be taken when ascending or descending poles to avoid catching safety straps or other tools on pole steps, attachments, or tree limbs.

3.16 Employees should keep their sleeves down and wear suitable gloves when climbing or working on poles.

*3.17 When more than one employee is working on the same pole, each employee shall exercise the utmost care in handling tools or materials or moving about the pole so as not to cause injury to the other employees. A second workman should never start climbing or descending a pole until the first workman has either reached his working position and has his safety strap in place or has reached the ground and has walked a safe distance from the pole.

3.18 In approaching or leaving a pole exercise care, particularly when wearing climbers, to avoid stepping on stones or other objects or into holes and depressions.

3.19 Do not stand under workmen working aloft or permit others to do so. If necessary to walk under a workman working aloft, tell him of your intentions so that work may be stopped until you are in the clear again. In raising and lowering tools and materials, exercise care to avoid being struck by them should they be dropped.

3.20 When placing or removing a pole in a location where the pole may come in contact with light or power wires, precaution shall be taken against electrical shock. Precaution shall also be taken to prevent setting up movement in the power wires which may cause crosses or short circuits.

3.21 When piking in poles, the foreman or employee in charge shall give all the orders. Workmen shall never place the butt of the pike pole against any part of the body. The butt of the lifting pikes should rest in the hollow of the hands when lifting at an angle of less than 45 degrees. If the angle is over 45

degrees, one hand should support the butt of the pike and the other hand used to guide the pike. Workmen shall not release strain upon pike pole until instructed to do so. See that the deadman has a secure footing. Do not allow pikes to fall when the pole drops into the hole.

3.22 Poles shall not be carried or erected by hand unless in the judgment of the foreman in charge sufficient help is available to complete the work safely.

3.23 When not in use, digging tools should be placed flat on the ground and away from the working area,

3.24 When working immediately adjacent to wire fences, stone walls, or other objects having rough or abrasive surfaces, wear suitable gloves and, if practicable, cover the surfaces with a tarpaulin or other suitable covering.



4. Strand and wire construction and maintenance

4.01 Work operations involving strand and wire present definite hazards, for example :

- (a) Contact with electric light and power wires and associated equipment.
- (b) Interference to automobile and pedestrian traffic.
- (c) Unbalanced loads caused by adding or removing equipment.

4.02 All electric supply lines and equipment shall always be considered as dangerously alive and proper precautions taken against contact.

4.03 Rope should be dry and free from metallic strands or threads. Rubber gloves shall be used if conditions require the use of a damp rope in the vicinity of electric light or power wires.

4.04 Rubber gloves shall be worn also in stringing or removing strand or wire where there are foreign electrical circuits of any voltage present and there is any possibility of contact.

4.05 Before being ridden, strand shall be tested by subjecting it to the weight test specified in Bell System Practices. The weight test shall not be applied to strand over electric light, power, or trolley wires (excluding electric light service loops), railroads, and heavily traveled highways. In these latter instances, temporary strand shall be placed for performing the work. A winch line in good condition may be used in lieu of strand.

4.06 In no case shall 2200-pound strand be ridden by a workman. Do not ride spans attached to buildings regardless of the size of the suspension strand if it is practicable to use a ladder because of the variations that occur in the construction of buildings and the consequent uncertainty of the holding power of attachments. A ladder shall always be used when working on strand that is attached to the building by any means other than an eye bolt.

4.07 When riding a strand in a span where a crossover clamp, electric wires, or other objects are encountered, the workman shall either return to the starting pole and resume the work from the opposite side of the crossover clamp, or other obstructions, or complete the work from a ladder. In no case shall a workman attempt to ride over a crossover clamp or, when there is danger of contact, over or under electric power wires.

*4.08 Where the work operation will involve the removal or slacking off of strand, wires, or guys and an unbalanced load on a pole or crossarm may result, compensating guys shall be placed before proceeding with the work. When removing or taking down drop wires, the supports at the pole end should be removed before any attempt is made to work on the building end, except that when removing or taking down taut drop wire attached to a span clamp, the tension is first released at the building end of the span by means of a handline.

4.09 When preparing to cut an existing strand for the purpose of extending the cable or to introduce slack into the strand, extreme care shall be taken before the strand is cut to make sure that sufficient slack has been obtained between the strand pullers or the strand puller and the deadend pole. Adequate slack will prevent the strand slipping through the pullers

because of a jump load. If in doubt that sufficient slack can be obtained at the cutting point, a section of strand shall be bridged across the proposed cut before the cut is made.

4.10 When slacking down a messenger strand which is to be removed, the strand shall be eased off by means of a chain hoist, block and tackle, winch line, or rope, depending on the size of the strand and the length of the section. Cutting a strand under tension shall be avoided.

4.11 When pulling up a messenger strand with a winch line preparatory to deadending, workmen shall not be allowed on the pole during the pulling process.

4.12 When pulling up a messenger strand to be deadended on an unguyed pole, such as slack spans, care shall be exercised to prevent breaking the pole and causing serious injury.

4.13 When a pole or a guy stub is being subjected to considerable strain by the pulling up of an anchor guy, the workman shall descend until the pulling is finished.

4.14 In some cases a considerable amount of slack is found in light and power wires between poles. To avoid the possibility of pulling strand up into contact with these wires, supervisors and workmen should check carefully when establishing the grade of a proposed cable run.

4.15 The strength of any **wire** is greatly reduced by kinking or nicking. If kinks or nicks occur, they shall be cut out before the wire is placed. It is essential that care be taken in handling wire to avoid kinks.

4.16 Do not attempt to flip wires around or over bushes, limbs of trees, or other obstructions. A handline should be used for getting through or over the obstacle and the wire pulled up with the handline.

No attempt shall be made to use force in freeing wires caught on obstacles. Before attempting to pull them up, the wires should be freed by the workman.

4.17 When cutting off ends of wire or strand, hold the cutting tool and wire or strand in such manner that the ends cut off will not strike you. Wire ends should be bent back after cutting them.



4.18 When stringing, removing, or relocating drop wires on span clamps, the ladder should not be placed inside the angle formed by the drop wire.

4.19 The procedures for stringing wire over streets and highways, as outlined in the Bell System Practices, shall be observed in all cases.

4.20 When pulling wires out of terminals or rings, the bare ends should be cut off or taped to prevent injury to the face and hands.

5. Tree pruning

5.01 Accidents resulting from operations involving trees or underbrush are caused by:

- (a) Breaking and falling limbs.
- (b) Improper climbing and working methods.
- (c) Swinging branches.
- (d) Underbrush.

5.02 Employees shall be sure that a limb is strong enough for support before placing weight upon it.

5.03 Before cutting off a limb, make certain that you will not be struck by the falling limb and that others are a safe distance from where the limb will fall.

5.04 A butt rope, top rope, and guide rope shall always be used to lower large limbs or sections of the trunk.

5.05 Care shall be taken that the swinging space is clear when using axes or bush hooks. Stray branches or brush may deflect the blow and cause injury.

5.06 Goggles shall be worn when working in underbrush or overhead tree branches, and in any other case where the eyes may be subjected to injury from small twigs or tree limbs.

5.07 In topping trees which are too weak to climb, a pole, ladder, or platform shall be used, or a suspension strand placed and the work performed from a cable car.

5.08 Employees shall not throw the end of a hand-line with a weight or a snap hook attached. A ladder or a wire raising tool shall be used to thread the line through the proper place.

5.09 Do not use axes, hatchets, and tools of a similar nature while working aloft in trees. Saws and tree pruners are the proper tools.

5.10 Unless local practices state otherwise, linemen's climbers shall not be used to climb trees. Where linemen's tree climbers are approved for use, they shall not be used without the approval of the supervisor.

5.11 Linemen's safety straps shall not be used with the body belt for support in trees. When the use of safety supports is required, a standard rope sling, tree safety strap, or tree safety rope shall be used.

5.12 When ladders are used to perform work in trees they shall be secured safely by lashing. If there is any possibility of the ladder slipping or falling while being lashed, another workman shall support the ladder until the lashing has been completed.

WORK OPERATIONS

1. Station installation and maintenance

1.01 Tools or materials strewn about the floor **or** on the ground constitute a safety hazard to be avoided. When there are children about, employees shall be constantly on the alert to see that they do not pick up tools or materials with which they might injure themselves.

1.02 Open flame station soldering copper heaters shall not be used close to inflammable materials or furniture. The heater shall not be moved while it is burning, or left unguarded. The flame shall be extinguished by using a cover.

1.03 When crawling under houses or buildings, extreme care should be taken to avoid injuries from broken glass, pieces of metal, nails, rocks, or other objects on the ground that could cause injury. At the same time, watch out for nails, pipes, masonry or other objects overhead which might cause injury.

1.04 Where the working space beneath a house or building is restricted, take the most comfortable working position possible in order to avoid cramped muscles.

1.05 When working under houses or buildings, watch out for poisonous snakes and spiders.

1.06 In raising from a stooped or kneeling position, care should be taken to avoid striking the head against projecting objects, such as, swinging windows, beams, edges of tables or desks, pipes, metal frame work, and wash basins.

1.07 Ladders supplied by the Company shall be used in every case possible. The ladder shall be of the proper type and length for the work at hand. A borrowed ladder shall not be used unless necessary—under no condition shall a borrowed ladder be used unless by inspection and test it has been found safe.

1.08 Ladders shall not be placed against support wires. Such wires are used for supporting cable and wiring in factories and warehouses and are not strong enough to support a ladder and workman.

1.09 Boxes, barrels, hand rails, partitions, bath tubs, flush tanks, radiators, wash bowls and other objects shall not be used as a substitute for ladders.

1.10 When using tools, take such a position that injuries will not result if the tool slips. To avoid stiffness, soreness or other knee injuries, it is helpful to get up frequently from squatting or kneeling positions and flex and massage the knees. Get up slowly to allow the moving parts of the knee structure to return to normal.

1.11 Edged or pointed tools shall not be carried in such manner as to cause injury to yourself or others. Tool rolls and tool pouches shall be used to carry small tools.

1.12 Before drilling or boring through walls, make a careful inspection to avoid striking electric wires, pipes, or other concealed obstacles. When drilling, take precautions to prevent accidents to persons or property on the opposite side of the wall.

1.13 When installing attachments on a house or building, avoid hanging over copings, railings, porches, or stairways. Use a ladder.

1.14 Goggles shall be worn when installing overhead attachments, drilling or chipping cement, brick, plaster, or similar materials.

1.15 Terminal lids, covers, and doors shall be opened or closed with care. They shall be secured properly when opened or closed.

1.16 Working under erected ladders is hazardous and should be avoided.

1.17 When cutting porcelain tubes, care shall be taken against flying pieces.

1.18 When installing porcelain knobs or when equipping angle screws or brackets with them, care should be taken to prevent breaking by not applying too much pressure on the screws or nuts.

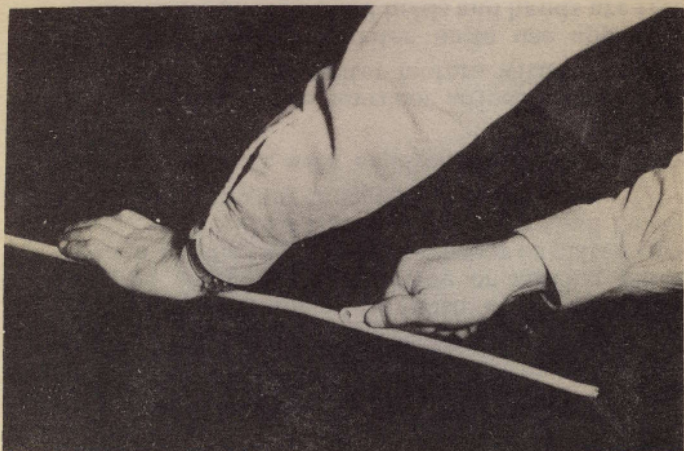
1.19 Where it is necessary to work in cabinets containing electric light or power lines or associated equipment, extreme care shall be taken to avoid contacting the wires or equipment.

1.20 When fishing conduit or duct, be sure that the fish tape or wire will not contact light or power wires or associated equipment at the other end of the conduit or duct. If in doubt about the location of the conduit or duct outlet, rubber gloves should be worn. Care should be taken also to make certain that the fish tape or wire will not strike or become entangled with any object or person during the fishing operation, or when pulling wire or cable in the conduit or duct.

1.21 When pulling wire and cable in conduit, take a safe working position to prevent loss of balance in case the pull wire or fish tape pulls loose or breaks suddenly and to prevent undue strain on body muscles. Suitable gloves should be worn during the pulling operation. If a fish tape is being used for pulling wire or cable, a standard fish tape puller shall be used.

1.22 In so far as possible, do not place wire or cable in elevator shafts, or in any place where access may be hazardous. When necessary to use elevator shafts to provide service, the work shall be performed only at the direction of the supervisor.

1.26 The standard cable stripping tool should be used to strip braid from braid covered inside wiring cable. The hand holding the cable should not be placed in the path of the tool.



1.27 When working in establishments where chemicals are used, avoid getting them on the body, clothing, or on tools and materials.

1.28 Where possible, avoid placing equipment near stairways, doors, trap doors, plumbing, windows, or machinery.

1.29 Before placing wires or equipment on desks or counters, inspect them for projecting nails and splinters.

1.30 When mounting equipment on wood, lead holes shall be drilled for starting the smaller sizes of screws in other than soft wood. Lead holes shall always be drilled for starting the larger sizes of screws. Keep the face, hands, and body in such a position that should the screwdriver slip it will not cause injury.



1.31 When handling booths, be careful not to catch the hands in the door. Always secure booth doors against swinging.

1.32 Employees moving booths shall obtain sufficient help to insure their safe handling.

1.33 Before moving booths, check the tops for loose objects.

1.34 Before leaving the premises, be sure that the booth top is clear of loose objects and that booth roof is fastened securely in place.

1.35 Makeshift or temporary connections of booth light equipment to electric light circuits shall not be made without the approval of the supervisor.

1.36 The following precautions shall be observed in working on teletypewriter equipment:

- (a) Stop the machine before removing or replacing distributors, typing units, keyboards and perforators. Where remote motor control is used, remove the power plug so that the machine cannot be started while work is being done.
- (b) In operating machines with cover removed, avoid contact with rotating or moving parts such as shafts, gears and typebar or platen carriages. Neckties and loose clothing shall be secured to prevent their being caught.
- (c) Avoid contact with exposed electrical connections.
- (d) Do not touch the governor adjusting wheel of running teletypewriter motors with the hand.
- (e) In lifting teletypewriter units use approved methods. Be sure hand holds and hands are free of grease or oil.
- (f) When dismantling and assembling smaller teletypewriter parts, hold or place the work se-



curely. If an assembly, such as a shaft, must be held in the hand, wrap the shaft with a cloth to prevent slippage and possible personal injury.

- (g) When a screwdriver is used, select the proper size to avoid burring screw slots. Keep the hands and face in a safe position. Many screws are provided with slotted hexagonal heads. Use a wrench of proper size in preference to a screwdriver.
- (h) Use a spring hook for anchoring springs to prevent injury in the event of breakage. Hold your head to one side while the spring is being anchored.

***1.37.1** When working in terminals or on switchboards carrying telegraph, telephone, power or battery circuits, guard against shocks which may startle you and cause injury.

***1.37.2** When terminating drop wire or inside wire on a protector or terminal, insulate the body from the ground, when practicable, by standing on a ladder or other insulating material, or by wearing rubber gloves, to guard against possible electric shock.

***1.38** When lifting or moving P.B.X. switchboards, have sufficient help on hand to prevent strain or injury.

1.39 Whenever possible use a roller dolly to move a switchboard on the customer's premises. Take the utmost precaution to guard against personal injury when it is necessary to move a switchboard up or down stairs.

1.40 When necessary to raise keyboard, secure it against falling.

1.41 When opening or closing the relay gate of a switchboard, be careful not to pinch the hands or fingers.

1.42 When working on switchboards, be careful not to cut or scratch yourself on soldered terminals or sharp ends of wires.

1.43 Before working on power panels, rectifiers or other battery charging equipment, cut off the power supply or provide adequate protection from electric shock. Warning signs shall be placed on any power switches opened and on fuse panels from which fuses have been removed.

1.44 In working around such equipment, be careful not to cause sparks, including those from static electricity. Do not use an open flame near batteries or alkaline type counter emf cells-the gas from these sources is explosive when sufficiently concentrated. Before removing vent plugs, touch cell terminals near the ground side to discharge any static electricity which may be present on the body.

1.45 Take extreme care in the use of a hydrometer to prevent electrolyte from getting on the hands or face.

*1.46 Wear rubber apron, approved acid-proof rubber gloves, and goggles when handling batteries or alkaline type counter emf cells and their solutions.

1.47 Before attempting to move open type batteries, reduce the level of the electrolyte to the top of the plates.

1.48 Always use an approved container for pouring water or electrolyte into batteries.

1.49 Always have sufficient help and proper equipment for the safe handling of water and electrolyte, particularly if it is in glass containers.

1.50 Use soda solution to neutralize acid and boric acid solution to neutralize alkaline solution if either gets on the skin or clothing.

WORK OPERATIONS

1. Central office maintenance

1.01 The safety practices contained herein apply mainly to Central Office Forces. They shall also be observed, to the extent possible, by Outside Plant Forces in maintaining equipment on the customer's premises.

1.02 Do not carry tools loosely in pockets of clothing. A tool pouch shall be used and the points of all sharp tools placed downward in them.

1.03 When using stairways, do not run or skip steps. Keep one hand on the hand rail and observe **traffic** lanes, especially when descending stairs.

1.04 When passing through aisles or around blind corners care should be taken to avoid collision with other workmen or with objects. Take the necessary time and proceed safely.

1.05 When extension cords are used they shall be arranged in a safe manner. When removing plugs from jacks or sockets the cords shall not be jerked. The proper method is to grasp the plug and remove it slowly.

1.06 All extension lights shall be equipped with approved lamp guards. Extension lights should be inspected to assure that the guard is fastened and that the cord and parts are in good condition.

1.07 When it is necessary for portable electric fans to be used, they shall be so placed and guarded that they will not cause injury. They shall not be handled while in operation.

*1.08 Safety goggles should be worn in all cases where there is a possibility of getting foreign material in the eyes. Goggles shall not be interchanged among employees unless they have been sterilized.

"1.09 Respirators shall be worn in all cases where there is a possibility of foreign materials being breathed into the lungs. Respirators shall not be interchanged among employees unless they have been sterilized.

1.10 POWER PANELS AND STORAGE BATTERIES-All power switches must be in an open position when they are not controlling a circuit in operation. Where necessary to avoid possible damage from accidental closure, the switch, when opened, shall be protected by approved fibre stops. Alternating current motor switches shall not under any circumstances be left closed at either the starting or running position when the motor is not in operation.

1.11 Avoid working in a position where the handle of a circuit breaker might cause injury if the breaker should operate.

1.12 Before opening any power circuit carrying a heavy load, reduce the load.

1.13 Have the hands free of tools or material when operating switches or replacing fuses. Use approved fuse pullers for replacing cartridge type fuses.

1.14 Use an approved test lamp for testing light and power circuits.

1.15 When a fuse is to be replaced in a circuit that contains a switch or other circuit opening device, see that the circuit is opened before replacing the fuse.

1.16 Before inserting new fuse, locate and clear fault which caused fuse operation.

1.17 Be sure the capacity of new fuse is correct.

Check against markings on panel or fuse block. If in doubt consult the supervisor. Never use wire solder or other substitute for fuses.

1.18 Cleaning and other work around fuse or power panels should be done only by authorized workmen.

1.19 Employees shall not work on electric equipment carrying dangerous voltage and currents while standing on a low resistance surface such as a floor constructed of concrete or any other conducting material unless the floor is covered with linoleum, rubber matting or other approved insulating material or rubber gloves are used.

1.20 Around power boards or fuse panels, avoid the use of all metal or metal strand tape lines and metal or metal bound rules.

1.21 Finger rings, wrist watches, metal wristbands, watch chains, metal pencils or tools projecting from pockets present a hazard when working around this equipment.

1.22 When testing or tightening bolts or nuts on the bus bars, fuse or switch terminals, all tools shall be insulated to prevent crossing them with live circuits.

1.23 Only authorized employees shall enter transformer vaults. Any necessary electrical work shall be done by Electric Company workmen.

1.24 Explosive gases are liberated from storage batteries under charge, so it is important that battery rooms be properly ventilated. Open flames shall not be permitted in battery rooms except when new plates are to be burned in. In such cases, it shall be the responsibility of the supervisor, before permitting the plates to be burned in, to satisfy himself that all precautionary measures have been taken to prevent an explosion.

1.25 Any employee having occasion to work on storage batteries should discharge the static electric-

ity that may be on his body by touching an interce. connector. This is to be repeated from time to time a. work proceeds, to prevent the possibility of an explosion that might result from a static discharge spark near a cell opening.

1.26 It is advisable to wear goggles, approved acid-proof rubber gloves, and rubber aprons while handling battery solutions.

1.27 Tools or materials shall never be placed on storage battery cases or where they might fall into the jar or tanks.

1.28 GENERATORS-RECTIFIERS-RING-ING MACHINES AND MOTORS-Before starting or operating any machinery, be thoroughly familiar with the operating instructions. See also that none of the machinery is defective, that the gears, belts, and wheels are properly protected and that machine covers and tools are in safe positions.

1.29 Keep clear of all moving parts of machines. Work on machines that are in operation only when absolutely necessary-if such work is required, see that the light is adequate. If necessary, use a portable extension lamp, taking care that the cord does not come in contact with moving parts.

1.30 Avoid possible accident from loose clothing when working around generators, ringing machines or frame motors, or other moving equipment. Neckties and loose sleeves are especially hazardous.

1.31 When it is necessary to work on motors or generators, open the power switches and place on the switches a warning sign reading "Men at Work". This sign shall be removed only by the man who placed it

1.32 When it becomes necessary to remove a guard or guards from any equipment, the equipment should be rendered inoperative and should remain inoperative through the work operation. If this cannot be

done, extreme care shall be exercised in removing the guard and in performing the work operation. All guards must be replaced before leaving the equipment whether such equipment is in operation or not.

1.33 Powermen and other employees working around generator units shall take every precaution to avoid short-circuiting or grounding different potentials with tools or other metallic objects.

1.34 Synchronous motors when started generate high voltage in the field coils; for this reason, no part of the machine except the starting mechanism shall be touched during the starting operation.

1.35 Ringing and charging machines must be stopped before cleaning. The only exceptions to this rule are ringing machine interrupters and generator commutators. Use approved tool and cleaning cloth for cleaning commutators.

1.36 When cleaning commutators or interrupters on machines in operation, hold the cloth so that it is not wrapped around the fingers or hand.

1.37 When working on the brushes of a machine in operation, be careful not to break a circuit. When a circuit is broken, the arc formed may injure the eyes or burn the hands. Shut the machine down if it is necessary to remove a brush from the holder.

1.38 When testing with a head receiver on running machines, see that the receiver cords do not come in contact with the moving parts and do not place the receiver directly over the ear.

1.39 Keep the floor around the equipment free of oil, grease, or other material that would make the floor slippery. Place any tools or other articles where they will not be a tripping hazard.

1.40 Wait until machines come to a complete stop before placing covers over them.

1.41 Unauthorized persons shall not be permitted within enclosures surrounding machines.

1.42 No work shall be done on a rectifier while in operation or while switches or fuses are supplying power to the primary windings of the rectifier's transformer-severe shocks or burns may result.

1.43 When in the immediate vicinity of automatic starting or remotely controlled machines, exercise care to prevent possible injury should the machines start unexpectedly.

1.44 GAS ENGINES-Before attempting to operate a gas or gasoline engine, become thoroughly familiar with the operating instructions.

1.45 Where mechanical or electrical devices have been provided to start gas engines, employees must not start such engines by hand, unless regular starting devices are out of order and then only on specific instructions from the supervisor.

1.46 Before starting the engine, see that machine covers, tools or other articles are in a safe position.

1.47 When starting an engine by hand, always turn the balance wheel in the direction of rotation as indicated by the arrow. Do not stand on the balance wheel.

1.48 Do not oil an engine or handle the belt when the engine is running.

1.49 Keep clear of moving parts and avoid standing near or between fly wheels of an operating engine.

1.50 Avoid ignition of explosive gases and breathing of exhaust gases. Gasoline fumes, including fumes from crank case, are explosive. When inhaled, these exhaust gases can also be fatal. Keep engine room well ventilated.

1.51 The contents of partially filled fuel tanks and piping, as well as those that have held fuel in the past, are explosive. If a fuel tank or piping, including vent and filled pipes, require repairs involving the use of an open flame or tools likely to cause sparks, discuss with the supervisor. He may decide to have a new tank or pipe provided or to obtain special instructions.

1.52 Only those who have been trained in the use of Diesel engines shall operate them. The use of an open flame or portable lamps without protective guards around Diesel engines shall be avoided.

1.53 DISTRIBUTING FRAMES -Keep aisles and mezzanine platforms clear of all tools and materials.

1.54 Employees working on frame balconies or ladders shall take extra precaution to prevent injury to any employee working or passing beneath them.

1.55 Place proper guards around any opening in the floor that might be a hazard if unguarded.

1.56 Do not climb on frames or equipment. Use a ladder.

1.57 When climbing onto a ladder seat, do not carry a hot soldering copper in the hand. Place it in an approved holder until after working position is reached.

1.58 Do not stand on ladder seats or use them as a resting place for tools or material except when they are provided with tool containers.

1.59 Soldering coppers when not in use shall be placed in a proper holder or returned to the furnace. A copper shall never be left on the step of a ladder or on the iron work of a frame. An approved holder for soldering coppers shall be used when working from a rolling ladder.

1.60 Wear goggles when using soldering coppers overhead.

1.61 Keep arm sleeves down when working on distributing frames. This protects the arms and prevents possible injury from shocks caused by the forearm coming in contact with terminal lugs or heat coil springs carrying generator current or battery power.

1.62 All leads or cords associated with soldering coppers and all testing or observing equipment which have any slack shall be coiled and stored safely out of the way.

1.63 When jumper wire has been removed from frames, the skinned ends shall be clipped off and the wire reused or disposed of in accordance with local instructions.

1.64 Use the approved tools in placing or removing heat coils-a shock or burn may be prevented.

1.65 When lighting a gas furnace apply the flame to the burner before turning on the gas. Keep the face at a safe distance.

1.66 EQUIPMENT ROOMS-Doors to cabinets, tool and material lockers, and enclosed central office equipment should be kept closed.

1.67 The removal and replacement of relay and switch covers should be done carefully to avoid bruised fingers. Place covers removed from relays and switches where they will not fall.

1.68 Use care in moving portable test boxes. Arrange cords in a safe manner before attempting to move the boxes. When moving metal test wagons and boxes, use extra precaution in passing by battery supply and fuse panels. In moving test boxes, use the handles provided for that purpose. Never use a test box or stand as a means of support or in lieu of a ladder.

1.69 Where temporary connection to the battery supply is to be made to obtain battery supply for test purposes make such connection to the standard battery supply binding posts provided for this purpose. If standard supply binding posts are not available, battery supply for testing purposes shall be obtained from the equipment side of a circuit fuse.

1.70 When working on keys, forms, or other equipment requiring the raising of a keyboard, care shall be taken to see that the keyboard brace is securely locked. The practice of bracing the keyboard with a tool shall be avoided. When the keyboard is not equipped with a brace, use the standard block.

1.71 When raising switchboard multiple, be careful to prevent wedges from slipping. The tendency of a wedge to slip may be overcome by moistening slightly the slanted surface of the wedge before inserting it between the cables. Do not use wedges which are splintered. Avoid standing behind them. Use an approved rubber hammer for driving wedges.

1.72 Vacuum tubes should be handled carefully. They may be hot or they may break.

1.73 When working on key wound spring mechanisms such as pen registers, remove the winding key from the shaft to avoid injury in case the spring unwinds.

1.74 When using footstools stand in the center. Use portable work benches only when suitable ladders for a particular work operation are not available. In such cases, be careful not to tilt the work bench or lose your balance.

1.75 Deskmen and other dispatching employees should be familiar with the safety practices so that every request made in connection with the dispatching of work to employees in the field will be consistent

with the safety rules prescribed for such work. When dispatching employees, tell them about any known or suspected hazardous conditions of an electrical nature, for example:

- (a) **Contact** between telephone and power conductors.
- (b) Foreign voltage on telephone conductors due to lightning, power induction, earth current, and other causes.

1.76 Under the conditions outlined above, the field forces shall not be instructed to work on such exposed plant until it is known to be safe.

1.77 When high voltages, such as "breakdown" voltages are to be applied to circuits, such circuits shall be identified to the field employee and other employees involved. In turn field employees shall inform the deskman that they are clear of the circuit before the high voltage is applied. All employees involved shall also be informed when the high voltage has been removed from the circuit.

1.78 The dispatching employee should inform field employees of all known hazards or peculiar conditions such as vicious dogs, contagious diseases, dangerous building construction, and right-of-way difficulties.

1.79 Test room forces should be on the lookout for the following hazards in test rooms and report them or take the necessary corrective steps :

- (a) Chairs or obstructions in aisles.
- (b) Patch cords or extension cords across aisles.
- (c) Sharp projection of equipment requiring
- (d) Defective equipment.
- (e) Broken or sharp edges of glass on desks, test-boards or writing shelves.

(f) Slippery floors.

(g) Splinters or slivers on furniture or other equipment

1.80 Acid-proof rubber gloves and goggles must be worn when recharging fire extinguishers containing soda and acid.

1.81 Gas fire extinguishers contain carbon dioxide gas under high pressure and must be handled with extreme care. Every precaution shall be taken in their handling to avoid dropping or jarring them as this may cause an explosion.

1.82 Unless the extinguisher is to be discharged, do not turn the handwheel operating the release valve. In the smaller type of extinguisher the gas, once started, cannot be shut off and will continue to discharge until completely exhausted.

1.83 Should the valve be opened accidentally, turn the funnel so that it is discharged against the floor and away from equipment.

1.84 Under no circumstances should the hands or face be permitted to come in contact with the gas. This is important because during the discharge carbon dioxide smoke is formed, the temperature of which is so extremely low that contact with it may result in severe frost-bite. Keep fingers clear of metal parts of the hose and nozzle for the same reason.

BUILDINGS

1. General

1.01 In the performance of their duties, all employees should be alert to detect any faulty doors, floors, windows, stair treads, mats, and all other property of the Company and make a report of any condition which might cause an accident or damage to property.

1.02 Respirators shall be used whenever there is danger of inhaling harmful particles into the lungs. Respirators are designed to filter the air by removing dust and atomized liquids. They have no effect on smoke or fumes inhaled into the lungs.

1.03 Gas masks are designed to protect against dangerous vapors and poisonous fumes. Gas masks shall be used whenever employees are exposed to concentrations of poisonous fumes or gases that might injure them. The mask shall be appropriate for the type of fumes or gas encountered.

1.04 Employees responsible for the making of general inspections of filters and gas masks shall, at required intervals, thoroughly examine and test them to make certain that they are in safe operating condition. Masks found to be defective shall be repaired or replaced at once.

1.05 Safety goggles shall be worn during the performance of any work that could cause injury to the eyes.

1.06 Test-lift heavy objects before attempting to lift them. Before attempting to make any lift and in

lifting heavy objects, observe the following procedures :

- (a) Get sufficient help if the object is too heavy and cumbersome.
- (b) Face the object with feet far enough apart to give a good base of operation without placing undue strain on the abdominal muscles-the length of a shoe is a good guide. Adopt a stance which is comfortable and which will permit the object to be lifted vertically.
- (c) Bend the knees and take a firm grip on the object and straighten the legs slowly. This allows the strain to come on the strong muscles of the arms, shoulders, and legs.

1.07 Adequate scaffolding shall be used when it is necessary to work in places that cannot be safely reached from a ladder, such as over open type batteries.

1.08 Where scaffolding is required, definite instructions as to the erection of and method of working on such scaffolding shall be obtained from the supervisor who will be directly responsible for the safe performance of such work.

1.09 Proper guards shall be placed around temporary floor openings, open doors or hatchways, and when working in pits and shafts.

1.10 Where there is a possibility of slipping hazards due to inclement weather, approved mats shall be used on entrance floors of buildings.

1.11 If the odor of gas is detected, do not attempt to locate the leak, but notify the supervisor or other person in charge of the building at once. All flames shall be extinguished immediately. Do not light

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matches or operate electric switches. The rooms affected shall be ventilated before any work is done in them.

1.12 The use of boxes, radiators, desks, chairs, sinks, or other objects as substitutes for ladders shall be avoided. Use approved ladders to reach necessary work levels.

1.13 Care should be taken to avoid slipping on tile, marble, and metal floors.

1.14 Before using stairs or passageways, make certain that the lighting is adequate. Do not turn off any lamps that have been provided for safety purposes.

1.15 Walk at a normal rate when going up or down stairs, through halls, passageways, or around corners.

1.16 When ascending or descending steps or stairways, keep to the right, use the hand rail, and observe traffic lanes.

1.17 Do not discard matches, pencils, rubber bands, or other like articles on stairs or in passageways.

1.18 Do not leave tools or materials on stairs or in passageways.

1.19 When opening or closing windows, the lifts shall be used on the lower sash and the window pole for the upper. Before using a window pole to open or close windows, inspect the hook to see that it is not loose.

1.20 When using the window pole, place the hook properly in the window sash socket; otherwise, the pole might slip and break the glass. The window pole shall be kept in the standard hanger wherever these are provided.

1.21 Force should not be applied to windows that do not open or close readily; if a window binds or

jams, it should be repaired or reported for correction. Defective counter balance window weights shall be reported for repair.

1.22 When raising or lowering window shades, venetian blinds, or awnings, do so carefully to prevent them from falling.

1.23 Do not place tools or materials or other objects on window sills-they may fall out and injure someone.

1.24 If there is danger of window glass falling out, report the condition at once. Cracked window glass should be replaced.

1.25 Never throw articles out of windows-someone below may be injured. This is particularly hazardous where lighted cigar and cigarette butts are involved-they may start a fire or burn someone.

1.26 Workmen handling ladders or trucks of any kind should be careful when going through doorways and into offices.

1.27 When handling heavy or bulky material or tools, provide sufficient help to do the job safely. Avoid carrying objects that will obstruct your view of floors or stairways.

1.28 Before moving a locker, look on top for objects that might fall off. Be sure that locker doors are locked or tied so they cannot fly open.

1.29 Use knee pads when the work requires kneeling for extended periods. To avoid stiffness, soreness, or other knee injuries, it is helpful to get up frequently from squatting or kneeling positions and flex or massage the knees. Get up slowly to allow the moving parts of the knee structure to return to normal.

1.30 Tools or supplies that might cause injury shall not be carried in the pockets.

1.31 Before doing work around desks or other furniture, inspect for projecting nails and splinters.

1.32 Before working around hot pipes, place a protection over them.

1.33 Use care in emptying wastebaskets-they may contain pins, broken glass, or other sharp objects.

1.34 Do not put hands in vacuum cleaner bags to clean them out-they, too, may contain pins and other sharp objects.

1.35 Do not use garbage cans or trash cans with jagged edges or with defective handles.

1.36 Do not start fires in stoves with kerosene, gasoline, or any other inflammable liquid.

1.37 When handling poisonous powders or pastes in the control of insects or rodents, be careful not to get the powders or paste in the mouth or lungs. Respirators shall be worn when poisonous powders are being applied with a blower type dispenser. The hands should be washed thoroughly immediately after the poison has been used. Where caustic liquids are used, employees shall wear approved acid-proof rubber gloves and goggles, being very careful to keep the liquid off the face or other parts of the body.

1.38 Store poisonous powders or pastes in a designated space in the building service quarters. Containers shall be labeled properly.

1.39 When working around moving machinery, pulleys, belts, or shafts, take extreme care to avoid injury. If necessary, have the machinery shut down or consult the supervisor. The wearing of any loose

clothing that might catch in the machinery or on pulleys, belts, or shafts shall be avoided.

2. Cleaning, scrubbing and waxing

2.01 Use only the proper containers for soap, powders, and other cleaning materials.

2.92 When scrubbing old or splintered wood flooring, use only long handled scrub brushes.

2.03 Never wring a mop with your hands-mops pick up pins and other sharp objects. Use a wringer.

2.04 Before scraping or cleaning woodwork or wall, examine the surface for protruding nails, tacks, and splinters and remove any found.

2.05 When using steel wool, gloves should be worn, or a piece of heavy cloth placed between the palm of the hand and the steel wool.

2.06 When scrubbing or waxing floors, warning signs or guards shall be placed to warn all persons of a slipping hazard.

2.07 Be careful of burns when filling pails, mop trucks, or other containers with hot water.

2.08 Mops, brooms, or tools with rough or splintered handles should not be used until the handles have been smoothed off with sandpaper.

2.09 Rubber footwear should be worn when mopping, scrubbing, and waxing floors.

2.10 Approved rubber gloves shall be worn when using strong washing solutions, cleaning water closets, urinals, and when disinfecting toilet seats.

2.11 Do not leave mops, brushes, pails, or other equipment in hallways, doorways, or on stairs.

2.12 Before dusting tops of lockers, tall cabinets, or similar items of furniture, look for loose objects.

3. Doors

3.01 While working at a door, secure it either wide open or closed.

3.02 Doors of lockers when not in use should be closed.

3.03 Only one person at a time shall go into a compartment of a revolving door. When leaving the compartment, never give the door an extra push.

3.04 Approach and open all doors with caution, especially swinging doors. Someone may be on the opposite side.

3.05 Where there are double swinging doors, always use the right hand door.

3.06 Use extra caution when opening or closing a door with a glass panel-never push on the glass.

4. Electrical equipment

4.01 When it is necessary to work on light or power circuits or associated equipment, open switches or remove fuses and discharge capacitors. Rubber gloves shall be worn when the current cannot be shut off. Warning signs shall be placed to guard against circuits being energized while the work is in progress.

4.02 Do not touch bus bars, terminals, and other electric carrying equipment in battery rooms. Avoid touching battery tanks, acid pitchers, or carboys-the acid will damage clothing or skin.

4.03 When working with tools around motors, generators, light or power circuits, be careful not to short circuit or ground exposed power terminals. In view of the hazards involved, it is not desirable to wear rings, metal wristbands, or wrist watches. Be careful that no part of the body becomes grounded-if necessary, stand on a rubber mat or dry board.

4.04 Disconnect electric fans before cleaning or working on them. Let moving parts come to a rest before moving or adjusting a fan. Ventilating exhaust fan blades shall be blocked to prevent motion due to air currents.

4.05 Before entering ventilating fan ducts, or working on ventilating fans, remove the fuses from the circuit. Place warning signs on the fuse panels to prevent someone from placing the fuses back again. Make certain that the lighting in the ventilating fan duct is sufficient to perform the work safely.

4.06 Leather-faced gloves should be worn when changing air filters in ventilating systems.

4.07 Use an approved testing device to test lighting circuits.

4.08 Do not grasp any part of an electrical fixture if any part of the body is in contact with a grounded object, such as a radiator, faucet, or pipe-an electric shock may result.

4.09 All light fixtures equipped with metal pull chains should be periodically inspected to insure that the insulating link is in place.

4.10 Do not use electric power supply cords with defective insulation or attachments. Where the insulation of the cord has been damaged to the extent of exposing the cord conductors, the damaged portion should be cut out or the cord replaced. Disconnect electric supply cords before attempting to repair them.

4.11 When not in use, auxiliary multiple plugs should not be left plugged in an outlet.

4.12 All portable extension lamps shall be equipped with substantial insulated handles and guards of approved type.

4.13 Paper, cardboard, and other inflammable material shall not be used for lamp shades. Approved lamp shades shall be provided when needed.

4.14 Appliance cords and extension cords should not cross aisles and passageways. Where this cannot be avoided, secure and flag the cord in such a manner that no one will trip over it.

4.15 Before turning off electric switches or replacing electric light bulbs, be sure the hands are dry. Do not wash an electric light bulb while it is in a socket. Be sure the bulb is dry before placing it back in the socket.

4.16 Before removing broken lamp bulbs, make certain that the current is turned off. Extract the broken bulb with pliers or use a piece of heavy cloth wrapped around the broken edges. When using pliers, wear goggles if there is a danger of glass getting in the eyes.

4.17 When removing or replacing cartridge type fuses, take care to prevent possible electric shock. Where practicable, open the circuit at the switch or use safety fuse holders.

4.18 The use of wire solder or any other substitute for fuses shall be avoided.

4.19 To avoid their tipping or falling, portable electric heaters and fans should be placed or fastened securely.

4.20 Only authorized employees shall enter transformer vaults. Any necessary electrical work shall be done by Electric Company workmen.

4.21 Warning signs, stating that these are automatic starting machines, should be placed on all such equipment.

5. Elevators

5.01 Elevators should never be operated except by authorized employees.

5.02 Elevator operators shall not permit horseplay in elevators. Elevator operators are charged with the responsibility for the safety of their passengers as well as their own, and they shall, therefore, take every reasonable precaution to insure that safety.

5.03 Elevators shall not be overloaded.

5.04 Passengers and operators should keep their hands, feet, and body away from doors and gates of elevators.

5.05 Watch your step when entering or leaving elevator-the car may not be level with the floor.

5.06 Never attempt to get on or off an elevator while it is in motion.

5.07 Always face elevator doors while the car is in motion. Stand behind the white line if there is one.

5.08 Operators shall make use of sideview mirrors where provided. They shall assure that passengers are safely in and out of the elevator before any attempt is made to move it.

5.09 When operating a car switch control type elevator, keep one hand on control handle during trip and while receiving or discharging passengers. When operating a signal control type elevator, the hand should only be placed on the control handle when closing doors and starting car.

5.10 Elevators shall be shut down only on the first or basement floors.

5.11 When opening an elevator shaft door, make certain that car is at floor landing before attempting to enter.

5.12 Do not work in elevator shafts until operators are notified and an attendant is on duty who can and will be governed by your directions. Work in elevator shafts shall only be performed under the personal direction of the supervisor.

5.13 When working on the side of an elevator, the car in the adjacent shaft on that side shall be shut down. Appropriate warning signs should be placed on the car shut down to warn operators against using it.

5.14 When working on top of elevators or shafts, be sure of your footing. Look out for grease and oil spots-remove them if observed.

5.15 When required, proper scaffolding shall be erected when working *on* the underside of a cab.

5.16 A guard shall be placed at open doors when work is being done on cars stopped between the floor levels.

5.17 Doors to elevator machinery rooms and pent-houses should be kept locked at all times to prevent unauthorized persons from entering.

5.18 When inspecting or handling elevator cables, employees should wear leather faced gloves to avoid injury to the hands from broken wires.

5.19 Elevator openings in sidewalks shall be properly guarded.

6. Fire protection and prevention

6.01 Paints should be stored in tightly sealed cans or containers and away from heat. Cans of paint which have been opened shall be stored in approved metal lockers.

6.02 Oily rags, paint rags, waste, and other combustible materials should be kept away from radiators, heating pipes, and the direct rays of the sun.

They should be stored in metal receptacles provided for that purpose in order to prevent spontaneous combustion. Never leave such articles in painters' work clothes.

6.03 Open flames shall not be permitted in central office buildings without proper supervisory approval. Where permission is given to use an open flame, observe all precautions outlined in Bell System Practices. Never leave an open flame unguarded.

6.04 Be familiar with the location of fire escapes, fire extinguishers, and other fire fighting apparatus in the building in which you are employed. Know the method of operating the apparatus.

6.05 Never obstruct or conceal fire extinguishing apparatus.

6.06 Where asbestos gloves are provided for smothering a fire, use them to protect the hands.

6.07 Fire escapes and passageways leading to and from fire escapes shall not be obstructed at any time.

6.08 Employees shall report any defects observed on rolling or sliding fire doors and shutters controlled by balance weights and fuse links.

6.09 Fire shutters should never be left in a partially open position, since a slight jar may cause them to fall suddenly and injure someone. They should be completely raised or completely lowered.

6.10 Locking devices on doors and windows giving access to fire escapes should be so arranged as to permit immediate exit.

6.11 When recharging fire extinguishers containing soda and acid, approved acid-proof rubber gloves and goggles shall be worn.

6.12 Gas fire extinguishers contain carbon dioxide gas under high pressure and must be handled with

extreme care. Every precaution shall be taken in their handling to avoid dropping or jarring them as this may cause an explosion.

6.13 Unless the extinguisher is to be discharged, do not turn the handwheel operating the release valve. In the small type of extinguisher the gas, once started, cannot be shut off and will continue to discharge until completely exhausted.

6.14 Should the valve be opened accidentally, turn the funnel so that it is discharged against the floor and away from equipment.

6.15 Under no circumstances should the hands or face be permitted to come in contact with the gas. This is important because during the discharge carbon dioxide fog is formed, the temperature of which is so extremely low that contact with it may result in severe frost-bite. Keep fingers clear of metal parts of the hose and nozzle for the same reason.

6.16 If necessary to use chemical tire extinguisher, be careful that the liquid does not get in the eyes or on the face. Take care that the liquid is not sprayed on other persons.

i. Heating plants

7.01 Before starting a fire in an oil burner furnace, make a general inspection to insure that the heating plant is in proper operating condition.

7.02 If a gas-fired water heater is located in the boiler room, MAKE CERTAIN THAT THE PILOT LIGHT ON THE HEATER IS BURNING BEFORE LIGHTING THE OIL BURNER-THIS IS IMPORTANT. Should the pilot light be extinguished, shut the gas off and clear the boiler room, heater, and flue of all gas before lighting the burner.

7.03 When lighting a fire in a furnace, stand clear of the open fire door.

7.04 Where a torch is used for lighting the oil burner, it should be extinguished immediately after the burner has been lit. Keep torches in the receptacles provided for them.

7.05 When examining a fire, the face should be kept at a safe distance from the fire door and the door opening. "Melters" goggles (cobalt blue lenses) should be worn to protect the eyes from the furnace glare.

7.06 Should the fire become extinguished during the operating period, close the hand regulating needle valve immediately and open the fire and draft doors wide until the fire box is free from all gas-then re-light the fire in the regular manner.

7.07 Inspection of heating plant pressure gauges should be made in accordance with instructions for each heating plant.

7.08 Make certain that the upper and lower valve on the water gauge are open at all times.

7.09 Inspect the water level in the gauge glass at each visit to the boiler room. If the water does not show in the water gauge glass, close down the boiler immediately and notify the supervisor, as per local maintenance instructions.

7.10 Do not add water to the boiler when the water is out of sight in the water gauge glass.

7.11 Should the pilot light of a gas water heater or boiler go out, do the following:

- (a) Close the main gas valve of the heater involved and all burner valves.

- (b) Open damper in doors and keep them opened for fifteen minutes to allow the unburnt gas to be dispersed.
- (c) Open the main gas valve and light the pilot immediately, and then open the burner valves.

7.12 Always stand clear of hot water and steam discharge when draining or blowing down boilers.

7.13 Boiler or furnace room floors shall be kept clean and free from oils, grease, or other slippery substance. Tools and materials shall be stored in proper containers and away from the boiler or furnace.

7.14 When taking fire tools down from racks, always grasp them by the handles. The tools may still be hot from previous use.

7.15 Open flames and smoking shall not be permitted in the vicinity of fuel tanks or other explosive liquids.

7.16 When burner motor is running, never remove carbon clinker from burner nozzle or firing port.

7.17 If gas odors are detected around a furnace or heater, shut down plant immediately by closing the main gas valve.

7.18 Under no circumstances should an open flame be used to locate gas leaks-use a soap solution.

SUPPLIES

1. General

1.01 This section prescribes the general safety practices to be observed with regard to the handling, storing and transporting of supplies.

1.02 The term "Supplies" as used herein includes all materials, equipment, tools, furniture, fixtures, and stationery.

1.03 Employees shall practice good housekeeping by always storing supplies in their proper place. Whether placed on platforms, shelves or on the floor, supplies shall be arranged neatly, clear of aisles and passageways, and in such order as to avoid falling.

1.04 Supplies shall not be placed on top of lockers, hampers, boxes, or other movable containers at a height where they are not visible from the floor.

1.05 Suitable gloves should be worn in all cases where the handling of supplies might cause injury to the hands.

1.06 Safety goggles shall be worn during the performance of any work that could cause injury to the eyes.

1.07 When handling heavy reels, containers, typewriters, switchboards, booths, heavy tools, man-hole frames and covers, or other heavy objects, make certain that proper equipment and sufficient help is used to perform the work safely.

1.08 Test-lift heavy objects before attempting to lift them. Before attempting to make any lift and in lifting heavy objects, observe the following procedures :

- (a) Get sufficient help if the object is too heavy to lift.
- (b) Face the object with feet far enough apart to give a good base of operation without placing undue strain on the abdominal muscles-the length of a shoe is a good guide. Adopt a stance which is comfortable and which will permit the object to be lifted vertically.
- (c) Bend the knees and take a firm grip on the object and straighten the legs slowly. This allows the strain to come on the strong muscles of the arms, shoulders and legs.

1.09 Before moving articles, make certain that all loose parts, whether inside or outside are removed or secured against swinging or falling.

1.10 Before handling booths with broken glass, remove the broken pieces and dispose of them so that others will not be injured.

1.11 When moving articles that require the use of a dolly or hand truck, care should be exercised to avoid slipping or tripping.

1.12 Handling creosote-treated poles, crossarms, duct, and planks may cause skin irritation. The application of protective creams, wearing gloves and keeping the sleeves rolled down will usually prevent creosote burns. Avoid brushing the face with gloves or sleeves which may have creosote on them. When necessary, use creosote burn wash.

1.13 Gloves should not be cleaned in any solvent that could cause injury to the hands. If heavily im-

pregnated with creosote, it is advisable to replace them.

1.14 Before lifting trays, determine their contents, so as to gauge the effort required to handle them safely.

1.15 Before lifting containers with rope handles, be sure the rope is not frayed or likely to break.

1.16 Supplies containers shall be inspected to make certain they will support safely the weight of the contents placed in them. In no case shall the weight exceed specified limits.

1.17 When opening barrels, boxes and packing cases, do not bend down protruding nails-remove them.

1.18 When unpacking supplies, use care to avoid possible injury from broken glass, broken porcelain or splinters. Dispose of packing materials promptly and safely.

1.19 Guy rods, guy shields, digging bars, and pipes should be laid flat-not stored on end. If space will not permit, they should be stored so that they cannot fall.

1.20 When storing glassware or similar supplies, care should be taken that the points or sharp edges do not extend into aisles or passageways. Wherever possible, store such supplies with the points and edges placed toward the rear of the cabinet or shelf. These articles should not be put on high shelves or in dark places.

1.21 Loading plates and platforms should be stored in a safe position where they cannot cause injury.

1.22 When it is necessary to remove or place supplies in containers at a height above eye level, stand on a ladder so that you can look into the container.

1.23 Only approved ladders shall be used for reaching storage places.

1.24 Standard guards shall be used for protecting edged tools that are to be handled, stored or transported. When guards are not available, the edges of sharp tools should be covered with wooden strips, heavy cardboard or other suitable material. Sharp ends of pike poles and other pointed tools should be covered with short sections of rubber hose or several layers of friction tape. Bits and drill points should be covered with tape or cork.

1.25 Jumping on or off loading platforms is hazardous and shall be avoided. Use the steps that have been provided.

1.26 Supplies stored on private or public property shall be arranged in such a manner as not to constitute a hazard to adults, children or animals. Use warning signs where necessary.

1.27 Supplies transported in motor vehicles shall be secured in such a manner that they will not be dislodged or fall out during transit.

1.28 When traveling storeroom shelf units are placed in the supply truck, they shall be fastened securely at once. When the units are removed from the supply truck, the brakes on the unit shall be set.

1.29 Drawers in movable supply trucks shall always be secured before the truck is driven.

2. Acids

2.01 When transporting storage batteries or other containers of acid, take extreme care to avoid spilling the acid or dropping the containers.

2.02 Wear goggles, approved acid-proof rubber gloves, and rubber aprons when pouring acid or when handling upset or broken batteries. If acid gets on the

skin, flush it off immediately with running water and neutralize with soda solution.

2.03 Keep acids in acid-proof containers and use only acid-proof stoppers.

2.04 Keep open flames away from locations where explosive acids fumes are present.

3. Asphalt, paraffin, terminal compound and waxes

3.01 Asphalt, paraffin, terminal compound and waxes are of inflammable character and extreme care should be exercised in their use and handling.

4. Conduit, clay

4.01 When handling multiple clay conduit, always use suitable gloves and grasp inner walls of ducts.

4.02 When carrying conduit, use pick handles or other approved tools.

5. Acetylene and nitrogen gas

5.01 If upon inspection any part of the pressure equipment appears defective, it shall not be used ; but shall be replaced.

5.02 Cylinders containing gas shall not be dropped or struck violently. When used or stored, they should be laid in a horizontal position wherever practicable. Where they are used or stored vertically, the cylinders shall be secured individually against falling.

6. Gasoline and kerosene

6.01 Red safety cans shall be used in the transportation and storage of gasoline. Green safety cans shall be used to transport or store kerosene.

6.02 Keep gasoline and kerosene containers away from combustible materials and heat. Do not smoke or light matches in the vicinity of gasoline fumes or the liquid itself.

7. Paint

7.01 Paints should not be used in poorly ventilated places or near an open flame.

7.02 Paints should be kept in tightly sealed cans or containers and stored away from heat. Cans of paint which have been opened shall be stored in approved metal lockers.

8. Poles

8.01 To insure maximum safety in the handling of poles, supervisors and employees shall first select the proper method and then apply every precaution set forth herein and in the Bell System Practices.

8.02 When loading or unloading poles, approved equipment and methods shall be used. Power equipment shall always be used when available. Always work in such a manner as to be in the "clear" should the poles roll or fall unexpectedly.

8.03 When a pole or poles are to be stored, they shall be blocked properly to prevent slipping or rolling. Where there is a danger of someone tampering with the poles, additional safeguards, such as binding the poles with strand shall be employed.

8.04 Poles should be rolled by lifting and pushing with canthooks or peavies. Stand on the side opposite to the direction of the pole movement. Do not attempt to seize poles while they are rolling.

8.05 Whenever possible, avoid walking on stored poles.

8.06 Before trimming, shaving or framing a pole, make certain that it is blocked in such a manner as to prevent it from rolling. If an axe is used for trimming, stand opposite the side of the pole being trimmed.

9. Cable reels

9.01 Employees should use extreme care when handling cable reels. Realize they are heavy, anticipate their roll, and be prepared to control the rolling with proper chock blocks. When loading or unloading reels, allow no one to stand directly behind the truck or trailer.

9.02 When handling heavy cable reels, never permit them to tilt. When uneven ground conditions are encountered, level the ground or provide a substantial runway of heavy planks leveled by blocking so that tilting of the reels will not occur.

9.03 Reels that are delivered to the job by the transportation forces and which are not to be set up immediately by the placing forces shall be securely blocked to prevent rolling. Store reels on a side street in preference to a main thoroughfare. Loaded reels of cable shall never be stored on grades unless a suitable level space can be arranged.

9.04 Set up cable reel jacks on firm footings so that the spindle is horizontal and the jacks cannot fall over. Place the spindle through the reel carefully to avoid injuring anyone on the opposite side of the reel. When setting up cable reels, digging bars shall not be substituted for standard axles or spindles. When removing reels from jacks, use precaution so that jacks will not fall and cause injury.

9.05 Cut wires or metal stripping of old style lagging with a strand cutter, pliers, lag band snips or other approved tool, Remove nails and pieces of strip-

ping with pliers, claw hammer or wrecking bar. When cutting wire or stripping, take care to avoid being struck by the ends of the wire or stripping in case they fly up. With new style lagging, cut the metal stripping with a strand cutter, being careful that the lags in falling do not strike the feet. Lags should not be left lying around or with nails protruding. Remove the nails and place the lags where they will be out of the way.

9.06 When unloading railroad cars, detail a man to warn of approaching switch engines or cars, where necessary.

10. Warehouse trucks

10.01 On brake equipped warehouse trucks, set the brake when the truck is not in motion.

10.02 Warehouse trucks shall be loaded so that supplies will not slide off and cause injury. The load shall not be of such height as to obscure the operator's vision.

10.03 Load warehouse trucks of the center balance wheel design so that the greatest weight is over the balance wheels.

10.04 Warehouse trucks shall not be loaded beyond the rated capacity. When operated on an incline, secure sufficient help to control the truck safely. In general, trucks should be pushed instead of pulled.

11. Strand and wire

11.01 When strand is being transported or when it is to be stored in coils, the ends shall be taped and securely tied to the coil.

11.02 When paying out strand from a coil, care shall be taken that the hands or arms are not caught and pinched between the turns of strand. Wearing

gauntlet gloves and keeping the shirt sleeves rolled down will be helpful in preventing this type of injury.

11.03 When the end of a messenger strand is released from a spool or coil it tends to recoil. Care should be taken to avoid injury from this source—hold the loose end.

11.04 Before cutting, all strand shall be served with friction tape. Be sure the strand does not strike and injure you or others when it is cut.

11.05 When cutting off ends of wire or strand, be on guard to prevent injury from flying ends. The cutting tool and the wire or strand shall be held in such manner that the ends cannot strike anyone.

11.06 Steel construction and hard drawn copper wire have a tendency to recoil when cut. Hold or secure the ends to avoid injury from this source.

11.07 When handling, transporting or storing coils of line wire, the ends of the wire should be bent into small loops to prevent scratches or lacerations.

11.08 When coiling covered wire, the bare ends should be cut off to prevent scratches or lacerations.

MOTOR VEHICLES AND OTHER WORK EQUIPMENT

1. General

1.01 The first and all important duty of a motor vehicle driver is that of safe operation. Every precaution must be taken to prevent accidents. At no time shall any chances be taken.

1.02 All employees required to drive motor vehicles in the service of the company shall be familiar with and observe, at all times, the Federal, State, Municipal and local regulations and the company Practices regarding the use and operation of motor vehicles.

1.03 Employees shall not be permitted to drive company motor vehicles unless they possess a valid operator's or chauffeur's license.

1.04 No employee shall be permitted to operate a company motor vehicle when it is known that his physical condition is such that it will constitute a hazard to himself or the public.

1.05 No employee shall operate a vehicle with which he is not familiar. He must first receive proper instructions on that particular type of equipment.

1.06 Traffic hazards are greatly increased by bad road and weather conditions, especially during the winter season. Moderate speed and careful driving is essential under these conditions.

1.07 Drivers shall be considerate of pedestrians and be particularly careful when children are nearby. Blowing the horn unnecessarily may create confusion

and cause accidents. Pedestrians shall always be given the right-of-way and drivers shall be alert for persons stepping or running from between parked cars or other standing vehicles.

1.08 Drivers shall proceed slowly and cautiously when :

- (a) Children are playing on the roadway or near
- (b) Passing schools or playgrounds.
- (c) Approaching persons on bicycles, roller skates, children's wagons or tricycles.
- (d) Children or others are hitched to or stealing a ride on vehicles ahead.
- (e) Passing any vehicle discharging passengers.
- * (f) Passing horse drawn vehicles, ridden animals, and livestock. (Drivers shall stop when passing in the opposite direction should the person in control of the animals so indicate by raising his hand.)

1.09 The following procedures shall be observed in case of an accident :

- (a) Employees shall always stop if they are involved in an accident.
- * (b) All assistance possible shall be rendered to any person or animal injured, including making arrangements for transporting injured person to a hospital or to a physician. Extreme caution should be used if the animal is handled-an injured animal may bite.
- (c) Secure all the information necessary for the preparation of the accident report, especially names and addresses of injured persons and witnesses.

- (d) Report the accident to the supervisor or office as soon as possible. When the accident requires a report to the authorities, the Chief Special Agent's office will advise whether or not you are to forward the report.
- *(e) An employee shall not engage in arguments with other persons or assume responsibility for accident, but shall confine his discussion to a free exchange of information, including the giving of his name, business address, vehicle registration number, and name of the company, and exhibiting his driver's or chauffeur's license.
- *(f) An employee involved in an accident resulting only in property damage or damage to an unattended vehicle shall stop and endeavor to locate and notify the owner, operator or person in charge of such property of such fact, and shall give his name, the name of the company and business address. In the case of an unattended vehicle, if neither the owner nor operator can be found, the employee shall leave in a conspicuous place in the vehicle struck, a written notice of such accident, giving his name, the name of the company and business.

2. Inspection and loading of motor vehicles

2.01 INSPECTION-Next in importance to careful driving is the inspection of the operating condition of a motor vehicle and the immediate correction of any mechanical defects which may cause an accident.

2.02 Motor vehicles should not be operated with any controlling parts in improper working condition. Any defective condition which cannot be immediately corrected shall be reported promptly for repair.

2.03 Hand and foot brakes shall be tested daily before leaving the garage. Vehicles with defective brakes shall not be driven until the defects have been corrected.

Note: Wet brakes are hazardous. For this reason care shall be taken after a car has been washed or after it has been driven through flooded roadways. Driving the car a short distance with the brake pedal gently applied usually corrects any defective brake operation from this source.

2.04 Before operating a vehicle during the hours when lights are required, all lights shall be checked to see that they are in proper working order.

2.05 The windshield and windows shall be clean and free from cracks or defects which might impair the driver's vision. See that windshield wipers are in working order. Check the rear view mirror for an unobstructed view.

2.06 Before leaving the garage, tires shall be checked to see that they are inflated properly and in

good condition. Tires with treads or sidewalls worn or damaged to a point where they may blow out shall be reported immediately to the supervisor. Check the horn to assure adequate sound and proper operation.

2.07 Where the use of flares or warning signals is required, make certain that there is a sufficient number of them in proper condition on the vehicle.

2.08 Vehicles shall have adequate traffic warning devices to meet safety requirements.

2.09 **LOADING**-Employees shall practice good housekeeping by always storing tools and materials in their proper containers and in their proper location.

2.10 Suitable gloves should be worn in all cases where there is a possibility of injury to the hands.

2.11 Goggles and approved acid-proof rubber gloves should be worn while handling carboys of sulphuric acid or batteries containing sulphuric acid.

2.12 Use proper lifting methods as covered under work operations. Do not attempt to lift weights that might cause strain. Power equipment should be used whenever necessary.

2.13 Vehicles shall not be loaded so as to obscure the driver's vision, interfere with the free movement of his arms and legs, or prevent his free and ready access to the accessories required for emergencies.

2.14 Material, ladders or other tools which are carried outside the closed compartment shall be placed securely in the brackets, carriers or other space provided. Ladders with wheel spurs shall be placed with the wheel spurs faced toward the front of the vehicle.

2.15 All pike poles not stored in suitable protective compartments shall have their points covered with short pieces of rubber hose or with several layers of tape.

2.16 Heavy articles shall be placed on the bottom of the load, the lighter pieces on top.

2.17 All doors shall be closed securely. Tools and materials shall be secured properly against falling down or falling out.

2.18 Where possible, motor vehicles shall be loaded and unloaded at the curb side. When this cannot be done, necessary precautions shall be taken to guard against passing traffic. Adequate warning devices shall be used as required.

2.19 Do not stand on fenders that are not equipped with foot plates.

2.20 When loading or unloading cable reels, no person shall be permitted to stand directly behind the truck or trailer.

2.21 When a reel has been loaded or unloaded, it shall be blocked or otherwise made secure against rolling or tipping.

2.22 When the load on any motor vehicle or trailer projects two feet or more beyond the rear of the body, two red lights should be displayed at the extreme end of the load during hours when lights are required. At other times a red flag not smaller than 16 inches square should be displayed at the extreme rear of the load.

2.23 When hauling poles with a truck or trailer, attach a red flag not smaller than 16 inches square, or a red light at night, to the poles at a point midway between the two vehicles. This is in addition to other warning signals prescribed by law. On extremely long poles, two or more warning signals may be required.

2.24 Floors of trucks shall, as far as possible, be kept free of tripping hazards.

2.25 The driver shall watch for low bridges, low doors, or other low openings when a high load is being carried on the vehicle. The driver is responsible for seeing that the load will clear obstructions. If in doubt, he shall proceed with such caution that no accident will result.

2.26 The overall height of a vehicle shall be posted in a conspicuous place in the cab of the vehicle if the height of the vehicle, unloaded, measures more than nine feet from the road surface to the highest point of the cab and/or body.

3. Operation of motor vehicles

3.01 GENERAL-When operating a motor vehicle, the driver shall not permit anything to distract his attention from driving safely. When it is necessary to make extensive studies of plant conditions, such as pole inspections after a storm or flood, at least two employees, where possible, should be assigned to a motor vehicle. One of these employees should operate the vehicle and the other make the necessary observations and notations. When it is impossible to assign more than one employee to a vehicle for studies of this nature, the operator shall drive slowly and carefully on the right side of the roadway. Whenever written notations are to be made, proper signals shall be given to other traffic and the vehicle brought to a stop off the traveled portion of the highway.

3.02 To operate a motor vehicle efficiently and safely, the driver needs adequate space in which to move and unobscured vision. For these reasons the number of passengers who are permitted to ride on the operator's seat of the vehicle shall be limited to a number that will permit of full compliance with these requirements. No passenger should be permitted to sit on another's lap.

3.03 Employees riding on Company vehicles shall :

- (a) Assume safe positions within the vehicle and, if possible, be seated.
- (b) Be on the alert to withstand sudden stops turns or jolts of the vehicle.
- (c) Exercise care to avoid being struck by any obstruction under which the truck may pass.
- (d) Avoid horseplay at all times.

3.04 Employees shall not ride pole, cable or other two wheel trailers.

3.05 Do not board or leave a vehicle until it has come to a complete stop.

*3.06 Wherever possible, get on or off vehicles on the curb side ; where this cannot be done, be careful to keep clear of approaching traffic, opening the door only when it is reasonably safe to do so. Never leave the car door open longer than is necessary to load or unload passengers.

3.07 Employees shall not wear their body belts or climbers while riding in or driving vehicles.

3.08 Books or papers placed in overhead compartments in certain cars shall be secured in such a manner that movement of the car will not dislodge them. Tools or materials shall not be placed in such compartments.

3.09 While riding in or driving a vehicle, do not wear tool pouches unless they can be so arranged as to prevent injury to seats and seat backs.

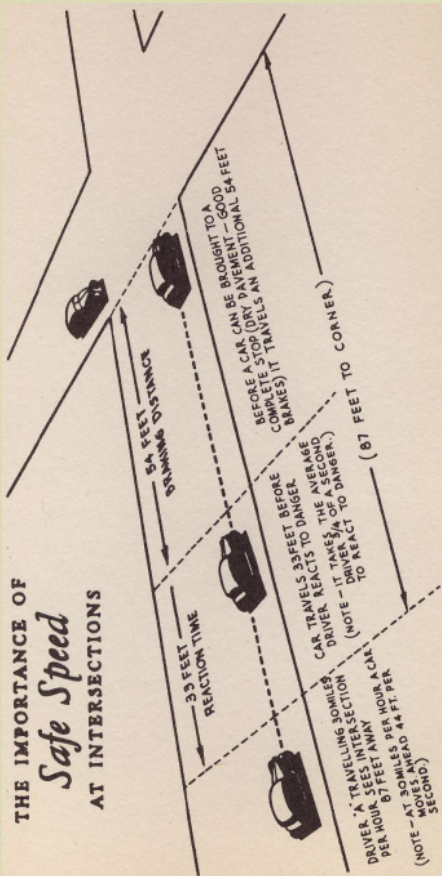
3.10 Before operating a vehicle, remove mud, snow or grease from shoes.

3.11 Do not permit the hitching of sleds or wagons to your vehicle nor allow skaters or bicycle riders to hang on.

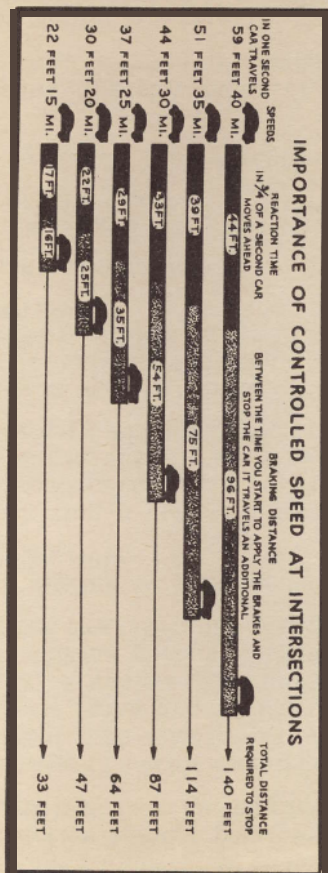
*3.12 Stop at least 20 feet away from any school bus that has stopped or is displaying a stop signal on any street or highway, other than on the opposite roadway of a highway with separate roadways, to load or unload passengers, and remain standing until the stop sign on the bus is released.

*3.12.1 Do not pass or proceed to the right of any interurban electric, street car, bus or other passenger carrying vehicle that has stopped or is about to stop to receive or discharge passengers until such passengers have boarded or have been discharged and have reached a place of safety. Do not pass to the left of any interurban electric or street car proceeding in the same direction, except on one way streets.

3.13 Vehicles shall be under control and the driver alert to the actions of other drivers when approaching and crossing intersections. It is a driver's obligation to look in both directions and to cross the intersection only when the crossing can be made in safety.



3.14 Drivers shall never exceed the maximum speed limits established by Federal, State, Municipal or local authorities for the particular type of vehicle being operated.



3.15 At least one window shall be kept partly open to provide ventilation against possible accumulation of gases from any leak from the engine or muffler.

3.16 The operator of a vehicle shall drive at a speed which is consistent with road conditions, traffic, and the type of vehicle being driven. Pass driveway entrances carefully. A vehicle shall never be operated at a speed that will not permit bringing it to a stop within the assured clear distance ahead.

3.17 Confine driving to existing roads and highways, wherever possible.

3.18 When driving a car on slippery roads, the driver shall use extreme care. He shall proceed slowly and approach curves and grades cautiously. Tire chains should be used when necessary.

3.19 Skidding is usually caused by traveling at a speed too great for existing conditions and also by the sudden application of brakes on wet or slippery roads. If a car starts to skid:

- (a) Never jam on the brakes.
- (b) Keep it in gear and turn the front wheels in the direction of the skid.
- (c) Apply and release brakes gently and intermittently.

3.20 Before stopping, slowing up, or making turns, the operator shall give the proper signal.

3.21 Proceed slowly and exercise care when driving in the immediate vicinity of warning signals.

3.22 Avoid sudden stops when approaching traffic signals and do not speed up in an effort to cross the intersection when an immediate change in the signal is expected.

*3.23 Slow down and proceed with caution, in accordance with permissible State or local regulations, at intersections, blind curves, school zones, railway crossings, safety zones, housing projects, and appropriately signed highway construction projects.

3.24 Motor vehicles shall be driven at a safe stopping distance from the car ahead and the driver shall be alert at all times for sudden stops.

3.25 Where practical, drivers of heavy equipment shall avoid traveling on narrow, congested streets and thoroughfares or where steep grades, sharp curves, heavy traffic and other driving hazards are present.

3.26 Avoid driving on car tracks.

3.27 Before going down a hill, change to the same gear that would be required for ascending the hill; close the throttle and keep the clutch engaged.

3.28 Employees shall not have lighted cigars, cigarettes, and pipes or any open flame around a vehicle while the gasoline tank is being filled or while examining the engine or fuel system.

3.29 Never allow the gasoline tank to be filled while the engine is running.

3.30 BACKING AND TURNING-Before making a turn or backing, check on vehicles behind you ; make certain that the drivers of these vehicles understand your intentions.

3.31 Except when unavoidable, never back a vehicle for more than a few feet and never until such movement can be made with complete safety.

"3.32. Backing out of a parking space or onto a main highway from a driveway shall be avoided where possible. Where this cannot be avoided, extreme caution shall be exercised. If a second employee is present he shall act as a flagman. If working alone, the driver

shall make sure that there is nothing in the way of the vehicle before backing out, and shall sound the horn before starting to back and shall sound the horn intermittently during the entire backing operation.

3.33 Weaving in and out of traffic is responsible for a great many motor vehicle accidents and shall be avoided. When it is necessary to change from one lane of traffic to another, e.g., in anticipation of making left or right hand turns, make certain that it can be done safely and give the proper signal.

3.34 If not in the proper line of traffic to make a right or left turn, proceed to the next intersection in the proper lane of traffic before turning.

3.35 When turning right at an intersection, approach in the line of traffic nearest to the right hand side of the highway, and, in turning, keep close to the right hand curb or edge of the highway. Proper signals shall be given to other traffic.

*3.36 Left turns at intersections frequently result in motor vehicle accidents and should be avoided whenever practicable by careful and reasonable planning of the route to be traveled. When turning left at an intersection, approach in the line of traffic to right of and nearest to the center line of the highway, yield the right of way to any vehicle approaching from the opposite direction which is within the intersection or so close thereto as to constitute an immediate hazard, and, in turning, keep to the right or left of the center of the intersection as required by State or local regulation, or as directed by markers, traffic buttons or signs. Where streets are laned for traffic or on one-way streets, a left turn shall be made from the left lane of traffic in the direction of travel. Proper signals to indicate intention shall be given to other traffic.

3.37 Avoid making of U-turns whenever practicable-they are responsible for many traffic accidents.

*3.38 When turning around on a narrow highway or mountain road, the rear of the vehicle shall be kept toward the bank or uphill side of the road. In no event shall such a turn be made unless the driver has assured himself that he has an unobstructed and clear view of approaching traffic in both directions for a distance which will permit him to make the complete turn safely. If a second employee is available, he shall act as flagman.

3.39 PASSING-Always pass an overtaken vehicle to the left except where State and Municipal motor vehicle regulations permit passing on the right and then only when such passing can be accomplished in safety and in accordance with the requirements of the regulations.

3.40 Do not pass on the right if it means driving upon the shoulder of the highway to do so.

3.41 A driver shall never drive to the left side of the center line of the highway to overtake and pass another vehicle proceeding in the same direction unless:

- (a) The traffic lines painted on the highway indicate that such a move is permissible.
- (b) The left side of the highway is free of oncoming traffic for a sufficient distance ahead to permit safe passing.
- * (c) The view is clear for a distance of 800 feet when approaching the crest of a grade or upon a curve in the highway.

3.42 On the highway, never pass another vehicle traveling in the same direction at or within 100 feet of an intersection.

3.43 Before passing vehicles, make sure that there is sufficient clearance to pass safely, giving due consideration to maximum governed speed of company vehicle and without exceeding speed limits at any time. Sound horn before passing.

3.44 After passing a vehicle, be sure there is sufficient clearance before pulling back into the proper lane of traffic.

3.45 When being overtaken and passed by another vehicle proceeding in the same direction, give the passing vehicle a fair share of the roadway and do not increase your speed until the passing has been completed.

3.46 Head lamp beams shall be depressed when approaching another vehicle coming in the opposite direction.

***3.47 PARKING-**Do not park a vehicle at the left-hand side of a street or highway facing oncoming traffic except for protection of employees doing work operations in a street or highway, in which case warning devices required by State motor vehicle regulations must be displayed.

3.48 Before leaving a parked car, set the brakes, lock the ignition, and lock the car doors.

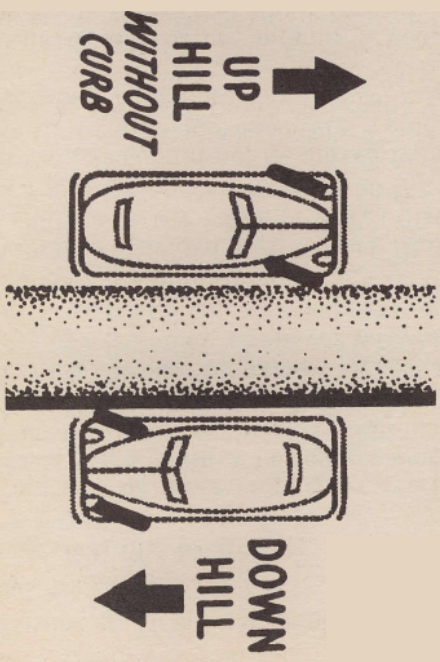
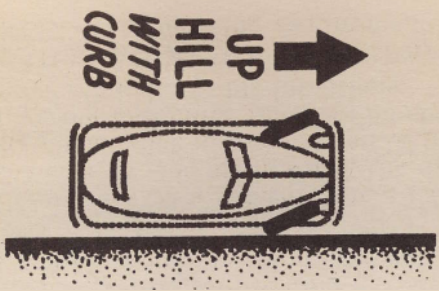
3.49 Avoid parking vehicles next to corners or in spaces where your ladders may be a hazard to other traffic.

3.50 In parking a truck, in which two or more men including the driver are riding, one shall act as a flagman in directing the movement of the truck and in warning traffic. When it is necessary to back up and the rear vision is obscured by the body or load, the same procedure shall be followed.

3.51 Where possible, avoid parking on grades. Where it is necessary to park on a grade, take the following precautions :

- (a) Set the brakes effectively.
- (b) Place the car in reverse gear.
- (c) When parked facing down grade, the front wheels should be turned toward the curb or other abutment with the tread of the right front tire resting against the curb or other abutment; when parked facing up grade, the front wheels should be turned away from the curb or other abutment with the tread of the right front tire resting against the curb or other abutment; where there are no curbs or other abutments, the wheels shall be turned as for downhill parking.

Note : Where local ordinances differ from the foregoing, the local ordinances shall be observed.



3.52 Diagonal parking is generally covered by local ordinances. In addition the following rules should be observed :

- (a) Extreme caution must be used in backing.
- (b) Back very slowly.
- (c) Observe traffic conditions, both vehicular and pedestrian.
- (d) When two or more employees are riding in a vehicle other than a passenger car, one shall advise the driver of the surrounding conditions, and assist as flagman, if required.

3.53 Vehicles should be parked off the main traveled portion of a highway whenever possible. When it is necessary to park on the traveled portion of a highway, the proper warning signals shall be used.

3.54 Vehicles provided with "Truck Stalled" signs or flares shall have the signs or flares displayed immediately when they become stalled on the highways.

3.55 A vehicle should not be moved from a parked position until it can be moved safely. You do not have the right-of-way so watch very carefully for passing cars.

3.56 Immediately before moving a vehicle from a parked position, the driver shall inspect clearances, both front and rear, and assure himself that no person or object will be struck by the movement of the vehicle.

3.57 Before moving a vehicle from a parked position, at the curb or side of the road, the driver shall make certain that such movement can be made without endangering oncoming vehicles ; he should make proper signals to indicate his intentions.

3.58 RAILROAD AND INTERURBAN GRADE CROSSINGS-The following requirements shall ap-

ply to all main line steam, motor, or electric railroad grade crossings in and out of towns or cities and to interurban grade crossings out of towns or cities.

Note: Interurban grade crossings in cities and towns shall be considered as street railways.

- * (a) Approach railroad and interurban grade crossings with extreme caution.
- * (b) Reduce speed and approach railroad and interurban grade crossings with the motor vehicle under absolute control so that a stop can be made before entering the crossing.
- * (c) All motor vehicles shall be stopped in accordance with applicable State and local regulations at railroad and interurban grade crossings.
- * (d) Where a clear or unobstructed view in both directions along the tracks cannot be had, all motor vehicles shall be stopped before entering the crossing. It shall be the responsibility of the driver of the motor vehicle, before proceeding over a grade crossing, to determine that the tracks are clear of approaching steam, motor or electric trains for a distance in both directions which will permit him to cross the tracks safely.

- * (e) When necessary to shift gears before proceeding over grade crossings, the gears shall be shifted before crossing the tracks.
- * (f) Do not drive so close to a vehicle ahead, that should it stop, you will be forced to remain on the tracks.
- * (g) Do not pass another vehicle proceeding in the same direction while crossing the tracks.
- * (h) Special precautions shall be taken at all multiple track crossings.

3.59 ENTERING OR LEAVING GARAGE-A complete stop shall be made on leaving a garage or other building. A complete stop shall also be made when entering a garage or other building unless such stopping will interfere with highway or street traffic.

3.60 Before entering a garage or other structure, make sure of adequate clearance for the vehicle, attachments and load.

*3.61 In congested areas, do not make a left turn into or upon leaving a garage, other quarters, alley or private driveway, unless it is impracticable to do otherwise. It shall be the responsibility of the driver about to enter or leave a garage, other quarters, alley or private driveway, to do so only when the driver may enter or leave safely.

3.62 Avoid backing into or out of a garage. Whenever conditions make it absolutely necessary to do so, extreme caution shall be exercised and a flagman provided if available.

4. Pole derricks, winches, power reels and trailers

4.01 GENERAL-Employees operating pole derricks, winches, power reels and trailers shall be thoroughly familiar with and follow the operating instructions contained in Bell System Practices.

4.02 Only employees who have been trained in the operation of associated motor vehicle equipment, such as derricks and winches shall be permitted to operate the equipment.

4.03 Employees shall exercise the utmost care to prevent injury to themselves or others while operating the equipment or while working in the immediate vicinity of it.

4.04 POLE DERRICKS-Before proceeding with the work, signals between the workmen and the operator shall be thoroughly understood by each person who has occasion to use or interpret them. Persons stationed to relay signals shall be in view of each other and the motor vehicle operator.

4.05 The hand brakes shall be set while a derrick is being operated. Wheel chocks shall also be used where the nature of the work being performed by the derrick might cause the truck to move forward or backward, thereby endangering the safety of employees or others.

4.06 With the exception of those employees required for the safe conduct of the work, no one shall be permitted under or near the derrick while it is being erected, dismantled, or while it is in operation.

4.07 When moving a truck with a derrick erected, care shall be taken not to strike obstructions overhead. When the derrick is in a partially erected position it shall have a suitable warning device attached to the head. Derricks should not be moved in an erected position for any great distance.

4.08 The operator shall take particular care to see that the hook on the winch line on the load being lifted is not pulled into contact with the sheave on the derrick leg. Care shall be used in placing the winch line around the load to see that the strain is on the shank of the winch line hook and not the point.

4.09 The utmost care shall be exercised to prevent contact with electric light and power wires when working in the immediate vicinity of them.

4.10 While lowering poles which have been raised by means of a derrick, be careful that the loop of the winch line around the pole does not catch on a pole step or other obstructions-this will cause slack in the loop and allow the pole to fall.

4.11 When pulling a pole from the ground with a derrick in the ground position, the pole shall be snubbed to the ground prop with a loose sling. This will prevent the butt from flying if it should break and also keep the pole from falling due to an unbal-

anced point of attachment. When a derrick is used with its third leg in the ground position, the length of pole which can be handled safely is limited. Never exceed that length of pole which Bell System Practices indicate may be safely handled by this method.

4.12 WINCHES-When a winch line is in operation, care shall be taken to see that employees and others are kept out of the danger zone. Never straddle a winch line or stand in such a position that you might be struck if the line breaks.

4.13 Do not touch winch lines or blocks that are under tension or in motion.

4.14 Keep the hands away from the winch drum while it is in motion. The hands should never be used to guide a winch line under strain while it is being wound on the winch drum. It is important, however, that the line be wound evenly on the winch drum. When necessary to guide the line, a piece of wood or a metal bar may be used.

4.15 When not in use, the end of the winch line shall be secured to the winch drum.

4.16 The winch jaw clutch shall never be disengaged to lower loads.

4.17 Steel winch lines shall not be used to raise poles or any other material near high voltage lines except when the winch line is rigged below all live wires a sufficient distance to prevent any possibility of contacting live wires by the winch line or conducting material being raised. Where there is a possibility of contacting high voltage lines, manila rope shall be used and rubber gloves worn by all employees engaged in the work operation. The rope shall not contain metallic strands and should be dry.

4.18 When power winches or similar devices are being operated to raise poles, material, or to pull wire,

pull slack, or do other work, the operator shall not leave the controls and shall pay strict attention to signals.

4.19 Winch lines that are deteriorated through rust, wear or broken wires shall not be used.

4.20 Gloves should be worn and care exercised in handling winch lines to avoid injury from broken strands.

4.21 When wire splinters develop near the hook end of the winch line, the worn section shall be cut off and a new rolled eye prepared. Goggles shall be worn when cutting a winch line.

4.22 POWER REELS-When using a power reel to wind wire or strand, keep the hands in the clear.

4.23 When removing material from a power reel, make certain the reel does not become disengaged and fall.

4.24 When moving a motor vehicle with a power reel in position on the side, use care to avoid striking obstructions or employees.

4.25 Winding long sections of wire or rope on a power reel induces considerable pressure on the reel. When the reel is collapsed to remove the coil it will spring open with considerable force. Keep the hands and body out of the way to avoid injury.

4.26 TRAILERS-Both wheels of a trailer shall be blocked in front and back during loading and unloading operations when not attached to a truck.

4.27 All trailers shall be fastened to the towing medium with standard approved coupling devices in proper condition. Substitute coupling devices shall not be used.

4.28 When a trailer is attached to a vehicle, a safety connection shall be used in addition to the usual coupling.

4.29 The safety connection shall be adjusted so there is a minimum amount of slack, as a failure of the towing hook may throw a heavy strain on the safety chain, cable or winch line and cause it to break.

4.30 When coupling a loaded cable reel trailer to a truck, attach the safety rope or chain of the trailer to the clevis of coupling before raising the tongue off the ground. This will eliminate any possibility of the trailer becoming overbalanced which can happen if the trailer is on a grade.

4.31 After attaching any trailer, the towing coupler shall be properly closed and locked. The coupler shall be closed when not in use.

4.32 Trailers equipped with brakes should not be towed until the brakes have been tested and found in proper operating condition.

4.33 All lights shall be connected and tested before taking a trailer on a highway. If trailer lighting outfits are to be used, they shall also be tested at the time.

4.34 Red glass reflectors used on trailers shall be maintained in good condition. Broken or missing reflectors shall be replaced immediately.

4.35 A load being hauled on a trailer shall be fastened securely to the trailer to prevent movement of the load. Check the load fastenings en route to be sure proper tension is maintained.

4.36 When handling a trailer by manpower, either loaded or unloaded, the tongue shall never be raised

above the balance point. Keep hands clear of the cradle of trailers. When necessary to move a trailer by manpower, have enough employees on hand to handle the load safely-then push, do not pull the trailer. Move heavy trailers by the use of a winch line or coupler. Keep the feet clear of the trailer.

OFFICE WORK

1. General

1.01 DESKS—Drawers of desks, filing cabinets and doors of lockers or cabinets shall not be left open.



1.02 Exercise care when opening and closing desk drawers that they do not fall out or close on the fingers.

1.03 Report for correction all office furniture with splintered surfaces, rough edges, or with loose and defective parts. Plate glass desk tops that have sharp or broken edges shall be repaired or replaced.

1.04 FILING CABINETS-Be careful when opening drawers of filing cabinets that the drawers do not pull out all the way and fall on the feet.

1.05 When working at filing cabinets, take care that an extended drawer does not cause the cabinet to overbalance and tip forward. Do not open more than one drawer in a tier at a time.

1.06 PASSAGEWAYS-Do not place chairs, wastebaskets, boxes or other objects in aisles or passageways.

1.07 Telephone cords, extension cords, cords to adding machines, or other cords should not be permitted to obstruct aisles or passageways. If this cannot be avoided, secure and flag the cords in such a manner no one will trip over them.

1.08 CHAIRS-Sitting on the edge of chairs equipped with casters or sitting on a chair balanced on two legs is dangerous and shall be avoided.

1.09 Be careful when lifting a swivel chair-the base may come loose and fall on the feet. Before swinging around on a swivel chair or pushing the chair away from the desk, make sure no one is passing.

1.10 WORKING TOOLS AND MATERIALS-Sharp or pointed objects such as pencils, knives, fountain pens or envelope openers shall be kept in a safe place away from the edge of the desk or table. Such

tools should be used only for the purpose for which they are intended. Do not place them in the mouth. Pencils should not be sharpened on both ends. Do not carry pencils with the points exposed.

1.11 Broken glass, light bulbs, pins, safety razor blades, or other sharp edged objects shall not be placed in wastebaskets. They should be turned over to or left for a building serviceman.

1.12 Standard clips or a stapling machine should be used for fastening papers together. When necessary to use pins, place the sharp points between the sheets of paper.

1.13 Avoid standing on chairs and desks. Do not stand on wastebaskets.

1.14 Where a head receiver is used, place and remove it with both hands to avoid being struck by the head band. Always remove the receiver before stooping to pick up an article on the floor, otherwise the head band may be pulled off and cause an injury. When wrapping or unwrapping the cord, hold the receiver away from the face to prevent possible injury, in case the head band breaks under tension.

1.15 When transporting typewriters, make certain that the margin stops are set so that the carriage will not move sideways, in case the carriage release lever is operated.

1.16 **WINDOWS**-When opening or closing windows, use the lifts on the lower sash and the window pole for the upper sash. Before using a window pole, inspect the hook to see that it is not loose.

1.17 When using the window pole, place the hook in the window sash socket-otherwise the pole might slip and break the glass. The window pole shall be kept in the standard hanger, where one is provided.

1.18 Excessive force should not be applied to windows and transoms that do not open or close readily. If the window binds or jams, it should be reported for correction.

1.19 Window shades, Venetian blinds or awnings should be raised and lowered carefully to prevent them from falling.

1.20 Do not place any material, office supplies or other objects on window sills-they may fall and injure someone.

1.21 Never throw articles out of windows-someone below may be injured. This is particularly hazardous where lighted cigar and cigarette butts are involved-they may start a fire or burn someone.

2. Actions in and out of buildings

2.01 WALKING-Never run and when walking, care should be taken to avoid the possibility of slipping.

2.02 When walking around corners, keep to the right of the passageway to avoid striking others.

2.03 DOORS-Approach and open all doors with caution, especially swinging doors-someone may be on the opposite side of the door. Use extra caution when opening and closing a door with a glass panel-never push on the glass. Avoid standing in the path of a door to prevent being struck if someone enters. Where multiple doors are encountered, use the right hand door whenever possible.

2.04 Only one person at a time should go into a compartment of a revolving door. When leaving the compartment, never give the door an extra push.

2.05 STAIRS-Do not run up and down stairs. Watch where you place your feet, use the hand rail and observe traffic lanes.



2.06 If hand rails and stair treads appear defective, report them for correction.

2.07 Never discard matches, pencils, rubber bands, or other articles on stairs or in passageways-such articles may cause someone to slip and fall.

2.08 Avoid engaging in playful activities which might result in injury to fellow employees.

*2.09 When turning on or off an electric light equipped with a pull chain or string, retain a firm hold until tension is relieved, thus avoiding a flipping action which might break the light or fixture.

*2.10 CROSSING STREETS-Before crossing a street or alighting from a vehicle, look to left and right for approaching vehicles. Streets should be crossed only at designated cross-walks or street intersections. Always observe traffic signals.

*2.11 Before crossing in front of or in rear of a stopped vehicle, observe that it is not about to move forward or backward and that there is no danger from approaching vehicles.

*2.12 ELEVATORS-Watch your step when entering or leaving elevators-the car may not be level with the floor. The elevator car shall not be entered or left until the car has come to a complete stop. Face the elevator doors while the car is moving. Avoid all horseplay.

*2.13 Do not converse with or distract the attention of the elevator operator while the car is in operation.

*2.14 Passengers must obey the instructions of the elevator operator.



3. Blue printing

3.01 While any type of cutting machine is in use do not converse with or distract the attention of the operator.

3.02 The blade of a block paper cutter should always be kept above the guard or clamp.

3.03 Only one person should operate the block paper cutting machine.

3.04 Do not attempt to remove paper from the block paper cutting machine unless the handle is in the "UP" safety position.

3.05 Upon removing a blade from a block paper cutter, secure it to a shipping board immediately.

3.06 Do not attempt to make any adjustments on the block paper cutter when the handle is in the "DOWN" position.

3.07 When operating a paper trimming machine, take care that the blade does not drop. Do not release your hold on the blade handle while cutting paper. Never leave the blade in an upright position. The handle of the blade should never be placed on the shoulder while paper is being adjusted.

3.08 Aisles and working space shall be kept clear of paper cuttings. Floors must be kept dry at all times to prevent slipping.

3.09 Approved acid-proof rubber gloves shall be worn when removing arc globes from water and caustic soda solution.

3.10 Switches shall be opened before changing fuses or lamps.

3.11 Before changing arc lamp carbons, open the switch controlling the circuit. Use pliers for handling hot carbons.

3.12 Goggles shall always be worn when cutting carbon electrodes.

3.13 When using the paper dryer, take care to prevent possible burns.

4. **Mail** room

4.01 Mail shall be taken from mail bins by removing quantities that can be handled easily, starting from the top of the bin and working down.

4.02 In sorting mail, watch out for exposed pins and guard against the possibility of cuts from sharp paper edges.

4.03 Test-lift heavy objects before attempting to lift them. Before attempting to make any lift and in lifting heavy objects, observe the following procedures:

- (a) Get sufficient help if the object is too heavy or cumbersome.
- (b) Face the object with the feet far enough apart to give a good base of operation without placing undue strain on the abdominal muscles—the length of a shoe is a good guide. Adopt a stance which is comfortable and which will permit the object to be lifted vertically.
- (c) Bend the knees and take a firm grip on the object and straighten the legs slowly. This allows the strain to come on the strong muscles of the arms, shoulders and legs.

4.04 No female employee shall lift or carry any article exceeding twenty-five (25) pounds in weight at any time. When ascending or descending stairs that rise for more than five (5) feet from the base **thereof**, the weight shall be limited to ten (10) **pounds**.

4.05 Mail trucks shall be loaded so that mail **and** supplies will not slide off and cause injury. In loading mail trucks, the load shall not be of such height as to obscure the operator's vision. Where mail trucks are to be operated on an incline, secure sufficient help to control the truck safely. In general, mail trucks should be pushed instead of pulled.

5. Photographic

5.01 Take care at all times when entering or working in dark rooms.

5.02 When operating a paper trimming machine, take care that the blade does not drop. Do not release your hold on the blade handle while cutting paper. Never leave the blade in an upright position. The handle of the blade should never be placed on the shoulder while paper is being adjusted.

5.03 Take extreme care in the handling of chemicals. Always pour acid into the water-NEVER pour water into a container holding acid. Goggles should be worn at all times when mixing chemicals.

5.04 Employees working with photographic or other poisonous chemicals shall wear approved acid-proof rubber gloves if they have cuts or open sores on their hands or are allergic to such chemicals.

5.05 After working with chemicals, wash the hands thoroughly with soap.

5.06 "Poison" labels must be placed on all containers in which poisonous materials are kept. Such containers should be stored in approved storage places that can be locked to prevent unauthorized persons from gaining access to them.

5.07 Wet films and prints must never be thrown on the floor-place them in proper containers.

5.08 Films shall not be placed in print dryers.

5.09 FILMS and inflammable material MUST be kept in metal lockers.

5.10 Floors must be kept dry at all times or rubber mats provided to prevent slipping.

5.11 Photostat machines and photographic dryers shall not be oiled while motors are running.

6. Reproduction

6.01 Before electrically operating a mimeograph machine, disengage the handle.

6.02 Stop reproduction machines before oiling them, making adjustments, or retrieving copy which may have become entangled in the equipment.

6.03 When putting on or taking off ditto rolls, make certain that the tray and paper guide are held securely in a vertical position by the rod.

6.04 When moistening roll of mechanical duplicator, it is advisable to turn the drum with the handle to avoid possible injury.

6.05 Since the drum handle on the multigraph machine does not disengage when the machine is in operation, extra care should be taken when working around this equipment.

6.06 Multigraph machines shall be stopped before cleaning ink rolls or changing belt speeds.

6.07 Loose clothing shall not be worn around machines in operation. The head should be kept a safe distance away from the ink rollers to prevent the hair from being caught in them.

6.08 Only one person shall operate a guillotine type block paper cutting machine.

6.09 Do not attempt to remove paper from the block cutter unless the handle is in the "UP" safety position and the guard is below the cutting edge of the blade.

6.10 Upon removing a blade from a block paper cutter, secure it to a shipping board immediately.

6.11 Goggles shall be worn when stripping compo-type metal from blankets.

6.12 Do not attempt the taking of metal from the Intermediate Line Hook on compotype machines.

6.13 Keep all short or broken pieces of metal away from the ejecting mechanism on compotype machines.

6.14 Before adjusting the electric contact blades on compotype machines, remove power cable from the power outlet.

6.15 Stop the compotype machine before attempting to change broken die springs. When removing or replacing springs, use extreme caution to prevent them from flying out of control. Goggles should be worn.

6.16 Keep all machinery clean. Report all mechanical difficulties immediately.

6.17 Keep all waste paper off of the floor. Wipe up, any **spillage** of water, oil, or chemicals immediately.