

STATE OF NEW JERSEY

Department of Labor & INDUSTRY

JOHN J. TOOHEY, JR., *Commissioner*

AN ACT

establishing a

SAFETY CODE FOR WORKERS

in the Construction Industry

Revised Statutes, Title 34, Section 5.

(Chapter 185, Laws of 1930, Approved April 18, 1930.)

BUREAU OF STRUCTURAL INSPECTION

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Trenton, N. J.

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SAFETY CODE FOR WORKERS

In the Construction Industry

ARTICLE 1.

GENERAL PROVISIONS

34:5-1. **RULES AND REGULATIONS.** The commissioner shall make such rules and regulations as are in his judgment necessary and proper to enforce this chapter and chapter 3 of this title (§34:3-1 et seq.).

34:5-3. **CONSTRUCTION OR USE OF UNSAFE EQUIPMENT FORBIDDEN.** No person shall knowingly construct or use any unsafe device, safeguard or equipment.

All persons having knowledge of the existence of an unsafe device, safeguard or equipment shall promptly report the same to the superintendent or foreman in charge.

A superintendent or foreman to whose attention the existence of any unsafe device, safeguard or equipment is called shall take immediate steps to remedy or remove the unsafe condition.

34:5-4. **SKILLED SUPERVISION AND WORKMEN.** The construction, erection, alteration and removal of scaffolds, and the application, installation and setting up of safeguards and equipment devices shall be done by skilled workmen under the supervision of a person qualified by experience or training for such work.

34:5-5. **MAINTENANCE OF SAFE EQUIPMENT.** Scaffolds, ladders, stairs, fuel gas tanks and other devices or equipment regulated by this chapter shall be maintained in a good, safe and usable condition as long as in use.

34:5-6. **ALTERATION OR REMOVAL.** No ladders, scaffolds, railings, or other devices or equipment required or regulated by this chapter or any part thereof, shall be removed, altered or weakened so long as the same are needed or in use, unless so ordered by the superintendent or foreman in charge.

34:5-7 **SCAFFOLDS AND WALK WAYS FREE FROM OBSTRUCTIONS; SNOW AND ICE.** Scaffolds, temporary floors, ramps, stairway landings, stair treads and all other walk ways shall be kept free from protruding nails, splinters and unnecessary obstructions. They shall be cleared of accumulations of snow and ice, before workers are permitted to use them, and where directly exposed to the weather they shall be sprinkled with sand or ashes during winter months to prevent workers from slipping.

34:5-8. **LUMBER; PROJECTING NAILS.** Projecting nails in boards, planks and timbers shall be removed, hammered in or bent over in a safe way.

34:5-9. STEAM PIPES; ELECTRIC WIRES; MOVING CABLES OR CHAINS. Steam pipes, high tension electric lines, and moving ropes, cables or chains with which workers might come in contact shall be incased or otherwise safeguarded.

ARTICLE 2.

DEMOLITION.

34:5-10. WATER, GAS, ELECTRICITY AND OTHER SERVICES; SHUTTING OFF. Workers shall not be permitted to start the demolition of a building or structure until all gas, electricity, water and other supply lines from the outside except those especially provided for use in the work of demolition, are effectively shut off.

34:5-11. GLASS FIRST REMOVED. Glazed sashes and glazed doors shall be removed at the start of demolition operations.

34:5-12. CHUTES. Chutes for the removal of materials and debris shall be provided in all such parts of demolition operations that are more than fifteen feet above the point where the removal of material is effected.

34:5-13. STOP IN CHUTE. The bottom of each chute shall be equipped with a gate or stop, with suitable means for closing or regulating the flow of material. A danger sign shall be placed at the discharge end of every chute. Such gate or stop shall be kept closed except for the discharge of material.

34:5-14. TOOLS ON HAND. Proper tools shall be provided and kept available to loosen material which becomes jammed in the chute.

34:5-15. REMOVAL OF WALLS AND BULKY MATERIAL. In the demolition of buildings, walls shall be removed part by part. No wall, chimney or other construction shall be allowed to fall in mass, except under competent supervision. Scaffolds or staging shall be erected for workers, if walls or other construction are too thin or too weak to work on. Bulky material, such as beams or columns, shall be lowered and not thrown.

34:5-16. MATERIAL PLACED TO AVOID OVERLOADING. Material resulting from demolition, if stored within the building, shall be so placed that no part of the construction is overloaded. It shall be so piled or stacked that it will not endanger workers.

34:5-17. DUST SPRINKLED. During demolition, chutes, floors, stairways and other places affected shall be sprinkled frequently to keep down the dust.

34:5-18. STAIRS. Stairs and stair railings shall be kept in place and in usable condition as long as possible. Steps and landings shall be kept free from debris.

34:5-19. FLOOR OPENINGS. Floor openings, unless covered or otherwise protected, shall be provided with guard rails and toe boards conforming to this chapter.

34:5-20. SIGNS; WATCHMEN. All fields of danger in demolition operations shall be properly inclosed and danger signs posted. Sufficient watchmen shall be provided to warn workers of impending dangers.

ARTICLE 3.

EXCAVATION.

34:5-21. SHORING. The sides of every excavation in connection with a building operation shall be sheet piled, braced or shored when necessary to prevent the soil from caving in on those engaged in work within such excavation.

34:5-22. RAILINGS. Where workers are employed adjacent to or near an excavation, on other work than that directly connected with the excavation, substantial railings or fences shall be provided to prevent such workers from falling into the excavation.

34:5-23. ADJOINING PROPERTY BRACED; TRENCHES. When, by reason of an excavation in which workers are employed the stability of neighboring buildings or other structures is menaced, such buildings or structures shall be properly braced and shored or underpinned to guard the workers against the danger of collapse. All trenches in loose or rolling soil in connection with building operations shall be properly shored to prevent soil from caving in.

ARTICLE 4.

BLASTING.

NOTE: *The use of explosives is subject to strict compliance with Chapter 27, Laws of 1941. All blasters are required to be in possession of a valid permit to use explosives issued by the Bureau of Explosives, Department of Labor, Trenton, N. J.*

34:5-24. EXPLOSIVE STORES. Explosives for blasting in connection with a building operation and kept at or near the work shall be stored in a shed or magazine especially constructed for and restricted to that purpose.

34:5-25. MAGAZINES LOCKED; PERSON IN CHARGE. Every shed or magazine for the storage of explosives, except during inspections or when receiving or removing explosives, shall be kept locked under the immediate charge of a reliable, competent person who shall be assigned no conflicting duties.

34:5-26. **MARKING AND SAFEGUARDING MAGAZINES.** Every shed or magazine for explosives shall be kept cool, clean, dry and free from grit. It shall be painted bright red and plainly marked with signs of warning or indicating the dangerous nature of its contents, and shall be otherwise protected against approach or interference by unauthorized persons.

34:5-27. **COMPETENT, EXPERIENCED WORKERS.** Blasting shall not be undertaken in connection with a building operation, except by competent workers experienced in the handling of explosives.

34:5-28. **TAMPING AND PRIMING.** Blasting charges shall be tamped only by means of wooden tamping rods, and explosives shall be primed or set into place by steady even pressure only.

34:5-29. **LOCALIZING EFFECT OF BLAST.** No blast shall be fired until the rock or other substance to be loosened or shattered has been covered on all sides with strong woven matting of rope or wire and a number of heavy logs or timbers securely tied together by chains or cables of sufficient weight to prevent the scattering of the loosened or shattered material.

34:5-30. **ELECTRICAL FIRING REQUIRED.** Blasts shall be fired by some form of electrical apparatus only.

34:5-31. **WARNING BEFORE BLASTING.** Before a blast is fired, warning shall be given to all persons in the immediate vicinity in danger of being hit by a possible missile projected by the blast, and ample opportunity given them to find places of safety.

34:5-32. **DRILLING AFTER BLAST.** No work of drilling or other preparations for blasting shall be resumed after blasts have been fired, until a thorough examination has been made to make sure there are no unexploded charges remaining.

ARTICLE 5.

SIDEWALK SHEDS.

34:5-33. **SUBSTANTIALLY CONSTRUCTED.** When sidewalk sheds are used for the storage or preparation of materials in the construction of a building, they shall be constructed of sufficient strength and stability to sustain safely the weight of the materials and the shocks incident to their handling or preparation and the accidental jars from trucks passing by or delivering material in addition to service as a protective covering over the highway.

34:5-34. **GUARD RAILS AND TOE BOARDS.** The open sides and ends of the platforms of sidewalk sheds used as herein specified shall be provided with proper guard rails and toe boards conforming to this chapter unless otherwise inclosed.

34:5-35. OVERHEAD PROTECTION. Suitable overhead protection shall be provided for workers employed on sidewalk sheds in the preparation of materials used in the construction of a building.

ARTICLE 6.

STACKING AND STORING MATERIALS; WASTE DISPOSAL.

34:5-36. STACKS OF MATERIALS. Materials which in the course of a building construction are to be stored in locations at or near which workers are employed shall be piled or stacked in a secure and orderly manner to avoid toppling over or being otherwise displaced.

34:5-37. HEIGHT OF PILE. No material shall be piled or stacked to a greater height than six feet, except in yards or sheds intended especially for storage.

34:5-38. PILES TO TAPER. When piles exceed four feet in height the material shall be so placed that the sides and ends of the piles taper back.

34:5-39. WASTE AND RUBBISH REMOVED. Waste material and rubbish resulting from a building operation shall be removed as rapidly as possible. Chutes, if used for this purpose, shall conform to the requirements of this chapter.

ARTICLE 7.

HOISTING MACHINERY.

34:5-40. BRAKES. Every hoisting engine shall be provided with adequate and effective brakes, capable of holding the maximum load at any point of its travel.

34:5-41. GUARDS. In connection with hoisting machinery, guards shall be provided for exposed gears and other moving parts and around hoisting cables at all points to prevent workers from tripping or getting clothing caught.

34:5-42. SPACE ABOUT MACHINERY. Ample room shall be provided around hoisting engines, motors or other machinery or apparatus for the free and safe movement of those who operate or otherwise attend the engines, motors or other machinery or apparatus.

34:5-43. HOISTING MACHINERY PROTECTED. Hoisting machinery, including boilers, placed outside buildings under construction shall be housed or inclosed to protect the operators and machinery against weather and falling objects.

34:5-44. HOISTING MACHINERY ON PLATFORM. When hoisting machinery is set on an elevated platform, the platform shall be of substantial construction and guard rails and toe boards conforming to this chapter shall be provided along all open sides of such platform.

34:5-44.1. ELECTRICAL MACHINERY. Electrical machinery and equipment in connection with building construction shall be guarded as provided in the National Electric Safety Code.

34:5-44.2. STEAM BOILERS. Steam boilers used in connection with building construction shall be installed, equipped and maintained as prescribed in the boiler code of the American Society of Mechanical Engineers.

ARTICLE 8.

DERRICKS.

34:5-45. MAXIMUM LOAD. Derricks shall be so designed and assembled that no part shall be stressed beyond the safe working stress of the material, under its maximum rated load in any possible position. Such maximum rated load shall be conspicuously marked on each derrick.

34:5-46. FOOT BLOCK. The foot block of every derrick shall be firmly secured against motion in any direction.

34:5-47. GUYS. In the case of guyed derricks the top of the mast shall be held by not less than six steel guy cables secured by firm, adequate anchorages.

34:5-48. ANGLE AT WHICH GUY PLACED. Derrick guys shall be so placed that the angle of the guy with the mast shall be as large as practicable. In case such angle of two or more guys is less than thirty degrees the maximum permissible load shall be reduced by two per cent for each degree that such angle of each cable is less than thirty degrees.

34:5-49. BRAKES. Every derrick shall be provided with adequate and effective brakes, capable of holding its maximum rated load. Such brakes shall be tested at least once a week while continued in use.

34:5-50. GUARDS. Every derrick shall be equipped with substantial and effective guards for all exposed gears and for all projecting and moving parts.

34:5-51. OILING AND INSPECTION. As long as derricks are continued in actual use, all moving parts shall be kept well lubricated and all parts shall be inspected at least every other day.

ARTICLE 9.

SIGNALS.

34:5-52. SIGNALING SYSTEM. An equipment of bells, whistles or electric signals shall be installed in connection with every platform hoist, concrete hoist, derrick or other hoisting outfit in building con-

struction, except for derricks where the hoisting machine operator has a clear and unobstructed view of the derrick and the signalman, in which case hand signals may be used.

34:5-53. **SIGNAL CODES.** The following codes shall be used for bells or other audible signals:

a. In operating platform hoists or other hoisting outfits, one bell, stop; two bells, raise; three bells, lower;

b. In operating hoisting cables or derricks, one bell, stop; two bells, raise; three bells, lower;

c. In operating derrick booms, one bell, stop; two bells, raise boom; three bells, lower boom; four bells, move boom right; five bells, move boom left.

Separate bells or other audible signals distinctly different in tone shall be used for the hoisting cable and for the boom movements in the operation of derricks.

34:5-54. **SIGNAL CODE DISPLAYED.** A copy of the signal code shall be posted in a conspicuous place on every construction job where hoisting machines or derricks are used.

34:5-55. **DEVICES PROTECTED.** All cords, wires or other devices used in signaling equipment shall be protected against unauthorized or unintentional use, breakage or interference.

ARTICLE 10.

CABLES, ROPES, CHAINS AND BLOCKS.

34:5-56. **MAXIMUM LOADS.** Cables, ropes, chains and blocks shall be of such sizes that the maximum loads supported by them will not exceed one-sixth of their breaking strengths.

34:5-57. **USE OF BLOCKS.** Blocks designed for use with manila ropes shall not be used for steel cables. Blocks used near floor or in other exposed places to change the direction of cables shall be inclosed or otherwise effectively guarded.

34:5-58. **ROPES AND CABLES TESTED.** All ropes and cables used in connection with scaffolds, hoisting apparatus or other equipment or devices regulated by this chapter shall be tested before being put in use and at least once in every thirty days while in use, to insure their safety and suitability for the purposes to which they are to be put. A record of tests specifying the time and place of test and the persons making the tests and at least two competent witnesses to the test shall be kept posted and accessible to all persons having a direct interest in the safety of the ropes or cables. Any ropes or cables found unsafe or unfit shall not be used or continued in use and shall be removed from the work.

ARTICLE 11.

PLATFORM HOISTS AND ELEVATORS.

34:5-59. CAR COVERED. Platform hoists within buildings under construction for the handling of materials shall have the car substantially constructed and provided with covers either solid or of wire mesh. Sections of the cover may be arranged to swing upward for handling bulky material. The covers may be omitted if suitable protective coverings are installed above the overhead work.

34:5-60. SHEAVES. The overhead sheaves of platform hoists and their supports shall be designed to carry safely twice the weight of the hoist and its maximum allowable load.

34:5-61. NO RIDING ON PLATFORM HOISTS, BUCKETS OR HOISTING APPARATUS. No person shall be permitted to ride on any platform hoist, unless it has been designed also for passenger service, or on any concrete bucket, derrick hook or other hoisting apparatus or device.

34:5-61.1. STANDARD OF ELEVATORS FOR WORKMEN. Elevators used during construction for the transportation of workmen shall comply with the requirements of laws, ordinances and regulations applying to passenger elevators, or, in the absence of such laws, ordinances or regulations, shall comply with the corresponding provisions of the "American standard safety code for elevators" published by the American Society of Mechanical Engineers.

ARTICLE 12.

HOIST TOWERS.

34:5-62. TOWERS REQUIRED. When hoists in connection with building construction are not operated within the building, suitable towers of wood or steel shall be erected for their operation in a manner to be safe and stable.

34:5-63. PROPER FOUNDATION. Every hoist tower shall rest on a sufficiently solid foundation to prevent injurious settlement or distortion of its framework.

34:5-64. HOIST TOWER PROPERLY GUYED. Every hoist tower, unless constructed and anchored to be self-sustaining, shall be secured in not less than four directions against swaying or tipping by adequately anchored galvanized steel guys at intervals of not more than thirty-two feet in its height.

34:5-65. LANDING PLATFORMS GUARDED. Landing platforms in hoist towers or connecting a hoist tower with a building or other structure shall be provided with guard rails and toe boards conforming to this chapter.

34:5-66. **HOIST TOWERS INCLOSED.** The bottom of every hoist tower shall be screened or otherwise inclosed on all sides to a height of not less than six feet. If the tower is close to an occupied building, the side or sides facing the building shall be screened or otherwise inclosed for the entire height of the tower, and openings to floors shall be adequately protected.

34:5-67. **DOORS AT UNLOADING POINTS.** Hoist towers erected within the building, that do not occupy the entire openings through which they pass shall be completely inclosed on all sides and shall be provided with doors at the unloading points, unless the platform hoist itself is solidly inclosed on all sides to the height to which material is to be loaded on the car.

ARTICLE 13.

TEMPORARY FLOORING.

34:5-68. **PERMANENT FLOOR FILLING.** In buildings or other structures of skeleton construction, the permanent floor filling except for necessary temporary hoistway openings shall be constructed as the building progresses. There shall not be more than three unfilled floors above the highest permanent floor.

34:5-69. **WORKING FLOOR PLANKED.** In buildings or other structures of skeleton construction, the entire tier of beams on which the structural iron or steel work is being erected, generally called the working floor, shall be thoroughly planked over, except spaces required for construction work, for raising or lowering materials and for stairways or ladders.

34:5-70. **UNDER FLOORING.** In buildings of wood joist or mill construction the under flooring shall be laid for each story as the building progresses, or if double floors are not to be used the floor two stories below the one where work is under way shall be planked over.

34:5-71. **PLANKING.** Planks used for temporary flooring in skeleton construction shall be not less than two inches thick, trade dimension, and shall be laid close. The overlap shall be not less than four inches. They shall be so placed that they cannot tip under the weight of the worker at any point, and so secured that they cannot slip out of place.

34:5-72. **TEMPORARY FLOORING.** In wood joisted buildings planks for temporary flooring shall not be less than one inch thick, trade dimension.

ARTICLE 14.

FLOOR OPENINGS.

34:5-73. FLOOR OPENINGS GUARDED. All floor openings used as hoistways or elevator shaft ways shall be guarded on all sides, except those sides or so much of them as are used for loading or unloading, either by barriers not less than six feet high along or near the edges of such openings, or by guard rails conforming to this chapter, not less than two feet distant at all points, measured in a horizontal direction, from the edges of such openings. If guard rails are used, toe boards conforming to this chapter shall be provided along the edges of the openings. The open sides shall be guarded either by solid doors or gates not less than six feet high at the edge of the opening, or by movable rails three feet above the floor distant not less than two feet from the opening, measured in a horizontal direction.

34:5-74. OPENING FOR STAIRS GUARDED. All floor openings used as stairways or for the accommodation of ladders or runways shall be guarded by railings and toe boards conforming to this chapter on all those sides or so much of them as are not necessarily open for traffic purposes.

34:5-75. ALL OPENINGS SAFELY PROTECTED. All other floor openings shall be guarded on all sides by solid barriers or by railings and toe boards conforming to this chapter, or shall be planked over or otherwise covered over by temporary construction capable of sustaining safely four times such loads as are likely to come thereon.

34:5-76. CONSTRUCTION OF BARRIERS. Barriers for the guarding of openings used as hoistways or for elevators shall be so constructed that workers cannot thrust heads, arms or legs through them, and loose material cannot fall or be pushed into the shaft way.

34:5-77. BARRIERS AND RAILS TO REMAIN. Barriers and guard rails around floor openings shall remain in place until the permanent inclosures or protection are installed.

ARTICLE 15.

RUNWAYS AND RAMPS.

34:5-78. CONSTRUCTION. Runways or ramps in connection with scaffolds or extending from story to story, or otherwise located and maintained for an extended period of time or for the transfer of bulky material, shall be constructed of at least three nine-inch planks, laid closely side by side and substantially supported and braced to prevent deflection and springing action.

34:5-79. PITCH. Runways or ramps shall not be steeper than one foot rise in three feet horizontal run.

34:5-80. **TOTAL RISE.** The total rise of a continuous runway or ramp shall not exceed twelve feet.

34:5-81. **USE OF CLEATS.** When the rise is steeper than one in six, or when the rise is more than six feet and steeper than one in eight, runways or ramps shall be provided, except at the center, with cleats spaced not more than eight inches apart.

34:5-82. **PROTECTION TO RAMPS.** Runways or ramps having a total rise of more than six feet, or passing over or near openings, railroad tracks, high tension wires, mortar beds or other dangerous places shall be provided with guard rails and toe boards conforming to this chapter.

ARTICLE 16.

TEMPORARY STAIRWAYS.

34:5-83. **PERMANENT STAIRS.** In all buildings the permanent stairways shall be installed as soon as conditions will permit.

34:5-84. **TEMPORARY STAIRWAY REQUIRED.** When the work on a building has progressed to a height in excess of sixty feet above grade, and it has not been practicable to install the permanent stairways, at least one temporary stairway shall be provided for the full height, and continued upward as rapidly as the work progresses.

34:5-85. **STRENGTH.** Stairs and stairways shall be of sufficient strength in all parts to support safely a load of at least one hundred pounds per square foot of tread and platform surfaces.

34:5-86. **GUARD RAILS.** All stairways, until permanently guarded or inclosed, shall be guarded on all open sides with hand (guard) rails and toe boards conforming to this chapter.

34:5-87. **RISERS AND TREADS.** Temporary stairs shall be so constructed that treads and risers are of uniform width and height in any one flight. The treads and risers shall be so proportioned that the sum of the tread exclusive of nosing and twice the riser, in inches, shall not be less than twenty-four nor more than twenty-six. Temporary stairways shall be not less than forty inches wide. Landings on the course of such stairways shall not be less than thirty inches long.

34:5-88. **VERTICAL RISE.** No flight of stairs of a temporary stairway shall have a vertical rise in excess of twelve feet. When necessary, intermediate landings shall be provided.

34:5-89. **STAIRWAYS LIGHTED.** Temporary and permanent stairways shall be adequately lighted as prescribed in this chapter for lighting during the progress of the work.

34:5-90. **DOOR OPENING.** No door shall open directly on a flight of stairs, but a landing of a length equal to at least the width of the door shall be provided between the door and the stairs.

34:5-91. **TEMPORARY TREADS.** Permanent stairs that are used during construction on which treads are to be filled in later shall have wood treads firmly fitted in place for the full area of the tread. Where under treads are used and are in place such wood treads shall be at least seven-eighths inch thick; otherwise they shall be at least one and five-eighths inches thick. The top surfaces of the temporary treads shall be maintained above the tops of risers or nosings.

34:5-92. **NO STORAGE ON STEPS.** Storage of materials on stairs or in stairways is prohibited.

ARTICLE 17.

LADDERS.

34:5-93. **USE OF LADDERS.** Except where either permanent or temporary stairways or suitable runways, conforming to this chapter, are required or allowed, ladders shall be provided to give access to all floors, stagings or platforms where work is being done more than five feet above solid ground or above a permanent or temporary floor.

34:5-94. **LADDERS REMAIN UNTIL RAMPS OR STAIRS BUILT.** Ladders required by this chapter shall be left in place until the permanent stairways or their substitutes (ramps) are ready for use, or until temporary stairways conforming to this chapter are installed, provided that such stairways shall be erected as soon as the building exceeds sixty feet in height.

34:5-94.1. **SAFETY LOAD OF LADDERS.** All ladders shall be substantial in construction so as to carry safely the loads to be placed thereon. The construction of the various types shall conform to the provisions of the "safety code for the construction, care and use of ladders."

34:5-95. **PLACING AND SECURITY OF LADDERS.** All ladders, when in use, shall be set up in a manner to be secure and to prevent slipping. All ladders, except stepladders, trestle ladders or other self-supporting ladders shall be securely fastened to a permanent support at top, and if necessary, at bottom also, and braced as required to prevent swaying, bending or shaking.

34:5-96. **EXTENSION ABOVE FLOOR LEVEL.** Ladders leading to floors, stagings or platforms shall extend at least three feet above the level of such floors, stagings or platforms.

34:5-97. **LANDINGS.** Ladder landings shall be at least four feet square and equipped with hand rails and toe boards conforming to this chapter.

34:5-98. **RUNGS.** Ladder rungs shall be spaced uniformly. In portable ladders the spacing shall be twelve inches. In fixed ladders the spacing shall not be less than eleven inches nor more than thirteen inches.

34:5-99. TWO-WAY LADDERS. When used temporarily in place of stairways or runways, ladders serving traffic in both directions simultaneously shall be at least forty inches wide. If separate ladders are provided for going up and coming down, they shall be marked "up" and "down", respectively, at each floor and platform level.

34:5-100. LADDERS NOT JOINED. Ladders, other than sectional or extension ladders, conforming to the Standard Ladder Code, shall not be extended by joining two or more together.

34:5-101. USE OF LADDERS IN SHAFTS. Ladders shall not be placed or used in elevator shafts or hoistways, except by workers engaged in the erection, construction, alteration or repair of such shafts or hoistways or the equipment thereon.

34:5-102. LADDERS NOT PAINTED. In order that defects may be readily discovered, ladders shall not be painted, but may be oiled or creosoted.

34:5-103. STORAGE. When not in use ladders shall be stored to provide easy access and inspection.

34:5-104. LADDERS NUMBERED AND INSPECTED. Every ladder shall be numbered for identification and shall be inspected by the superintendent or foreman in charge before being put in use on a building operation and at least once every thirty days while continued in use on such building operation. Broken or weak ladders, or ladders with weak or missing rungs, shall not be used or permitted to remain on the building operation; such ladders shall be marked "condemned" until repaired and made safe.

ARTICLE 18.

SCAFFOLDS.

34:5-105. USE OF SCAFFOLDS. Properly constructed scaffolds shall be provided for all work which cannot be done safely by workmen standing on permanent or solid construction, except when the work can be done safely from ladders.

34:5-106. CONSTRUCTION. All scaffolds shall be substantially constructed, safe for at least four times their loads, and shall be secured to prevent swaying.

34:5-107. GOOD QUALITY LUMBER USED. Lumber used in the construction of scaffolds shall be of good quality, reasonably straight grained and free from weakening knots and other defects. Planks for flooring should be of uniform thickness so as not to cause unevenness.

34:5-108. PLANKS. Planks used in the construction of scaffolds shall be not less than two inches thick, trade dimensions, and shall be laid tightly together. Where such planks overlap at the ends, the overlap shall be not less than six inches. Planks shall be so placed that they cannot tip under the weight of the worker at any point.

34:5-109. **NAILS.** Nails used in the construction of scaffolds shall be of ample size and lengths to carry the loads they are intended to support. All nails shall be driven full length. No nails shall be subjected to direct pull.

34:5-110. **ROPES, CABLES, BLOCKS.** Ropes, cables and blocks used in support of scaffolds shall be of sufficient size and strength to sustain at least six times the maximum loads to which they will be subjected.

34:5-111. **EXPOSURE TO ACIDS.** Where acids are likely to come in contact with them, ropes shall not be used in the support of scaffolds. Steel cables properly protected by grease or oil, or other effective method, should be used instead.

34:5-112. **SCAFFOLDS GUARDED.** Every scaffold, other than iron workers' scaffolds or carpenters' bracket scaffolds, the platform level of which is more than six feet above solid ground or a permanent or temporary floor, shall be provided with guard rails and toe boards conforming to this chapter extending its entire length and along the ends, except where ramps or runways connect with them, unless otherwise inclosed or guarded.

34:5-113. **USE OF WIRE SCREENS.** On suspended, swinging and pole scaffolds the space between guard rails and toe boards shall be filled in with wire mesh screens securely attached. Where weather protection is desirable, canvas screens may be provided in addition.

34:5-114. **OVERHEAD PROTECTION.** Where objects are likely to fall on a scaffold from above, a substantial overhead protection shall be provided not more than ten feet above the scaffold platform.

34:5-115. **PROTECTION AT PASSAGES.** At doorways, passageways or other points where workers must pass under scaffolds, a substantial overhead protection shall be provided.

34:5-116. **MATERIAL PLACED ON PLATFORMS.** No material or equipment, other than that used by the workers on the scaffold, shall be placed on scaffold platforms.

34:5-117. **CHANGES IN SCAFFOLDS.** Scaffolds erected for one type of work shall not be used for another type of work requiring more men or heavier loads, unless reinforced or altered to meet the changed requirements and to conform to the provisions of this chapter.

34:5-118. **BRACKETS, ETC., SECURELY FASTENED.** Roof brackets, roof scantling, crawling boards and similar forms of support shall be substantial in construction and securely fastened in place when in use.

34:5-119. **UNSTABLE SUPPORTS NOT USED.** Barrels, boxes or other similar unstable objects shall not be used as supports for planking intended as scaffolds or places of work.

ARTICLE 19.

GUARD RAILS AND TOE BOARDS.

34:5-120. **GUARD RAILS.** Guard rails, wherever required by this chapter shall have the top rail not less than thirty-six inches high above the platform level, unless some other height is specifically prescribed.

34:5-121. **INTERMEDIATE RAIL.** When the top rail is more than thirty-six inches above the platform level, an intermediate rail shall be provided midway between the top rail and the platform.

34:5-122. **SUPPORTS.** Guard rails shall have adequate supports not more than eight feet apart.

34:5-123. **STRENGTH.** Every guard rail shall be constructed of sufficient strength to withstand the impact of a man weighing two hundred pounds falling against or on top of it.

34:5-124. **MAKESHIFTS PROHIBITED.** Light scantling resting on barrels or boxes or other makeshifts shall not be set up or used as guard rails.

34:5-125. **TOE BOARDS.** Toe boards, wherever required by this chapter, shall be solid for their full height and shall extend at least six inches above the platform level.

34:5-126. **ADEQUATELY SUPPORTED.** Toe boards shall be adequately supported, secured and braced along their entire length, to resist the impact of workers' feet or shifting materials.

34:5-127. **DIMENSIONS.** Toe boards of wood shall be not less than one and one-half inches thick with supports not more than eight feet apart; toe boards of metal shall be not less than one-eighth inch thick with supports not more than four feet apart.

34:5-128. **CLOSE TO EDGE.** Toe boards shall be placed to fit closely to the edges of the platform.

ARTICLE 20.

LIGHTING.

34:5-129. **BUILDING SUFFICIENTLY LIGHTED.** All parts of buildings under construction and all sheds, scaffolds and other equipment in connection with such buildings, where workers are engaged in work or where they must necessarily pass to and from their work or in its performance, shall have sufficient light, either natural or artificial, to insure safety.

ARTICLE 21.

FIRST AID.

34:5-130. **SURGICAL ARRANGEMENTS.** On every building operation, arrangements shall be made for prompt medical attention in case of accident.

34:5-131. TEMPORARY HOSPITAL. On every building operation where more than two hundred workers are employed, a properly equipped first aid room or field hospital shall be provided.

34:5-132. SURGICAL SUPPLIES ON HAND. On every building operation an ample supply of iodine or mercurochrome and aseptic gauze bandages shall be provided and maintained in a clean, sanitary cabinet, at all times available under the direction of the superintendent or a person designated by him.

ARTICLE 22.

SANITATION.

34:5-133. TOILETS. Adequate toilet facilities, maintained in a clean, sanitary condition, shall be provided for workers within easy access of their place of work.

34:5-134. NUMBER OF CLOSETS. At least one permanent or temporary water-closet, chemical closet, dry closet or privy space not less than twenty-eight inches wide shall be provided for every thirty workers or less.

34:5-135. DRINKING WATER. An adequate supply of pure, cool drinking water shall be provided for workers during hours of employment.

ARTICLE 23.

LIFE LINES AND SAFETY BELTS.

34:5-136. WHERE REQUIRED. Life lines and safety belts shall be provided for and used by workers who secure or shift thrust outs, who adjust or inspect overhead machines supporting scaffolds, who are engaged in other high rigging, who are employed on steeply pitched roofs, whose work requires them to stand on window sills or window jacks or who, in their work, are exposed to the hazard of falling, and by painters at work on poles or steel frame construction, more than fifteen feet above solid ground or a temporary or permanent floor or platform construction.

34:5-137. STRENGTH. Every life line and safety belt shall be of sufficient strength to support before breaking a weight of twenty-five hundred pounds.

34:5-138. INSPECTION. Every life line and safety belt shall be inspected by the superintendent or foreman in charge before it is used by the workers, and at least once a month while continued in use. Its use shall not be permitted until it is so inspected and found safe for use.

34:5-139. RINGS FOR BELTS. Life lines shall be equipped at intervals not exceeding six feet with rings or similar devices to which workers may attach their safety belts.

34:5-140. **STABLE SUPPORTS.** Life lines and safety belts, when in use, shall be safely secured to strong stable supports.

34:5-141. **LINES FOR WASHERS, PAINTERS.** Life lines for building washers, painters and other workers using solutions containing acids, caustic or other solutions injurious to rope fiber, shall consist of ropes or cables protected against damage by such solutions.

ARTICLE 24.

SALAMANDERS.

34:5-142. **USE OF HEATING APPARATUS.** Heating apparatus such as salamanders of large size or installed in confined spaces, or installed in any room for a considerable time, shall be provided with piping to the outside air to remove smoke and gas. Small salamanders or braziers which are moved from place to place, so that it is not practicable to provide piping to the outside, shall not be used in any room or space that is not ventilated by at least one window opening to the outer air, or in some other effective manner.

34:5-143. **LIMITED USE.** Salamanders shall not be used in confined or unventilated spaces.

34:5-144. **INSULATED FROM FLOOR.** Salamanders shall not be set on combustible flooring or platforms unless thoroughly insulated therefrom by a bed of earth or cold ashes or other efficient protection, extending at least two feet horizontally beyond the salamander on all sides.

34:5-145. **PLACING SALAMANDERS.** Salamanders shall not be placed within six feet in a horizontal direction of any unprotected woodwork, or other combustible material, whether permanent or temporary, nor within ten feet of tarpaulins or canvas covers.

ARTICLE 25.

WELDING AND CUTTING.

34:5-146. **EXPERIENCED WORKERS.** Gas welding and cutting, and arc welding in building construction and demolition operations shall be restricted to workers experienced in such work.

34:5-147. **HEAD PROTECTORS.** Suitable goggles or helmets shall be provided for workers and worn by them when engaged in gas welding or cutting, or arc welding.

34:5-148. **GLOVES.** Suitable gloves shall be provided for workers and worn by them when engaged in gas cutting.

34:5-149. **BODY SHIELDS.** Incombustible shields shall be provided to protect the worker, when his position is necessarily such that some part of his body is exposed to falling hot metal or oxide.

34:5-150. **WORKING ABOVE OTHERS.** Unless unavoidable, gas welding or cutting, or arc welding shall not be done in any place above other workers. When unavoidable, an incombustible shield shall be provided between the work and the workers beneath.

34:5-151. **PROTECTION IN PASSING.** At such places where workers in the course of their employment are likely to pass under a gas welding or cutting or an arc welding operation, a watchman shall be stationed to give warning, unless a suitable shield is installed immediately below the operation.

34:5-152. **VENTILATION.** Unless unavoidable, gas welding or cutting shall not be carried on in any place where ample ventilation is not provided. When unavoidable, workers engaged in such work in confined spaces shall be allowed frequent access to fresh air.

34:5-153. **RELIEF WORKER.** Whenever gas welding or cutting is done in a space from which quick escape is difficult, a relief worker shall be stationed close at hand to assist the worker in such space in case of accident and to shut off the gases.

34:5-154. **FUEL TANKS.** Tanks of fuel gas shall not be moved, or allowed to stand for any extended period when not in actual use, unless the caps of such tanks are in place.

34:5-155. **CRADLES TO HANDLE TANKS.** Suitable cradles shall be used for lifting or lowering oxygen or fuel tanks, to reduce to a minimum the possibility of dropping tanks. Ordinary rope slings shall not be used.

34:5-156. **POSITION OF TANKS.** Tanks supplying gases for gas welding or cutting shall be located at no greater distance from the work than is necessary for safety. Such tanks shall be securely fastened in place, and, unless unavoidable, in an upright position.

34:5-157. **SAFETY IN PLACING TANKS.** Tanks supplying gases for gas welding or cutting shall be so stored or set in place for use that they are not exposed to the rays of the sun or to high temperatures. Combustible materials shall not be permitted near such tanks.

34:5-158. **BEAMS SECURED BEFORE CUTTING.** Before steel beams or other structural shapes or elements of construction are cut by means of a gas flame, they shall be secured by ropes or chains to prevent dropping or swinging.

NOTE: *These operations are also subject to the Standards for the protection of Workers in Gas and Electric Welding, issued by the Bureau of Hygiene and Sanitation, New Jersey Department of Labor.*

ARTICLE 26.

PENALTIES; JURISDICTION; PROCEDURE.

34:5-159. FINE AND IMPRISONMENT. Any person who shall violate any of the provisions of this chapter, shall, upon conviction thereof be punished by a fine of not less than twenty-five nor more than one hundred dollars, for the first offense; and, for a second offense, may be sentenced to confinement in the common jail of the county where the conviction is had, for a period of ten days; and, for the third and each succeeding offense, may be sentenced to confinement in the common jail of the county where the third or succeeding conviction is had, for a period of thirty days.

34:5-160. PERSONAL LIABILITY OF OFFICER. Any officer of a corporation which shall violate any of the provisions of this chapter shall be personally liable for such violation of such corporation, and upon conviction thereof shall be fined or imprisoned as herein provided.

34:5-161. MANAGERS, FOREMEN, ETC. Any manager, superintendent, owner, foreman or other person in charge of any building, construction or other place, in which this chapter is violated shall upon conviction thereof, be fined or imprisoned as herein provided.

34:5-162. JURISDICTION OF COURTS; PROCESS. Every police magistrate, recorder, justice of the peace or official having criminal jurisdiction in the municipality where a violation of any of the provisions of this chapter shall be committed, upon receiving a verified complaint in writing of the violation, shall have jurisdiction to try and punish the offender and shall issue process in the nature of a summons or warrant. When in the nature of a warrant, such process shall be returnable forthwith; when in the nature of a summons, in not less than five nor more than fifteen days.

34:5-163. COMPLAINT; VERIFICATION. The complaint may be sworn to by any person having knowledge of the facts except that a complaint when made by the commissioner or any employee of his department, may be made upon information and belief.

34:5-164. SUMMARY TRIAL. Upon the return day of the summons or warrant, or upon any day to which the hearing shall be adjourned, the case shall be heard and tried summarily, in accordance with the usual practice of said courts and the guilt or innocence of the defendant determined; and in case of conviction the defendant shall be fined or imprisoned in the manner aforementioned and shall pay the costs of prosecution.

34:5-165. DISPOSITION OF PENALTIES. All fines shall be paid into the state treasury when prosecution is conducted by the commissioner, and into the treasury of the municipality in which the offense occurred when the prosecution is conducted by an official of such municipality.

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