NATIONAL RESEARCH COUNCIL CANADA

Associate Committee on the National Building Code

A Code of

Construction Safety Measures

(Authorized Preprint of Part 8 of the National Building Code, 1953)

> OTTAWA 1953

N.R.C. No. 2903



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The National Building Code (1953) is an advisory document published for use throughout Canada under authority of the National Research Council. It has been prepared under the direction of the Associate Committee on the National Building Code, by Technical Committees and Panels responsible for the contents of each of the eight parts. The Code is an advisory document only; it has to be adopted for local or provincial use by appropriate legislation. It is a set of minimum requirements for the regulation of building in respect to public safety.

This Part has been pre-printed in this form as a service to the building industry, as a guide to minimum safety requirements on construction. It will be printed in final form as a regular Part of the National Building Code.

Ce document sera disponible en français d'ici quelque temps. Toutes demandes doivent être adressées au Secrétaire, Comité Associé sur le Code National du Bâtiment, Conseil National de Recherches, Ottawa, Canada.

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PART 8: CONSTRUCTION SAFETY MEASURES

SECTION 8.1: GENERAL PROVISIONS

8.1.1. Administrative Requirements

Reference should be made to Part One of this Code for general administrative requirements which are related to construction safety measures such as provisions for enforcement and the procurement of permits.

8.1.2. Definitions

Reference should be made to Part One of this Code for definitions of terms used in this Part and throughout the Code. It is to be noted that all terms used in this Part are those in common usage on construction.

Special note is to be made of the fact that the term "lumber" is used in this Part of the Code to include yard lumber, plywood, and other wood products of corresponding structural strength and properties.

8.1.3. Residential Construction

The safety measures outlined in this Part of the Code are intended to apply generally to all building operations. For small building jobs such as the construction of individual residences the authority having jurisdiction may waive certain requirements in accordance with the abridged version to be found in the "Code for Dwelling Construction".

8.1.4. Fencing and Barricades

(a) When building operations are located at the street line or within 7 feet of the inside line of the sidewalk of any street, work shall not be commenced on the site until a covered way for protection has been constructed over such sidewalk; provided that unless required by the authority having jurisdiction, this provision shall not apply to one-storey buildings.

Such covered way shall have a clear height of not less than 8 feet and a clear width of not less than 5 feet. Posts and roof shall be adequate to withstand falling objects and the roof shall be weather tight and sloped to the building side for drainage.

The structure shall be totally enclosed on the building side with tight boarding applied on the sidewalk side of the posts. A 2- by 4-inch railing 3 feet in height shall be provided on the street side of the structure.

(b) When building operations are located 7 feet or more from the inside of a sidewalk there shall be erected when so required by the authority having jurisdiction, a strongly constructed fence, hoarding or barricade, not less than 6 feet in height. Boarding shall be applied on the street side to present a smooth surface.

8.1.5. Use of Streets or Public Property

(a) A sidewalk or temporary sidewalk in place thereof shall be maintained clear of obstruction at all times.

- (b) Material or equipment shall not be placed on any street or other public property, except as authorized by the authority having jurisdiction.
- (c) Excavation in streets or public property shall be adequately barricaded and warning signs shall be posted on each section of such barricades. Backfilling of such excavations shall be executed in accordance with the requirements of the authority having jurisdiction.
- (d) All damage to sidewalks, streets or other public property shall be made good, and all obstructions pertaining to the work of construction shall be removed.

8.1.6. Warning Lights

When so required by the authority having jurisdiction, warning lights shall be placed and maintained during the hours of darkness at all obstructions on streets or public property.

8.1.7. Unoccupied or Incomplete Construction

Unoccupied buildings or incomplete construction on which work has been suspended shall be properly secured or closed in order to prevent ingress.

SECTION 8.2: HOUSEKEEPING

8.2.1. Waste Material

No hazardous condition shall be created by the accumulation of waste material and debris.

In buildings exceeding two storeys in height, waste material and debris shall not be dropped or allowed to fall from one level to another. It shall be lowered by means of chutes or in suitable containers. Such removal shall be done in accordance with the provisions of Section 8.13 "Demolition".

8.2.2. Nails as a Hazard

Protruding nails found in boards, planks, or scrap, shall be removed or bent flush with the wood.

8.2.3. Small Tools and Gear

Small tools and gears shall, at the end of each work shift, be collected and properly stored.

8.2.4. Scaffolds, etc.

Scaffolds, runways, stairs, and passageways, shall be maintained clear of all obstructions.

8.2.5. Snow and Ice Removal

All snow and ice shall be removed from all scaffolds, platforms, and working areas daily, or whenever work is to proceed. When necessary to assure firm footing, all platforms, scaffolds, runways, etc., shall be sprinkled with sand or other suitable material.

8.2.6. Materials

All materials shall be neatly stacked or piled clear of all openings in floors, the open edges of all floors, passageways, and stairs.

8.2.7. Tarpaulins

Tarpaulins used as windbreaks, or as protection against welding sparks, or protection for heat units, shall be chemically treated so that they will not propagate flame.

8.2.8. Danger Signs

Danger signs shall be posted at all places of hazard, such as temporary openings in floors, hoisting areas, hanging scaffolds, etc.

8.2.9. Lanes and Walks

All lanes of travel and walks or paths on the site shall be maintained clear of all obstructions.

SECTION 8.3: HANDLING AND STORING MATERIALS

8.3.1. General

- (a) A competent employee shall be placed in charge of all handling and storing of materials, and he shall be authorized to direct and supervise the work.
- (b) Temporary storage structures, when used, shall be designed to withstand the loads imposed by the material to be stored, and no part of such structures shall be loaded in excess of the loads stipulated in Part 4 of the Code.
- (c) The materials stored inside buildings under construction shall be placed clear of all hoist shafts or floor openings and the open edges of all floors.

(d) The load imposed on any part of the permanent work shall not exceed the allowable loads stipulated in Part 4 of the Code.

8.3.2. Lumber

Lumber to be stacked shall be neatly piled against toppling, and the width of piles shall be equal to, or greater than the height. Cross strips or shims shall be used to stabilize stacks of lumber which are more than 4 feet in height.

8.3.3. Masonry Units

- (a) Masonry units shall be stacked on level wood planks or platforms or on a firm suitable base.
- (b) Masonry units shall be stacked in tiers throughout the piles. The vertical face of the stacked piles shall not exceed 6 feet in height, and stacking above this height shall be stepped back with wood strips placed between the tiers to prevent toppling. Rectangular units shall be bonded where necessary to provide stability.

8.3.4. Reinforcing Steel and Pipe

Such material shall be stacked in racks or frames or other provision shall be made to prevent movement side-ways.

8.3.5. Bagged Material

(a) Bags forming the outside face of the piles shall be cross-piled to prevent falling. The vertical face of the piles shall not exceed ten bags in height,

except when in bins or enclosures built for the purpose.

(b) During unpiling, the top of the pile shall be maintained approximately level.

SECTION 8.4: TEMPORARY SERVICES

8.4.1. Sanitation

(a) Adequate toilet facilities, located within easy access to their place of work, shall be provided for the workmen. The total number to be provided shall be not less than one per 30 employees. Such facilities shall be provided from the start of building operation, and connection to a sewer shall be made as soon as practicable.

Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling objects. Natural or artificial illumination shall be provided. Such toilet facilities shall be maintained in a sanitary condition. A sufficient quantity of disinfectant and toilet paper shall be provided.

- (b) An adequate supply of drinking water and individual cups shall be provided, and unless connected to a municipal water supply, samples of the water shall be tested at frequent intervals by the local Medical Officer of Health. Washing facilities shall be installed, and when practicable shall be connected to municipal water supply and shall discharge to a sewer.
- (c) In all buildings exceeding 60 feet in height, a permanent or temporary standpipe for fire pur-

poses shall be installed at each stairway as soon as the building is enclosed. Such standpipes shall have standard hose connections at each floor level and shall be located within 20 feet of the exit stairway.

8.4.2. Electrical Wiring and Lighting

- (a) All electrical equipment, installation and wiring shall conform to the provisions of the Canadian Electrical Code 5th edition (C.22.1 1947) as published by the Canadian Standards Association, or to the local provincial electrical code.
- (b) The main service switch shall be securely mounted on a substantial support, and shall be readily accessible.
- (c) Secondary panels shall be securely mounted on a substantial support and shall be within easy reach and readily accessible. No obstruction of any kind shall be placed within 3 feet of the front of such panels.
- (d) All cables and wires for electrical distribution shall be suspended overhead with adequate clearance for traffic. Such wires shall be protected by metal conduit, boards, or planks, where necessary to protect them from damage.
- (e) Extension cords in fixed position shall be carried overhead and adequately secured in place. Extension cords for casual use shall be disconnected when not in use.
- (f) Adequate lighting shall be provided throughout the building in all work areas and passageways and stairways. Electrical lamps for

artificial lighting shall be protected by wire guards against breakage.

(g) Panels and other electrical equipment shall be inspected at frequent intervals and shall be maintained in safe condition.

8.4.3. Temporary Heat and Steam Supply

- (a) Within a building under construction fuel shall be stored in such a way as to not create a hazard.
- (b) Bituminous coal shall not be used in open salamanders. Salamanders shall not be set up and used in unventilated spaces. Stationary salamanders shall be provided with a sheet metal hood and a sheet metal pipe extending from the hood to the outside air. Small portable salamanders, where exhaust piping is not practical, shall only be placed in a space that is not completely enclosed or has at least one window opening.

Salamanders shall be placed on ground or other incombustible base or floor, or when placed directly upon wooden floors they shall be insulated therefrom by at least 3 inches of incombustible material covered by sheet metal and extending not less than 2 feet beyond all sides of the salamander. There shall be a clear distance of not less than 2 feet 6 inches in a horizontal direction from all wood construction or other combustible material and there shall be a clear distance of at least 6 feet above all salamanders.

- (c) Temporary furnaces shall be equipped with an adequate smoke pipe securely supported and discharging to the outside air. The base for a furnace shall be of incombustible material which base shall extend not less than 2 feet on all sides.
- (d) All temporary steam piping shall be securely and rigidly supported, and where within reach of workmen shall be equipped with guards or pipe covering. All piping, connections, and valves, shall be inspected frequently and shall be maintained in safe working condition.

SECTION 8.5: EXCAVATION

8.5.1. Disconnect Existing Services

Before commencing to excavate, all existing services such as gas, electrical, and water, shall be disconnected as stipulated in Article 8.13.3(e).

8.5.2. Trees, Boulders, etc.

Trees, boulders and other surface encumbrances located so as to create a hazard at any time during building operations shall be removed before excavating is started.

8.5.3. Adjoining Property

(a) If the stability of adjoining buildings, walks, walls, or services may be endangered by the work of excavating, written notice shall be sent to the owner of such adjoining property. Such notice shall state the pertinent particulars of the proposed excavation and of any necessary underpinning, shoring, and bracing of his property.

- (b) Adequate underpinning, shoring, and bracing shall be done to prevent damage to, or movement of, any part of the adjoining property.
- (c) Frequent inspections shall be made to ensure that such underpinning, shoring, and bracing is properly maintained.

8.5.4. Barricades and Warning Lights

At all excavations on the site, barricades and warning lights shall be maintained where required by the authority having jurisdiction.

8.5.5. Stability of Banks

Banks, or sides of excavations shall be either trimmed to the angle of repose of the material excavated, or such banks shall be adequately supported by sheet-piling, shoring and bracing. In all trench excavations more than 5 feet in depth, vertical banks shall be sheet-piled or shored and braced.

8.5.6. Staging and Escape Ladders

In deep trench excavations, ladders or other means of escape, and staging as required, to the approval of the authority having jurisdiction, shall be provided and installed. Such staging shall consist of plank platforms supported on horse trestles or scaffolding.

8.5.7. Removal of Water from Excavations

Excavations shall be kept reasonably clear of water at all times.

8.5.8. Explosives

All matters pertaining to the use of explosives on the construction site, including handling, storing, drilling, placing, blasting cover, warnings, and signals shall be conducted and arranged strictly in accordance with the regulations of the appropriate authority having jurisdiction. A copy of all such regulations shall be prominently posted.

8.5.9. Caisson, Piers, and Tunnels

- (a) All caisson, pier, and tunnel excavation shall be executed in accordance with the regulations of the appropriate authority having jurisdiction.
- (b) Wherever on construction, workmen are required to work in compressed air, all matters pertaining to the work shall be conducted and arranged in accordance with the regulations of the authority having jurisdiction.
- (c) A copy of all such regulations shall be prominently posted.

SECTION 8.6: CONSTRUCTION EQUIPMENT

8.6.1. Trucks

Automotive trucks shall be maintained and operated strictly in accordance with the following provisions.

- (a) Only experienced licensed drivers shall operate any trucks within the construction site.
- (b) Trucks shall be maintained in good repair and safe working condition. Brakes, steering gear,

tires, and all operating parts shall be inspected regularly, and shall be removed from service when defective.

(c) For loading from an excavation or on sloping ground the wheels of trucks shall be effectively blocked. During loading operations by a power shovel, no person other than the driver shall remain on the truck or within the radius of the swing of the shovel.

8.6.2. Wheelbarrows

Wheelbarrows and hand buggies shall be maintained in good repair and safe working condition. If defective they shall be removed from service until repaired.

8.6.3. Jacks

- (a) The rated capacity of every jack shall be legibly cast or stamped in plain view on the jack.
- (b) Every jack shall be equipped with a positive stop to prevent over-travel, or an indicator when positive stop is impracticable.

8.6.4. Power-driven Cranes, Shovels, etc.

In all particulars such power-driven equipment shall conform to the regulations of the appropriate authority having jurisdiction.

(a) A cab, screen, or other adequate means, shall be required for the protection of the operator. Safe and easy access shall be provided in the form of ladder, or steps and hand-holds.

- (b) No unauthorized person shall be allowed on the operating platform when the shovel is in operation, nor within the radius of the swing of the shovel or cab. When not in use the scoop or dipper shall rest on the ground or other support. The operator shall not leave the cab while the master clutch is engaged. When operating at or near an excavation or on sloping ground the wheels or treads shall be blocked.
- (c) All parts, cable, and fittings shall be thoroughly inspected each day before the shovel is put into operation and the shovel shall not be used until all replacements and repairs have been completed. Repairs shall not be attempted while the machine is in operation.

8.6.5. Pile-driving Equipment

- (a) Every pile driver shall be securely and safely guyed or supported at all times. The working platform on the pile driver shall be kept clear of all ropes, tools, and materials.
- (b) Every steam boiler shall comply with the requirements of the appropriate authority having jurisdiction. The hose of the connection from steam or air lines to the hammer shall be securely lashed in place. Shut-off valves shall be located within easy reach of the operator.
- (c) There shall be not less than two turns of cable around the hoisting drum. When not in use the hammer shall be kept near the bottom of the leads.

(d) All pile-driving equipment and all pipe lines, sheaves, and sheave pins shall be inspected at frequent intervals. No repairs shall be attempted while the pile-driver is in operation or the steam or air lines are under pressure.

8.6.6. Derricks

In all particulars, derricks shall conform to the regulations of the appropriate authority having jurisdiction.

- (a) All operating cable, guy wires, and rope and all tackle and gear, as to type and size, shall be as specified by the manufacturer of the derrick.
- (b) Derricks shall be operated or moved by a qualified operator. Loading shall be supervised by a person skilled in the work. Workmen shall not be allowed to ride on the load or any part of the hoisting apparatus. The boom shall not be swung while any unauthorized person is in the orbit of its swing. A tag line or guide rope shall be used on all loads that swing freely. When a derrick is not in use the boom shall be lowered to a horizontal position, or safely secured in place.
- (c) The derrick and all parts and gear shall be thoroughly inspected each day before the derrick is put into operation. The derrick shall not be used until all replacements and repairs have been completed. Repairs shall not be attempted while the derrick is in operation.

8.6.7. Welding and Cutting

- (a) Electrical and gas welding equipment shall be operated only by a fabricator or contractor who is fully qualified according to the provision of "Welding Qualifications Code"—C.S.A.-W47/1947.
- (b) All equipment and procedure shall be in accordance with the provisions of "Safety in Electric and Gas Welding and Cutting Operations"—C.S.A.—W117/1951.

8.6.8. Wood-working Equipment

- (a) Power tools shall be installed in accordance with the instructions of the manufacturer. All power tools shall have a third wire attached for grounding purposes. All safety attachments shall be installed and maintained in service. Starting switches shall be located within safe and easy reach of the operator. Adequate natural or artificial illumination shall be provided. Portable power tools which are connected by extension cords shall be disconnected when not in use.
- (b) The space for the operator around a machine shall be kept clear of obstruction at all times. All waste material, shavings or sawdust, shall be removed frequently to prevent any undue accumulation. Power tools shall be inspected frequently and if found to be defective shall not be used until all repairs and replacements have been made.

SECTION 8.7: HOISTS AND ELEVATORS

8.7.1. General

- (a) Except for purposes of oiling, repair or maintenance, no person shall ride on a temporary hoist or elevator unless such temporary hoist or elevator conforms in all respects with the requirements of Article 8.7.6.
- (b) Only competent men, duly authorized, shall operate a hoist or elevator used for men or materials.
- (c) When it is necessary for workmen to enter a hoist or elevator for purposes of loading or unloading at levels other than ground level a locking device shall be provided at all landings or platforms.

8.7.2. Power Equipment for Hoisting Material

- (a) All equipment shall be maintained in good repair and in proper operating condition. Frequent inspection by qualified persons shall be made and equipment shall not be used until all repairs and replacements have been completed.
- (b) Hoisting engines shall be operated only in response to a predetermined system of signals. Manual signals shall be used only where the operator has a clear view of the signal man. A copy of the signal code shall be conspicuously posted near the operating controls.
- (c) The operator and hoisting engine and equipment shall be adequately protected from falling objects and the working space shall be surrounded by temporary walls or guardrails.

(d) Hoisting rope shall be in accordance with the instructions of the manufacturer. All hoisting rope for power-driven hoisting machinery shall be steel wire rope. All blocks and pulleys shall match the rope. At least four turns of rope shall remain on the drum at all times.

Wire rope shall be maintained free of kinks and shall be lubricated to prevent corrosion. Kinked rope and rope in which 10 per cent of the strands in any 3 feet are broken shall be replaced. Wire rope fastening devices shall be of approved standard.

Fibre rope shall be first quality manila rope or equal. Blocks and pulleys shall be proper size to accommodate the rope. Means shall be provided to prevent chafing of the rope. Fibre rope shall be inspected frequently and shall be replaced when there is evidence of severe wear, abrasion, or deterioration.

- (e) Sheaves shall be of proper size to accommodate the rope. Sheaves intended for fibre rope shall not be used for wire rope.
- (f) Hoist brakes shall be capable of stopping and holding 150 per cent of the rated hoisting capacity. A ratchet and pawl shall be provided on the drum to hold the load.

8.7.3. Material Hoist Platforms

(a) Material hoist platforms shall be substantially constructed and designed with a factor of safety of 5 on the rated load.

- (b) When rolling equipment is to be transported, suitable blocking or cleats secured in place shall be provided.
- (c) Toe boards shall be provided at all edges of platforms except at entrances. Such toe boards shall consist of 2-inch plank extending not less than 5 inches above the platform.

8.7.4. Outside Hoisting Towers

- (a) Material hoist towers shall be constructed of softwood of good structural quality, structural steel, or steel pipe. They shall be supported on a firm foundation of such dimensions that the safe bearing capacity of the soil will not be exceeded. Hoist towers shall be plumb and securely braced to ensure stability and rigidity. Such towers shall be anchored to the building or other fixed anchorages at intervals of not more than 30 feet, or shall be adequately guyed by means of wire rope securely anchored.
- (b) There shall be not less than 4 feet of clearance between the crosshead of the tower and the hoisting rope fastening on the conveyance when it is at the uppermost terminal or landing.
- (c) A platform of ample size and strength equipped with guardrails and toe boards shall be constructed at each loading level. A bar or gate shall be provided at the tower end of such platform.
- (d) A strong ladder securely fastened in place shall extend the full height of the tower and shall extend not less than 3 feet 6 inches above the tower.

8.7.5. Inside Material Hoistways

- (a) Inside hoistway shafts shall be enclosed on all sides and overhead except entrances. Enclosure shall consist of vertical boarding, not less than one inch (nominal) in thickness tightly applied; or exterior type plywood not less than ½ inch in thickness, tightly applied; or alternatively, No. 16 gauge wire ½ inch mesh, not less than 8 feet in height with toe boards; or slatted partitions adequately supported, consisting of wood slats not less than ¾ inch in thickness installed horizontally and spaced not more than 2 inches apart.
- (b) Substantial gates shall be installed at all entrances to hoistways. Gates shall be not less than 5 feet 6 inches in height with a clearance at floor level of not more than 2 inches and shall be located not more than 4 inches from the edge of the floor. Where such gates are impracticable the hatchway enclosure shall be located not less than 2 feet from the edge of the floor, and the entrance shall be protected by a 2- by 4-inch hinged wooden bar, located not less than 36 inches, nor more than 48 inches from the floor.
- (c) A hoist or elevator shall not be operated while workmen are working in the shaft. At such times a tight platform of 2-inch plank shall be installed to cover the opening in the floor next above the workmen and the top floor opening in the shaft shall also be closed in a similar manner. During repair work, all shaft doors shall be kept closed, except when a workman is stationed as a guard at the open shaft door.

8.7.6. Hoist Cars

- (a) Hoist cars for use of workmen and material shall be enclosed from floor to crosshead with a solid enclosure; or alternatively with No. 9 gauge expanded metal or equal, 1½ inch mesh with toe boards. At the car crosshead an overhead protective covering of planking shall be provided.
- (b) Blocks and cleats, securely fastened to the floor, shall be provided to prevent accidental movement of wheelbarrows or other rolling equipment.

8.7.7. Guide rails

Guide rails shall be of steel or clear softwood timber of high structural quality and shall be so designed and fastened that deflection shall not exceed $\frac{1}{4}$ inch.

8.7.8. Thoroughfare

There shall be no thoroughfare through any hoistway.

8.7.9. Car Control-operated Passenger Elevators

- (a) The safe carrying capacity shall be not less than 75 pounds per square foot of car floor area.
- (b) The top and all sides except entrance shall be provided with substantial and tight enclosure. Top of the car shall have an opening with hinged hatch cover not less than 18 inches in the least dimension.

- (c) Car door or gate shall be equipped with an electrical interlock to prevent movement of car while door or gate is open.
- (d) The car and counter weight shall be equipped with automatic rail safety stops actuated by a speed governor.
- (e) Adequate illumination shall be provided in the car.
- (f) Every such elevator shall be equipped with automatic stops at both terminals of travel.

8.7.10. Wiring in Shaft

All wiring in the shaft shall be housed in flexible or rigid metal conduits.

SECTION 8.8: SCAFFOLDS

8.8.1. General

- (a) Scaffolds constructed in accordance with this Code shall be provided for workmen engaged in work that cannot be done safely from the ground or from solid construction, except such short period work that can be done safely from ladders.
- (b) All lumber used in the construction of scaffolds shall be of Douglas fir, spruce or other softwoods of equivalent strength and shall be free of decay, shakes, large loose or dead knots, or other defects which would impair its durability or strength. All pole scaffolds more than 80 feet in height shall be constructed of non-combustible

material. Nails shall be of ample size and length and shall be driven in full length. Nails shall be so driven that they are not subject to bending or withdrawal from the wood. All scaffold fittings such as hoisting gear, cornice hooks, blocks, rope, and cables shall be standard material properly installed. Safety catches shall be provided on all hooks.

- (c) The footings or support for every scaffold shall be sound, rigid, and capable of carrying the maximum load without excessive settlement or deformation. Barrels, boxes, loose masonry units, or other unstable objects shall not be used either to stand on or for the support of planking or platforms intended as scaffolds or working platforms.
- (d) The structure throughout including all load-bearing parts, all load-bearing joints and platform planking shall be capable of sustaining at least four times the maximum load for which it is intended. Uprights shall be diagonally and horizontally braced as may be necessary to prevent lateral movement. Horizontal members shall not be spliced between points of support.
- (e) Except as hereinafter provided, planks shall overhang their end supports not less than 6 inches nor more than 18 inches or they shall be fastened in place by cleats or nailing. Maximum permissible load for 2-inch planking shall be as follows: 75 pounds per square foot for spans of 6 feet or less, 50 pounds per square foot for spans over 6 feet but not exceeding 10 feet.

- (f) For scaffolds more than 5 feet above ground or other firm support, runways or ladders shall be provided for access.
- (g) When there is danger of material falling from above, overhead protection equal at least to 2-inch planking on 10-foot span shall be provided.
- (h) Open sides of all scaffold platforms which are more than 12 feet above ground or floor or which are swung or suspended from an overhead support or are erected with stationary supports shall be equipped with guardrails properly attached, bolted, braced, and otherwise secured to inside of legs. Guardrails shall be not less than 36 inches nor more than 42 inches in height above platform level and shall extend along the entire length and ends thereof. Except as hereinafter provided such guardrails shall include intermediate rails at midheight of the guardrail, and toe boards. Toe boards shall consist of 2-inch plank secured to the outer edge of the platform and projecting 5 inches above.

8.8.2. Pole-type Scaffolds

Diagonal and horizontal bracing shall be provided for the entire outside face of the scaffolding. All pole-type scaffolds shall be secured against lateral movement by means of bracing, anchoring to building, guy wires, or other effective means. The area of cross-section of lagging pieces for splicing shall equal the area of cross-section of the pole or other member to be spliced.

8.8.3. Outrigger Scaffolds

Outrigger beams shall extend not more than 6 feet beyond the face of the building. The inboard portion from fulcrum point to point of anchorage shall be not less than one and one-half times the length of the outboard portion. The beam shall be securely braced at the fulcrum point against upsetting. The inboard end shall be securely anchored against upsetting or horizontal movement and inspected before each use. Planking shall be laid tight, shall be nailed to outriggers, and shall extend to within 3 inches of the wall. Platforms shall be not less than 3 planks in width.

8.8.4. Suspended Scaffolds

- (a) Installation or change of position and use of such scaffolds shall be in charge of, and under the direct supervision of a responsible person designated by the employer.
- (b) Hoisting machines shall be of an approved type, with ratchet and pawl and a secondary positive locking device.
- (c) When the length between blocks exceeds 300 feet, fibre rope shall not be used, nor shall fibre rope be used on hoisting drums.
- (d) Scaffold shall be securely tied in to the building or structure.
- (e) Stringers shall be parallel and shall be secured by tie rods spaced not more than 5 feet apart. Ends of the tie rods shall be rivetted over proper-sized washers. Stringers shall be supported

by means of U bolts at all bearing points. Hangers or stirrups shall be placed not less than 6 inches nor more than 18 inches from the ends of platforms. Planking shall be nailed in place or otherwise secured against displacement. Platforms shall be not less than 24 inches in width.

(f) Guardrails shall extend the full length of each working platform.

8.8.5. Needle Beam Scaffolds

- (a) Span of the platforms between supports shall not exceed 10 feet.
- (b) Platforms shall be not less than 4 feet nor more than 6 feet in width. Planking shall be not less than 2 inches in thickness and planks shall be not less than 2 feet longer than the distance between supports. Planking shall be adequately secured in place against slipping.
- (c) Suitable containers for tools shall be provided and securely attached to the scaffold.

8.8.6. Horse Scaffolds

- (a) Horses for scaffolds shall not exceed 4 feet in height. Horse scaffolds shall not exceed 3 tiers in height. Platforms for horse scaffolds shall be not less than 3 feet in width.
- (b) Footing for horses shall be level and shall form a solid support for the horses. Horses shall be placed directly over one another. When scaffolds are 3 tiers high they shall be securely braced. The distance centre-to-centre of horses shall not exceed 10 feet.

8.8.7. Carpenter's Bracket Scaffolds

- (a) Triangular-framed brackets shall be built up of 2- by 3-inch material mortised together and bolted. Supporting bolts shall be not less than \(\frac{5}{8} \) inch in diameter welded to a flat iron member not less than 2 feet long countersunk and spiked into the bracket and extending through the wall and inside blocking and secured with washer and leverhandled nut. After erection the bracket shall be capable of sustaining a load of 400 pounds at the extreme outer end of the bracket. The spacing of the brackets centre-to-centre shall not exceed 10 feet.
- (b) Platforms shall be not less than two planks in width. Planks shall be not less than 2 inches in thickness and shall extend not less than 6 inches and not more than 12 inches beyond the brackets.
- (c) Not more than two workmen shall occupy the same panel of a scaffold at the same time. Material load per panel shall not exceed 75 pounds.
- (d) Outer guardrails securely fastened shall be provided for all scaffolds which are more than 12 feet above ground.

8.8.8. Bricklayer's Square Scaffolds

(a) Scaffolds shall consist of planking supported on framed wood squares. Squares shall consist of two uprights with top and bottom horizontal and diagonal bracing on both sides. The height of squares shall not exceed 5 feet and the width shall be not less than the height. Diagonal bracing centre-to-centre shall be provided between squares on both sides of the scaffold.

- (b) Platforms shall consist of 2- by 8-inch planks tightly laid and shall extend the full width of the squares. Planks shall be supported by three squares and ends of planks shall overlap not less than 4 inches nor more than 6 inches.
- (c) Scaffolds built in tiers shall not exceed three tiers in height. Each tier shall be planked and squares shall be centred one above the other. Planks of lower tiers shall be nailed or otherwise secured in place.

8.8.9. Ladder Jack Scaffolds

Ladders shall be in accordance with the provisions of Section 8.9.

Planks shall be not less than 2- by 8-inch, and shall overlap the bearing by not less than 12 inches.

Ladder jacks shall be of approved type, clamped or otherwise secured to the ladder in a manner that will transmit the load through the rails and not through the rungs of the ladder.

Height of scaffolds shall not exceed 20 feet above the foot of the ladder. Not more than two persons shall occupy any ladder jack scaffold at the same time.

8.8.10. Boatswain's Chair

(a) The chair shall be not less than 2 feet long by 9 inches wide by 1 inch in thickness, or 2 feet

long by 1 foot wide by \(^28\)-inch thick plywood. A cleat shall be nailed to the underside of the seat at each end and shall project 9 inches in front of the seat.

(b) The chair shall be supported by a sling attached to a suspension rope. The suspension rope shall be securely fastened overhead or passed through a secure block and the end securely fastened to a fixed and easily accessible object.

Each workman using a Boatswain's chair shall be provided with a safety belt which shall be secured to the supporting tackle or to a fixed object. When working on a pole the workman shall be provided with stirrups supported independently of the chair itself for purposes of adjusting the suspension rope hitch. For blow torch work, the sling shall be wire rope not less than $\frac{3}{8}$ inch in diameter.

8.8.11. Roofing Brackets and Crawl Boards, etc.

Other types of scaffolding such as roofing brackets and crawl boards, shall be constructed and installed to the approval of the authority having jurisdiction.

8.8.12. Special or Patented Scaffolds

For scaffolds or any system of scaffolds which do not comply in all respects with the provisions of this Section, the approval of the authority having jurisdiction shall be obtained as provided for in Part One of this Code.

8.8.13. Alterations and Dismantling

No scaffolds shall be used by a workman while alterations to or dismantling of such scaffold is in progress, nor until such alterations or dismantling has been completed.

8.8.14. Inspection and Maintenance

All scaffolds shall be inspected frequently by responsible persons, particularly after heavy rains and during cold weather. They shall be maintained in proper working condition and shall not be used by workmen until all necessary repairs and replacements have been made.

SECTION 8.9: LADDERS

8.9.1. General

- (a) Except where either permanent or temporary stairways or suitable ramps or runways are available, ladders shall be used to give access to all floors and to all platforms or scaffolds where work is being performed above the ground or above a permanent or temporary floor. Such ladders shall be left in place until the permanent or temporary stairways are completed and ready for use, provided that this shall not require the use of ladders as a means of access to suspended, outrigger or window jack scaffolds.
- (b) For ladders of special design which do not conform in all particulars to the provisions of this

Section, the approval of the authority having jurisdiction shall be obtained in accordance with the provisions of Part One of this Code.

- (c) Ladders which are made on the construction site shall be "cleat type": See Article 8.9.8. Rungs, Steps or Cleats.
- (d) Double width ladders shall comprise three rails evenly spaced and shall be not less than 5 feet in width. In ladders more than 20 feet long, the base end shall be at least 6 inches wider than the top end. Cleats or rungs shall extend the full width of the ladder.

8.9.2. Materials of Construction

Wood used in the construction of ladders shall be thoroughly seasoned, sound, clear, and straight grained. All wood parts shall be dressed smooth, sharp edges eliminated and free from splinters or shakes.

Wood for ladders shall not be painted. Coating material shall be linseed oil, shellac, spar varnish, or other suitable transparent protective coating. Wood in side rails shall be spruce, western hemlock, Douglas fir, oak, or equal. Wood in rungs shall be white oak, white ash, or hickory.

Metal parts shall be of steel or malleable cast iron.

8.9.3. Inspection and Maintenance

Ladders shall be inspected frequently and maintained in a safe condition. Any ladder found

to have a broken member, insecure joint or any defect that might cause failure shall be immediately taken out of service until all repairs and replacements have been completed.

8.9.4. Installations

Ladders used as a regular means of access between levels shall be nailed or otherwise securely fastened in place. Ladders shall extend at least 3 feet above the upper landing or other hand holds shall be provided.

There shall be a clear space of not less than $6\frac{1}{2}$ inches behind all rungs, steps, or cleats. Ladder footing shall be firm.

Ladders not fastened in place and exceeding 15 feet in length shall, while work is being performed therefrom, be held in place by a person stationed at the foot thereof. The projection of the slope of the ladder at ground or floor level shall be not less than one-quarter and not more than one-third of the length of the ladder.

8.9.5. Limitations for Height

Portable single ladders and cleat ladders shall not exceed 30 feet in length. Extension ladders shall not exceed 60 feet in length. In a building under construction the maximum ascent by ladder shall be 60 feet. (See Section 11).

If the ascent exceeds 20 feet, separate lines of ladders or double width ladders for ascent and

descent shall be provided and directing signs shall be prominently posted at such ladders. Ladders shall not be set up in elevator shafts or hoistways when such spaces are used for hoisting.

8.9.6. Splicing

Ladders shall not be connected end to end by splicing.

8.9.7. Continuous Vertical Runs

In continuous vertical runs of ladders, rest platforms shall be provided at intervals not greater than 35 feet. Such runs of ladders shall be staggered and so located as to provide overhead protection.

8.9.8. Rungs, Steps, or Cleats

The spacing of rungs or steps shall be uniform in any one flight and such spacing shall not exceed 12 inches. Holes for rungs shall be located in the centre of the wide face of the side rails and rungs shall extend through the rail and be flush with the outside face. The shoulder of rungs shall fit tightly against side rails and the tenon shall be nailed in place.

Wood treads shall be inset in the side rails not less than three-sixteenths of an inch, fastened thereto with cleats or screws and further secured by braces, bolts, or tie rods.

Cleats shall be housed into the edge of the side rails not less than $\frac{1}{2}$ inch, or filler blocks used. The

cleats shall be nailed to the rails with three nails at each end or fastened with through bolts.

Metal rungs shall be made of solid steel rods, standard steel pipe, or angles and securely fastened to the side rails by riveting, bolting, or welding. Metal treads shall be flanged downwards not less than 2 inches at each end and secured to the side rails by not less than 2 bolts or rivets.

8.9.9. Special Appliances and Attachments

- (a) Rod or wire reinforcement shall be so applied that it does not create hazard. There shall be no space between such reinforcement and the rails or treads as the case may be. The space between rails and rungs shall be clear of all obstruction.
- (b) Extension gear shall be of approved standard manufacture.
- (c) End hooks, spikes, and end cleats shall be of approved standard manufacture.

SECTION 8.10: TEMPORARY FLOORING

8.10.1. Buildings of Skeleton Construction

- (a) The skeleton frame shall not be carried more than 8 floors above permanent floor construction.
- (b) Temporary plank flooring in lieu of permanent flooring shall be provided at all floor levels

up to and including the floor level second below the tier on which either bolting, riveting, or painting of the skeleton frame is being done. Such temporary flooring shall extend over the whole area except openings for hoisting, ladders, and stairways.

(c) Such temporary flooring shall consist of 2-inch plank of softwood of good structural quality not less than 8 inches in width. Planks shall be laid close together. Maximum span of planks shall be 10 feet.

When the span between permanent supports exceeds 10 feet, temporary girders or beams having adequate strength shall be provided to support the planks. Planks shall not extend more than 6 inches beyond bearing except for purposes of overlap. The ends of all planks shall be securely fastened to the structure or shall extend not less than 4 inches beyond the bearing.

(d) Guardrails constructed in accordance with the provisions of Section 8.12 shall be provided at all openings in temporary floors.

8.10.2. Building of Wood Joist Construction

(a) Temporary flooring or the permanent subflooring shall be laid over each tier of joists as the work progresses. Such flooring shall extend over the whole area of each floor, except openings for hoisting, ladders, and stairways, and those areas in which formwork for concrete floors has been provided. (b) Temporary flooring shall consist of tightly laid boards not less than \(\frac{3}{4}\)-inch in thickness, or exterior-type plywood not less than \(\frac{5}{3}\)-inch in thickness. Joints shall be made over joists or boards shall overlap not less than 6 inches. Boards shall not extend more than 6 inches beyond bearing except for purposes of overlap.

8.10.3. Removal of Temporary Flooring

No part of the temporary flooring shall be removed except for purposes of installing permanent work.

SECTION 8.11: STAIRS AND RAMPS

8.11.1. Stairs Required

When any work on a building has progressed to a height of more than 60 feet above ground level, permanent or temporary stairs shall be provided for the entire height from the ground to the uppermost floor level. Such stairs shall be continued as work progresses.

Temporary stairs shall be maintained in safe condition until the permanent stairs have been installed. Permanent stairs shall be installed as soon as working conditions will permit.

8.11.2. Permanent Stairs

Skeleton steel stairs shall have temporary wooden treads of not less than 2- by 10-inch

planking extending the full width of stairs and landings. Temporary treads shall be securely fastened in place.

Permanent handrails or temporary guardrails securely fastened and supported in place shall be provided on the open sides of stairs and landings.

8.11.3. Temporary Stairs

- (a) Stairs and landings shall be constructed to support safely a load of 100 pounds per square foot.
- (b) The treads and risers shall be uniform in width and height respectively in any one flight.
- (c) The angle of the rise of temporary stairs shall not exceed 50° from the horizontal.
- (d) The rise or vertical distance between landings of a flight shall not exceed 12 feet.
- (e) Temporary stairs shall be not less than 40 inches in width.
- (f) Guardrails and handrails for stairs and stairwells shall conform to the provisions of Section 8.12. The open sides of all stairwells shall be enclosed by guardrails or partitions until permanent enclosure has been provided.

Temporary and permanent stairs 44 inches or less in width shall be provided with a guardrail on one open side; stairs exceeding 44 inches in width shall be provided with guardrails on all open sides. Guardrails and handrails shall be not less than 36 inches nor more than 42 inches in height above the treads of the stairs.

When stairs are constructed between temporary partitions or walls, a handrail securely attached to such partition or wall shall be provided. Clearance between the wall and the handrail shall be not less than 1½ inches.

8.11.4. Ramps—Temporary

- (a) Temporary ramps shall be designed to support four times the estimated load.
- (b) Platforms shall be not less than 2 planks in width. Planks shall be not less than 2- by 8-inch nominal. Board for wearing surfaces may be 1 inch nominal in thickness, closely laid, and securely nailed to planking. The distance between platform supports shall not exceed 10 feet.

Platforms shall be adequately supported on bearings of permanent construction or on timbers, horse trestles, or scaffold squares. Platforms shall be securely anchored at both ends and adequately held in place at intermediate supports by bolts, spikes, or cleats.

- (c) The incline of ramps for pedestrian or vehicular traffic shall not exceed 20° from the horizontal. Cross cleats shall be provided for all ramps having an incline in excess of 7° from the horizontal. Cross cleats shall be not less than 1- by 2-inch nominal and shall be secured in place and spaced at regular intervals not exceeding 18 inches.
- (d) Guardrails shall be provided at the open sides of all ramps built at an elevation at the lower end 8 feet or more above a safe working level.

SECTION 8.12: GUARDRAILS AND TOE BOARDS

8.12.1. Guardrails

Guardrails shall consist of a 2- by 4-inch wooden rail securely supported on 2- by 4-inch posts at intervals of not more than 8 feet, with a 1- by 4-inch intermediate rail and a toe board at the floor.

8.12.2. Height

The top of the rail shall be not less than 36 inches nor more than 42 inches above floor level.

8.12.3. Finish

Handrails shall be smooth and free from splinters or protruding nails.

8.12.4. Toe Boards

Toe boards shall be securely nailed to posts and floor construction and shall extend not less than 5 inches above floor level.

8.12.5. Wire Mesh for Guardrails

Where required wire mesh shall be not less than No. 16 gauge wire with not larger than 1½-inch mesh. Wire mesh shall extend from floor platforms or toe boards as the case may be to the handrail on the near side of the intermediate rail.

SECTION 8.13: DEMOLITION

8.13.1. Municipal and Provincial Regulations

The work of demolition in all particulars shall comply with all municipal and provincial regulations which are applicable thereto.

8.13.2. Permit

Before commencing work at the site, a permit for demolition shall be obtained from the authority having jurisdiction. Such permit shall be prominently posted on the site.

8.13.3. Requirements Prior to Demolition

- (a) If the structure to be demolished has been partially wrecked or damaged by fire, flood, explosion, or other cause, all shoring, bracing, or other measures necessary to prevent accidental collapse of any part shall be provided.
- (b) All measures required by the authority having jurisdiction for the enclosure of the site and the protection of the public shall be completed before the work of demolition is commenced.
- (c) Danger signs shall be conspicuously posted around the property and all doorways or thoroughfares giving access to the property shall be closed. During the hours of darkness, warning lights or flares shall be placed on or about all barricades.
- (d) The adjoining owner shall be notified in writing of the intent to demolish, and all necessary

measures to prevent damage to such adjoining property shall be arranged and put into effect before the work of demolition is commenced.

If during the progress of the work, a condition develops which might endanger such adjoining property the owner shall be notified forthwith and the work of demolition, insofar as it affects the adjoining property, shall be stopped until the necessary measures to prevent damage have been completed.

- (e) All existing gas, electrical, water, steam, and other services to the site shall be shut off and capped at the property line. In each case the service company involved shall be notified in advance and its approval obtained. If it is necessary to maintain any such services, they shall be arranged and relocated if necessary, and shall be protected to prevent injury and to afford safety to the workmen.
- (f) When work is not in progress, the site shall be patrolled by a watchman to prevent the public from entering the danger zone, and to maintain all barricades, danger signs, and warning lights.
- (g) A competent foreman shall be in charge of the work at all times while work is in progress.

8.13.4. Precautions during Demolition

- (a) Removal of all glass throughout the building shall precede all other demolition.
- (b) In buildings more than 25 feet in height all exterior window and door openings within 20 feet

of chutes or shafts for removal of debris shall be solidly boarded up. Openings in floors below the level of demolition, not used for removal of material or debris, shall be covered by planking or barricaded.

- (c) Dust shall be controlled by water sprinkling or other means to prevent harm to the workmen.
- (d) No debris or other material shall be burned on the property or site of any building being demolished, unless under special permit and conditions by appropriate authority.
- (e) Material or debris shall not be stacked or piled in the building to the extent that it will create overloading of any part of the structure.
- (f) Adequate supports, shoring, and bracing shall be provided for the support of all gin poles, derricks, and other similar equipment, necessary to prevent overloading of any part of the structure.
- (g) No person or persons shall travel on any material hoist.
- (h) All scaffolding or staging required in connection with the work shall be made self-supporting and shall be in accordance with the provisions of Section 8.8.
- (i) Material with protruding nails shall be piled or removed from the building as it is dismantled or the nails shall be removed or flattened as the work proceeds.
- (j) Workmen shall be provided with adequate natural or artificial lighting.

(k) There shall be provided at all times safe access to and egress from all working areas by means of entrances, hallways, stairways, or ladder runs, so protected as to safeguard the persons using them from falling material.

8.13.5. Sequence of Operation

Demolition shall proceed in a systematic manner from the roof to the ground. All work above each tier or floor shall be completed before the safety of its supports is impaired. In skeleton-construction buildings the steel frame may be left in place during demolition of masonry work. In such cases all masonry or loose material shall be removed from the steel work as the removal of masonry progresses.

8.13.6. Flooring

Adequate support of centring shall be provided for the removal of masonry or concrete floors and planking or walkways shall be provided for the workmen. The area below such work shall be closed to workmen while removal is in progress. Wood flooring shall be lowered in bundles by hoisting gear or chuted through open chutes.

8.13.7. Trusses, Girders, and Beams

Derricks or other adequate hoisting gear shall be provided for lowering all structural members. No truss, girder, or beam shall be disconnected or cut until it has been roped or lashed for lowering. Wood joists shall be roped for lowering before being disconnected at supports.

8.13.8. Masonry and Concrete

Masonry walls shall be removed in reasonably level courses. Masonry shall neither be loosened in large masses nor permitted to fall in mass from one level to another where adjoining structures, etc. may be endangered. All cornices, string courses, and other projections shall be supported and tied back until removed.

No workman shall stand on any wall, pier, or chimney to remove material except when adequate staging or scaffold protection is provided at a distance not exceeding 12 feet below the top of such wall, pier, or chimney, and other reasonable precautions taken.

8.13.9. Safety Belts

Whenever a workman is required to work at a height of more than 12 feet above a floor, platform, scaffold, or the ground he shall be equipped with a safety belt with life line attached.

8.13.10. Lowering of Material

- (a) No material shall be dropped or allowed to fall from one floor level to another.
- (b) Rubbish and debris shall be removed in containers provided for the purpose or shall be lowered through enclosed chutes. Such chutes shall be well constructed and securely fastened in place.

A chute shall not extend through more than two storeys and in buildings more than two storeys in height they shall be staggered. At the discharge end of chutes a wooden, metal, or canvas flap shall be provided, and for discharge into trucks a control gate or door shall be provided.

Entrance to chutes shall be closed or covered when not in use, and when wheelbarrows are used a block or cleat to block the wheel shall be securely fastened to the floor at the opening. Open chutes shall be inclined at an angle of not more than 45° to the horizontal.

(c) All large material or objects shall be lowered by means of derricks, platform hoists, or other adequate apparatus.

8.13.11. Disposal of Material

- (a) When used to fill the cellar space, rubbish and debris shall be covered with approximately one foot of earth or sand. All other debris shall be removed from the site or so disposed as to create no nuisance.
- (b) Such material shall be assembled in piles on the site pending disposal therefrom. Care shall be taken that scrap pieces with protruding nails are not strewn about.
- (c) Salvage material such as lumber, bricks, blocks, stone, and steel beams, etc., shall be stacked in an orderly manner in accordance with the provisions of Section 8.3.
- (d) In the disposal of materials, no nuisance shall be created in the streets nor to the adjoining property owners.

8.13.12. Requirements after Demolition

- (a) Except when new construction is to proceed without delay, all cellars and excavations which might create a hazard shall be backfilled to grade or shall be adequately barricaded.
- (b) All temporary obstructions relating to the work shall be removed and all damage to sidewalks, roads, and other public property shall be made good.
- (c) The site shall be left in such condition that no hazard to safety or health has been created.
- (d) The site shall be left in such condition that no fire hazard has been created.

8.13.13. Mechanical Method of Demolition

The mechanical method of demolition, whereby the wrecking of a building or part thereof is accomplished by smashing the walls or floors with a heavy weight suspended by a cable from a boom or hoist, or whereby the walls are collapsed by the use of a power shovel, tractor, or other mechanical contrivance, shall be permitted only when application in writing covering full particulars of the procedure has been made to the authority having jurisdiction, and its approval in writing has been obtained.

The following provisions shall apply to this method of demolition.

(a) The building or structure or remaining portion thereof shall be not more than 80 feet in height.

- (b) A zone of demolition of at least one and one-half times the height of the structure being demolished should be maintained wherever possible beyond the perimeter of such structure and shall be restricted as hereinafter provided.
- (c) Such method shall not be used where access may be had to any space within the zone of demolition by persons other than the workmen performing demolition operations.
- (d) Workmen performing demolition operations may enter buildings or spaces within the zone of demolition but such workmen shall not be permitted on or within the structure being demolished, nor shall such workmen, excepting the operating crew, be permitted within the zone of demolition while the mechanical device as above described is in actual operation.
- (e) Substantial barricades shall be erected to prevent persons other than workmen from entering the zone of demolition operations.
- (f) The controls of mechanical devices used in such method of demolition shall be located and operated a safe and reasonable distance from the point of demolition.
- (g) Where a swinging weight is used the supporting cables shall be of such length or shall be so restrained that it is not possible for the weight to swing against any structure other than the structure being demolished.
- (h) No wall, chimney, or other structure, or part of a structure shall be left in such condition

that it may topple over due to wind or vibration or so as to become otherwise dangerous.

SECTION 8.14: FIRST AID

8.14.1. Regulations

A copy of all municipal and provincial regulations and notices, including Workmens Compensation Board Regulations concerning accident, injury, and first aid, shall be prominently posted on the work.

8.14.2. First Aid Services

When warranted by the scope and nature of the operations, a registered nurse or other person qualified in first aid shall be appointed in charge and shall be authorized to direct first aid work. This person shall maintain a list of employees qualified to serve in first aid work as assistants.

8.14.3. First Aid Kit

A complete first aid kit shall be maintained on the site. When conditions warrant, a standard stretcher and cot bed shall be provided.

8.14.4. Casualty Report

A complete report of all accidents and treatments shall be prepared and sent to the Workmens Compensation Board and other authorities having jurisdiction.

For the convenience of those wishing to purchase publications of the National Research Council, a coupon system has been introduced in order to make payment for these publications relatively simple. Coupons are available in denominations of 5, 25, and 50 cents and may be obtained by forwarding a remittance to the National Research Council in the form of a Bank, Express or Post Office Money Order, or a cheque made payable at par in Ottawa, to Receiver General of Canada, credit National Research Council (stamps are not acceptable). These coupons can be used when submitting orders for publications. A list of all Council publications and those issued by the Division of Building Research is available and can be obtained on application.

The Code will be continually under review, revised editions being issued when necessary. Comments will, therefore, be welcomed. All correspondence should be addressed to:

The Secretary,

Associate Committee on the National Building Code, c/o Division of Building Research, National Research Council, Ottawa, Canada.