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### APPENDIX A

**BRITISH STANDARDS AND CODES APPLICABLE**

<table>
<thead>
<tr>
<th>Item</th>
<th>Code No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>BS144</td>
<td>Wood preservation using coal tar creosotes</td>
</tr>
<tr>
<td>A2</td>
<td>BS373</td>
<td>Testing small clear specimens of timber</td>
</tr>
<tr>
<td>A3</td>
<td>BS405</td>
<td>Expanded metal (steel) for general purposes</td>
</tr>
<tr>
<td>A4</td>
<td>BS497</td>
<td>Manhole covers, road gully gratings and frames for drainage purposes</td>
</tr>
<tr>
<td>A5</td>
<td>BS5911</td>
<td>Precast concrete pipes, fittings and ancillary products</td>
</tr>
<tr>
<td>A6</td>
<td>BS648</td>
<td>Schedule of weights of building materials</td>
</tr>
<tr>
<td>A7</td>
<td>BS690</td>
<td>Asbestos-cement slates and sheets</td>
</tr>
<tr>
<td>A8</td>
<td>BS8004:1986</td>
<td>Code of practice for foundations</td>
</tr>
<tr>
<td>A9</td>
<td>BS915</td>
<td>High alumina cement</td>
</tr>
<tr>
<td>A10</td>
<td>BS6925</td>
<td>Mastic asphalt (limestone aggregate)</td>
</tr>
<tr>
<td>A11</td>
<td>BS1187</td>
<td>Wood blocks for floors</td>
</tr>
<tr>
<td>A12</td>
<td>BS1191</td>
<td>Gypsum building plasters</td>
</tr>
<tr>
<td>A13</td>
<td>BS1200</td>
<td>Sands for mortar for plain and reinforced brickwork, block walling and masonry</td>
</tr>
<tr>
<td>A14</td>
<td>BS1230</td>
<td>Gypsum plaster board</td>
</tr>
<tr>
<td>A15</td>
<td>BS1282</td>
<td>Guide to the choice, use and application of wood preservatives</td>
</tr>
<tr>
<td>A16</td>
<td>BS1297</td>
<td>Grading and sizing of softwood flooring</td>
</tr>
<tr>
<td>A17</td>
<td>BS1369</td>
<td>Metal lathing (steel) for plastering</td>
</tr>
<tr>
<td>A18</td>
<td>BS1370</td>
<td>Low heat Portland cement</td>
</tr>
<tr>
<td>A19</td>
<td>BS1521</td>
<td>Waterproof building papers</td>
</tr>
<tr>
<td>A20</td>
<td>BS1579</td>
<td>Timber connectors</td>
</tr>
<tr>
<td>A21</td>
<td>BS6323</td>
<td>Seamless and welded steel tubes</td>
</tr>
<tr>
<td>A22</td>
<td>BS1876</td>
<td>Automatic flushing for urinals</td>
</tr>
<tr>
<td>A23</td>
<td>BS1881</td>
<td>Methods of testing concrete</td>
</tr>
<tr>
<td>A24</td>
<td>BS5135</td>
<td>Arc welding of steels</td>
</tr>
<tr>
<td>A25</td>
<td>BS2994</td>
<td>Cold rolled steel sections</td>
</tr>
</tbody>
</table>

(A-1)
<table>
<thead>
<tr>
<th>Item</th>
<th>Code No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A26</td>
<td>BS3260</td>
<td>PVC (vinyl) asbestos floor tiles</td>
</tr>
<tr>
<td>A27</td>
<td>BS3261</td>
<td>Unbacked flexible PVC flooring'</td>
</tr>
<tr>
<td>A28</td>
<td>BS3284</td>
<td>Polythene pipe (type50) for cold water services</td>
</tr>
<tr>
<td>A29</td>
<td>BS3921</td>
<td>Clay brick and blocks</td>
</tr>
<tr>
<td>A30</td>
<td>BS4360</td>
<td>Specification for weldable structural steels</td>
</tr>
<tr>
<td>A31</td>
<td>BS4482</td>
<td>Hard drawn steel wire for the reinforcement of concrete</td>
</tr>
<tr>
<td>A32</td>
<td>BS4483</td>
<td>Steel fabric for the reinforcement of concrete</td>
</tr>
<tr>
<td>A33</td>
<td>BS8000 Part 3</td>
<td>Code of practice for masonry</td>
</tr>
<tr>
<td>A34</td>
<td>BS5268</td>
<td>Structural use of timber</td>
</tr>
<tr>
<td>A35</td>
<td>BS5628</td>
<td>Structural recommendations for load bearing walls</td>
</tr>
<tr>
<td>A36</td>
<td>BS5655</td>
<td>Lifts and service lifts</td>
</tr>
<tr>
<td>A37</td>
<td>BS5950</td>
<td>Structural use of steelwork in building</td>
</tr>
<tr>
<td>A38</td>
<td>BS8110</td>
<td>The structural use of concrete in buildings</td>
</tr>
<tr>
<td>A39</td>
<td>BS8214:1990</td>
<td>Code of practice for fire door assemblies with nonmetallic leaves</td>
</tr>
<tr>
<td>A40</td>
<td>BS6399 Part 1</td>
<td>Dead and imposed loads</td>
</tr>
<tr>
<td>A41</td>
<td>BS8000 Part 3</td>
<td>Code of practice for masonry</td>
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<tr>
<td>A42</td>
<td>BS8000 Part 2</td>
<td>Code of practice for concrete work</td>
</tr>
<tr>
<td>A43</td>
<td>BS8005 Part 1:1987</td>
<td>Guide to new sewerage construction</td>
</tr>
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</table>
APPENDIX B

U.S. AGENCIES

<table>
<thead>
<tr>
<th>Designation</th>
<th>Institution</th>
</tr>
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<tbody>
<tr>
<td>ACI:</td>
<td>American Concrete Institute, 818 Connecticut Ave. N.W. Washington, D.C. 20006</td>
</tr>
<tr>
<td>AITC:</td>
<td>American Institute of Timber Construction Inc. 333 West Hampden Ave, Englewood, Colorado 80110</td>
</tr>
<tr>
<td>ANSI:</td>
<td>American National Standards Institute 1430 Broadway, New York, New York 10018</td>
</tr>
<tr>
<td>AISI:</td>
<td>American Iron and Steel Institute 100 16th St. N.W., Washington, D.C. 20036</td>
</tr>
<tr>
<td>APA:</td>
<td>American Plywood Association 1119 A St., Tacoma, Washington 98401</td>
</tr>
<tr>
<td>AWS:</td>
<td>American Welding Society, Inc 2501 N.W. 7th St. Miami, Florida 33125</td>
</tr>
<tr>
<td>NFiPA:</td>
<td>National Fire Protection Association 470 Atlantic Ave., Boston Massachusetts 02210</td>
</tr>
<tr>
<td>NPA:</td>
<td>National Particleboard Association 2306 Perkins Place, Silver Springs, Maryland</td>
</tr>
<tr>
<td>SJI:</td>
<td>Steel Joist Institute 1703 Parham Rd, Richmond Virginia 23229</td>
</tr>
<tr>
<td>TPI:</td>
<td>Truss Plate Institute 2400 East Devon, Des Plaines, Illinois 60018, USA</td>
</tr>
<tr>
<td>AWPB:</td>
<td>American Wood Preservers Bureau, PO Box 6085, Arlington, Virginia 22206, USA</td>
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</tbody>
</table>
APPENDIX B (1)

U.S. STANDARDS AND CODES QUOTED

<table>
<thead>
<tr>
<th>Item</th>
<th>Code No</th>
<th>Description</th>
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<tbody>
<tr>
<td>B1</td>
<td>ACI 318</td>
<td>Building code requirements for reinforced concrete</td>
</tr>
<tr>
<td>B3</td>
<td>ACI 530-92</td>
<td>Building code requirements for concrete masonry structures</td>
</tr>
<tr>
<td>B4</td>
<td>ASZIM C90</td>
<td>Specifications for hollow load-bearing concrete masonry units</td>
</tr>
<tr>
<td>B5</td>
<td>ANSI A41.1</td>
<td>Standard requirements for reinforced masonry</td>
</tr>
<tr>
<td>B6</td>
<td>AITC 101</td>
<td>Timber construction standards</td>
</tr>
<tr>
<td></td>
<td>to 115</td>
<td></td>
</tr>
<tr>
<td>B7</td>
<td>NLMA</td>
<td>National design specification for stress grade lumber and its fastenings</td>
</tr>
<tr>
<td>B8</td>
<td>NBSR 16</td>
<td>American lumber standards for softwood lumber</td>
</tr>
<tr>
<td>B9</td>
<td>NBS-CS</td>
<td>Douglas fir plywood, commercial standard</td>
</tr>
<tr>
<td>B10</td>
<td>AISC-SJI</td>
<td>Standard specification for open web long span steel joist construction</td>
</tr>
<tr>
<td>B11</td>
<td>AISC</td>
<td>Specifications for design, fabrication and errection of structural steel for buildings</td>
</tr>
<tr>
<td>B12</td>
<td>ANSI A59.1</td>
<td>Specifications for reinforced gypsum concrete</td>
</tr>
<tr>
<td>B13</td>
<td>SJI AISC</td>
<td>Specifications and load tables for J series and H series joists</td>
</tr>
<tr>
<td>B14</td>
<td>AWS D1.1</td>
<td>Structural Welding Code</td>
</tr>
<tr>
<td>B15</td>
<td>AWS D1.3 78</td>
<td>Specifications for Welding Sheet Steel in Buildings</td>
</tr>
<tr>
<td>B16</td>
<td>AISC</td>
<td>Specifications for Structural Joints using ASTM A325 or ASTM A490 Bolts</td>
</tr>
<tr>
<td>B17</td>
<td>ANSI/ASTM A6</td>
<td>Standard Specification for General Requirements for Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use</td>
</tr>
<tr>
<td>B18</td>
<td>AISI</td>
<td>Specification for the Design of Cold-Formed Stainless Steel Members</td>
</tr>
<tr>
<td>B19</td>
<td>AISI A151</td>
<td>Structural Specifications for the Design of Light Gauge Structural Members</td>
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<tr>
<td>B20</td>
<td>TPI, 1978</td>
<td>Design Specifications for Light Metal Plate Connected Wood Trusses</td>
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<tr>
<td>Code</td>
<td>Code Description</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td></td>
</tr>
</tbody>
</table>
| C1   | Caribbean Uniform Building Code (CUBiC)  
Caricom Community Secretariat, Georgetown, Guyana |
| C2   | National Building Code of Jamaica  
Ministry of Finance and Planning, Kingston Jamaica |
| C3   | Standard Building Code  
Southern Building Code Congress International Birmingham, Alabama, USA. |
| C4   | South Florida Building Code  
Board of County Commissioners,  
Metropolitan Dade County, Florida, USA. |
| C5   | Bahamas Building Code  
Ministry of Works, Nassau, Bahamas |
| C6   | National Building Code of Canada  
National Research Council of Canada, Montreal, Ottawa, Ontario, Canada |
## APPENDIX C

### STEEL SHEET METAL GAUGES

**BRITISH Imperial or US Standard Gauge**
(Uncoated Steel Sheets)

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>British Standard Thickness (inches)</th>
<th>US Standard Thickness (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0.2242</td>
<td>0.232</td>
</tr>
<tr>
<td>6</td>
<td>0.1943</td>
<td>0.192</td>
</tr>
<tr>
<td>8</td>
<td>0.1644</td>
<td>0.160</td>
</tr>
<tr>
<td>10</td>
<td>0.1345</td>
<td>0.128</td>
</tr>
<tr>
<td>12</td>
<td>0.1046</td>
<td>0.104</td>
</tr>
<tr>
<td>14</td>
<td>0.0747</td>
<td>0.080</td>
</tr>
<tr>
<td>16</td>
<td>0.0598</td>
<td>0.064</td>
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<tr>
<td>18</td>
<td>0.0478</td>
<td>0.048</td>
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<tr>
<td>20</td>
<td>0.0359</td>
<td>0.036</td>
</tr>
<tr>
<td>22</td>
<td>0.0299</td>
<td>0.028</td>
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<tr>
<td>24</td>
<td>0.0239</td>
<td>0.022</td>
</tr>
<tr>
<td>26</td>
<td>0.0179</td>
<td>0.018</td>
</tr>
<tr>
<td>28</td>
<td>0.0149</td>
<td>0.0148</td>
</tr>
<tr>
<td>30</td>
<td>0.0120</td>
<td>0.124</td>
</tr>
</tbody>
</table>
APENDIX D

APPENDIX D (1)

HIGH HAZARD MATERIALS

1. Acetylene gas and gasses under pressure and in quantities of greater than 70 cubic meters including hydrogen, natural ammonia, carbon monoxide, chlorine, methyl oxide and all gasses subject to explosion, fume or toxic hazard.

2. Ammunition, explosives and fireworks manufacture
3. Apparel manufacture
4. Artificial flowers and synthetic leather manufacture
5. Celluloid and celluloid products
6. Cercal, feed, flour and grist mills
7. Cotton batting and cotton waste processes
8. Dry cleaning establishments
9. Fruit ripening processes
10. Grain elevators
11. Industries employing substances which ignite or produce flammable gasses on contact with water

12. Kerosene, fuel, lubricating or any oil storage with a flash point under &80 degrees C.
13. Match manufacture or storage
14. Metal enameling
15. Nitro-cellulose film exchanges and laboratories
16. Paint and varnish manufacture or spraying or dipping

17. Petroleum manufacture
18. Processing of paper or cardboard in loose form
19. Refrigerating systems using high hazard refrigerants
20. Shoe polish manufacture
21. Smoke houses (industrial)

22. Straw goods manufacture or broom storage
23. Sugar and starch pulverizing mills
24. Tar, pitch or resin processing
25. Tire storage warehouses
26. Waste paper sorting or shredding, storage or baling
APPENDIX D (2)

MODERATE HAZARD MATERIALS

1. Bags, cloth burlap and paper
2. Bamboo and rattan baskets
3. Belting, canvas and leather
4. Books and paper in rolls or packs
5. Boots and shoes
6. Buttons, including cloth covered, pearl and bone
7. Cardboard and cardboard boxes
8. Clothing
9. Cordage
10. Fiberboard
11. Furniture
12. Glue, mucilage and paste
13. Linoleum
14. Livestock shelters
15. Lumber yards
16. Motor vehicle repair shops
17. Petroleum warehouses for storage of lubricating oils with a flash point of 150 degrees C. or higher
18. Photo engraving
19. Soap
20. Sugar
21. Tobacco, cigars, cigarettes
22. Upholstering and mattress manufacturing
23. Wax candles
APPENDIX D (3)

LOW HAZARD MATERIALS

1. Asbestos
2. Chalk and Crayons
3. Food products
4. Glass
5. Metals
6. Motor car spares (excluding upholstery)
7. Plumbing wares
8. Porcelain and pottery
9. Talc and soapstones

Note: See Tables 3.107.2, 3.111.2, and 3.111.3 of Part 3, Caribbean Uniform Building Code
## APPENDIX E

### WEIGHTS OF BUILDING MATERIAL

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight, lb/sq.ft</th>
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</thead>
<tbody>
<tr>
<td><strong>Ceilings</strong></td>
<td></td>
</tr>
<tr>
<td>Plasterboard, unplastered</td>
<td>3</td>
</tr>
<tr>
<td>Plaster, 3/4 in, and wood lath</td>
<td>8</td>
</tr>
<tr>
<td>Plaster on tile or concrete</td>
<td>5</td>
</tr>
<tr>
<td>Suspended metal lath and plaster</td>
<td>10</td>
</tr>
<tr>
<td><strong>Floors</strong></td>
<td></td>
</tr>
<tr>
<td>Hardwood flooring, 7/8 in thick</td>
<td>4</td>
</tr>
<tr>
<td>Sheathing, Yellow pine 1 in. thick</td>
<td>4</td>
</tr>
<tr>
<td>Spruce</td>
<td>2-1/2</td>
</tr>
<tr>
<td>Wood block, creosoted 3 in thick</td>
<td>15</td>
</tr>
<tr>
<td>Cement finish per in. thick</td>
<td>12</td>
</tr>
<tr>
<td>Terrazzo tile per in. thick including base</td>
<td>12</td>
</tr>
<tr>
<td>Gypsum Slab, per in thick</td>
<td>5</td>
</tr>
<tr>
<td><strong>Roofs</strong></td>
<td></td>
</tr>
<tr>
<td>Corrugated metal, galvanized:</td>
<td></td>
</tr>
<tr>
<td>20gauge</td>
<td>1.66</td>
</tr>
<tr>
<td>24gauge</td>
<td>1.16</td>
</tr>
<tr>
<td>28gauge</td>
<td>0.78</td>
</tr>
<tr>
<td>Roofing felt, 3 ply and gravel</td>
<td>5-1/2</td>
</tr>
<tr>
<td>Roofing felt, 5 ply and gravel</td>
<td>6-1/2</td>
</tr>
<tr>
<td>3 ply ready roofing</td>
<td>1</td>
</tr>
<tr>
<td>Shingles, wood</td>
<td>3</td>
</tr>
<tr>
<td>Tile or slate</td>
<td>5 to 20</td>
</tr>
<tr>
<td><strong>Partitions</strong></td>
<td></td>
</tr>
<tr>
<td>Channel Studs, metal lath, cement plaster,</td>
<td></td>
</tr>
<tr>
<td>Solid 2” thick</td>
<td>17.5</td>
</tr>
<tr>
<td>Studs, 2” x 4”, wood or metal lath, 3/4 in. plaster both sides</td>
<td>18</td>
</tr>
</tbody>
</table>

(E-1)
APPENDIX E (Cont'd)

Studs, 2” x 4”, plaster board,  
1/2” plaster both sides  
18

Plaster, 1/2” on clay tile (one side)  
4

Mortar Rubble Masonry

Limestone  
150

Dry Rubble Masonry

Limestone  
125

Earth etc Excavated

<table>
<thead>
<tr>
<th>Material</th>
<th>Unit Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand, gravel, dry, loose</td>
<td>90 to 105</td>
</tr>
<tr>
<td>Sand, gravel, dry, packed</td>
<td>100 to 120</td>
</tr>
<tr>
<td>Clay, dry</td>
<td>63</td>
</tr>
<tr>
<td>Clay, damp, plastic</td>
<td>110</td>
</tr>
<tr>
<td>Clay, and gravel, dry</td>
<td>100</td>
</tr>
<tr>
<td>Earth, dry, loose</td>
<td>76</td>
</tr>
<tr>
<td>Earth, dry, packed</td>
<td>95</td>
</tr>
<tr>
<td>Earth, moist, packed</td>
<td>96</td>
</tr>
<tr>
<td>Earth, mud, packed</td>
<td>115</td>
</tr>
<tr>
<td>Riprap, limestone</td>
<td>80 to 115</td>
</tr>
</tbody>
</table>

Excavations in Water

<table>
<thead>
<tr>
<th>Material</th>
<th>Unit Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand or gravel</td>
<td>60</td>
</tr>
<tr>
<td>Sand or gravel and clay</td>
<td>65</td>
</tr>
<tr>
<td>Clay</td>
<td>80</td>
</tr>
<tr>
<td>River mud</td>
<td>90</td>
</tr>
<tr>
<td>Soil</td>
<td>70</td>
</tr>
<tr>
<td>Stone riprap</td>
<td>65</td>
</tr>
</tbody>
</table>

Concrete Block

<table>
<thead>
<tr>
<th>Size</th>
<th>Unit Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>8” x 8” x 16” (from the US)</td>
<td>35 to 40 lbs per block</td>
</tr>
<tr>
<td>8” x 8” x 16” (from the Dominican Republic or other areas with igneous or extrusive rock)</td>
<td>45 to 50 lbs per block</td>
</tr>
</tbody>
</table>
Concrete

With aggregate (basalt or other extrusive rocks)
  eg from Haiti, Dominican Republic  155 to 160 lbs/cu.ft

With aggregate (sedimentary rock),
  From Jamaica, Bahamas and other quarries  145 to 150 lbs/cu.ft

With aggregate from limestone (local sources)  140 to 145 lbs/cu.ft
APPENDIX F

ACCESSIBILITY GUIDELINES FOR HANDICAPPED PERSONS

1. Scope

1.1 The following guidelines are intended to introduce designers and builders to the minimum provisions required for safe access for handicapped persons to building facilities. The guidelines should be used in conjunction with the Building Code provisions and in conjunction with the specific recommendations of the bodies and institutions engaged in assisting handicapped persons with the minimum provisions needed for access to all facilities.

1.2 Designers should also be aware of the United States Americans with Disabilities Act (ADA) which was signed into law in July 1990, and which determines the minimum provisions for disabled persons in public institutions.

The Act includes:

a) Title I: Employment
b) Title 11: State and Local Government services regardless of the receipt of federal funds
c) Title 111: Public Accommodation - hotels, retail establishments etc
d) Title 11V: Telecommunications
e) Title V: Miscellaneous Provisions - includes attorney’s fees.

1.3 Designers of public buildings in Groups A and B (a) would therefore be expected to consult the relevant bodies such as the local chapter of the institutes for the blind for specific information based on the research being carried out by these bodies. In accordance with 501.2(e), the Director will examine the plans for new public facilities to ensure that adequate provisions have been made for physically handicapped persons.

1.4 The following should be considered as minimum provisions for facilities for handicapped persons in wheel chairs using public buildings.

a) All public buildings - post offices, hospitals, asylums, sanatoria, airport terminals and sea port terminals - and all other buildings in Group B (a) shall have provisions for the physically handicapped including those persons in wheel chairs.

b) It is desirable that other public buildings such as banks, theatres, assembly halls, hotels and cinemas, have some provisions which would allow ease of access by persons in wheel chairs.

c) Hotels and other establishments offering accommodation to the public should have at least one bedroom for every 25 bedrooms, or a fraction thereof, made accessible for disabled persons.
d) In new housing developments consideration should be given to constructing at least one dwelling unit in every 25 units (or a fraction thereof) to be accessible to disabled persons.

2. Relevant Guidelines

2.1 The following Guidelines and Codes provide detailed information on the design of barrier free facilities:

- BS 5588 Means of Escape for disabled persons
- Caribbean Uniform Building Code, Sections 3.125 and 3.126
- Barrier Free Design - A National Standard for Canada; Canadian Standards Association, June 1990
- National Building Code of Canada - Section 3.7 - Barrier Free Design; National Research Council of Canada, Ottawa

2.2 It is suggested that designers also read the following:


3. Building Approaches and Entrances

a) In every public building at least one primary entrance at ground floor level shall be accessible from the street entrance or parking lot by means of a walkway or ramp with a gradient of not more than one in twenty. There shall be no steps or abrupt changes in grade of the access way.

b) At every entrance there should be a level platform at least 3’ 0” by 4’ 0” to afford the opening and closing of doors by persons in wheel chairs. (Figure 26 in TCI Building Guidelines). Such platforms should also be constructed at every change of grade or direction of the ramp and at 30 foot intervals on a long ramp.

c) A clear space of 4’ 0” x 4’ 0” would allow access for both forward and side approaches to doors. A clear space of 5’ 0” x 5’ 0” is required for a wheelchair to pivot 180 degrees.

d) Kerbs intended to be crossed by handicapped persons in wheel chairs should be cut to provide a passage of not more than 4 inches high at the kerb and at least 4 feet wide. The lip of the kerb should not be greater than 1” high. Such ramps should be of contrasting color and texture.

(F-2)
e) Access ramps should be provided with handrails on both sides at a height of 2’ 8” measured from the ramp surface to the top of the rail.

f) Gratings across entrances and walkways must be avoided. Where gratings are absolutely necessary for drainage the apertures of the gratings should not be greater than 3/4” and the bars at least 1/2” wide set at right angles to the direction of travel. Gratings and manholes covers should fit securely and be flush with the walkway or street.

g) Catch basins should be constructed outside of pedestrian crossings.

4. Walkways and Sidewalks
   a) The surfaces of walkways should be constructed of non-slip covering.
   b) Walkways in passages and courtyards should be 4’ 6” to 6’ 6” wide with shoulders about 4’ 0” wide.
   c) Slopes should be no greater than 5%.
   d) Cross slopes no greater than 2%.
   e) Walkway widths for persons using crutches or service dogs should be a minimum of 3’ wide.
   f) Sidewalks should be 5’ 0” wide.
   g) Slopes for sidewalks should be 2-1/2% to 5% maximum.

5. Doors and Corridors
   a) Doors should be openable in a single motion with one hang and with a force of no greater than 5 pounds, and should have a clear swing of at least 90 degrees. For sliding doors the force required to operate the door should not be greater than 8.5 pounds.
   b) Doorways should be a minimum of 32 inches clear.
   c) Door latches, handles and pull bars should be easy to grasp and between 2’ 0” and 4’ 0” high. Knobsets should not be used.
   d) Corridors should be at least 4’ 0” wide and should be equipped with an easy to grasp handrail along one side. The handrail should be at a height of 2’ 8” to 2’ 11” and be 1-1/2” clear of the wall.
   e) Expert in confined spaces and except for doors to toilets and washrooms, all doors in corridors should open into rooms.
f) The minimum clear floor space or ground area for wheel chairs is 3’ 6” x 4’ 0”. An area 4’ 0” x 4’ 0” allows access to doors for both forward and side approaches.

g) The space required for maneuvering wheel chairs at doorways is given in the Table F-1.

Table F-1

Applicable Dimensions for Wheel Chair Space at Doorways

<table>
<thead>
<tr>
<th>Description</th>
<th>Floor depth (ft.-in)</th>
<th>Space width (ft.-in.)</th>
<th>Required space beside latch (ft.-in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Approach Side</td>
<td>5-0</td>
<td>4-0</td>
<td>2-0</td>
</tr>
<tr>
<td>hinged</td>
<td>4-0</td>
<td>4-0</td>
<td></td>
</tr>
<tr>
<td>Pull</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Push</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latch Side Approach</td>
<td>4-0</td>
<td>5-0</td>
<td>2-0</td>
</tr>
<tr>
<td>Pull Side</td>
<td>3-6</td>
<td>5-0</td>
<td></td>
</tr>
<tr>
<td>Push Side</td>
<td></td>
<td>2-0</td>
<td></td>
</tr>
<tr>
<td>Hinged Side Approach</td>
<td>5-0</td>
<td>5-0</td>
<td>2-0</td>
</tr>
<tr>
<td>Pull Side</td>
<td>3-6</td>
<td>4-6</td>
<td></td>
</tr>
<tr>
<td>Push Side</td>
<td></td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td>Sliding Door</td>
<td>4-0</td>
<td>3-0</td>
<td>1-9</td>
</tr>
<tr>
<td>Front approach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Side approach</td>
<td>3-6</td>
<td>4-6</td>
<td>1-10</td>
</tr>
</tbody>
</table>

6. Elevators

Where elevators are required to access upper floors at least one elevators should be constructed to meet the requirements given below:

a) Elevators should be accessible from the ground floor entrance

b) The elevator cab shall have a clear area of not less than 20 square feet, with a minimum dimension of 4.5 feet.

c) The elevator door should be at least 32 inches in clear width

d) Elevators should be self leveling with a maximum tolerance of 1 inch.

e) Control buttons should be located not more than 4.5 feet above the floor.

f) Handrails should be provided at a height of between 2’ 8” and 2’ 11”.
7. \textbf{Theatres, Cinemas and Auditoria}

a) There should be accommodation for persons in wheel chairs attending functions at the public buildings as follows:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
Number of Fixed Seating & Number of Spaces Required for Wheel Chairs \\
\hline
Up to 200 & 2 \\
201 to 300 & 3 \\
301 to 400 & 4 \\
401 to 500 & 5 \\
501 to 600 & 6 \\
Over 600 & 6 plus 1 for each additional increment of 500 seats to a maximum of 12. \\
\hline
\end{tabular}
\end{table}

b) Wheel chair spaces should be not less than 4’ 4” deep by 2’ 6” wide and should preferably be integrated into the regular seating.

c) Each space should be on an aisle and should be on the same level and near to an exit.

d) Where a public address communication system is installed, headphones outlets should be provided for persons in wheel chairs at a ratio of 1 such outlet for every 100 seats with a minimum of two.

8. \textbf{Ground and Floor Surfaces}

a) The surfaces of the ground and floor on which disabled persons must walk should be firm, slip resistant and free of glare, Any change in level should be treated as per Table F-3.

b) The floor surface of detectable warning surfaces should be about 3’ 0” long and be of contrasting color.

c) Floor surfaces should be slip resistant as far as possible. The slip resistance of common surfaces is given in Table F-4.
Table F-3

Changes in Level

<table>
<thead>
<tr>
<th>Vertical Rise (in.)</th>
<th>Edge Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1/4</td>
<td>May be vertical</td>
</tr>
<tr>
<td>1/4-1/2</td>
<td>Should be beveled. Max slope 1:2.</td>
</tr>
<tr>
<td>Over 1/2</td>
<td>Treat as ramp</td>
</tr>
</tbody>
</table>

Table F-4

Slip Resistance of Floor Finishes

<table>
<thead>
<tr>
<th>Surface</th>
<th>Dry and Unpolished</th>
<th>Wet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay tiles</td>
<td>Very good</td>
<td>Very good</td>
</tr>
<tr>
<td>Carpet*</td>
<td>Very good</td>
<td>Good</td>
</tr>
<tr>
<td>Clay tiles (textured)</td>
<td>Very good</td>
<td>Good (External)</td>
</tr>
<tr>
<td>Cork tiles</td>
<td>Very good</td>
<td></td>
</tr>
<tr>
<td>PVC with non-slip granules</td>
<td>Very good</td>
<td>Good</td>
</tr>
<tr>
<td>Mastic asphalt</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Concrete**</td>
<td>Good</td>
<td>Poor to fair</td>
</tr>
<tr>
<td>Terrazzo</td>
<td>Good</td>
<td>Poor to fair</td>
</tr>
</tbody>
</table>

Notes: *The soft weave of the carpet may make travel in a straight line difficult

**textured finish to concrete improves its resistance when wet.

9. Protruding Objects

It is recommended that designers consult Section 3 of the National building Code of Canada for the proper placing of protruding objects. Objects protruding from walls with their leading edges between 2’ 6” and 6’ 6”, shall protrude not more than 4” into pedestrian areas such as sidewalks, halls, corridors, etc.

10. Walls

a) Walls surfaces should not be rough or uneven and should have contrasting colors.

b) Mirrored walls should not be used as they may be confusing to the visually impaired.

(F-6)
c) Glass panels may be confused as egress routes.

11. Detectable Objects

The following guide should be considered in the placing of objects on walls or in rooms to be traversed or used by the physically handicapped.

a) Objects with their leading edges 2' 4" from the floor may protrude any amount.

b) Objects between 2' 4" and 6' 8" from the floor shall not overhang more than 12 inches.

c) The maximum height of the bottom edge of an object with a space of more than 12 inches between supports shall be 2' 3" from the floor.

d) Freestanding objects shall not overhang more than 1 foot between 2' 3" and 6' 5".

12. Headroom

The minimum headroom - clear height from the floor to ceiling (or airy supporting beam or member) - is 7 feet.

13. Bathroom and Toilet Facilities

a) All public buildings shall have at least one toilet specially constructed for use by handicapped persons. Such toilet compartments shall carry on the door to the compartment the international sign indicating that such a compartment has been specially constructed for use by handicapped persons. The sketches (Figure 26 in TCI Building Guidelines) show planning arrangements for the toilet compartments and the international signs used for handicapped facilities.

b) Toilet fixtures should be so placed as to facilitate the turning of a wheelchair.

c) Handrails of not less than 1 inch and not more than 1-1/2 inches O.D. shall be provided on both sides of the water closet, and mounted 34 inches above and parallel to the floor. The handrail should be placed with the front end about 2 feet in front of the water closet.

d) Toilet seats should be 18 inches to 24 inches off the floor. They should be equipped with:

i) hand operated flushing controls that can be reached by persons in a wheelchair and

ii) a back support.
e) Wash basins should be placed a maximum of 2' 10” high with a clear space of at least 2' 3” high by 3' 0” under the basin. The wash basin should be equipped with faucet handles of the lever type without spring loading. The soap and towel dispensers should be located not more than 4 feet above the floor and be accessible to persons on a wheel chair.

f) The bottom edge of e mirror should not be more than 3’ 0” above the floor.

g) Where showers are provided in public assembly buildings at least one shower for each sex should be constructed for use by handicapped persons. Such showers should not be less than 5’ 0” by 3’ 0” with a threshold no higher than 1/2” and a curtain hung 3’ 0” from the back wall.

h) Doors to toilet facilities should always open outwards and be equipped with self closing hinges or door closers.

i) Vertical and horizontal grip rails should be installed and readily accessible from the toilet and shower.

14. Parking Lots

a) Any parking lot servicing an entrance described in 506.1 shall have a number of level parking spaces identified by the appropriate international signs as reserved for handicapped persons. Each reserved parking space shall not be less than 12’ 0” wide.

b) Table F-5 gives the suggested number of reserved parking spaces for handicapped persons. Such parking spaces shall be within easy reach of an exit, and shall be so placed that the person using the space would not be compelled to pass behind other parked vehicles to access the building entrance, ramp or walkway.

Table F-5

<table>
<thead>
<tr>
<th>Total Number of Parking Spaces in Lot</th>
<th>Required Number of Spaces Reserved for Handicapped Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-50</td>
<td>1</td>
</tr>
<tr>
<td>51-75</td>
<td>2</td>
</tr>
<tr>
<td>76-100</td>
<td>3</td>
</tr>
<tr>
<td>101-200</td>
<td>4</td>
</tr>
<tr>
<td>201-500</td>
<td>5</td>
</tr>
<tr>
<td>above 500</td>
<td>1 percent of the total number of spaces</td>
</tr>
</tbody>
</table>

(F-8)
15. **Illumination**

All spaces to be used by visually impaired persons should be prodded with at least the lighting level of 100 lx.

16. **Signs**

For adequate recognition of signs by the visually impaired the signs should be constructed and placed in accordance with the following Table F-6.

**Table F-6**

<table>
<thead>
<tr>
<th>Minimum Character Height (in.)</th>
<th>Maximum Viewing Distance (ft.-in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>20-0</td>
</tr>
<tr>
<td>5</td>
<td>15-0</td>
</tr>
<tr>
<td>4</td>
<td>8-0</td>
</tr>
<tr>
<td>3</td>
<td>7-10</td>
</tr>
<tr>
<td>2</td>
<td>5-0</td>
</tr>
<tr>
<td>1</td>
<td>2-6</td>
</tr>
</tbody>
</table>

17. **Provision s for access to service in Supermarkets, Banks and other Public Places**

a) **Aisles.**

The minimum width of aisles for persons to allow safe maneuvering by persons in wheel chairs should be 3’ 4” for travel in a straight line and 5’ 0” to provide for a 180 degree turn. In supermarkets and other public places such as assembly halls, banks and theatres it is recommended that provision be made for 2 persons in wheel chairs to pass, and for persons -in wheel chairs to make a 180 degree turn. The recommended minimum width for aisles is therefore 5’ 0”.

b) **Counters**

It is recommended that special seating arrangements be made at banks, work places and lunch counters for person in wheel chairs. Adequate room must be provided for safe maneuvering to approach the counter.

Seating spaces at counters should have a clear floor space of not less than 2’ 6” by 4’ 0”. Where a forward approach is possible there should be a clear knee space of at least 2’ 6” wide by 1’ 8” deep by 2’ 4” high.

(F-9)
At lunch counters and at places where it is necessary to stand or sit to be served there should be at least one such special seat available for every 30 places. There should be at least one special counter available in banks for persons in wheel chairs.

c) Shopping Malls

The design of shopping malls should be in accordance with BS 5588 Part 10: 1991 Code of practice for shopping complexes.

18. Public Telephones

a) Wherever public telephones are installed provision shall be made for at least one telephone to be accessible by persons in wheel chairs.

b) The maximum height of the telephone controls should be 4' 6" and a clear floor space of not less than 3' 0" by 4' 0" shall be provided in front of the telephone. If a clear height of 2' 6" is available for knee space, then the allowable floor space can extend into the knee area a maximum of 4' 0".

c) The minimum cord length should be 3' 4".

d) The telephone assembly including the enclosures shall not reduce the minimum width required for safe passage in corridors aisles or walkways.
SECTION G.

ELECTRICAL GUIDELINES FOR RESIDENTIAL AND LIGHT COMMERCIAL CONSTRUCTION

1. General

All electrical installations and wiring shall conform to the requirements of rule 11 of the Hydro-Electricity Rules Chapter 258 of the laws of the Commonwealth of Dominica. Work done in accordance with the latest edition of the regulations issued by the institute of Electrical and Electronic Engineers of Great Britain satisfies the requirement of rule 11. All installations must be certified by the Electrical Inspector before electricity connections can be installed.

2. Installation of electricity wiring for small buildings.

The following are basic rules to be observed in installing wiring in residential buildings:

a) Units in Bathrooms

- Sockets and switches must not be placed in bathrooms. The regulations prescribe that a switch and or socket be placed a distance of 2.5 meters from a shower. All switches should therefore be placed outside of the bathroom.

- Depending on the size of the bathroom, pull switches may be allowed inside the bathroom providing they are non-conducting.

- Shaver outlets are allowed as such outlets are specifically designed for this area.

b) Units in Kitchen

- The regulation does not give the distance between any electrical socket and the water piping, but as a general rule, the distance of 2.5 m is applied.

- Socket(s) must be out of reach.

- Socket(s) must be located 6'-0" to 8'-0" from water piping.

c) Location of Main Switch

i) Residential Buildings

- Not in bedrooms
- Not in room likely to be locked
- Should be in an area accessible to all
- In duplex units separate main switches are required

ii) Shops and Stores

- Not in a position where general public could have easy access to the switch.
iii) Public Buildings

- There is no hard and fast rule but the main switch must be located away from the entrance.

3. Occupancy Certificates

The Planning Authority will not issue an occupancy Certificate until the electricity wiring has been inspected and approved by the Electrical Inspector.

Dominica Electricity Services will not supply power to any building until the Electrical Inspector has inspected the building and approved the electricity wiring.
1. DEFINITION
2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE
3. LOCATION ON PROPERTY
4. EXIT FACILITIES
5. OCCUPANCY CONTENT
6. WIDTH OF EXITS
7. MAIN FLOOR EXITS
8. BALCONY EXITS
9. EXIT DOORS
10. AISLES AND SEATING
11. LIGHT AND VENTILATION
12. HAZARDS
13. ENCLOSURE OF VERTICAL OPENINGS
14. STAGES
   a) Stage construction
   b) Gridirons
   c) Accessory rooms
   d) Proscenium walls
   e) Proscenium curtains
   f) Stage ventilators
   g) Flame retarding requirements
   h) Stage exits
   i) Other requirements
15. PLATFORMS
   a) Platform construction
   b) Size of Platform
   c) Accessory rooms
   d) Screen
16. MOTION PICTURE MACHINE BOOTHs
17. FIRE PROTECTION AND HAZARDS

18. PLUMBING AND TOILET FACILITIES

19. EXCEPTIONS AND DEVIATIONS

20. SCHOOLS AND CHURCHES

   a) Special provisions
   b) Occupancy content
   c) Widths of exits
   d) Arrangement of exits
   e) Corridors
   f) Balconies
   g) Floors
   h) Doors

21. MIXED OCCUPANCIES
APPENDIX H (1)

REQUIREMENTS OF GROUP A OCCUPANCIES

1. DEFINITION

Group A occupancy is defined in 301.2 and includes assembly uses such as theatres, auditoria, motion-picture houses, exhibition halls, skating rinks, gymnasiums, bowling alleys, pool rooms, restaurant, churches, dance halls, night clubs, meeting rooms, passenger rooms, recreation facilities, and similar uses having an occupant content of 50 or more persons.

2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE

Buildings or parts of buildings, classed in Group A because of use or Occupancy shall be Type 1 construction. Exterior walls shall have fire-resistance and opening protection, determined by location on property, as set forth for the Type of Construction in Tables 3-4 to 3-7.

Buildings in this Group shall not be limited as to occupant content, height or area except as may be required by the Director of Planning and as provided in the Development Manual issued by the Department of Planning.

3. LOCATION ON PROPERTY

See Development Manual for location

The main floor shall be located at or near grade.

4. EXIT FACILITIES

Exit facilities for Group A Occupancy shall be as set forth in Section 5 and in Table 5-2.

5. OCCUPANCY CONTENT (See Section 3 Table 3-1)

For places of public assembly with fixed seats, a space of seven square feet shall be allowed per person. For places of assembly with moveable seat & a space of square feet shall be allowed per person. For night clubs and restaurants with tables, a space of twelve square feet shall be allowed per person. Aisles or gangways shall not be included in these areas.

Notwithstanding the above areas required, the occupant content shall be taken as not more than one person per fifteen square feet of aggregate gross area of all floors or parts of the building used for assembly purposes including lobbies, corridors, dressing rooms, toilets, and other commonly used connecting rooms and service areas used in conjunction with the assembly occupancy.

(H-3)
Such areas as swimming pools, bowling alleys, may be excluded or other uses separately considered.

6. **WIDTHS OF EXITS**

Every place of assembly and every individual room used as a place of assembly shall have exits of a number and width sufficient to provide for the total occupancy as given in Tables 5-2 and 5-4. The widths can be calculated by the following:

a) Areas served by doors or horizontal exits leading to the outside of the building or 22 inch unit of exit width for each one hundred persons or fraction thereof.

b) Areas served by stairs or other type of exit not as set forth in (a) above, one 2 inch unit of exit width for each 75 persons or the fraction thereof. The minimum exit width shall be 36 inches in all cases.

However, the number and widths of exit shall not be less than those set out in Tables 5-2 and 5-4.

7. **MAIN FLOOR EXITS**

a) Not less than half of the required main floor exit widths shall be to a main entrance and exit, and the remainder shall be proportioned to the side exits. All required exits of Group A Occupancy shall serve no other Occupancy.

b) Exits no less in width than the full width of the aisles or gangway leading thereof shall be provided at the rear of the main-floor assembly and such exits hall lead into a foyer or into a passageway to the outside of the building. Any change in elevation from a public footpath to the back of the main floor assembly or foyer shall be made by ramps having a slope of not more than one in ten. The most obvious and direct exit to the public street shall be and remain unobstructed.

c) The width of the foyer at any point shall not be less than the combined width of the aisles, gangways, stairways and passageways leading thereto. The foyer shall be separated from the assembly spaces with partitions having a fire rating of not less than two hours. There shall be not less than two remote exits from any Groups A Occupancy.

d) Half of the required main floor exit widths shall be proportioned to the side exits and when more than one side exit is required, shall be equally divided in full units of unit width to each side. The number of side exits shall be as in 502.4 g).

e) Exits shall be so arranged that the maximum distance as measured along the line of travel to the nearest floor exit from any point shall not exceed 150 feet. (See Table 5-3)

(H-4)
8. BALCONY EXITS

Exits from a balcony shall be as specified for main-floor exits except as follows:-

Balconies having an occupancy content of less than thirty persons may be served by one 44 inch stair, and for thirty persons or more at least two exits shall be provided.

9. EXIT DOORS

All doors in the paths of egress, normally closed and latched shall be equipped with full sets of panic hardware. No single door shall be more than 3’8” in width and no double door ways shall be less than 3’9” in width.

10. MARKING OF EXIT DOORS

Above every exit door there shall be a lighted sign marked EXIT in letters at least 4” high lit normally by an electric bulb and in addition fitted with an emergency battery or power source to give light in the event of power failure. The letters shall be green and the background white. Doors which may be confused as leading to exits, shall clearly be marked "PRIVATE."

11. AISLES AND SEATING

a) Section 503.9 provides information on fixed seating in places of public assembly.

b) Fixed seats shall be securely fastened to the floor; moveable or folding seats for the assembly of five hundred (500) persons or more shall be fastened together in banks of six or more.

c) Where seating is at tables as in restaurants and night clubs aisles or gangways shall be located so that there is not more that twenty-eight (28) feet between aisle or gangways nor more than fourteen (14) feet between an aisle or gangway and a wall. At each side exit there shall be a cross aisle or gangway leading to the centre of the width of the building. Aisle or gangway widths shall be rigorously maintained.

12. LIGHT AND VENTILATION

a) General

All portions of Groups A Occupancies customarily used by human beings and all dressing rooms shall be provided with light and ventilation by means of windows or skylights with an area of not less than one-eighth of the total floor area, one-half of which shall be openable, or shall be provided with electric light and mechanically operated ventilating system as set forth in Section 11.
Ducts for the mechanical ventilation system shall serve no other Group of Occupancy.

b) Artificial lighting

Auditorium light shall be as set forth in accordance with the requirements of the Section 11, and emergency lighting shall be provided in all paths of egress to the approval of the Director.

13. HAZARDS

Registers or vents supplying air back stage, supplying a projection booth or passing through a fire wall shall be equipped with automatic closing devices activated by smoke detectors located in the registers or vents, and supplying air fans shall be controlled with a smoke sensing device.

14. ENCLOSURE OF VERTICAL OPENINGS

a) Vertical openings shall be enclosed as set forth in Part 3 Section 3.612 of CUBiC.

b) Elevators which serve dressing rooms, gridiron and fly galleries need not be enclosed above the stage level.

15. STAGES

Stages, platforms and accessory features thereof shall be designed and constructed as set forth herein.

a) Stage construction

All parts of the stage shall be designed to support not less than 125 pounds per square foot and shall be of Type 1 construction or fire retardant timber. The room directly under the stage shall not be used for any purpose other than the working of traps and mechanical apparatus necessary for a performance on the stage.

Openings through stage floors shall be equipped with tight-fitting trap doors or non-combustible materials or of wood not less than two inches thick.

b) Gridirons

Gridirons, fly galleries and pin rails shall be constructed of non-combustible materials, but fireproofing of metal shall not be required.

c) Accessory rooms

Dressing rooms, workshops, and store rooms shall be located on the stage side of the proscenium wall and shall be separated from each other and from the stage by two-hour fire resistive construction.
d) Proscenium walls

The proscenium wall separating the stage portion from the auditorium shall be not less than four hours fire-resistive construction and shall extend not less than four feet above the roof. The proscenium wall shall not be finished or covered with combustible materials.

Proscenium walls may have in addition to the main proscenium opening, one opening at the orchestra-pit level and not more than two openings at the stage-room level, each of which shall be not more than as square feet in area. Such openings shall be equipped with self-closing fire-resistive doors.

e) Proscenium curtains

The main proscenium opening shall be provided with a self-closing, tight-fitting fire-resistive curtain composed largely of heat-resistive material with no more than ten percent of weight of cotton or other combustible materials.

Such curtain shall be of one-ply thickness and shall weight not less than three pounds per square yard and shall be painted with a mineral paint so brushed into the cloth that no light or smoke can come through. Proscenium curtains of non-combustible materials other than fabric may be used, with the approval of the Director.

Proscenium curtains, 35 feet or less in width, shall have a rigid metal member, not less than the equivalent of a two-inch standard steel pipe, at the top and bottom edges, protected by the fabric on both the stage and auditorium sides. Curtains over 35 feet in width shall have a rigid metal frame, protected on both sides against fire and such frame shall be designed for a wind pressure of not less than 15 pounds per square foot.

The proscenium curtain shall extend into non-combustible and smoke-proof guides at the sides, a distance of not less than 12 inches. The curtain shall overlap at the top of the proscenium opening not less than 24 inches, and the bottom edge shall have a yielding pad of non-combustible materials not less than four inches deep to form a seal against the floor.

The proscenium curtain shall be rigged and counter-balanced with not less than six three-eighths-inch flexible steel cables and six safety stop chains of one-quarter-inch straight link-welded chain and shall be so arranged that it can be quickly released to descend by gravity and completely close the opening.

The releasing device and its location shall be approved by the Director.

f) Stage ventilators

There shall be one or more ventilators constructed of metal or other noncombustible materials near the centre and above the highest point of any permanent stage, raised above the roof and having a total ventilating area equal to at least five percent of the floor area within the stage walls, doors or covers for ventilators shall open by gravity and shall be held closed and manually operated by means of cords extending to each side of the stage.

(H-7)
These cords shall be equipped with three fusible links, one of which shall be placed in the ventilator above the mains roof level and the other two at approved points, no affected by sprinkler heads. Such links shall fuse and separate at 160 degrees Fahrenheit. Glass, if used in such ventilators, shall be wire glass.

g) Flame-retarding requirements

No combustible scenery, drops, decorations, or other combustible effects shall be placed on any stage or enclosed platform unless it treated with an effective fire-retardant solution and maintained in a non-flammable condition as approved by Department of Government responsible for fire protection and control.

h) Stage exits

At least one exit two feet six inches wide shall be provided from each side of the stage opening, directly or by means of a passageway not less than three feet in width, to a street or exit court. An exit stair not less than two feet six inches wide shall be provided for egress from each by gallery.

Each tier of dressing rooms shall be provided with two remote paths of egress, each not less than two feet six inches wide, and where dressing rooms are provided more than one tier above the stage floor, stairways to all tiers shall be enclosed.

Stage exits shall be as set forth in Section except as otherwise required in this Sub-section.

i) Other requirements

There shall be no enclosed structure for human occupancy located above a stage.

16. PLATFORMS

a) Platform construction

The platform shall be constructed entirely of non-combustible materials except that where the auditorium floor extends under the full area of such platform, construction may be of Type 2, omitting the fire-proofing on the beams and girders.

b) Size of platform

The platform shall not extend from the rear wall a distance greater than 18 feet, measured to the greatest projection of the platform, nor shall the ceiling over any platform be more than five feet above the screen except that platforms for schools and churches may extend from the rear wall a distance not greater than 25 feet.
c) Accessory rooms

No dressing or other rooms for human occupancy shall be located on, under or above such platform unless such rooms shall be completely separated therefrom by not less than two-hour fire-resistive construction.

d) Screen

The screen shall be rigidly attached to the platform and to the rear wall, and a clear passageway, not less than 20 inches wide, shall be provided between the screen or sound equipment and the rear wall.

17. MOTION PICTURE MACHINE BOOTHs

All booths constructed for the projection or showing of motion picture films shall be as set forth herein:

a) Every motion-picture machine using nitro-cellulose or other inflammable films together with all electrical devices, rheostats and sewing machines used in connection therewith, and all such films, shall be enclosed in a booth large enough to permit the operator to walk freely on either side or back of the machine; and such room shall be not less than seven feet high and shall have a floor area of not less than 50 square feet for each motion picture machine in such booth.

b) The floors, walls and ceiling of such booth shall be of non-combustible materials of not less than two-hour fire-resistive construction as specified in Section 4.

c) The entrance to the booth shall be equipped with tight-fitting, self-closing doors of fire-resistive construction. Such door shall open outward and shall not be equipped with any latch. Booths exceeding 200 square feet in area shall have two means of exit therefrom, and doors shall be remotely located Any required exit door from the motion picture booth shall be not less than two feet six inches in width.

d) Machine and observation ports in machine booth walls shall be of three kinds: projection ports, observation ports and combined observation and spotlights ports. These ports shall be limited in size and number as follows: there shall be not more than one projection port for each machine head having an area of not more than 120 square inches.

e) There shall be not more than three combination observation and spotlight ports and they shall not exceed so inches by 24 inches.

f) There shall be not less than one foot of wall space between openings. Each port in the projection booth wall shall be completely covered with a single pane of plate glass; and each such opening, together with all fresh air inlets, shall be provided with automatic shutters of not less than ten U.S. gauge sheet metal and enough to overlap at least one inch on all sides and arranged to slide shut by gravity without binding.

(H-9)
g) These shutters shall be held normally open by means of chains equipped with approved 160 degree-Fahrenheit fusible links, an so arranged that the shutters may be easily released by hand or automatically by the fusible links and close smoothly without noise.

h) Every booth shall be equipped with a ventilating inlet not less than 30 inches square in area placed near the floor and protected by two layers of copper gauze, one of 18 meshed per inch and the other of ten meshed per inch, in addition to the shutter specified above.

i) At the top of every booth, there shall be at least a ten-inch diameter vent for each motion-picture machine. Such vent shall be constructed of not less than #4 U.S. gauge sheet metal and shall connect into a masonry flue or go directly through the roof and n inches above, and shall be provided with an exhaust fan which will produce a complete change of air in the booth every two minutes.

j) No wood or other combustible materials shall be allowed closer than four inches to such vent, and there shall be not more than one elbow or change of direction of this metal vent in any attic space. No such vent shall pass through any occupied room unless encased in not less than four inches of solid masonry.

k) All shelves, furniture and fixtures within the booth shall be constructed of metal or other non-combustible materials.

l) Every motion-picture machine shall be securely fastened to the floor to prevent overturning.

m) The rewinding machine shall be located in a fire-proof compartment within the booth, and all films not in actual use shall be kept in individual metal boxes with tight-fitting covers and must be stores, each in its individual box in a the-proof cabinet, which cabinet shall be divided into compartments having a capacity of not more than ten such films boxes in each compartment.

n) Each compartment shall have a separate tight-fitting, self-closing cover of not less than ten U.S. gauge sheet metal, arranged to close automatically.

No solder shall be used in the construction of such metal boxes, compartments or cabinets.

18. FIRE PROTECTION AND HAZARDS

The installation of fire alarm and fire suppression systems shall be in accordance with Sub-section 505.
19. PLUMBING AND TOILET FACILITIES

The installation of plumbing and toilet facilities shall be in accordance with Sections 3 and 9.

20. EXCEPTIONS AND DEVIATIONS

Existing buildings not fully complying with the requirements of the Appendix may be used for Group A Occupancies, if they meet the requirements of:

a) The construction Type, height and area as per Tables 3-1, 3-2 and 3-3.

b) Exit facilities as per Sub-section 503

c) Fire and Safety requirements as per Section 5 and

d) Plumbing and sanitation as per Section 9,

and providing that there is not less than a two-hour fire, separation between such buildings and any other occupancies.

21. SCHOOLS AND CHURCHES

a) Special provisions

   i) A fire-resistive ceiling shall not be required in the assembly space of churches and gymnasiums in one-storey buildings, every part of the roof structure of which is 18 feet or more above any floor or above any balcony or gallery seating 50 or more persons.

   ii) Rooms having an occupancy content of more than 100 persons and rooms used for kindergarten, first, and second grade pupils, shall not be located above the first storey above grade except in buildings of Type 1 construction.

   iii) Where there is useable space under the first floor of two stories Type 3 buildings, basements, including the first floor shall be of Type 1 construction.

b) Occupancy content

For determining exit requirements of Group A, schools and churches the occupant content shall be the area within the perimeter of the building or fire division at any floor level, with no deduction for corridors, divided by the area per person as specified below:
Occupancy			Area Sq.ft Per Person

Auditoriums			7
Dining Rooms			10
Gymnasium seating areas		6
Classrooms			16
School libraries		40
Other Uses			40

c) Widths of exits

Exits shall be provided as per Section 5

d) Arrangement of exits:

i) Classrooms and similar small room occupied by less than 40 persons may have one
door thereof, provided such door is not less than 36 inches in width and located at
the teacher end of the room.

ii) Classroom, shops and similar rooms occupied by 41 or more persons shall have not
less than two exit doors not less than 36 inches in width, the combined width of
which shall be not less than one 20 inch unit of exit width for each 100 persons or
fraction thereof, which doors shall be remote from each other.

iii) Rooms with occupant content exceeding 300 persons shall have exits as specified
for Group A Occupancies and as shown in Section 5.

iv) Classroom exits may be to corridors.

v) Rooms in basements shall have not less than 50 percent of the required paths of
egress therefrom opening directly to the exterior.

e) Corridors

i) Classrooms, assemblies to less than 300 persons, and other subdivisions shall open
directly to floor exits or shall connect thereto by means of corridors.

ii) Corridors shall have a width of not less than six feet nor less than four inches for
every 300 square feet, or major fraction thereof, of floor area served.

iii) Room doors or locker doors swinging into corridors shall not at any point in their
swing reduce the clear effective width of the corridor to less than six feet, nor shall
drinking fountains or other equipment fixed or moveable, be placed to obstruct the
required minimum six feet width.
f) Balconies

Used as exits shall not be less than five feet in width at any point.

g) Floors

i) There shall be not less than two remote paths of egress from each floor.

ii) Floor exits shall be by means of stairways, ramps, horizontal exits, passageways or by doors at or near grade, directly to be exterior.

iii) The upper floors of two storey buildings may have enclosed interior stairways or open exterior stairways.

iv) The upper floors of three storey buildings shall have enclosed interior stairways for not less than one-half of the required floor exits. Other upper floor exits may be open exterior stairways or enclosed interior stairways.

v) The upper floor of building exceeding three stories shall have smokeproof towers for not less than one half the required floor exits. Other upper floor exits shall be enclosed interior stairways.

h) Doors

i) Doors in paths of egress, normally closed and latched shall be equipped with panic hardware except that doors leading from classrooms directly to the outside of the building may be equipped with the same knob-operated schoolhouse type lock as is used on classroom doors leading to corridor with not provision whatsoever for locking against egress from the classroom.

ii) The minimum width of any required door in a path of egress shall be 36 inches.

iii) Doors of classrooms serving as required exits may swing against the direction of exit travel when serving an occupant load of less than 40 persons.

iv) Travel distance

The exits shall be so arranged that the maximum travel distance from any point or from the door of the separated spaces less than 800 square feet, to the nearest floor exit shall not exceed 100 feet except that eh not distance in any room where one exit door is permitted shall not exceed 40 feet.
i) Fire protection and hazards

Automatic sprinkler systems, fire extinguishers, fire alarm systems and standpipes shall be as set forth in Section 5.

j) Plumbing and toilet facilities.

   i) Plumbing shall be installed as set forth in Section 9.

   ii) The number of toilet units shall be provided as in Section 3.

k) Exceptions and deviations

Except in buildings of Type 1 Construction, school classrooms used for kindergarten, first and second-grade pupils shall be located on the ground floor.

22. MIXED OCCUPANCIES

Separation of Group A Occupancies or division thereof from all other Occupancies or Divisions of Occupancies shall be as set forth in Table 3.208 of Part 3 Section 3 of CUBiC.
APPENDIX H (2)

REQUIREMENTS OF GROUP B OCCUPANCIES

1. DEFINITION
2. TYPE OF CONSTRUCTION
3. LOCATION
4. EXIT FACILITIES
   a) Exit capacity
   b) Travel distance
5. FIRE PROTECTION AND HAZARDS
6. PLUMBING AND TOILET FACILITIES
7. ELECTRICITY AND AIRCONDITIONING SERVICES
APPENDIX H (2)

REQUIREMENTS OF GROUP B OCCUPANCIES

1. DEFINITION

Group B occupancy is defined as Institutional Buildings in which persons are incapacitated or their movements are physically restrained. The buildings under this classification are listed in 301.3.

2. TYPE OF CONSTRUCTION

Buildings in this Group can be of Types 1, 2, 3 or 4 construction. Construction in frames (Type 5) is not permitted.

The permissible heights and are as under each classification are given in Table 3-3.

3. LOCATION

The limiting location of such buildings is given in Tables 3-4 to 3-7. The location with respect to the boundaries or to adjacent buildings depend on the fire resistance rating of the structure.

4. EXIT FACILITIES

a) Exit capacity

The number of persons per unit (22 inches of exit width) from a sprinklered or non-sprinklered building shall be as per Table 5-3(b)

b) Travel Distance

The maximum permitted travel distance shall be as per Table 5-3(a), except that for a sprinklered building the maximum travel distance may be increased to 150 ft.

5. FIRE PROTECTION AND HAZARDS

a) Buildings in this Group may be either sprinklered or non-sprinklered. To qualify for the sprinkler option, buildings must be protected in accordance with NFfPA 13 and the system must be supervised in accordance with NFfPA 71.

b) Buildings such as hospitals and nursing homes must be:

i) divided into areas not exceeding 750 sq.m. by 1 hour fire rated construction and

ii) further subdivided into areas not exceeding 375 sq.m by construction which is smoke proof.
ii) further subdivided into areas not exceeding 375 sq.m by construction which is smoke proof.

c) For prison institutional buildings, each cell must be bounded with separating construction of block masonry or concrete with a fire rating of at least 1 hour and doorways to cells and other openings in construction bounding cells must be protected with 1 hour fire doors.

d) Institutional buildings not equipped throughout with complete automatic sprinkler system shall have an approved automatic smoke detection system installed in all corridors in accordance with NFPA 72E. All automatic smoke detection systems shall be connected electronically to the fire alarm system.

6. PLUMBING AND TOILET FACILITIES

The installation of plumbing and toilet facilities shall be in accordance with Section 3 and Section 9.

7. ELECTRICITY AND AIRCONDITIONING SERVICES

Section 11 provides guideline on the installation of electricity and air-conditioning services. Designers are advised to consult the specialist handbooks for the provision of these services to institutional buildings.
APPENDIX H (3)

REQUIREMENTS FOR GROUP C OCCUPANCY

1. DEFINITION

2. CONSTRUCTION, HEIGHT AND AREA AVAILABLE

3. LOCATION ON PROPERTY

4. EXIT FACILITIES
   a) General
   b) Content
   c) Width of exits
   d) Arrangement of exits
   e) Doors
   f) Travel distance
   g) Parking garages

5. LIGHT AND VENTILATION

6. FIRE PROTECTION HAZARDS

7. PLUMBING AND TOILET FIXTURES
APPENDIX H (3)

REQUIREMENTS OF GROUP C OCCUPANCY

1. DEFINITION

Group C Occupancy shall include storage and industrial uses as listed in Section 301.4.

2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE

General

a) Buildings, or parts of buildings classed in Group C because of use or occupancy shall be limited in height and area as shown in Table 3-3.

b) Motor vehicle service stations shall be Types 1, 2 or 3 (Protected) or 4 Construction. The canopies over the pumps may, at the discretion of the Director, be of exposed steel columns and fire treated timber roofing. Motor vehicle service stations shall not be of Type 5 Construction.

c) Aircraft hangars shall be of Type Construction as approved by the Director and shall comply with the requirements of the Ministry responsible for Civil Aviation.

d) Parking garages used exclusively for parking and storing of passenger motor vehicles shall be of Type 1 construction except that garages not exceeding four stories may have framework and floors unprotected and exterior walls of not less than two-hour fire resistive construction.

e) Floors in motor service stations, garages and aircraft hangars shall be noncombustible materials protected against saturation.

f) Where ramps are used for the transfer of vehicles, or materials from one floor to another, such ramps shall meet the ground floor level at a point not less than 25 feet from the exit of such building.

3. LOCATION ON PROPERTY

a) Buildings with Group C Occupancy shall comply with the requirements of the Department of Planning as given in the Development Manual or as determined by the Director.

b) Exterior walls of Group C Occupancy buildings shall have fire-resistance and opening protection, determined by location on property, as set forth for Type of Construction in Table 3-4 to 3-7.

(H-19)
4. EXIT FACILITIES

a) General

Exit facilities for Group C Occupancies shall be as set forth Section 5, except that exit facilities for parking garages where no persons other than parking attendants are permitted on upper floors there shall not be less than one stairway for each 10,000 eq.ft. or fraction thereof. (see 4 g) below).

b) Occupant content

For determining exit requirements of Group C Occupancy, the occupant content shall be the area within the perimeter of the building, or fire division at any floor level with not deduction for corridors, divided by an area of 100 square feet per person.

c) Width of exits:

Exits shall be provided as follows:

Street floor exits shall be provided based on one 22 inch of exit width for each 100 persons or fraction thereof on the street floor plus one and one-half units for each two units of stairway or ramp from upper or lower floor where such floors discharge through eh street floor.

d) Arrangement of exits:

i) Interior spaces: Rooms or spaces shall have not less than two remote exits except that where having an occupant content of less than 5 persons having direct exit to public space and with travel distance not exceeding 50 feet a single exit may be provided.

ii) Floors: There shall be not less than two remote paths of egress from each floor except that floors or mezzanines of buildings not exceeding two stories and having an occupant content of not more than 25 persons, may have a single door, or an enclosed stairway, exiting directly to the exterior.

iii) Floor exits shall be by means of stairways, ramps horizontal exits passageways, as specified in Section 5, or by doors, at or near grade, directly to the exterior.

iv) Dead ends in exit corridors beyond a floor exit or other corridor giving two remote exits, shall not exceed 20 feet.

v) The upper floor of two-storey buildings may have interior stairways, enclosed where required under Types of Construction, or open exterior stairways.

vi) The upper floors of three-storey buildings shall have enclosed interior stairways for not less than one-half of the required floors exits. Other upper exits may be open exterior stairways or enclosed interior stairways.

(H-20)
vii) The upper floors of buildings which exceed three stories shall have enclosed interior stairways, except that buildings which exceed five stories shall have not less than one-half of the required floors exits by smokeproof towers.

viii) Where floors are divided in fire divisions, one exit from each such division may be a horizontal exit.

e) Doors

Doors in paths of egress, normally closed and latched, and serving more than 50 persons, shall be equipped with panic hardware.

f) Travel distance

The exits shall be so arranged that the maximum travel distance from any point or from the door of separated spaces having and occupant content of less than 50 persons, to the nearest floor exit shall not exceed 150 feet.

g) Parking garages

i) Where persons other than parking attendants are permitted, stairs and exits shall be as otherwise set forth herein.

ii) Where no persons other than parking attendants are permitted, and a ramp for transporting vehicles is constructed, or where cars are mechanically lifted and parked without attendants or passengers there shall be not less than one stairway for each 10,000 square feet or fraction thereof.

iii) Where cars are mechanically lifted and parked by attendants, one additional exit shall be provided where such ramp is omitted. Such ramps shall be considered an exit, and exits shall be remotely located so that the maximum travel distance from any point to a floor exit shall not exceed 100 feet.

iv) Stairs shall be not less than three feet wide and shall be enclosed if more than 50 percent of the periphery of the building is enclosed or if the structure exceed three stories in height.

5. LIGHT AND VENTILATION

All portions of Group C Occupancies customarily used by human beings shall have light and ventilation as set forth in Section 11. All portions of buildings where flammable liquids are used or stored or where automobiles are stores or handled shall be provided with mechanical ventilation as set forth in Chapter 40, except that the Buildings Control Officer may waive this requirement when the building is provided with unobstructed openings and/or cross ventilation.
6. **FIRE PROTECTION AND HAZARDS**

   a) Automatic-sprinkler systems fire extinguishers and standpipes shall be as set forth in Section 5.

   b) The storage of flammable material shall be as set out in Part 3 section 3.303 of CUBiC.

   c) The service of hazardous utilities shall be as set forth in Section 5 and in Part 3 Section 3.300 of CUBiC.

7. **PLUMBING AND TOILET FIXTURES**

   a) Plumbing shall be installed as set forth in Section 9.

   b) Toilet accommodation shall be as set forth in Section 3.
APPENDIX H (4)

REQUIREMENTS FOR GROUP D OCCUPANCIES

1. DEFINITION

2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE

3. LOCATION ON PROPERTY

4. EXIT FACILITIES
   a) Occupant content
   b) Widths of exits
   c) Arrangement of exits
   d) Travel distance
   e) Special restriction

5. LIGHT AND VENTILATION

6. FIRE PROTECTION AND HAZARDS

7. PLUMBING AND TOILET FACILITIES
APPENDIX H (4)

REQUIREMENIS OF GROUP D OCCUPANCIES

1. GROUND DEFINITION

Group D Occupancy is defined in Section 301.5 as being buildings used for business or professional transactions or for the display of materials or finished products. This Group is divided into two divisions in which markets and shops are separated from the other office buildings and small restaurants.

2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE

General
Buildings, or parts of buildings classed in Group D because of use or occupancy, shall be limited in height and area as given in Table 3-3.

Special provisions
a) Basements shall be of Type 1 construction
b) Buildings on open lots, if used for the dispensing of gasoline, shall be as set forth in Appendix H (2) paragraph 2 (b).

3. LOCATION ON PROPERTY

Buildings with Group D Occupancy shall comply with the requirements of the Director of Planning as given in the Development Manual and with Tables 3-4 to 3-7.

4. EXIT FACILITIES

Exit facilities for Group D Occupancies shall be as set forth in this Appendix and in Section 5.

   a) Occupancy content

   For determining exit requirements of Group F Occupancy, the occupant content shall be the area within the perimeter of the building or fire division, any floor level with no deduction for corridors, divided by the specified area per person as given in Table 3-1.

   The occupancy content of floors or spaces used for assembly purposes shall be computed as set forth in Table 3-1. The occupant content shall be the reasonable maximum capacity based on the intended use as determined by the Director.

   (H-24)
b) Widths of exits

Street floor exits shall be provided based on 22 inch of exit width for each 100 persons or fraction thereof on the street floor plus one and one-half units for each two units of stairway or ramp from upper or lower floors where such floors discharge through the street floors.

c) Arrangement of exits

i) Interior spaces

Rooms or spaces shall have not less than two remote exits except where having an occupant content of less than 25 persons, having direct exit to public space and with travel distance not exceeding 50 feet a single exit may be provided.

In self-service stores, no check out stand or association railing turnstile or barrier shall obstruct exits, aisles or approaches thereto.

Not less than one half of the required exits from the first or ground floor of a mercantile occupancy shall be to the main entrance and exit.

In self-service stores where wheeled carts or buggies are used by customers, adequate provision shall be made for the transit and parking of such carts to minimize the possibility that they may obstruct exits.

ii) Floors

There shall be not less than two remote paths of egress from each floor except that floors of buildings not exceeding two stories and having an occupant content of not more than 25 persons may have a single door, or an enclosed stairway, exiting directly to the exterior.

Floor exits shall be by means of stairways, ramps, horizontal exits, passageways as specified in Section 5 or by doors at or near grade, directly to the exterior. Dead ends in exit corridors beyond a floor exit or other corridor having two remote exits shall not exceed 20 feet.

The upper floor of two-storey buildings shall have enclosed interior stairways for not less than one-half of the required exits by smokeproof towers.

Where floors are divided in fire divisions, one exit from each such division may be a horizontal exit.
iii) Doors

Doors in paths of egress, normally closed and latched, and serving more than 50 persons, shall be equipped with panic hardware.

d) Travel distance

The exits shall be so arranged that the maximum travel distance from any point or from the door of separated spaces having an occupant content of less than 50 persons, to the nearest floor exit shall not exceed 150 feet except that if high hazard commodities are displayed or handled without protective wrappings or containers the travel distance shall not exceed 75 feet.

e) Special restriction

Smokeproof towers and enclosed interior stairways shall not be taken down to basement level. Basement exits shall be separate.

5. LIGHT AND VENTILATION

All portions of Group D Occupancies customarily used by human beings shall have light and ventilation as provided in Section 11.

6. FIRE PROTECTION AND HAZARDS

a) Automatic sprinkler systems, fire extinguishers and standpipes shall be as set forth in Section 5.

b) The service of hazardous utilities shall be as set forth in Section 3 Part 3 of CUBiC.

c) Electrical installations shall be as required herein and as specified in Section 11.

d) The storage of flammable materials shall be as set forth in Part 3 Section 3 of CUBiC.

7. PLUMBING AND TOILET FACILITIES

a) Plumbing shall be installed as set forth in Section 9

b) Toilet accommodation shall be as set out in Section 3

(H-26)
APPENDIX H (5)

REQUIREMENTS OF GROUP E OCCUPANCIES

1. DEFINITION

2. CONSTRUCTION ON HEIGHT AND AREA ALLOWABLE

3. LOCATION ON PROPERTY

4. EXIT FACILITIES
   a) General
   b) Occupant content
   c) Widths of exits
   d) Arrangement of exits
   e) Travel distance
   f) Special restriction

5. LIGHT AND VENTILATION
   a) General
   b) Rooms

6. FIRE PROTECTION AND HAZARDS

7. PLUMBING AND TOILET FACILITIES

(H-27)
APPENDIX H (5)

REQUIREMENTS OF GROUP E OCCUPANCIES

1. DEFINITION

Group E Occupancy shall include multiple-residential uses such as private residences, hotels, motels and other buildings as listed in 301.5.

2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE

a) Buildings, or parts of buildings classed in Group E because of use or occupancy shall be limited in height and area as given in Table 3-1.

b) EXCEPTION: Type 3 (Protected) buildings may be three stories in height if the floor level of the third floor is not more than 20 feet above the grade adjacent thereto, but where this exception is use, load bearing walls shall be of non-combustible materials.

c) Basement shall be of Type 1 construction.

3. LOCATION PROPERTY

a) Buildings with Group E Occupancy shall comply with the requirements of the Director of Planning as given in the Development Manual and the requirements herein stated, whichever are the more restrictive.

b) Exterior walls of buildings of Group E Occupancy shall have fire resistance and opening protecting determined by location on property as set forth for the Type of Construction given in Table 3-3.

4. EXIT FACILITIES

a) General

Exit facilities for Group E Occupancies shall be as set forth in this Appendix and in Section 5.

b) Occupant content

For determining exit requirements of Group E Occupancy, the occupant content shall be the area within the perimeter of the building, or fire division any floor level, including all floors of residential apartments, with no deduction for corridors, divided by an area of 125 square feet per person except that dormitory room shall be computed at 30 square feet per person.
c) Widths of exits
   i) Exits from street or ground floors shall be provided on the basis of one unit (22-inches) of exit width for each 50 persons or fraction thereof on the ground floor plus one unit for each unit of exit width exiting through the ground floor from other floors.

   ii) Exits from upper or lower floors other than the ground floor shall be provided on the basis of one 22-inch unit of exit width for each 30 persons or fraction thereof.

   iii) All required paths of egress from floors shall be not less than 44 inches in width, except that where serving floors having not more than four apartment units or eight hotel rooms, one such required path of egress may be no less than 36 inches in width.

   iv) The minimum width of exit doors from dwelling units or hotel rooms shall be not less than as given in Table 5-2.

   v) Residential apartment units in multiples apartment buildings, having a second floor or balcony contained wholly within the unit not exceeding 1,000 square feet and an additional exit not less than 30 inches in width from upper areas exceeding 1,000 square feet. Width of exit from main floors of residential apartment units shall be as otherwise set forth in this Appendix.

   iv) Exit courts on lot lines shall have a clear width, not less than required by Town Planning but not less than 44 inches, and inner courts shall have a clear width of not less than ten feet.

d) Arrangement of exits:

   i) Unit exits:

   Dwelling units and hotel rooms, 800 square feet or more in area, shall have not less than two remote exits, except as otherwise provided for the upper floors of residential-type apartment.

   The landing on the upper floor of residential apartment units shall be directly accessible from all rooms on such upper floors, and the stairway shall discharge on the main floor of the unit in close proximity to a path of egress from the unit. Where the upper floor of such unit has a gross floor area in excess of 1,000 square feet, not less than two exits shall be provided, one of which shall be enclosed and shall discharge directly to a path of egress from the floor.

ii) Floor

   There shall be not less than two remote paths of egress from each floor except for two floor building containing only three apartments.
Floor exits shall be by means of stairways, ramps, horizontal exits and passageways as specified in section 5 or by doors at or near grade, directly to the exterior.

Dead ends in exit corridors beyond a floor exit or other corridor having two remote exits shall not exceed 20 feet.

The upper floor of two-storey buildings may have enclosed interior stairways for not less than one-half of the required floor exits. Other upper floor exits may be open exterior stairways or enclosed interior stairways.

The upper floors of three-storey buildings shall have enclosed interior stairways for not less than one-half the required floor exits. Other upper floor exits may be open exterior stairways or enclosed interior stairways.

EXCEPTION

Where the floor level of the third floor does not exceed 220 feet above grade, all floor exits may be open exterior stairways.

The upper floors of buildings which exceed three stories shall have enclosed interior stairways, except that buildings which exceed five stories shall have not less than one-half of the required exits by smoke proof towers.

Where floors are divided in fire divisions, one exit from each such division may be a horizontal exit.

iii) Doors

Doors in paths of egress, normally closed and latched, and serving more than 50 persons, shall be equipped with panic hardware.

e) Travel distance

i) General

The exits shall be so arranged that the maximum travel distance from any point or from the door of separated spaces less than 1,000 square feet to the nearest floor exit shall not exceed 100 feet except that the travel distance in any room where one exit is permitted shall not exceed 50 feet.

ii) Apartments

Exits and means of access thereto shall be so located that it will not be necessary to travel more than 50 feet nor traverse more than one flight of stairs, within any individual living unit to reach the nearest exit, or to reach an entrance of the apartment.

(H-30)
iii) Doors and windows

(aa) Every sleeping room below the eighth floor in Group E Occupancies shall have at least one openable windows or exterior door to permit emergency exit or rescue.

(bb) Where such windows are provided, such windows shall have a sill height of not less more than 48 inches above the floor and shall provide not less than five square feet of openable area with no dimension less than 22 inches.

iv) Transoms and ventilating openings

Buildings more than one storey in height shall have no transoms or ventilating openings from guest rooms to enclosed public corridors.

f) Special provisions

Where Group D Occupancy buildings exceed three stories in height and where the distance between floor exits exceeds 100 feet, smoke doors shall be provided in the corridors. Those smoke doors shall be centrally located between the exits and shall take the form of doors hung in recesses in the corridor walls. The doors, when in the open position, shall be flush with the wall of the corridor.

Smoke doors shall be kept in an open position at all times, when not in use, by means of magnetic catches. These catches shall be connected to the fire alarm system in such a manner that the doors will be released when the alarm is activated. When the doors are in a closed position they shall not be secured by any means that impeded easy passage through the doorway. The doors shall be of such size or framed in such a manner that when closed they effectively control the spread of smoke in the corridor.

The doors shall be a minimum of 6 feet 8 inches in height and shall be of a width deemed necessary to meet the exit requirements and shall be of 1 3/8 inches solid construction with a 10 inches by 10 inches wired glass panel. These doors shall be tested in the presence of the Director at six month intervals.

g) Special restriction:

Smoke proof towers and enclosed interior stairways shall not be taken down to basement level. Basement exits shall be separate.
5. LIGHT AND VENTILATION

a) General

i) Rooms used for sleeping or living purposes shall be provided with light and ventilation by means of widows in exterior walls with an area not less than one eighth of the floor area of such rooms and not less than one-half of the required windows area shall be openable.

ii) Other spaces for human occupancy such as lobbies, locker rooms dining rooms, kitchens, and toilet rooms shall be provided with light by means of windows as herein set forth or shall be provided with electric light and a mechanically operated ventilating system as set forth in Chapter 40.

iii) Rooms used for sleeping and living purposes where located as the first occupied space below a roof, shall be protected from extreme temperatures. The overall coefficient of heat transmission or “U” factor of such roof construction shall not be greater than 0.22.

iv) The floor area for an apartment shall be not less than required by applicable Physical Planning and Ministry of Health Regulations.

b) Rooms

i) Sleeping rooms

Rooms used for sleeping shall have a minimum width of eight feet and a minimum floor area with the immediate enclosing walls, exclusive of closets and toilets, as required by the Minister of Health.

Rooms, the floor of which is more than three feet below grade and which depend of natural ventilation shall not be used for sleeping purposes. The minimum average height of each sleeping room shall be 7 feet 6 inches and least height of the WC and bath shall be seven feet.

ii) Living and dining rooms

Living and Dining rooms shall have a minimum average height of eight feet. Where fans are being used the minimum height should be nine feet.

iii) Kitchen and corridors

Kitchen and corridors shall have a minimum height of seven feet six inches.
iv) **Toilet rooms**

Toilet rooms shall have a minimum height of seven feet, a minimum width as given in Table 5-1.

6. **FIRE PROTECTION AND HAZARDS**

   a) Automatic sprinkler systems, fire extinguishers and standpipes shall be as set forth in Section 5.

   b) The service of hazardous utilities shall be as set forth in Section 5 and in Part 3 Section 3.300 of CUBiC.

   c) The storage of flammable materials shall be as set forth in Part 3 Section 3.303 of CUBiC.

7. **PLUMBING AND TOILET FACILITIES**

   a) Plumbing and toilet facilities shall be as provided in Section 9 and Section 3.

   b) Toilet rooms serving one-family unit shall have outside openings screened with 18-mesh wire screening. The minimum openable area shall be 2 square feet.

   c) For occupancies with an occupant content of ten or more persons, separate facilities shall be provided for employees.

   d) Separate facilities consisting of water closet, a lavatory, and a bath or shower shall be contiguous thereto and directly accessible from each hotel room.

   e) Lavatories may be located in rooms provided there is no conflict with minimum requirements otherwise set forth in Section 3.
APPENDIX H (6)

REQUIREMENTS OF GROUP F OCCUPANCIES

1. DEFINITION

2. CONSTRUCTION, HEIGHT AND AREA ALLOWABLE

3. LOCATION ON PROPERTY

4. EXIT FACILITIES
   a) Occupant content
   b) Widths of exits
   c) Arrangement of exits
   d) Travel distance

5. LIGHT AND VENTILATION

6. ENCLOSURE OF VERTICAL OPENINGS

7. FIRE PROTECTION AND HAZARDS

8. PLUMBING AND TOILET FACILITIES

(H-34)
APPENDIX H (6)

REQUIREMENTS OF GROUP F OCCUPANCIES

1. DEFINITION

Group F Occupancy is defined in 301.7 and shall include such hazardous uses as storage and use of highly combustible materials or explosives and is listed in Appendices D (1), D (2) and D (3) of this Code.

2. CONSTRUCTION, HEIGHT AND AREA ALLOWANCE

   a) General

   Buildings, or parts of buildings classed in Group F because of use or occupancy shall be limited in height and area as given in Tables 3-1 and 3-3.

   b) Other Laws

   Developers must examine the Development Manual and the laws of the Turks and Caicos Islands which affect the manufacture and/or storage of flammable or hazardous material.

   c) Special provisions

   Floors shall be of non-combustible materials protected against saturation and basements shall be Type 1 construction.

3. LOCATION ON PROPERTY

   Buildings with Group F Occupancy shall comply with the requirements of Development Manual and be in accordance with Tables 3-4 to 3-7.

4. EXIT FACILITIES

   Exit facilities for Group F Occupancies shall be as set forth section 5 and the following:

   a) Occupant content

   For determining exit requirements of Group F Occupancies, the occupant content shall be calculated in accordance with Table 3-1 the area within the perimeter of the building, or fire division at any floor level, with no deductions for corridors shall be used as the basis for the calculation.
b) Width of exits

Exits shall be provided as follows: (a) street floor exits shall be provided based on one 22 inch of exit width for each 100 persons or fraction thereof on the street floor plus one and one half units for each two units of stairway or ramp from upper or lower floors where such floors discharge through the street floor.

Upper or lower floors other than street shall have one n inch of exit width for each 60 persons or fraction thereof except that horizontal exits and smoke towers may serve 100 persons for each 22 units of exit width.

c) Arrangement of exits

i) Interior spaces

Occupied rooms, including mezzanines, shall have paths of egress so located that travel from such rooms to a floor exit is not subjected to hazardous exposure.

Rooms including mezzanines, 400 square feet or more in area, shall have not less than two remote exits.

ii) Floors

There shall be not less than two remote paths of egress from each floor.

Floor exits shall be by means of stairways, ramps, horizontal exits, passageways as specified in Section 6, or by door & at or near grade, directly to the exterior.

The upper floors of two storey buildings may have enclosed interior stairways or exterior open stairways.

The upper floors of three storey buildings shall have enclosed interior stairways for not less than one half the required floor exits.

Other upper floor exits may be open exterior stairways or enclosed interior stairways.

The upper floors of buildings which exceed three stories shall have smoke proof towers for not less than one half the required floor exits. Other upper floor exits shall be enclosed interior stairways.

Where floors are divided in fire divisions, one exit from each such division may be a horizontal exit.
iii) Doors

Doors in paths of egress, normally closed and latched, and serving more than 50 persons, shall be equipped with panic hardware.

d) Travel distance

Exits shall be so arranged that the maximum travel distance from any point to the nearest floor exit shall be not more than 75 feet.

EXCEPTION: The travel distance in any room, including mezzanines, where one exit door is permitted, shall not exceed 25 feet.

5. LIGHT AND VENTILATION

a) All portions of Group F Occupancies customarily used by human beings shall have light and ventilation as set forth in Section 11. All portions of buildings where flammable liquids are used or stored shall be provided with mechanical ventilation.

b) In all buildings where flammable liquids are used or stored, mechanical exhaust ventilation shall be provided, sufficient to produce one complete change of air every 10 minutes. Such exhaust ventilation shall be taken from a point at or near floor level and shall be in operation when the building is occupied by human beings.

6. ENCLOSURE OF VERTICAL OPENINGS

Vertical openings shall be enclosed and shall be of non-combustible materials of not less than one hour fire resistive materials. Walls adjacent to open interior stairways and the soffit thereof shall be constructed of not less than one hour fire resistive materials as specified in Section 4.

7. FIRE PROTECTION AND HAZARDS

a) Automatic sprinkler systems, fire extinguishers, and standpipes shall be as set forth in Section 5.

b) Electrical installations shall be as required herein and as specified in Section 11.

c) The storage or use of flammable materials shall be as set forth in Part 3 Section 3 of CUBiC or any other Code approved by the Board.

d) No combustion heater shall be installed in Group F Occupancies.
e) Each machine in dry-cleaning plants which use a flammable liquid shall have an adequate steam line connected to it, so arranged as to automatically fill the machine with steam in case of fire.

f) Paint spraying and dipping shall comply with the requirements set forth in CUBiC Part 3 Section 3.312.

8. PLUMBING AND TOILET FACILITIES

a) Plumbing shall be installed as set forth in Section 9.

b) Toilet accommodation shall be as set forth in Section 3.
APPENDIX I (1)

TYPE I BUILDINGS - FIRE RESISTIVE

Contents

1. DEFINITION
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3. STRUCTURAL FRAMEWORK
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6. ROOFS
   a) Materials
   b) Fireproofing
   c) Roof Coverings
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   e) Furred Spaces above a Ceiling
7. ENCLOSURE OF VERTICAL OPENINGS
8. STAIRWAYS
9. DOORS AND WINDOWS
10. PROJECTIONS FROM THE BUILDING
11. ROOF STRUCTURES
12. COMBUSTIBLE MATERIALS
APPENDIX I (1)
CLASSIFICATION BY TYPES OF CONSTRUCTION

TYPE 1 BUILDINGS (FIRE RESISTIVE)

1. DEFINITION

The structural frame of Type 1 buildings or structures shall be of steel or reinforced concrete or masonry as noted below. Walls, permanent partitions, roofs and floors shall be of noncombustible fire-resistive construction except as otherwise set forth herein.

2. GENERAL

a) Allowable height and area shall be as specified in Section 3 Table 3-3.

b) Loads and material stresses shall be as specified in Section 12.

3. STRUCTURAL FRAMEWORK

a) The primary structural framework shall be of not less than the following fire-resistive construction: exterior frame four hours; interior frame three hours as per Table 3-4, Section 3.

b) Unless specifically designed as a structural frame, the walls shall be considered as load-bearing and shall be constructed of masonry or reinforced concrete except that 8 inch masonry block walls shall be limited to 20 feet in height and 12 inch masonry block walls shall be limited to 30 feet in height. Bearing walls shall be of fire-resistive construction as set forth in Tables 3-4 to 3-7.

4. WALLS AND PARTITIONS

a) Distance separations shall be measured at right angles from the wall or opening to the building line of continuous lot or any building on the same lot. The building line of a continuous lot should be taken as that for the use of the contiguous lot which requires the least set back from the property line, and in no case shall this setback be taken as more than five feet from and parallel to the common lot line.

b) Main exterior walls shall be of noncombustible four hour fire resistive construction as per Tables 3-4 to 3-7.

c) Openings in main exterior walls should be as follows:

i) Walls having a distance separate on of less than five feet, or walls, except on street fronts, which are less than five feet from the building line of continuous lot, shall have no openings.
ii) Openings in walls of buildings having a distance separation or from five to ten shall be protected by fire-resistive doors or windows. The total area of openings in any storey shall be limited to 30 percent with no single opening more than ten percent of such wall area. Walls having a distance separation of more than ten feet but less than 30 feet shall be protected by ordinary doors or windows not exceeding 50 percent of the wall area in any storey.

d) Buildings having exterior walls without openings shall be provided with access panels along street fronts or walls otherwise accessible for fire-fighting entrance to the building as follows:

i) The access openings in each accessible side of a building not over 65 feet in height shall be not less than one suitably marked access opening not less than 32 inches wide and 48 inches high with still not over 32 inches above the floor spaced not more than 50 apart on each floor each side.

ii) The access openings in each accessible side of a building over 65 feet in height shall be not less than

(aa) windows spaced not more than 50 feet apart and equivalent to 10 % or more of the wall area, on each floor of each such side, or

(bb) Smokeproof towers spaced not over 100 feet apart on each such accessible side. The smokeproof towers may serve as a required exit way.

e) Fire walls shall be of the fire-resistive rating as required in Section 4.

f) Interior bearing walls shall be of three-hour fire-resistive construction as per Table 3-4 to 3-7, except that:

i) Corridor partitions shall also comply with Sub-section 503 Means of Escape.

ii) Partitions subdividing offices, stores, apartments and similar uses within the area occupied by a single tenant may be constructed without a fire-resistive rating provided the materials of construction are:

(aa) Noncombustible or

(bb) Fire-retarded treated wood or

(cc) Of other wood provided a space of not less than 18 inches, as measured down from the ceiling, shall be open or of transparent non-combustible material.

(I-3)
5. FLOORS

a) Material

i) Floor systems shall be of noncombustible materials. Poured-in-place concrete slabs shall be not less than 2-1/2 inches thick where removable forms are used nor less than 2 inches thick where tile, metal decking or similar structural form element is to remain as a permanent component of the structure.

ii) Where wood floors are laid over concrete slabs, the space between the floor slab and the underside of the finish floor shall be filled with noncombustible materials.

b) Fireproofing

Floors for buildings more that eight stories or more than 100 feet in height shall be of not less than three hour fire-resistive construction; floors for buildings eight stories or less or 100 feet or less in height shall be of not less than two-hour fire-resistive construction. The use of bar joists shall be limited to buildings for four stories.

6. ROOFS

a) Materials

Roof systems shall be of noncombustible materials. Poured-in-place concrete slabs shall be not less than 2-1/2 thick where removable forms are used nor less than 2 inches thick where tile, metal decking or similar structural-form element is to remain as a permanent component of the structure.

ii) Where wood floors are laid over concrete slabs, the space between the floor slab and the underside of the finish floor shall be filled with noncombustible materials.
b) Fireproofing

Roofs for buildings more than eight stories or more than 100 feet in height shall be of not less than three-hour fire-resistant construction roofs for buildings eight stories or less or 100 feet or less in height shall be of not less than two-hour fire-resistant construction.

c) Roof Coverings

Roof coverings shall be fire-retardant in accordance with the test procedure of the BSI or ASTM. (See Part 3 Section 3.605.4 of CUBiC)

d) Roof Drainage

Roof drainage and the disposal of rainwater shall be as specified in Section 9 - Plumbing. In general, roof systems not designed to support accumulated water shall be sloped for drainage. Rain water drains or leaders where required shall be used and sized in conformance with the Section 9. (Chapter 36).

e) Furred Spaces above a Ceiling

Access trap doors, not less than 16 inches by 30 inches, shall be provided to all spaces above a furred ceiling having a minimum vertical distance of 36 inches. Such access trap doors shall be from common spaces such as corridors and no part of such furred space shall be more than 100 feet from an access trap door. Walkways shall be provided in such furred spaces above the ceiling.

7. ENCLOSURE OF VERTICAL OPENINGS

Enclosure of vertical openings shall be of noncombustible materials and not less than one hour fire-resistant construction, and where such openings exceed eight square feet in area shall be of not less than two-hour fire-resistant construction, with fire-resistant doors and/or windows.

8. STAIRWAYS

a) Stairways shall be as required in Section 5.

b) Stairs, stair platforms, treads and riser shall be constructed of non-combustible materials. Unprotected steel or iron stairways may be used only when enclosed.
9. **DOORS AND WINDOWS**

   a) Doors, windows and similar openings in exterior walls, fire walls and enclosure walls shall be protected or entirely prohibited. Section 4 sub-section 404 provides information on the requirements for fire doors and fire windows assemblies.

   b) Doors and windows shall not project over public property or restricted areas.

10. **PROJECTIONS FROM THE BUILDING**

    a) Cantilevering projections outside of the main exterior walls of the building shall be of non-combustible materials and of not less than one-hour fire-resistive construction.

    b) Canopies, awnings and marquees forming part of the construction but outside of the main exterior walls of the building but not cantilevered from the building shall be constructed of non-combustible materials but need not have fire-resistive protection.

11. **ROOF STRUCTURES AND SKYLIGHTS**

    a) Towers, pylons, masts, signs and similar structures above a roof, when not enclosed, shall be of noncombustible materials.

    b) Roof structures, including bulkhead area shall be limited in total combined area to 30 percent of the area of the roof, shall extend not more than 50 feet above the roof and any enclosure having a floor area of more than 15 square feet shall be constructed as required for the main portion of the building.

    c) Minor roof structures having an area of 15 square feet or less, housing ventilating shafts or similar openings shall be constructed of non-combustible materials.

    d) Storage tanks, having a capacity of over 500 gallons, shall not be located over stairways or elevators.

    e) Skylights shall be constructed of non-combustible materials and transparent or translucent materials shall be fire-resistive.

    f) Where required to control rain water runoff, a curb not less than eight inches in height shall be provided.

    g) Where the public has access to roof areas, a guard rail not less than 36 inches above the roof shall be provided around all open wells or shafts and at all exterior walls.

    h) Skylights placed over shafts, vent shafts, stair enclosures, and exit ways, shall be glazed with glass or other approved non-combustible material which may be easily pierced by fire-fighting personnel.
12. COMBUSTIBLE MATERIALS

Combustible materials shall be permitted for the following uses unless otherwise specifically prohibited:

a) Show-window bulkheads shall be of non-combustible materials, but show cases and other moveable appurtenances of stores or other buildings may be of wood.

b) Trim, picture moldings, furniture, and permanent seats, chair rails, wainscoting, baseboards, furring strips and blocking handrails, show window backing temporary partitions conforming to Sub-section 4 of this Appendix floor finishes and sleeper may be of combustible materials. Wood doors or windows or frames may be used except where fire-resistive protection is required.

c) Loading platforms, and roofs over loading platforms, for warehouse, freight depots and buildings of similar use may be of heavy timber construction provided such heavy timber construction does not penetrate the exterior walls.

d) All materials used for interior finishes shall be in accordance with Part 3 Section 6 Paragraph 3.606.2 of CUBiC.

e) In places of public assembly, all draperies, hanging and other decorative materials suspended from walls or ceilings shall be non-combustible or flame-resistant meeting the requirements of the code as herein specified:

   Non-combustible: The permissible amount of non-combustible decorative hangings shall not be limited.

   Flame-resistant: The permissible amount of flame-resistant decorative hangings shall not exceed ten (10) percent of the total wall and ceiling area.
APPENDIX I (2)

TYPE 2 BUILDINGS - SEMI-FIRE RESISTANT

Contents

1.  DEFINITION
2.  GENERAL
3.  STRUCTURAL FRAMEWORK
4.  WALLS AND PARTITIONS
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   a)  Material
   b)  Fire proofing
6.  ROOFS
   a)  Materials
   b)  Fireproofing
   c)  Roof Coverings
   d)  Roof Drainage
   e)  Attic Spaces
7.  ENCLOSURE OF VERTICAL OPENINGS
8.  STAIRWAYS
9.  DOORS AND WINDOWS
10. PROJECTIONS FROM THE BUILDING
11. ROOF STRUCTURES AND SKYLIGHTS
12. COMBUSTIBLE MATERIALS
APPENDIX I (2)

TYPE 2 BUILDINGS (Semi-Fire-Resistive)

1. DEFINITION
   a) The structural frame of Type 2 buildings or structures shall be of steel or reinforced concrete or masonry as noted below.
   b) Walls, permanent partitions, roofs and floors shall be of non-combustible fire-resistive construction except that permanent non-load-bearing partitions of one-hour fire resistive construction may use the-retardant treated wood within the assembly.

2. GENERAL
   a) Allowable height and area shall be as specified in Section 3.
   b) Loads and material stresses shall be as specified in Section 12.
   c) Required fireproofing shall be as set forth in Section 4.

3. STRUCTURAL FRAMEWORK
   a) The primary structural framework shall be of not less than three-hour fire-resistive construction for members in exterior walls and of not less than one hour fire-resistive construction for members in the interior frame as per Tables 3-4 to 3-7.
   b) Unless specifically designed as a structural frame, the walls shall be considered as load-bearing and shall be constructed of masonry or reinforced concrete except that 8 inch masonry block walls shall be limited to 20 feet in height and 12 inch masonry block walls shall be limited to 30 feet in height. Bearing walls shall be of fire-resistive construction as set forth in Table 3-2.

4. WALLS AND PARTITIONS
   a) Exterior walls shall be as set forth in Tables 3-4 to 3-7.
   b) Fire walls shall be of the fire-resistive rating as required in Tables 3-2 and 3-4 to 3-7.
   c) Interior bearing walls shall be of noncombustible one-hour fire-resistive construction as per Tables 3-4 to 3-7.
   d) Partitions shall be of not less than one-hour fire resistive construction except as provided in Tables 3-4 to 3-7.

(I-9)
5. FLOORS

a) Material

i) Floor systems shall be of noncombustible material or fire-retardant treated wood.

   Exception: Fire retardant treated wood may not be used in buildings exceeding two stories in height.

ii) Wood joists shall not be used to support concrete and cement-base tile or terrazzo floor surfaces other than for bathrooms or less than 100 square feet in area.

iii) Spaces under a ground floor shall have the clearance and ventilation as set forth in the Section 14. Openings shall be provided to all space under the building.

b) Fireproofing

Moors and all parts thereof shall be of not less than two-hour fire-resistive construction as per Tables 3-4 to 3-7, except that where the space under a ground floor has clearance of less than three feet, such fire protection for the ground floor may be omitted.

6. ROOFS

a) Materials

   Roof systems shall be of noncombustible materials or of fire-retardant treated wood.

b) Fireproofing

   Roofs and all parts thereof shall be of net less than one-hour fire-resistive construction as per Tables 3-4 to 3-7, except as follows:

i) Roofs, where every pan of the structural framework is 20 feet or more above any part of the floor, balcony or gallery, may be on unprotected non-combustible materials or fire-retardant treated wood.

ii) Roofs of one-storey open sheds not more than 75 percent enclosed by walls, in which the travel distance to the nearest exit does not exceed 40 feet, may be of unprotected noncombustible materials.
c) Roof Coverings

Roof coverings shall be fire-retardant and as specified in Part 3 Section 6 of CUBiC.

d) Roof Drainage

Roof drainage and the disposal of rainwater shall be as specified in the Section 9. In general, roof systems not designed to support accumulated water shall be sloped for drainage.

e) Attic Spaces

Attic spaces shall not be required, but where attic spaces are provided such spaces shall have a minimum vertical dimension of 18 inches clear distance and where unprotected combustible material is exposed, shall be divided, by fire-stops, into areas not exceeding 2500 square feet, or less depending on individual occupancy. Access trap doors, not less than 16 inches by 30 inches, shall be provided to all attic spaces. Such access trap doors shall be from common spaces such as corridors, and no part of an attic space shall be more than 100 feet from an access trap door.

7. ENCLOSURE OF VERTICAL OPENINGS

a) Enclosure of vertical openings shall be of noncombustible materials and where such openings exceed eight square feet in area shall be not less than one hour fire-resistive construction, with fire-resistive doors and/or windows.

b) Where the enclosure of vertical openings is required to be of not less than one-hour fire-resistive construction the materials of construction shall be noncombustible or fire-retardant treated wood.

8. STAIRWAYS

a) Stairways shall be as required in the Section 5.

b) Stairs, stair platforms, treads and riser shall be constructed of non-combustible materials. Unprotected steel or iron stairways may be used only when enclosed.

9. DOORS AND WINDOWS

a) Doors, windows and similar openings in exterior walls, fire walls and enclosure walls shall be protected or entirely prohibited as set forth in Section 5.

b) Doors and windows shall not project over public property or restricted areas.

(I-11)
10. PROJECTIONS FROM THE BUILDING

a) Cantilevering projections outside of the main exterior walls of the building shall be of non-combustible construction or fire-retardant treated wood, and shall be of not less than one-hour fire-resistive construction.

b) Canopies, awnings and marquees forming part of the construction but outside of the main exterior walls of the building but not cantilevered from the building shall be constructed of non-combustible materials but need not have fire-resistive protection.

11. ROOF STRUCTURES AND SKYLIGHTS

a) Towers, pylons, masts, signs and similar structures above a roof, when not enclosed, shall be of noncombustible materials. Roof structure extending more than 25 feet above the roof or signs more than 100 square feet in area shall be supported to the ground by a non-combustive frame, unless already incorporated into the building frame design.

b) Roof structures, including bulkheaded areas, shall be limited in total combined area to 30 percent of the area of the roof shall extend not more than 20 feet above the allowable height and any enclosure having a floor area of more than 15 square feet shall be constructed as required for the main portion of the building.

c) Minor roof structures having an area of 15 square feet or less, housing ventilating shafts or similar openings shall be constructed of non-combustible materials.

d) Storage tanks, having a capacity of over 500 gallons, shall not be located over stairways or elevators.

e) Skylights shall be constructed of non-combustible materials and transparent or translucent materials shall be fire-resistive.

f) i) Parapets shall be required on exterior walls except where the roof is of noncombustible, fire-resistive construction.

ii) Parapets shall be not less than 20 inches above the roof immediately adjacent thereto where located 20 feet or less to/from the building line of a contiguous lot or any building on the same lot, and shall be constructed as set forth in Section 15.

iii) Where required to control rain water runoff, a curb not less than eight inches in height shall be provided.

g) Where the public has access to roof areas, a guard rail not less than 36 inches above the roof shall be provided around all open wells or shafts and at all exterior walls.
12. COMBUSTIBLE MATERIALS

a) Combustible materials shall be permitted except where specifically prohibited in this Appendix.

b) Loading platforms for warehouses, freight depots and buildings may be of heavy timber construction with wood floors not less than one and five-eighths inches thick. Such wood construction shall not be carried through the exterior walls.

c) Interior finishes shall be as set forth in Part 3 Section 6 of CUBiC.
APPENDIX I (3)

TYPE 3 BUILDINGS - ORDINARY MASONRY

Contents

1. DEFINITION

2. GENERAL

3. STRUCTURAL FRAMEWORK
   a) Materials
   b) Fireproofing
   c) Heavy Timber Construction

4. WALLS AND PARTITIONS

5. FLOORS
   a) Material
   b) Fireproofing

6. ROOFS
   a) Materials
   b) Fireproofing
   c) Roof Coverings
   d) Roof Drainage
   e) Attic Spaces

7. ENCLOSURE OF VERTICAL OPENINGS

8. STAIRWAYS

9. DOORS AND WINDOWS

10. PROJECTIONS FROM THE BUILDING

11. ROOF STRUCTURES AND SKYLIGHTS

12. COMBUSTIBLE MATERIALS
APPENDIX I (3)

TYPE 3 BUILDINGS - ORDINARY MASONRY

1. DEFINITION
   a) i) Type 3 buildings or structures shall have an exterior structural frame of steel or reinforced concrete or of fire-retardant treated wood, or shall have exterior load-bearing walls of non-combustible, fire-resistive construction.

   ii) Type 3 buildings or structures shall have an interior structural frame of steel reinforced concrete, wood, or interior load bearing walls of non-combustible materials or wood.

   iii) Partitions, floors and roof framing may be of wood.

   b) Walls, permanent partitions, roofs and floors shall be of non-combustible fire-resistive construction, except that permanent non-load-bearing partitions of one-hour fire resistive construction may use fire-retardant treated wood within the assembly.

2. GENERAL
   a) Allowable height and area shall be as specified in Section 3.

   b) Loads and material stresses shall be as specified in Section 12.

   c) Required fireproofing shall be as set forth in Section 4.

3. STRUCTURAL FRAMEWORK
   a) Materials

      i) Unless specifically designed as a structural frame with panel walls, the exterior walls shall be considered as load-bearing and shall be constructed of masonry or reinforced concrete except that 8 inch masonry walls shall be limited to 20 feet in height and 12 inch masonry block walls shall be limited to 30 feet in height. Where designed as a structural frame, the materials shall be as specified in sections 14, 15, 16 and 17.

      ii) The interior structural support shall be of steel, reinforced concrete, or interior bearing walls of noncombustible materials or wood studs. (Tables 3-4 to 3-7)
b) Fireproofing

i) Fireproofing shall be as required in sections 3 or 4. Where required or where otherwise referred to in this code as being protected, the structural framework or supports shall be of not less than one-hour fire-resistive construction except that members in the exterior walls shall have the fire protection as set forth in Tables 3-4 to 3-7.

ii) All steel members supporting masonry in buildings over one Storey in height shall be fire-proofed with not less than one-hour fire resistive construction.

iii) Heavy timber structures, designed and constructed in accordance with Section 14, shall be considered the equivalent of one-hour fire-resistive protection.

c) Heavy Timber Construction

i) General

Heavy timber construction is that type in which fire resistance is attained by placing limitations on minimum sizes of wood structural members including the thicknesses and compositions of wood floors and roofs and by the use of approved fastenings and construction details.

ii) Heavy Timber Framing

Heavy timber columns, floors sizes and framing, roof sizes and framing, and construction details shall be as specified in Section 14.

iii) Heavy Timber Floors

Heavy timber floors shall be constructed as specified in Section 14.

iv) Heavy Timber Roof Decks

Heavy timber roof decks shall be constructed as specified in Section 14.

4. WALLS AND PARTITIONS

a) Exterior walls shall be as set forth in Tables 3-4 to 3-7.

b) Fire walls shall be of the fire-resistive rating as required in Tables 3-4 to 3-7.

c) Interior bearing walls shall be of noncombustible materials or of wood studs, and for Type 3 (protected) buildings, or for Type 3 (unprotected) buildings where supporting upper floors or where adjacent to common corridors shall be of one-hour fire-resistive construction.
5. FLOORS

a) Material
   
i) Floors shall be of non-combustible material or woods.

ii) Wood joists shall not be used to support concrete and cement-base tile or terrazzo floor surfaces other than for bathrooms or less than 100 square feet in area.

iii) Wood post and girder construction shall not be permitted for a ground floor of buildings used by the public and spaces under ground floors shall have the clearance and ventilation as set forth in Section 14.

b) Fire proofing

Floors and all parts thereof of Type 3 buildings shall not be constructed of materials and assemblies of less fire resistance than shown in Tables 3-4 to 3-7, except that where a ground floor has clearance of less than three feet, such fire protection may be omitted.

6. ROOFS

a) Materials

   Roof systems shall be of non-combustible materials or wood.

b) Fireproofing

   Roofs and all parts thereof of unprotected Type 3 buildings and protected Type 3 buildings shall be of not less than one-hour fire-resistant construction, except as follows:

   i) Roofs, where every part of the structural framework is 18 feet or more above any part of any floor, may be of unprotected non-combustible materials or protected combustible materials.

   ii) Roofs of one-storey open sheds not more than 75 percent enclosed by walls, in which the travel distance to the nearest exit does not exceed 40 feet, may be of unprotected noncombustible materials or protected combustible materials.

c) Roof Coverings

   Roof coverings shall be fire-retardant and as specified in CUBiC Part 3 Section 6.
d) Roof Drainage

Roof drainage and the disposal of rainwater shall be as specified in Section 9. In general, roof systems not designed to support accumulated water shall be sloped for drainage.

e) Attic Spaces

Attic spaces shall not be required, but where attic spaces are provided such spaces shall have a minimum vertical dimension of 18 inches clear distance and where unprotected combustible material is exposed, shall be divided, by fire-stops, into areas not exceeding 2,500 square feet, or less depending on individual occupancy. Access trap doors shall be from common spaces such as corridors, and no part of an attic space shall be more than 100 feet from an access trap door.

7. ENCLOSURE OF VERTICAL OPENINGS

Enclosure of vertical openings shall be of noncombustible materials and where such openings exceed eight square feet in area shall be not less than one hour fire-resistive construction. Walls adjacent to open interior stairways and the soffits thereof shall be of not less than one hour fire-resistive construction.

8. STAIRWAYS

Stairways shall be as required in Section 5.

9. DOORS AND WINDOWS

a) Doors, windows and similar openings in exterior walls, fire walls and enclosure walls shall be protected as per Section 4 Sub-section 405.

b) Doors and windows shall not project over public property or restricted areas.

10. PROJECTIONS FROM THE BUILDING

Cantilevering projections outside of the main exterior walls of the building shall be of non-combustible construction and be fire-resistive as specified in this Appendix, except that the projection of wood roof rafters of residential occupancies over private property shall be permitted.
11. ROOF STRUCTURES AND SKYLINES

a) Towers, pylons, masts, signs and similar structures above a roof, when not enclosed, shall be of noncombustible materials. Roof structures extending more than 25 feet above the roof or signs more than 100 square feet in area shall be supported to the ground by an incombustible frame, unless already incorporated into the building frame design.

b) Roof structures including bulkheaded areas, shall be limited in total combined area to 30 percent of the area of the roof, shall extend not more than 20 feet above the allowable height and any enclosure having a floor area of more than 15 square feet shall be constructed as required for the main portion of the building.

c) Minor roof structures having an area of 15 square feet or less, housing ventilating shafts or similar openings shall be constructed of non-combustible materials.

d) Storage tanks, having a capacity of over 500 gallons, shall not be located over stairways or elevators.

e) Skylights shall be constructed of non-combustible materials and transparent or translucent materials shall be fire-resistive.

f) Parapets shall be required on exterior walls except:

i) Where the roof is of non-combustible, fire-resistive construction.

ii) Where the walls of buildings for other than residential occupancy are 20 feet from the building of a continuous lot or any building on the same lot.

iii) Where the building is of residential occupancy.

g) Parapets shall be not less than 20 inches above the roof immediately adjacent thereto and shall be constructed as set forth in Sections 15 or 16.

h) Where required to control rain water runoff a curb net less than eight inches in height shall be provided.

12. COMBUSTIBLE MATERIALS

a) Combustible materials shall be permitted except where specifically prohibited in Section 3 and/or Section 4.

b) Loading platforms for warehouses, freight depots and buildings may be of heavy timber construction with wood floors not less than 1-3/4 inches thick. Such wood construction shall not be carried through the exterior walls.

c) Interior finishes shall be as set forth in CUBiC Part 3 Section 6.
APPENDIX I (4)

TYPE 4 BUILDINGS – NON-COMBUSTIBLE

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1. DEFINITION
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4. WALLS AND PARTITIONS
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6. ROOFS
7. DOORS AND WINDOWS
8. PROJECTIONS FROM THE BUILDING
9. ROOFST STRUCTURES AND SKYLIGHTS
10. COMBUSTIBLE MATERIALS
APPENDIX I (4)

TYPE 4 BUILDINGS - NON-COMBUSTIBLE

1. DEFINITION

All structural and other elements of type 4 buildings shall be of non-combustible materials.

2. GENERAL

a) Allowable heights and areas shall be as specified Section 3.

b) Loads and material stresses shall be as specified in Section 12.

c) Required fireproofing shall be as set forth in Sections 3 and 4.

3. STRUCTURAL FRAMEWORK

The structural framework shall be of steel, aluminum, or reinforced concrete, and fireproofing of structural members shall be required only when such members are a part of an exterior wall as set forth Tables 3-4 to 3-7.

4. WALLS AND PARTITIONS

a) Distance separation shall be measured at night angles from the wall or opening to the building line or a continuous lot or any building on the same lot. The building line of a continuous lot shall be taken as that for the use of the continuous lot which requires the least set back from the property line and in no case shall this set back be taken as more than five feet from and parallel to the common lot line.

b) The main exterior walls shall be of non-combustible materials and such walls shall be of fire-resistive construction with opening protection where located as follows:

   i) Main exterior walls having a distance separation of from five to ten feet shall be of not less than one-hour fire resistive construction and openings therein shall be protected by fire-resistive doors and windows and shall be limited in area to 30 percent of the wall area with no single openings or more than ten percent of such wall area.

c) Fire walls shall be of non-combustible materials and shall be of the fire-resistive rating as required in the Section 3.

d) Interior bearing walls shall be of non-combustible materials.
5. **FLOORS**

Floors shall be of non-combustible material, provided, however that a wood surface or finish may be applied over such non-combustible materials.

6. **ROOFS**

   a) Roof systems shall be of non-combustible materials and fire-proofing shall not be required.

   b) Roof coverings shall be as specified in the CUBiC Part 3 Section 6.

   c) Roof Drainage

      Roof drainage and the disposal of rainwater shall be as specified in Section 9. In general, roof systems not designed to support accumulated water shall be sloped for drainage.

7. **DOORS AND WINDOWS**

   a) Doors, windows and similar openings in exterior walls, fire walls and enclosure walls shall be protected or entirely prohibited as set forth in Sections 3 and 4.

   b) Doors and windows shall not project over public property or restricted areas.

8. **PROJECTIONS FROM THE BUILDING**

    Projections from the building shall be of non-combustible materials.

9. **ROOF STRUCTURES AND SKYLIGHTS**

    a) Roof structures may extend above the allowable height not to exceed 20 feet and shall be of non-combustible materials.

    b) Skylights shall be constructed of non-combustible materials and transparent or translucent materials shall be fire-resistive.

    c) Where the public has access to roof areas, a guard rail not less than 36 inches above the roof shall be provided around all open wells or shafts and at all exterior walls.
10. COMBUSTIBLE MATERIALS

A loading platform may be constructed of heavy timber with wood floors not less than 1-3/4 inches thick. A Type 4 building or structure erected over such platform shall be supported by non-combustible materials to the foundation.
APPENDIX I (5)

TYPE 5 BUILDINGS - WOOD FRAME

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7. STAIRWAYS
8. DOORS AND WINDOWS
9. PROJECTIONS FROM THE BUILDING
10. COMBUSTIBLE MATERIALS
APPENDIX I (5)

TYPE 5 BUILDINGS - WOOD FRAME

1. DEFINITION

All structural and other elements of Type 5 buildings shall be of non-combustible materials or wood or any materials allowed by this code.

2. GENERAL

a) Allowable height and area shall be as specified in Section 3.

b) Loads and material stresses shall be as specified in Section 12.

c) Required fireproofing shall be as set forth in Sections 3 and 4.

3. WALLS AND PARTITIONS

a) Distance separation shall be measured at right angles from the wall or opening to the building line or a continuous lot or any building on the same lot. The building line of a continuous lot shall be taken as that for the use of the continuous lot which requires the least set back from the property line, and in no case shall this set back be taken as more than five feet from and parallel to the common lot line.

b) The main exterior walls shall be of non-combustible materials and such walls shall be of fire-resistive construction with opening protection where located as follows:

i) Main exterior walls having a distance separation of less than five feet or walls except of street fronts which are less than five feet from the building of a contiguous lot, shall be of not less than two hour fire resistive construction and have no openings therein.

ii) Main exterior walls having a distance separation of from five to tea feet shall be of not less than one-hour fire resistive construction and openings therein shall be protected by fire-resistive doors and windows and shall be limited in area to 30 percent of the wall area with no single openings or more than ten percent of such wall area.

c) Fire walls shall be of non-combustible materials and shall be of the fire-resistive rating as required in Section 3.

d) Interior bearing walls shall be of non-combustible materials or wood.

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4. **FLOORS**

   a) Floors shall be of steel concrete or wood.
   
   b) Wood posts shall not be permitted under a girder supporting a ground floor and spaces under ground floors shall have the clearance for ventilation.
   
   c) Access openings shall be provided to all space under the building.

5. **ROOFS**

   a) Roof systems shall be of noncombustible materials or wood.
   
   b) Roof coverings shall be as specified in CUBiC Part 3 Section 6.
   
   c) Roof drainage and the disposal of rainwater shall be as specified in Section. In general, roof systems not designed to support accumulated water shall be sloped for drainage.
   
   d) Attic spaces shall not be required but where attic spaces are provided, such spaces shall have a minimum vertical dimension of 18 inches clear distance and, where unprotected combustible material is exposes, shall be divided by fire stops into areas not exceeding 5500 square feet or less depending on occupancy. Access trap doors shall be from common spaces such as corridors, and no part of an attic space shall be more than 100 feet from an access trap door. Minimum vertical dimension shall not be required for hip or gable roof construction.

6. **FIREPROOFING**

Bearing walls supporting floors shall not be less than one-hour fire-resistive protection except that where a ground floor has clearance of less than three feet, such protection may be omitted.

7. **STAIRWAYS**

   a) Stairways shall be as required in Section 3 and in Section 4.
   
   b) Stairways may be of non-combustible or combustible materials.

8. a) Doors, windows and similar openings in exterior walls, fire walls and enclosure walls shall be protected or entirely prohibited as set forth in Sections 3 or 4.
   
   b) Doors and windows shall not project over public property or restricted areas.
9. PROJECTIONS FROM THE BUILDING

Projections from the building may be of wood.

10. COMBUSTIBLE MATERIALS

No materials more combustible than wood shall be permitted in the construction of permanent portions Type 5 buildings.