BUILDING CODE ON THE OCCUPANCY BASIS PROPOSED FOR THE ARAB COUNTRIES

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Proposed for the Arab Countries

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I N T R O D U C T I O N

The followong report is an effort towards advancing a uniform and general code for the Arab Countries, to make building construction easier and safer .

In this report the author presented parts of the present Palestinian and Lebanese Code that concerne his subject, The Building Code. In conclusion the author presented his own suggested code which was mostly based on the American Uniform Building Code. Special attention was made to have this suggested code fit the Arab Countries.

P A L E S T I N I A N

BUILDING CODE

Part III.- ZONING, HEIGHTS AND OPEN SPACES ABOUT BUILDINGS.

Art.6 - Provisions of authorised scheme applicable.

A building erected in an area to which an authorised scheme applies shall conform in every respect with the requirements of such scheme.

Art.7 - Height of buildings generally .

Where the height of a building is not controlled by an authorised scheme, no part of such building shall exceed in height five fourths of the horizontal distance measured between the face of the building and the building line on the opposite side of the road on which the building abuts, or, where no such road exists, then a height to be determined in each case by the District Commission.

Art. 8 - Height of buildings on corner plots.

Notwithstanding anything contained in these Rules, the height of a building erected on a corner plot and abutting on more than one road, shall be regulated by the wider of such roads, and the height of the building on the narrower of such roads may, to a distance not exceeding 14 meters from the wider road, be equal to that on the wider road.

Art. 9 - Projections above prescribed height .

Notwithstanding anything contained in these Rules, towers, domes and other architectural features and adornments, may rise higher than the permitted height of the building in a commercial or industrial zone, subject in each case to the special approval of the Local Commission, which may attach to the approval such conditions as it thinks fit.

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Art. 10 - Width of courtyards.

Where a window (other than a window to a habitable room in a basement) opens into a courtyard enclosed on three or more sides, the width of the courtyard measured from the face of the window to the opposite wall shall be not less than half the height of the wall, measured from the sill of the window to the eaves or top of the parapet of the opposite wall:

Provided that the width of such courtyard shall be -

(a) not less than four meters in residential zones and not less than three meters in other zones; and

(b) such that the superficial area of the courtyard will be not less than ten square meters, if the courtyard is enclosed on three sides, or sixteen square meters, if the courtyard is enclosed on all sides.

Art. 11 - Ventilation of courtyards.

Where a courtyard of a building is wholly or in part open at the top and is enclosed on every side and the depth of the courtyard (measured from the eaves or top of the parapet of the surrounding walls down to the floor level of the ground storey of the building) exceeds its length or breadth, adequate provision to the satisfaction of the Engineer shall be made for the ventilation of the courtyard by passages or other means of communication between the courtyard and the outer air.

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Art. 12 - Rear height of buildings .

(1) The height of a building, other than a public building or an industrial building, in relation to the open space in the rear thereof, shall not be of a geater height above the mean level of the ground abutting on the rear of the building than twice the distance measured from such building to the rear boundary of the plot on which the building is erected.

(2) The height of a public building or of an industrial building, in relation to the open space in the rear thereof, shall not be of a greater height above the mean level of the ground abutting on the rear of the building than three times the distance measured from such building to the rear boundary of the plot on which the building is erected.

(3) In cases of doubt, the Local Commission shall determine which elevation or part of any building is, or shall be deemed to be, " the rear " for the purposes of this Rule.

(4) A building erected on a corner site and having frontages on to two roads or on to one road and a public open space of not less than twelve meters in width may, in any special case, be exempted by the District Commission from the provisions of this Rule, either unconditionally or upon such conditions as the District Commission may prescribe.

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Art. 13 - Height of factory chimneys and silos.

Factory chimneys, silos and other similar structures may be erected in excess of the maximum permissible height in the zone in which such structures are permitted, subject to the special approval of the Local Commission, and if such building is to be erected in the neighbourhood of any place which is being, or may be, lawfully used as an aerodrome, such approval shall only be given after consultation with the Director of Civil Aviation.

Art. 14 - Building plots to front road .

A building shall not be erected on a plot unless the plot abuts for at least three meters of its frontage on a road or is connected to the road by a passage or way of not less than three meters in width.

Art. 15 - Corners at road junctions.

In the case of a building situated at a junction of roads which contain an angle of less than 135°, the Local Commission may require, in addition to conformity with the road or building lines as prescribed in any authorised scheme applicable, that the building be set back in such a manner as to permit the construction of a sidewalk of such a width as the Local Commission may prescribe and with a minimum outer radius of four meters.

Art. 16 - Floor area .

(1) No storey of a building shall have a floor area exceeding the maximum area of the plot on which building is permitted in accordance with any au-

thorised scheme applicable unless the approval of the District Commission has been obtained.

(2) Oriels, balconies, staircases and all other projections shall be deemed to be included within the floor area of the storey of which such projections form part.

Part IV.- SIZE, HEIGHT, VENTILATION, ETC. OF ROOMS.

Art. 17 - Definition of habitable room .

For the purposes of these Rules, " habitable room" means a room constructed or adapted to be inhabited or in which some person passes the night or which is used as a living room, and includes a room with respect to which there is a reasonable presumption that some person passes or may pass the night therein or that it is used or may be used as a living room. In cases of doubt, the Local Commission shall determine whether or not a room is a " habitable room" for the purposes of these Rules.

Art. 18 - Height of rooms .

(1) Every habitable room, except a room built wholly or partly within a roof, shall be not less than three meters in height measured from the floor to the lowest part of the ceiling.

(2) Every habitable room built wholly or partly within a roof shall be not less than three meters in height for at least one half of the area of the room and for the remainder

.../...

shall be not less than two meters and fifty centimeters in height.

(3) The height of a room with a vaulted or domed ceiling shall in each individual case be approved or determined by the Local Commission after taking into consideration the factors of sufficiency of light, air, ventilation and architectural design.

Art. 19 - Habitable rooms in a basement.

Every habitable room in a basement shall have at least one and a half meters of its height above the level of the road, paving or ground immediately adjoining the room and shall have on the outer side of the room and immediately abutting the external wall thereof a paved and drained area extending to at least three metres in width measured at right angles from the face of the external wall, and the surface of such paved area shall be below the level of the floor of such room.

Art. 20 - Floor area of habitable rooms.

Every habitable room shall have a floor area of not less than nine square meters.

Art. 21 - Floor area of kitchen.

A room used as a kitchen shall have a floor area of not less than six square meters, except in special cases of flats where a smaller area may be permitted with the approval of the Health Authority.

.../...

Art. 22 - Window area of habitable rooms.

(1) Every habitable room shall have one or more windows opening directly into the external air and such window or windows shall have a total glass area (free from obstruction to the natural daylight) equal to at least one tenth part of the floor area of the room, and shall be so constructed that a portion equal to at least one twentieth part of such floor area can be made to open in a manner and to an extent to the satisfaction of the Engineer.

(2) The part or parts made to open shall extend to at least two meters above the floor of the room

Art. 23 - Ventilation of floor.

Every room in the lowest storey of a building having a wooden floor, other than a floor constructed of wood bedded directly on to concrete, shall have a sufficient space beneath the floor to permit of ventilating the space thereunder by means of air bricks or by such other method as is approved by the Engineer.

Art. 24 - Height of shops.

(1) For the purposes of this Rule -

" entrance " means any external doorway or opening to a shop used, intended to be used, or which may be used, by the public for ingress or egress ;

" front " means any facade or external wall of a shop in which there is an entrance.

.../...

(2) The internal height of a shop shall be not less than three meters and fifty centimeters, and not more than five meters and fifty centimeters.

(3) The mean average level of the threshold at the entrance of a shop shall be not less than ten centimeters above the adjoining pavement.

(4) Where three or more shops immediately adjoining each other are so designed and constructed as to form a continuous façade or front which abuts on a pavement having a gradient thereagainst exceeding one in ten, and the requirements of this Rule as to minimum internal height of a shop prevent a satisfactory architectural design of the facade or front, the District Commission may consider such a case on its merits and may permit a lesser internal height in any one or more of the shops :

Provided that no such shop shall be less than three meters in height and the average internal height of the shops forming the façade or front shall be not less than four meters and twenty five centimeters.

Art. 25 - Galleries in shops and workshops.

(1) A gallery projecting over the floor of a shop may be permitted if -

a - It is constructed of fire-resisting materials ;

.../...

b - it is sufficiently lighted and ventilated to the satisfaction of the Engineer ;

c - the floor area of the shop is not less than twenty five square meters ;

d - the total length of such gallery (or galleries) does not exceed one half the total length of the walls enclosing the shop ;

e - the total glass area of the windows lighting the shop is not less than one eighth of the total combined floor area of the shop and the gallery and the distribution of the windows and the height between the floor and the top of the windows is to the satisfaction of the Engineer.

(2) Where the height of the shop when measured between the floor and the ceiling is less than six meters and the floor area of the shop is less than thirty six square meters, the gallery shall not exceed one meter and twenty centimeters in width , that is to say, the gallery shall not project over the floor of the shop by more than one meter and twenty centimeters.

(3) Where the height of the shop when measured between the floor and the ceiling is not less than six meters and the floor area of the shop is not less than thirty six square meters the gallery may exceed one meter and twenty centimeters in width but shall be subject to the regulations prescribed in the following table :-

.../...

(1) Minimum floor area of shop	(2) Minimum height of shop	(3) Permissible floor area of gallery	(4) Minimum height between floor at shop and soffit of gallery	(5) Minimum height above floor of gallery
25 m^2	5.00 m	1/4 floor area of shop	2,75 m	2.10 m
36 m^2	6.00 m	1/3 floor area of shop	3.00 m	2.75 m
50 m^2	6.50 m	1/2 floor area of shop	3.35 m	2.75 m

(4) A gallery shall not be constructed in a shop in a residential zone.

(5) For the purposes of this Rule, "shop" includes a workshop.

Part V. STAIRWAYS AND CORRIDORS .

Art. 26 - Stairways.

(1) A building having more than one storey shall be provided with one or more stairways and each such stairway shall be arranged in a continuous succession of flights connecting the several storeys with the ground storey and to an exit or passageway leading to the external air.

(2) Such stairway or stairways shall be so situated that no part of the floor of any storey is more than twenty five meters distant from a stairway.

.../...

Art. 27 - Fire-resisting materials.

In all buildings other than dwelling houses, stairs and stairways, the floors of all lobbies, landings, corridors and passageways leading to such stairs or stairways together with the structural supports thereof, shall be made of fire-resisting materials.

Art. 28 - General requirements.

In every building all stairways shall comply with the following requirements :-

(a) Balustrades and handrails. Every flight, landing, corridor, or passageway, where not enclosed or protected by a wall, shall be provided with handrails and balustrades of suitable size and height to the satisfaction of the Engineer.

(b) Minimum headroom. The headroom above the tread of a stair or the floor of a landing, corridor or passageway shall be not less than two meters and ten centimeters.

(c) Risers and treads. The risers and treads of all stairs shall on each flight of stairs be of uniform width and height. The riser of a stair shall not exceed eighteen centimeters in height and the width of the corresponding tread shall be determined by the following formula expressed in centimetres :-

2 x (height of riser) + (width of tread) = 63 centimeters :

.../...

Provided that the Engineer may at his discretion approve slight variations therefrom in any special circumstances.

(d) Width of stairs. Every flight of stairs and every landing shall be :-

(i) in a domestic building, not less than one meter and ten centimeters wide ;

(ii)in a public building, not less than one meter and thirty centimeters wide.

(e) Number of stairs . A flight of stairs shall not contain less than three nor more than fifteen stairs.

(f) Supporting walls. A wall enclosing a stairway and which also supports or assists in supporting the stairway shall be constructed in accordance with the provisions of Article 66.

(g) Windows. No window or part of a window shall be made or fixed to open inwards in such a manner as to project beyond the internal face of the wall on any stairway or lobby, landing, corridor or passageway which forms part of, or gives access to, such stairway, at a height less than two meters and twenty centimeters above the level of the tread of any stair of the floor of any such lobby, landing, corridor or passageway.

.../...

(h) Ventilation and lighting. Every stairway shall be adequately ventilated and lighted to the satisfaction of the Engineer, by means of windows or skylights opening directly into the external air.

Art. 29 - Stairways serving apartments.

A building containing a number of apartments shall be so designed and constructed that not more than forty rooms have access to any one staircase and not more than ten rooms have access to any one landing of a staircase.

For the purposes of this Rule, the term "apartment" means any room or rooms designed, intended, used or likely to be used, as a self-contained flat, office or suite of rooms by one or more persons.

Part.VI - PROJECTIONS .

Art. 30 - Prohibition :- .

Save as provided in Article 31, or in the provisions of any authorised scheme, no part of a building may project beyond the building line.

Art. 31 - Permitted projections.

Where no part of any projection beyond the building line is at a height above the adjoining footway less than three meters and fifty centimeters.-

(a) cornices may project not more than seventy five centimeters.

(b) window grilles may project not more than fifty centimeters.

.../...

(c) lamps, clocks and signs, inclusive of any framework or other construction to which, or by means of which, they are attached to the building, may project not more than seventy five centimeters. The surface area of any one facet of such lamp, clock or sign, shall not exceed one square meter.

Art. 32 - Sunblinds .

(1) Sunblinds, including any support, frame or other construction attached thereto and which formspart thereof, may project beyond the building line :

Provided that -

a - no part of a sunblind shall be at a height less than two meters and fifty centimeters above the level of the footway ; and

b - when opened to its fullest extent, a sunblind shall not project more than two meters beyond the building line and shall be not less than thirty centimeters from the carriage way .

(2) Every such sunblind shall be constructed to fold, roll or otherwise collapse against the wall of the building, so that when so collapsed no part thereof projects to a geater distance than fifteen centimetres beyond the building line.

.../...

Art. 33 - Sky-signs .

Save with the special approval of the Local Commission letters, models, signs or other advertising devices on a building shall not be rected in such a manner as to be visible against the sky when viewed from any point in the public way .

Art. 34 - Projecting window and doors.

(1) Any window or part of a window which, when opened outwards, projects over the public way shall be at a height not less than two meters and fifty centimeters above the level of the public way measured to the lowest part of such window or part thereof.

(2) Evety door or gate opening directly on to a road, except a door or gate of apublic building, shall be constructed and fixed so as to open inwards, that is to say, away from the road.

(3) The Engineer may require the fixing of rails or grilles to any window, if, in his opinion, they are necessary for safety .

Part IX - CONSTRUCTION OF BUILDINGS :-

All the articles in this part do not deal with the subject of my study . Some of them concern foundation others the concrete or reinforced concrete work.

Art. 66 - Walls .

External, party and cross walls shall be constructed of sound, incombustible materials in a good workmanlike manner :

Provided that nothing herein contained shall exempt, or be deemed to exempt, any building from the provisions of any authorised scheme prescribing that, in the planning area in which such building is situated, the external walls of buildings shall be constructed of, or faced with, stone.

Art. 67 - Damp proofing walls.

Whenever in the opinion of the Engineer the nature relative level or other characteristic of a building site to demands, he may require measures to be taken for rendering the lowermost part of the building damp-proof, in which case -

(a) the walls and piers of the building shall be provided with a damp-proof course of asphalt or other suitable, durable material, impervious to moisture, and such damp-proof course shall be laid at a level not higher than the lowest part or underside of the construction of the ground floor, and shall extend to the full width and extent of such walls and piers, and not less than fifteen centimeters above the surface of the ground adjoining such walls and piers ;

(b) where the surface of the ground adjoining, and immediately abutting on, the walls of a building is higher than the floor of the basement or ground storey, or any part thereof the said walls -

.../...

(i) from a level not less than fifteen centimeters below the construction of the lowermost floor up to a height not less than fifteen centimeters above the surface of the ground immediately abutting thereon and to the full extent thereof, shall be constructed of cavity walls or otherwise in a manner and of materials and thickness to the satisfaction of the Engineer ;

(ii) shall, if the Engineer so requires, be rendered with asphalt or other suitable impervious material on all surface on which the ground abuts ;

(iii) shall be provided with a damp-proof course laid at the level and in the manner and as prescribed in paragraph (a) of this Rule and a similar damp-proof course at a level not less than fifteen centimeters above the surface of the adjoining ground.

Art. 68 - Parapets .

Every wall of a building which is continued upwards above the level of the roof, flat or gutter so as to form a parapet shall be finished on the top with an adequate coping the upper side of which shall have a slope towards the roof, flat or gutter, or as approved by the Engineer.

.../...

Art. 75 - Special provisions for cartain buildings.

Notwithstanding anything contained in this Part of these Rules, a building may be constructed of such materials and in such manner and for such purpose as the Engineer may approve if it is of a temporary character and is removed within one week after written notice to that effect has been given by the Engineer.

Art. 76 - Separation of trade and residential premises.

In every building the cubical extent of which is one hundred and fifty cubic meters used in part for the purposes of trade or manufacture, and in part as a domestic building, the two parts shall be separated by walls and floors constructed of fire-resisting materials, and all passages, corriders, staircases and other means of approach to the part used as a domestic building shall be constructed of fireresisting materials and all doorways communicating between the said two parts shall be fitted with fire-resisting doors and door frames .

Art. 77 - Projecting quoins, etc.

The upper surface of quoins, bands, cornices and similar features where projecting from the face of external walls shall be suitably weathered.

Art. 78 - Bedding of joists.

The ends of steel or other joists where bearing directly upon or built into, a wall shall be bedded on stone or reinforced concrete templates or pad-stones the breadth of which shall be not less than three times the breadth of the joist.

Part X.- CHIMNEYS, FIREPLACES, FLUES, ETC.

Art. 79 - Flues .

Every receptacle for the combustion of fuel, including a fireplace, copper, oven, cooking range, stove, and furnace shall be provided with an adequate flue leading to the external air.

Art. 80 - Construction of flues.

Flues shall be constructed of -

(a) stone or brick properly bonded and constructed and not less than twelve centimeters thick:

Provided that the thickness of the upper side of the flue when its course makes with the horizon an angle of less than 45 degrees shall be at least twenty two centimeters ;

(b) piping of iron, steel or other suitable metal, properly jointed and securely fixed ;

(c) such other materials as the Engineer may approve.

Art. 81 - Height of flues.

Every flue shall be carried to a height not less than one meter above the roof, flat or gutter adjoining thereto measured at the highest point in the line of junction with such roof, flat or gutter, and where roof towers are constructed such flue may form part of the tower.

My subject does not include the other articles in this Part.

.../...

PArt. XI - CONVERSIONS OR, AND ALTERATIONS AND ADDITIONS TO, BUILDINGS.

Art. 86 - Conversion of buildings.

Save with the approval of the District Commission, no person shall -

(a) convert into, or use, as a dwelling house, any building, or part of a building, not originally constructed for human habitation ;

(b) convert into one dwelling house, two or more dwelling houses constructed as such originally;

(c) convert into, or use, as two or more dwelling houses, any building, or part thereof, originally constructed as one dwelling house;

(d) convert into, or use, as a place for human habitation, any premises, or part thereof, originally used as a shop or for purposes of trade or industry ;

(e) convert into, or use, as a shop of for purposes of trade or industry, any dwelling house or part thereof.

Art. 87 - Converted buildings to comply .

Any building or part of a building converted to a use other than that for which it was originally built, approved or permitted shall comply with the provisions of these Rules relating to buildings of the class or character to which it is converted.

.../...

Art. 88 - Openings in foundation walls.

No opening may be made or left in a foundation wall, plinth or floor of any building to give access to any hollow or filled space under the lowermost floor of such building.

Part XIII. PUBLIC BUILDINGS .

Art. 99 - Application - Cap. 143

(1) Where there is any conflict or discrepancy between any rule in this Part of these Rules and any rule made under the Trades and Industries (Regulation) Ordinance, the Health Authority shall decide which rule shall apply in any particular case.

(2) The provisions of this Part of these Rules, other than the provisions of Articles 100, 102, 103, 106, 107, 108, 109, 110, 111, 119, 121 and 126, shall not apply to any building constructed, or adapted to be used, as a place of public worship.

Art. 100 - Frontages .

A public building shall not be erected on any site unless at least one-sixth part of the total length of the boundaries of the site abuts on a road not less than twelve meters in width.

Art. 101 - Theatres and cinemas .

A public building provided with a proscenium opening and a stage on which scenery may be used, or a building constructed or adapted to be used for the exhibition of cinematograph films (whether occasionally or ordinarily) shall -

.../...

(a) not be constructed beneath, or near any part of, any other building ;

(b) where forming part of another building, comply with such requirements as the Local Commission and the Engineer may prescribe ;

(c) not contain living rooms or in any part be used for human habitation;

(d) not have openings in an external wall at a distance less than six meters from any adjoining building or property unless separated and entirely disconnected from such building or property by means of a wall constructed of stone, brick or concrete not less than twenty five centimeters thick and of such a height that no part of any opening in such adjoining building or in any building which may be erected on such adjoining property shall be higher than the part of the wall immediately opposite such opening ;

(e) not be erected on a site unless, in addition to the requirments of Arible 100 at least one half of the total length of the boundaries of the site abut or front on to roads not less in width than nine meters, if a carriage way, and not less in width than five meters if a footway .

.../...

Art. 102 - Floors, tiers, roofs, etc.

In every public building, all floors, staircases, balconies, tiers, roofs and all other parts used by the public shall be constructed of fire-resisting materials and shall comply with the following requirements :-

(a) there shall not be more than two tiers or horizontal divisions above the lowest floors used by the public as an auditorium. Where the seats of any tier are separated from other seats in the same tier by a partition, all such seats shall be deemed to form, or belong to, one tier;

(b) the height measured from such lowest floor to the soffit of the tier next above shall be not less than three meters ;

(c) the height measured from the floor of the first tier to the soffit of the second tier, if any, shall be not less than two meters and fifty centimeters.

(d) the height between the topmost part of the floor of the highest tier and the lowest part of the ceiling over that tier shall be not less than three meters.

Art. 103 - Exits.

(1) In every public building two separate exits leading directly to a road shall be provided from any tier or floor, and , where a tier or floor accommodates more than four hundred persons, an additional exit leading directly to

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a road shall be provided for every two hundred, or part of two hundred, persons in excess of the said four hundred, and such exits shall comply with the following requirements :-

a - every such exit shall have a clear width of not less than one meter and fifty centimeters measured between the walls at any point and also between the jambs of the frames of any doors therein ;

b - two of the exits from each tier or floor shall lead into different roads ;

c - where any tier or floor is divided into two or more parts, exits as prescribed in this Rule shall be provided from each of such parts;

d - in calculating the number of persons which can be accommodated in any tier or floor, the standing space, other than the space afforded by the intersecting gangways, shall be considered as well the seating area ;

e - where in order to comply with this Rule a passage or way is necessary, it shall be provided by means of a private passage or way not less than five meters wide and shall be in the sole ownership and under the complete control of the owner of such building and premises and if less than six meters in width no doors or openings, other than the exits, shall communicate therewith or overlook any portion thereof ;

.../..

(2) The owner shall allow the public to leave by all exit doors.

Art. 104 - Exit notices .

(1) All doors in a public building which is used as a place of public assembly which are used by the public as a means of exit shall be indicated by the word " EXIT" in clear lettering at least eighteen centimeters high inscribed in the three official languages and shall be to the satisfaction of the Engineer, and such doors shall be further indicated by an electric lamp supplied by a special circuit which is not nonnected with the circuit which supplies the general lighting of the building shining a red light at all times during which the building is being used by the public, and every such light shall be placed over the doors at a height of not less than two meters above the level of the floor.

(2) All doors visible to the audience which are not a means of exit shall be indicated by the words " NO EXIT " in clear lettering eighteen centimeters high inscribed in the three official languages and shall be to the satisfaction of the Engineer.

(3) All notices required under this Rule shall be placed over the doors at a height of not less than two meters above the level of the floor.

.../..

Art. 105 - Vestibules .

Where vestibules are provided in a public building, the aggregate width of all the doorways and passages communicating from each vestibule and leading therefrom to the road shall be at least one third greater than the aggregate width of all doorways and passages leading into such vestibule.

Art. 106 - Cloakrooms.

(1) In a public building, corridors or vestibules shall not be used as cloakrooms and pegs for hanging hats or cloaks shall not be allowed therein.

(2) Where cloakrooms are provided they shall be so situated that persons using them do not interfere with the free use of any exit way, and shall be separated from any exit way by a passage, corridor or vestibule of adequate dimensions and area to be approved by the Engineer.

Art. 107 - Staircase .

In a public building every staircase for the use of the public -

(a) where it is designed for the use of not more than 200 persons, shall throughout be not less than one meter and thirty centimeters in width and in other cases not less than one meter and sixty centimeters in width, measured between finished surfaces of the enclosing walls ;

.../...

(b) shall be enclosed by solid walls of fire-resisting material not less than twenty two centimeters in thickness and, except where continued upwards above the roof as an open staircase, shall be ceiled with reinforced concrete or other materials to the satisfaction of the Engineer;

(c) shall have treads and risers of uniform width and height in each flight of steps and the steps shall be built into solid walls at both ends;

(d) shall be arranged in straight flights without winders, and no flight shall have more than fifteen or less than three steps ;

(e) shall have no more than two flights of fifteen steps each without a turn, and the depth of the landing between flights shall be not less than the width of the flight ;

(f) shall have a continuous and uninterrupted handrail fixed securely to both sides of all steps and landings, and shall project not more than seven centimeters ,and, where a flight of steps returns the newel wall shall be chased out so as to allow the handrail to turn without projecting over the landing ;

(g) shall have no recesses or projections, other than the handrail, for staircases prescribed in this Rule or projecting light fitting brackets in the walls of such staircase at a height less than two meters above the tread of any stair or above the floor of any landing.

Art. 108 - Corridors and lobbies .

All corridors, lobbies and passageways for the use of the public shall be not less in width than the width specified for exits in Article 103.

Art. 109 - Inclines .

Inclines may be used instead of steps, and where used shall not have a gradient exceeding one in ten.

Art. 110 - Doors.

(1) Doors in a public building used by the public as a means of exit shall -

a - when measured between the door frames or posts be of a width not less than the width specified for exits in Article 103 ;

b - be hung in two leaves and be made to open outwards towards the road ;

c - be so hung that, when open, they will not obstruct any gangway, staircase, passage or landing nor open immediately upon a flight of steps ;

d - be so arranged as to open within a recess or on to a landing not less than one metre and thirty centimeters in depth between such flight and door ;

e - not be fitted with locks, bolts or obstructions to exit ;

f - shall have no fastening other than automatic " panic " bolts of a pattern and in a position approved by the Engineer.

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(2) All doors leading from exit passages, staircases or corridors used by the public to the other parts of the building shall be hung so as to be closed by the stream of persons passing from the auditorium to the road and shall be fitted with spring hinges.

(3) All doors and gates used by the public as entrances shall be made to open both ways, and shall, when opened inwards, be so fitted that they can be locked back against the wall in such a manner as to require a key to release them.

Articles 111,112 and 113 deal specificly with the safety and electrical rules.

Art. 114 - Ventilation .

Every part of a public building shall be adequately ventilated in a manner approved by the Health Authority.

Art. 116 - Dressing rooms .

(1) Dressing rooms shall comply with the following requirements :-

a - they shall be adequately lighted and ventilated by windows in the external walls, and shall be divided from the stage and all other parts of the building by solid walls of brick, stone or concrete not less in thickness than twenty two centimeters;

.../...

b - they shall have only such means of communication with the stage and the other parts of the building as the Local Commission may approve ;

c - they shall have a separate exit way leading directly to a road and the exit doors thereof shall be fitted with automatic panic bolts only ;

d - they shall not be situated at a line lower than one storey below the ground storey .

(2) Spearate water closets, wash-hand basins and urinals shall be provided for the use of the artists and orchestra, in such numbers and so constructed and arranged as the Health Authority shall require.

Art. 121 - Gangways and passages .

Gangways or passages not less than one meter and ten centimeters wide shall be provided in the auditorium leading direct to the exit doors, and no seat shall be more than three meters and twenty centimeters from such a gangway or passage measured in a line of the seating.

Art. 122 - Seating .

(1) The seating area assigned to each person in the auditorium shall not be less than -

a - sixty centimeters deep and forty-five centimeters wide, where there are no arms or backs to the seats ;

b - seventy centimeters deep and fifty centimeters wide, where there are arms or backs

to the seats.

(2) There shall be a space of not less than thirty centimeters in depth between the back of every seat and the front of the next seat behind when measured between perpendiculars.

Art. 123 - Chairs.

Where separate chairs are used in an auditorium they shall be battened together in groups of not less than four nor more than twelve chairs so that the centres of the chairs are not less than fifty centimeters apart in the case of chairs with arms and fofty five centimeters appart in other cases.

Art. 124 - Provisions as regards traffic, etc.

(1) When application is made for a building permit for the erection of a building, or the conversion of an existing building, to be used as a public building and the Local Commission is satisfied that the character and use of the building will be such as to cause, or be likely to cause, increased vehicular traffic or interference with the traffic along any road in front of, or adjacent to, such building, the Local Commission, as a condition of the permit shall require the owner to provide and maintain such means of ingress and egress and such accommodation for the loading or unloading of vehicles, or the picking up and setting down of

.../...

passengers and persons in connection with the building as they shall specify .

(2) Where such building is to be used as a theatre, cinema or other place of public entertainment, the owner shall, in addition to complying with the provisions of sub-rule (1),-

a - provide adequate parking space for vehicles in the immediate vicinity of the building of an area not less than twenty square meters for every twenty five seats of public seating accommodation in the building, or of such greater area as the District Commission may, in any particular case, direct ;

b - provide an adequate entrance or waitting hall of an area not less than one square meter for every six seats, which area shall not include any corridor or passage ;

c - site any ticket windows or booking offices in such a manner as to prevent the use of any public way as queue space.

Art. 125 - Access for public.

(1) Every public building shall, to the satisfaction of the Local Commission, be substantially supplied with ample, safe and convenient means of ingress and egress for the use of the public , regard being had to the purposes for which such building is intended to be used and to the number of persons likely to be assembled at any one time therein.

(2) The means of ingress and egress within and without the building shall during the whole time that such building is used by the public, be kept free and unobstructed to the satisfaction of the Local Commission.

Art. 126 - Approval of Engineer.

Notwithstanding anything contained in this Part of these Rules, every public building (including every part thereof) shall be constructed in a manner approved by the Engineer and, subject to the provisions of sub-rule (1) of Article 99, be subject to all the provisions of these Rules relating to buildings and to any rules applicable thereto made under the Trades and Industries (Regulation) Ordinance .

Art. 127 - Power of inspection.

The Engineer and any other officer authorised in writing by the Local Commission may at all reasonable times enter any building to satisfy himself that the provisions of this Part are carried into effect .

L E B A N E S E

LEGISLATIVE DECREE N° 61/L.E.

of August 30, 1940.

CHAPTER II - HEIGHT OF CONSTRUCTIONS

A - On the public road:-

Art.8 :- All construdtions should be inside an envelop line called " Gabarit" giveh by :

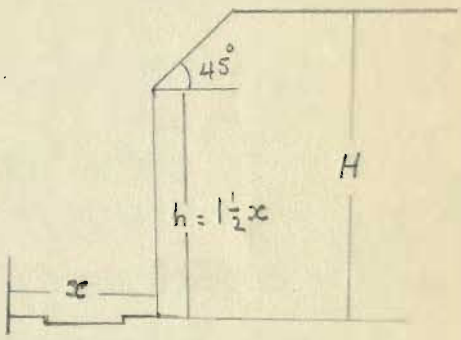
a) a vertical line on public road equal to 1 1/2 the width of the road (in no case the height of this vertical can exceed 19 meters, and for roads of less than 6 meters its height can be fixed to 9 m.)

b) and an inclined line making 45° with the horizontal.

c) and a horizontal at 22.5 m. above the base of the vertical.

$9m < h < 19m$

$H < 22.5m.$



The base of the vertical is from the level of the side walk and in the middle of the façade . This is true only if the difference in level of the side walk along the façade does not exceed 3.5 M. - If it does exceed 3.5 m. The façade is divided into portions so that the difference is only 3.5.m.

Art. 9 :- When a building is on 2 or more roads of the same width and different level the most advantageous envelop line can be applied on the other roads for only a width of the façade equal to 1 1/2 time the width of this road with a minimum of 10 meters.

.../...

- The cut corners or rounded corners are not included in this length; but they can be attached to one of the façades at the choice of the constructor.

- By the application of the gabarit the inclined plane can be prolonged until its intersection with the horizontal plane which contains the highest horizontal line.

Art. 10 :- When a building is on 2 or more roads of different widths of the same or different level the envelope line established on the wider roads can be applied to the other roads for a façade only 1 1/2 times their width with a minimum of 10 meters.

- The cut or round corner is not included .

Art. 11 :- When a building has more than one façade on different reads of the same or different width same or different level the general gabarit will be calculated as given above for each of the façades, the inclined planes being produced to intersect the horizontal plane having the highest horizontal line.

Art. 12 :- When the building goes inside the property it can be higher than if it was on the road but always inside the gabarit line . If all the construction goes inside it should go at least 2 m. and a fence should be built on the boundary of the road.

Art. 13 :- On Public places the adopted gabarit will be uniform and equal to the gabarit of the largest road .

.../...

B - On free spaces :-

Art. 14 :- The constructions should be inside the envelop line " Gabarit " determined by :

a) a vertical equal to 2 1/2 times the aerated and lighted distance between the building and the neighbouring building . The middle level will be taken as reference - and at the reference the height can not be more than 19 m. and no where more than 22.5 m.

b) an indline line going from the upper extremity of the vertical and making 68° (2 hor. to 5 vert.) with the horizontal .

c) and a horizontal line at 22.5 m. as seen before .

Art. 15:- When a building has façades on a street and on open spaces having direct access to the street , the gabarit of the street will govern for 2 1/2 times the width of the open space with a maximum of 20 m. and a minimum of 10 m.

Art. 16 :- When a building has many façades giving to open spaces of the same or different widths the same or diff. level, the general gabarit of construction will be calculated for each façade seperately and the inclined planes prolonged to the intersection with the horizontal plane containing the highest horizontal line.

C - On Courts :-

Art. 17 :- All constructions should be inside an envelop line (Gabarit) determined by :

.../...

a) a vertical line equal to 2 times the minimum distance of the acrated width of the court . This vertical line H is fixed to:
$9 < H < 19$ m.

B) an inclined line making 63° 30' with the horizontal (1 - 2) .

c) and a horizontal line at 22.5. m. (as seen before).

Art. 18 :- When the building has no façade to the main road the gabarit given above applies but it should have at laast one façade which is at a distance of 4.50 m. from the neighbour or from another building on the same plot.

GENERAL GABARIT :-

Art. 19 :- The Administration is the only judge for special authorisation.

Art. 20 :- The Minimum heights under the ceiling for different parts of a buildings are :

- 2.50 m. for the celler - subsoil and dependances.
- 3.40 m. for the ground floor & the other floors.
- 3.20 m. for the attic or mansard roof.

The ceiling for the parts built in the first floor at the alignment of the main road and for commerce or habitation should be at least 4.25 m. above the level of the side walk.

.../...

CHAPITRE III - PROJECTIONS ON THE GABARIT

I° -Fixed Projections (making part with the building)
balconiesand bow-windows .

A - On the public road :-

Art. 21 :- Balconies : The Balconies on the gabarit are forbidden on public roads of less than 6 m in width.

For the others roads the maximum permitted projections for the balconies in the vertical part of the gabarit are fixed to :

- roads from 6 m. to 7.5 m. 0.75 m.
- " " 7.50 m. to 9.00 m. 0.90 m.
- roads more than 9.00 m (public places) 1.05 m.

On the inclined and horizontal parts of the gabarit the projections of the balconies are forbidden.

Art. 22 :- Balconies should be if built at a minimum distance of 1.50 m. from Neighbour's boundary . (cadastral limit).

The length of balconies is fixed by :

- on road between 10 - 6 m. in width only 2/3 of built façade can be used.
- on road above 10 m in width all the built façade can be used.

Art. 23 :- Bow - Windows or Bay Windows :-

The bow windows are forbidden on roads less than 10 m in width .

.../...

The Maximum projection of these bow windows is fixed to 0.70 m. when they are on roads of 10 m of more in width.

Their minimum distance from the neighbour is 1.50 m.

Art. 24 :- Whatever the widths of the adjacent roads are, the bow windows on cut corners or round corners can be constructed to the condition that they will not go outside the alignement of the roads nor have more than 0.70 m. projection.

Art. 25 :- The length of the bow window should not be more than 1/3 the length of the built façade on the alignment.

Art. 26 :- On the inclined and horizontal part of the gabarit bow windows are forbidden. The coronation of the last bow windows can go 1 m. above the vertical part of the gabarit.

Common Dispositions of Balconies & Bow Windows :

Art. 27 :- Buildings having more than one façade on streets each façade is considered separatly and subject to the above dispositions fof the balconies and Bow windows.

And each cut corner can be added to the façade that the constructor wants.

Art. 28 :- The Bow Window can not be used for the plumbing installation.

The construction of the sky lighted stairs projecting on the main road or resting on balconies are forbidden.

Balconies going outside the bow windows are not allowed.

.../...

Art. 29 :- The net height of the balconies or bow windows above the side walk level should be at least 3.75 meters.

B - On Free Spaces :- (Courts & Inner Courts)

Art. 30 : - The Bow Windows are forbidden on open spaces .

But Balconies on the Vertical parts of the gabarit are allowed to the condition that they are 3.40 m. above ground (net height) and at 2 meters from the boundary of the neighbour . If the free space is common it should be 2 m. from the mediating line of the common free space.

On the inclined and horizontal part of the gabarit no balconies can be built.

Art. 31 :- In the courts of not less than 30 m2 the balconies on the vertical part of the gabarit are allowed to the condition that the horizontal distance to the other building should be at least 6 m, that their projection does not exceed 1/10 this horizontal distance and with maximum projection of 1.50 m. and their area does not exceed 1/5 the area of the court.

Balconies are forbidden on the inclined and horizontal parts of the gabarit.

Art. 32 :- In general it is forbidden to build a balcony on the roof facing a public road or a free space.

.../...

CORNICES

A -On Public Roads : -

Art. 33 :- Continuous cornices can be built on the roof or on the floors preceeding the roof the building being on the line of the street or be hind this line.

The maximum projection is given by :

For roads below 6 m. in width	0.25 m.
" " from 6 m. to 7.50 m.	0.40 m.
" " " 7;50 m. to 9.00 m.	0.50 m.
" " " 9.00 m. " 12. m.	0.60 m.
" " of 12.00 m. in width or above	0.75 m.

On the bow window the maximum cornice is of 0.35 m.

Art. 34 :- On the cut corner façade the projection be more than the one fixed by the largest adjacent street.

B -On Open Spaces :- (Courts & Inner Courts)

Art. 35 :- The above disposition (Art 33 and 34) are applicable for cornices built on free spaces (Courts and inner courts are not included) . Taking as width of road the minimum direct vue on the free space.

- In Courts the maximum width of cornice can not exceed 0.25 m.
- In inner courts cornices are not allowed.

.../...

A W N I N G S

A -On public Roads :-

Art. 36 :- On roads of 10m. or more in width the projection of awnings are allowed all the length of the façade but under the following conditions :

a) They must be of a hard material same body as the building - generally in reinforced concrete (single or corrugated sheets of metal are not allowed at all).

b) The minimum height above side walk being 3.75 m.

c) The maximum width being 1.05 m. The awnings can not be used as balconies except if they are under the rules of balconies.

Art. 37 :- For the buildings on 2 roads , the awning built on one road (of more than 10 m.) can be prolonged on the other façade (facing the road of less than 10 m. in width) but under the following reservations :

a) These roads should be at least 6 m . in width.

b) The length of these awnings can not exceed 1 1/2 times the width of the road with a maximum of 10 meters . (The cut corner is not included - in this length).

c) The maximum projection of these awnings cannot exceed the maximum projections allowed for balconies of these roads.

.../...

Art. 38 : - The construction of awnings above the balcony of the last floor is authorised but under the following conditions :

a) Their length and width can not exceed the length and width of the balcony.

b) The material should be the same as prescribed in paragraph (a) of article 36.

c) They should be placed at a minimum distance of :

0.90 m. for roads from 6 m. to 7.50 m.

0.80 m. " " " 7.50 m. to 9.00 m.

0.75 m. " " " 9.00 m. to 12.00 m.

0.40 m. " " of 12 m. and above and public places below the roof of the last floor.

Art. 39 :- The construction of awnings above the roofs along the line of road or behind it is allowed but under the following conditions.

a) Their length should not exceed the platform over which it is constructed.

Their width should not go beyond the gabarit.

b) The material should be according to paragraphe (a) of article 36.

B - On Open Spaces - Courts & Inner Courts :

Art. 40 :- On open spaces the construction of awnings projecting on the vertical part of the gabarit adopted by the constructor is allowed. But the minimum net distance should be 2 m. from the boundary of the neighbour or 2 m. from the middle

.../...

of the common open space. And the conditions given in paragraphs (a) & (c) in article 36. apply .

And the building of awnings over the roof facing open spaces are allowed but according to the conditions given in art. 39 .

Art. 41 :- On Courts : The construction of awnings projecting from the vertical part of the gabarit taken by the constructor is not allowed.

The construction of awnings partly over lower terrasses is allowed but under the condition given in article 39.

Art. 42 :- On Inner Courts :- The construction of awnings projecting on the vertical and inclined parts of the gabarit is not allowed.

OTHER PROJECTIONS

A - On the Public Road

Art. 43 :- a) For less than 3 m. above the side walk :

- a maximum projection of 12 cm. is allowed for lintels sills, signs posts being of the same body as the building.

b) - From 3 m. above the side walk to the last floor.

- The maximum projection of the above mentioned constructions is fixed to 0.25 m. for roads less than 10 m. in width; and to 0.35 m. for roads of

10 m. or more and on public places.

Art. 44 :- The following are forbidden :

Below the side walk level :

- All constructions such as footings, foundations, caves, steps, stairs etc... projecting outside the boundary of the road; but o.12 m. is allowed for the construction of the foundations.
- It is forbidden to doors and windows below 3 m. and opening to the outside, to project more than 0.12 m. during its opening closing or stopping . Even columus and pipes for the rain water projecting more than 0.12 m. are not allowed.

B -On Open Spaces and Courts :-

Art. 45 :- a) For less than 3 m. in height above the soil (mean level of the free space or court) . A projection of 0.12 m. is allowed for lintels sills signs, posts, columns, iron works pipes for rain water, steps, and decorative or protective motives.

b) From 3 m. above the soil surface to the last floor .

- The maximum admitted projections around windows and doors and other projections are fixed by the gabarit adopted by constructor :

- 0.25 m. for free spaces leaving a minimum distance of less than 6 m.

- 0.35 m. for free spaces leaving a minimum distance of 6 m. or more.

.../...

2° - Projections not making part of the Building :-

Art. 46 :- The following are allowed :-

a) Electric or non electric signs, ornaments of shops and show windows not projecting more than 0.16 m. and below 3 m. in height above the side walk, for any width of road.

- Above 3 m. this projection can become 0.35 m. on roads less than 10 m. in width and to 0.50 m. for roads larger or equal to 10 m.

b) Electric or non electric signs and lamps which are placed perpendicular to the wall under the following conditions :

- Their lower parts should be 3 m. above the side walk.
- Its heighest point should not go above the height of the façade.
- This projection can not exceed the width of the side walk minus 0.50 m. - and with a maximum of 2.00 m.
- But for side walks less than 1 m. in width then projection can have 0.50 m.

c) The sun-blinds and tilts infront of the façade where side walks exist are under the following conditions :

- The point which is the most projecting should be at least at 0.50 m. from curb-

stone or from the trunk of the trees if they exist and with a maximum projection of 3.00 m.

- All their parts should be 2.50 m. above the side walk.

Art. 47 :- The perforated signs (electrical or not) longitudinal or transversal are allowed only over roofs and terrasses of buildings under the following conditions :

- They don't go beyond the alignment
- They don't go beyond 5 m. above the gabarit.
- They should not form a screen against the air and light for more than 1/5 of their total surface.

GENERAL DISPOSITIONS

Art. 48 :- The erection of guard rails on the front elevation and on separation walls of terrasses is allowed to project out of the general gabarit line provided that their vertical projection does not exceed 1 m and provided these guard rails be built in line with the façade walls or separation walls of the lower floor.

Art. 49 :- The starcase, the lift, or other apparatus of the lift can go only 3 m. above the general gabarit of construction.

Art. 50 :- The vents and chimneys can go above the gabarit to the only condition that they should not go more than 3 m. above the roof .

.../...

Art. 51 :- On 1/5 of the façade of the building decorative construction not exceeding 3 m. above the gabarit can be constructed .

Art. 52 :- The dispositions of art. 21 to 51 are applicable to the façades built behind the boundary of the road, in this case the distance between the façades on both sides of the road will be the governing width.

Art. 53 :- Balconies, Bow Windows, cornices awnings and other projections actually existing and not conforming these laws can not be repared. ?

CHAPTER IV

FREE SPACES - COURTS & INNER COURTS

Art. 54 :- Free spaces : Are all spaces free from actual or future constructions and communicating directly or by other free spaces to the public road and having a minimum width of 4.50 m.

Art. 55 :- Contraty to art 54 the following constructions in open spaces can be allowed :

Separation walls :- This wall can not be higher than 1 m. - but a perforated screen can be built above this wall . But the total height can not exceed 2.50 m.

Garages and other pieces which are not habitable :-

a) The surface covered by these constructions can not be more than 1/5 the Total free space, and

.../...

at a distance at least 2.00 m. from the main construction.

b) The height of these construction can not be more than 2.80 m. (without the parapet wall).

c) Their outside walls should be of the same material as the outside walls of the main building.

d) They should be covered with reinforced concrete roof and a parapet wall of 0.20 m. as maximum height.

Art. 56 :- When set backs are imposed for buildings, garages (staying of cars) can only be built on the alignment of the road under the following conditions.

a) The area covered by garages can not exceed 1/5 the free space so created - and only 1/4 of the length of the piece of land can be occupied by this construction .

b) Their construction are under the prescriptions of the paragraph b, c and d of the last article.

Art. 57 :- The free spaces and " courts can not be covered . They should have enough area for ventilation and lighting for the parts of the building that they serve.

- This area can not be less than 30 m2. But 20 m2 are enough if this area ventil ates kitchens.

Art. 58 :- The " Inner courts " ventil ating Baths, W.C. stair cases or corridors should have a minimum area of 6 m2

- This area becomes 8 m2 if the importance of the building justifies.

- The minimum width is 2 m.
- The area of this inner court should remain uniform all along the height of the building.

Art. 59 :- The W.C.s, not ventillated by windows on roads or free spaces should have vents : These ~~xhx~~ vents should be under the following conditions :

- They should be easy to inspect .
- Their section should be between 1.50 m2 and 3.00 m2 with minimum width of 0.75 m.
- The width should be the same for all the height of the vent.
- Its sides should be covered with a smooth coat without projections except pipes for drainage .
- The walls of this vent should be at least 1 m. above the level of the roof.
- The upper part should have a glass covering going 30 cm. beyond the interior side of the walls - and 50 cms. above the walls.

Art. 60 :- All free spaces , courts and inner courts on the limite of one or more lots should satisfie the prescription given in articles 54 to 58 included.

These prescriptions are applied as if some construction exist on the limit of the projecties .

But 2 or more neighbours can agree to establish a commun free space, a commun court or a common inner court for all

the lots according to the prescriptions of the said articles .

In this case the separation walls should not be higher than 1 M. and only screens can go above 1 m. up to 2.50m.

A copy of this agreement should be conserved in the administration . And no change in the agreement can be made witho out the consent of the administration .

CHAPTER V

Art. 61:- It is forbidden to construct above the road like a bridge.

PROPOSED BUILDING CODE

For the Arab Countries

The following is a compilation of the proposed building Code for the Arab Countries. Most of the item were based on the American . Uniform Building Code. In chosing the following items, those that are related to the Arab countries were considered only. To be able to do that continuous reference was made to the present Lebanese and Palestinian codes.

I - Requirements Based on Occupancy :-

A -Classification of All Buildings by use or Occupancy and general requirements for all occupancies.

1 - Classification of Occupancies :-

Group A :- Any Assembly building with a stage and an occupant load of 1000 or more in the building .

Group B :- a- Any assembly building with a stage and an occupant load of less than 1000 in the building .

Ex : Theatres - Auditoriums religions assembly and school assemblies .

b- Any assembly building without a stage and having an occupant load of 300 or more in the building.

Gymnasium :- Between 300 and 1000 population and used as long as all the time of the day .

c- Any Assembly building without a stage and having an occupant load of less than 300 in the building, including such buildings used for school purposes less than 4 hours per week.

d- Stadium, reviewing stands and amusement park structures not included within group A nor the other divisions of group B.

Group C :- Any building used for school purposes more than four hours per week, involving assemblage for instruction education or recreation and not classed in group A occupancies or in Division a and b of Group B occupancies.

.../...

Ex : Classrooms

Dining Room areas

Shop and Vocational rooms.

Group D:- a- Mental Hospitals, jails, prisons, reformatories, houses of correction ,and building where personal liberties of inmates are similarly restrained.

b- Nurseries for the care of children under six years of age, each accomodating more than six.

Hospitals, Sanitariums, mental sanitariums.

Ex : Children's Homes

Dining-Rooms Areas.

Hospitals, Sanitariums.

Group E :- a - Paint & Petroleum storage, dry cleaning plants using flammable liquids, paint shops and spray painting rooms and shops.

Planning mills, box factories and wood working.

b - Aircraft repair hangars.

c - Public garages, storage of hazardous and highly flammable or explosive materials and liquids.

Group F :- a - Wholesale and retail stores, office buildings, restaurants, undertaking parlors, printing plants, municipal police and fire stations, gazoline filling and service stations, factories workshops using materials not highly flammable or combustible; storage and sales rooms for combustible goods, paint stores without bulk handling.

b - Aircraft Hangars where no repair work is done except exchanged of parts and maintenance requiring no open flame welding , or the use of highly flammable liquids.

Groups G :- Ice plants, power plants, pumping plants, cold storage, creameries.

Factories and workshops using incombustible and non explosive materials.

Storage and sales rooms of incombustible and non-explosive materials.

Group H :- a- Homes for the aged, orphanages, homes and dormitories for children 6 years of age or older (each accomodating 6 or more) .

b- Hotels - appartment houses, dormitories lodging houses - couvents and monasteries (each accomodating 10 or more persons).

Group I :- All Dwellings .

Group J :- a - Private garages, sheds and minor buildings used as accessories only when not over 100 m2 in area .

b - Fences over 2.00 m. high, Tanks and towers.

2 - Change in Use :-

No change shall be made in the character of occupancy or use of any building which would place the building in a different group of occupancy, unless such building is made to comply with the requirements of this code for that group.

.../..

Exceptions :- The character of the occupancy of existing buildings may be changed subject to the approval of the Administration , and the building may be occuped for purposes in other groups without conforming to all the requirements of this code for those groups provided the new or proposed use is less hazardous, based on life and firerisk than the existing use.

3 - Mixed Occupancy :-

a - General :- When a building is used for more than one occupancy purpose, it shall be subject to the most restrictive requirements for the occupancies concerned.

b - Forms of occupancy separations :- Occupancy separation shall be vertical or horizontal or both or, when necessary, of such other form as may be required to afford a complete separation between the various occupancy divisions in the building.

c - Types of occupancy separation :- Occupancy separations shall be classed as " absolute " " special " and " ordinary ".

An "absolute Occupancy separation " shall have no openings therein and shall be of not ~~more~~ less than four hour fire resistive construction.

A " Special Occupancy Separation " shall be of not less than three hours fire resistive construction. All openings in walls forming such separation shall be

.../...

protected on each side and shall be kept normally closed. The total width of all openings in any " Special Occupancy Separation " wall in any one story shall not exceed 25 % of the length of the wall in that story and no single opening shall have an area greater than 12 m2 .

Table N° I - Required separations in Buildings of mixed occupancy :-

Legend : A : Absolute Separation S : Special Separation
O : Ordinary " N : No " "

Group	A	B	C	D	E	F	G	H	I	J
A	N	N	N	S	A	S	S	O	O	O
B		N	N	S	A	S	S	O	O	O
C			N	O	A	O	O	O	O	O
D				N	A	A	A	O	N	S
E					N	O	O	S	S	O
F						N	N	O	N	N
G							N	O	N	N
H								N	N	O
I									N	O
J										N

- An " Ordinary Occupancy Separation " shall be of not less than one-hour fire - resistive construction. All openings is such separations shall be protected with

class " C " fire doors and such doors shall be kept normally closed.

d - Fire ratings for Occupancy Separations :-

Occupancy separations shall be provided between the various groups and divisions of occupancies except that in no case need the serparation be more fire-resistive than the exterior walls of the building in which the separation occurs, unless such walls are less than one-hour fire resistive construction . Where any occupancy separation is required the minimum shall be and " Ordinary Occupancy Separation ".

4 - Location on Property :-

a - General Requirements :

- Exterior walls shall have the degree of fire resistance and exterior openings shall have the protection ~~as~~ by set forth ~~with~~ Mr. Elias Dabbas.

For the purpose of this section, the center Line of an adjoining street or alley may be considered an adjacent property line. Distance shall be measured at right angles to the plane of the wall in question.

b - Buildings on same property :- For the purpose of determining the required exterior wall protection, Buildings on the same property shall be assumed to have property line between them... When a new building is to be erected on the same property with an existing building,

the assumed property line from the existing building shall be the distance to the property line for each occupancy.

Exception :-

Two or more buildings on the same property may be considered as portions of one building if the area within a line circumscribing the buildings is within the limits specified in the next section 5. In this case, the space between builts shall be considired an inner court for the purpose of determining the exterior wall construction.

5 - Allowable Floor Area :-

a - General :- The floor area of every building shall be determined by the character of the occupancy, the type of construction, and the location on a fire zone. Buildings shall adjoin a public space, yard, or street on not less than one side. Basement and cellar areas need not be included in the total allowable areas. Yards shall be on the property on which a building is located permanently maintained as an integral part thereof, and free of all obstructions from the ground up.

b - One story building :- The area of one story building shall not exceed the limits set forth in table N° 2 except as provided in section 6.

c - Areas of buildings over one story :-

The total area of all floors of buildings over one storey in height shall not exceed 200 per cent of the area allowed for one story buildings. No single floor area

shall exceed one-story buildings.

See part B to K for special occupancy provisions.

Table N° 2 - Basic allowable floor area for buildings one story in Height .

(in m^2)

Type of Construction	OCCUPANCY								
	A	B	C	D	E	F	G	H	I
I	Unli.	Unli.	Unl.	Unl.	Unl.	Unl.	Unl.	Unl.	
II	Not Permit.	1400	2000	600	1200	1750	2800	1400	Unlimited
III	Not Permit.	850	1200	350	700	1050	1700	850	Unlimited
IV	Not Permit.	700	950	230	500	850	1350	700	Unlimited
V	Not Permit.	550	800	230	500	700	1100	550	Unlimited

1) - The type of construction are specified in the Safety Code of Mr. Elias Dabbas.

2) - For Type J of Occupancy see the requirements given in the general study of that type of Occupancy.

TABLE N° 3 - MAXIMUM STORIES OF BUILDINGS

Type of Construction	OCCUPANCY							
	A	B	C	D	E	F	G	H	I
I	Unlimited								
II	Not Permitted	2	2	I	2	5	6	4	3
III	Not Permitted	2	I	I	I	3	3	4	3
IV	Not Permitted	2	I	I	I	2	2	4	3
V	Not Permitted	2	I	I	I	2	2	3	3

6 - Maximum height of Buildings :-

The maximum number of stories in height of every building shall be dependent upon the character of occupancy and the type of construction and shall not exceed the limits set forth in table No. 3 except asprovided in this section.

- The maximum height in meters of any building shall not exceed the number of stories allowed times 4.50 plus 7.5 meters .

The limits set fourth in table N° 3 may be in creased in height by one story in type III, IV and V buildings of group B, C ,F, G and H occupancy, if the construction is at least one hour fire resistive construction throughout, except that such increases shall not apply when other provisions of this code require one hour fire resistive construction.

B - Requirements for Group . A Occupancies :-

1 - Group A occupancy is already defined. For Occupancy

separations see Table No. 1.

For occupent load see section 1 of part B of Subdivision II .

2 - Construction, Height & Area allowable :-

a) General - Buildings or parts of buildings classed in Group A because of the use or character of the occupancy shall be of type I construction and shall not be limited as to location in fire zones, occupant load, height or area.

b) Special Provision - The slope of the main floor of the assembly room shall not exceed one in five.

3 - Location on property :-

Buildings housing group A occupancies shall front directly upon at least one public street not less than 12 m. in width, in which front shall be located the main entrance.

4 - Exit facilites :-

Sairs exits, and smokeproof enclosures shall be provided as specified in part B of subdivision II.

5 - Light ventillation and Sanitation :-

All portions of Group 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 not less than one-eigth of the total floor area, or shall be provided with artificial light and a mechanically operated ventilating system. The mechanically operated ventilating system shall supply at least thirty cubic feet (30 cu. ft.) of pure air per minute per seat in all portions of the

building and such system shall be kept continuously in operation during such time as the building is occupied. If the velocity of the air at the register exceeds ten feet (10') per second the register shall be placed more than eight feet (8') above the floor directly beneath.

Lights in all parts of the building customarily used by human beings shall be controlled from the box office. All lights in corridors , exit courts and exit passageways shall be protected by a wire cage.

All resgisters or vents supplying air backstage shall be equippred with automatic closing devices with fusible links. Such closing devices shall be located where the vents or ducts pass through the proscenium walls and shall be operaged by fusible links located on both sides of the proscenium wall and both inside of and outside of the vent or duct.

There shall be provided in an approved location at least one lavatory for each two toilets for each sex, and at least one drinking fountain for each floor level.

6 - Enclosure of Vertical Openings :-

Exists shall be enclosed as specified in part B of subdivision II.

Elevator shafts, vent shafts and other vertical openings shall be enclosed and the enclosure shall be of not less than 2 hours fire resistive construction.

A parapet wall or hand nail at least 0.80 m. in

height above the roof shall be provided around all open shaft enclosures extending through the roof.

C -Requirements for Group B - Occupancies :-

1 - Definition :-

The definition is given before (Subdivision I part A Section I)

- For occupancy separation see Table N° 1
- For occupant ~~xxxxxx~~ load see section 1 of part B in subdivision II.

2 - Construction Height and Area Allowable :-

a) General :- Buildings or parts of buildings classed in group B because of the use or character of the occupancy shall not exceed, in area or height the limits specified in Section 5, and 6 of part A of Subdivision I .

Exception :- Stadiums, reviewing stands and amusement park structures of open skeleton frame type shall not be limited in area or height.

b) Special Provisions :- Group B assembly rooms having an occupant load of 1000 or more shall not be located in the basement.

All buildings shall have access provided to the attic space by means of stairway or permanent ladder. The openings provided through the ceiling for such access into the attic space shall be not less than 55 cm. x 75 cms. and

shall be located in the hallway or corridor.

In buildings with no ceilings and having rooms with floor area of more than (2800 m2) tight draft stops shall be installed to prevent a free current of air under the roof. These draft stops in trussed roofs shall extend from the roof down to the bottom chord of the truss and shall divide the under roof or attic into sections not to exceed (1850 m2) in area.

3 - Location on Property :-

All buildings of Group B occupancies shall front directly upon at least one public street of not less than 10 meters in width, in which front shall be located the main entrance of such a building.

4 - Exit Facilities :-

Stairs, exits, and smoke proof enclosures shall be provided as specified in part B of subdivision II.

Exit signs shall be installed as specified in Section 10 part B Subdivision II.

5 - Light Ventillation And Sanitation :-

All portions of Group B occupanies customarily used by human beings and all dressing rooms shall be provided with natural or artificial light ventillation and sanitation facilities as specified in section 5 of the previous Part.

6 - Enclosures of Vertical Openings :-

Exits shall be enclosed as specified in part B of Subdivision II.

Elevator shafts, vent shafts and other vertical openings shall be enclosed as specified in section 6 of the last part.

D -Requirements for Group C, Occupancies :-

1 - Definition :-

Group C is already defined (I, A, 1)

- For Occupancy separation see ~~su~~table No 1
- For Occupant load see (II, B, 1).

2 - Construction Height & Area Allowable :-

a) General :- Buildings or parts of buildings classed in Group C because of the use or character of the occupancy shall not exceed in area or height, the limits specified in section 5 and 6 of part A given before .

b) Special Provisions :- Rooms having an occupant load of more than 100 and rooms used for kindergarden, first or second grade pupils shall not be located above the first story above grade except in buildings of Type I Construction.

For attic space partitions and draft stops see (I,C,2)

3 - Location On Property :-

Group C occupancies shall front : directly upon at least one public street of not less than 6 m. in width, in which

front shall be located at least one required exit.

For further specific problems see art. 4 part A Subdivision I.

4 - Exit Facilities :-

Sairs, exits, and smoke proof enclosures shall be provided as specified in part B of Subdivision II.

5 - Light Ventillation & Sanitation :-

All portions of Group C occupancies shall be provided with light and ventilation, either natural or artificial, as specified before in section 5 of part B.

Toilets shall be provided on the basis of the following ratios of toilets to number of students:

	Girls	Boys
Elementary Schools	1:35	1: 100
Secondary Schools	1:45	1: 100

In addition, urinals shall be provided for boys on a basis of 1:30.

There shall be provided at least one lavatory for each two toilets or urinals for each sex and at least one drinking fountain on eash floor.

6 - Enclosure of Vertical Openings :-

Exists shall be enclosed as specified in part B of subdivision II. All elevator shafts, vent shafts, and other vertical openings shall be enclosed, and the enclosure shall be as specified before in section 6 of part B.

E -Requirements for Group D Occupancies :-

I - Definition :-

Group D is already defined (I, A, 1).

For Occupancy separation see table No 1

For occupant load see (II,B,1).

2 - Construction Height & Area Allowable :-

a) General Buildings or parts of buildings classed in group D because of the use or character of the occupancy shall not exceed, in area or height, the limits specified in section 5 and 6 of Part A given before.

b) Special provisions :- Mental hospitals, jails, prisons, reformatiories houses of correction and buildings where personal liberties of in mates are similarly restrained shall be of Type I construction throughout.

Occupancies in which the personal liberties of inmates or partiemts are restrained within the building shall have floors of incombustible construction - When the above occupancies are of more than one story in height they shall be of type I Construction .

For attic space partitions and draft stops see section 2 of part C given before.

3 - Location on Property :-

For the limitation of location on property see (I,A,4)

4 - Exit Facilities :-

Stairs, exits, and smokeproof enclosures shall be provided as specified in part B of subdivision II.

5 - Light & Ventillation :-

All portions of Group D occupancies customarily used by human beings shall be provided with light and ventillation by means of windows or sky lights with an area equal to one-eighth (1/8) of the total floor area, or shall be provided with artificial light and a mechanically operated ventillating system. The mechanically driven ventilating system shall supply at least (850 liters) of pure air per minute for each occupant there of in all portions of the building and such system shall be kept continously in operation while the building is occupied.

6 - Enclosure of Vertical Openings :-

Exits shall be enclosed as specified in part B of Subdivision II. All elevator shafts, vent shafts, and other vertical openings shall be enclosed, and the enclosure shall be as specified before in section 6 of part B.

F - Requirements for Group E Occupancies :-

1 - Definition : -

Group E is already defined (I,A,1)

For occupancy separation see table No 1

For occupant load see section (II,B,1).

2 - Construction, Height & Area Allowable :-

a- General :- Building s or parts of buildings classed in group E because of the use or character of the occupancy shall not exceed in area or height, the limits specified in section 5 and 6 of part A.

b - Special Provisions :- Aircraft and repair hangars shall be surrounded by public space, streets, or yards of not less than twenty meters (20 m) in width .

For attic space partitions and draft stops see section 2 part C given before .

3 - Location on Property :-

For limitation of location on property see (I,A,4)

4 - Exit Facilites :-

Stairs, exits, and smokeproof enclosures shall be provided as specified in (II, B).

5 - Light., Ventillation, & Sanitation :-

All portions of Group E occupancies customarily used by human beings shall be provided with light and ventillation by means of windows or skylights with an area equal to 1/8 of the total floor area or shall be provided with artificial light and a mechanically operated ventilating system. The mechanically driven ventilating system shall supply at least 850 liters of pure air per minute for each occupant there of in all portions of the building and such system shall be kept continuously in operation while the building is occupied.

In all buildings used for the storing or handling of automobiles operated under their own power, and in all buildings where flammable liquids are used, exhaust ventillation shall be provided sufficient to produce one complete change of air every 15 minutes. Such exhaust ventillation

shall be taken from a point at or near the floor level.

Exception :- In public garages and aircraft hangars not exceeding an area of 450 m2 the Administration may authorize the omission of such ventilating equipment where, in its opinion, the building is supplied with unobstructed openings to the outer air which are sufficient to provide the necessary ventilation.

Every building or portion thereof where persons are employed shall be provided with at least one toilet. Every building and each subdivision thereof where both sexes are employed shall be provided with access to at least two toilets located either in such building or conveniently in a building adjacent thereto.

6 - Enclosure of Vertical Openings :-

Exits shall be enclosed as specified in (II, B).

All Elevator shafts, vents shafts, and other vertical openings shall be enclosed, and the enclosure shall be as specified before in section 6 part B.

G -Requirements for Group F Occupancies :-

1 - Definition :-

Group F is already defined (I,A,1)

For occupancy separation see table No 1

For occupant load see section (II,B, 1).

2 - Construction Height & Area Allowable :-

a - General :- Buildings or parts of buildings classed in group F because of the use or character of the

occupancy shall not exceed in area or heights , the limits specified before in section 5 & 6 of part A.

b - Special Provisions :- Aircraft hangars shall have exterior walls, or parts of walls, within 6 meters of a property line, or within 12 meters of buildings on the same property.

For attic space partitions and draft stops see section 2 part C given before.

3 - Location on Property :-

For Limitation of location on property see (I,A,4)

4 - Exit facilites :-

Stairs, exits, and smoke proof enclosures shall be provided as specified in (II, B) .

Passageways direct to outside exits, free of all incumbrances and at least 2.25 meters in width, clearly defined by floor markings and overhead signs, shall be maintained permanently.

5 - Light Ventilation & Sanitation :-

All portions of group F Occupancies customarily used by human beings shall be provided with light and ventilation by means of windows or skylights with an area not less than 1/8 of the total floor area or shall be provided with artificial light and a mechanically operated ventilating system.

In no case shall less than 4 changes of air per hour be provided .

Every building or portion thereof where persons are employed shall be provided with at least one toilet. Every building and each subdivision thereof where both sexes are employed shall be provided with access to at least two toilets located either in such building or conveniently in a building adjacent thereto.

Such toilet rooms in connetion with food establishments where food is prepared, stored, or served, shall have a non absorbent interior finish on floors , walls, and ceilings, shall be separated from such food establishments with close fitting, tight doors with a vestibule between, shall have hand washing facilites therein or adjacent thereto, and shall be provided with an exterior window at least 0.30 m2 in area, fully openable, or a vertical duct not less than 0.03 m2 in area leading to the exterior of the building.

6 - Enclosure of Vertical Openings :-

Exits shall be enclosed as specified in (II,B)

Elevator shafts, vent shafts, and other vertical openings shall be inclosed and the enclosure shall be as specified before in section 6 part B.

H -Requirements for Group G Occupancies :-

1 - Definition :-

Group G is already defined (I,A, 1)

For occupancy separation see table No.1

For occupant load see section (II, B, 1).

2- Construction , Height and Area Allowable :-

a - General :- Buildings or parts of buildings classed in group G because of the use or character of the occupancy shall not exceed, in area or height , the limits specified in sections 5 & 6 of part A given before.

b - Special Provisions :- For attic space partitions and draft stops see section 8 part C given before .

3 - Location on Property :-

For the limitation of location on property see (I,A , 4) .

4 - Exit Facilites :-

Stairs, exits, and smokeproof enclosures shall be provided as specified in (II, B).

Passageways direct to outside exits, free of all incumbrances and at least 2.25 meters in width, clearly defined by floor markings and over head signs, shall be maintained permanently.

5 - Light, Ventilation, and Sanitation :-

All portions of group G occupancies customarily used by human beings shall be provided with light and ventilation.

Every building or portion thereof where persons are employed shall be provided with at least one toilet. Every building and each subdivision thereof where both sexes are

employed shall be provided with access to at least two toilets located either in such building or conveniently in a building adjacent thereto.

6 - Enclosure of Vertical Openings :-

Exits shall be enclosed as specified in (II - B) Other vertical openings are not required to be enclosed.

I - Requirements For Group H Occupancies :-

1 - Definition :-

Group H is already defined (I, A, 1)

For occupancy separations see table No 1 .

For occupant load see sedtion (II,B, 1).

2 - Construction , Height & Area allowable :-

a - General : Buildings or parts of buildings classed in group H because of the use or character of the occupancy shall not exceed, in area or height the limits specifed in sections 5 & 6 of Part A.

b - Special Provisions :- For attic space partitions and draft stops see section 2 part C given before .

3 - Location on property :-

For the limitation of location on property see section (I, A, 4).

4 - Exit Facilities:-

Stairs, exits, and smokeproof enclosures shall be

as specified in (II, C).

All stairs and exits in group H occupancies shall open directly upon a street as alley or upon a yard or court not less than 1.25 m. meter in width directly connected to a street or alley by means of a passageway not less in width than the stairway opening in to such passage way and not less than 2.50 meters in height.

5 - Light Ventilation & Sanitation :-

a - Windows :- All living rooms, kitchens and other rooms used for living, eating or sleeping purposes shall be provided with windows with an area not less than 1.25 m2 nor 1/8 of the floor area of such rooms. The window area in both rooms watercloset compartments, and other similar rooms shall not be less than 0.30 m2 unless adequate mechanical ventilation is provided. Not less then one half this area shall be openable.

Required windows shall open on a court, yard or street either directly or through a porch with a minimum clear height of not less than 3.00 m. and a depth of not more than 2.00 m. and a depth of not more than 2·00 m. Such porch shall be at least 50 percent open on at least two sides.

The width of such courts or yards shall not be less than 1.50 m. when such courts or yards are not more than 2 stories high measured down from the top of the building and shall be increased at the rate of 0.25 m. for each additional story in height . If such court is entirely surrounded by

the building it shall have a width at least 50 per cent greater than that otherwise required.

b - Room Sizes & Ceiling Heights :

Every room required to have windows by subsection (a), except it built wholly or partly within a roof and kitchens shall be not less than 3 meters (3 m.) in height (net height).

If built wholly or pastly within a roof (or kitchens) it shall not be less than 3 meters in height for at least 50 per cent of its area and for the remainder not less than 2.50 meters.

For Bath rooms & W.C.s the minimum height is 2.50m.

Rooms used for living, eating, or sleeping purposes shall have an area of not less than 8 m2, Kitchens shall have an area of not less than 5 m2.

c - Sanitation :- Every building shall be provided with at least one toilet. Every hotel and each subdivision thereof where both sexes are accomodated shall be provided with at least two toilets located in such building, which shall be conspiciously marked, one for each sex. Not less than one toilet shall be provided for each 15 persons or major fraction thereof that such building is designed to accomodate.

One toilet shall be provided for each appartment

A Kitchen sink shall be installed in every kitchen

Light, ventilation and sanitation other than given above shall be as specified by the local municipality laws

intended to regulate such light, ventilation and sanitation.

6 - Enclosures of Vertical Openings :-

Exits shall be enclosed as specified in (II,B).

Elevator shafts , vent shafts and other vertical openings shall be enclosed and the enclosure shall be as specified before in section 6 of part B.

J - Requirements for Group I Occupancy :-

1 - Definition :-

Dwellings .

For occupancy separation see table N o.1.

For occupant load see section (II, B, 1).

2 - Construction Height & Area Allowable :-

Buildings or parts of buildings classed in Group I because of the use or character of the occupancy shall not exceed, in area or height, the limits specified in sections 5 & 6 of part A.

3 - Location on Property :-

For the limitation of location on property see section (I, A, 4).

4 - Exit Facilities :-

Stairs and exits shall be provided as specified in (II, B).

5 - Light Ventilation and Sanitation :-

a - Windows :- All living rooms, kitchens , and

other rooms used for living, eating, or sleeping purposes shall be provided with windows with an area not less than 1.25 m2 nor 1/8 of the floor area of such room. Not less than one-half such area shall be openable.

The window area in backrooms, water-closet compartments, and otther similar rooms shall not be less than 0.30 m2 and may open on a vent shaft which has a least dimension open and unobstructed to the sky of not less than one meter.

Required windows shall open on a court, yard, or street either directly or through a porch with a minimum clear height of not less than 3·00 m. Such porch shall be at least 50 percent open on at least one side.

b - Room Sizes and Ceiling Heights : Every room required to have windows by subsection (a) except if built wholly or partly within a roof(and kitchens); shall be not less than 3·00 meters, in height. If built wholly or partly within a roof (or kitchens) , it shall not be less than 3.00 m. in height for at least 50 per cent of its area and for the remainder not less than 2.50 meters.

Bath Rooms and Water closet compartments shall not be less than 2.50 meters in height.

c - Sanitation facilites shall be provided as required by the Public Health authorities .

There shall be no opening from a room in which a water closet is located into a room in which food is prepared or stored.

Light, ventilation, and sanitation shall be provided as specified by the municipality of the district.

6 - Enclosure of Vertical Openings :-

Dumb-Waiter shafts, clothes chutes and other similar vertical openings shall be enclosed, and the enclosure shall be as specified before in section 6 of part B.

7 - Exceptions and Deviations :-

Group I occupancies constructed on the roof of multiple - storied buildings shall be considered as an additional story in so far as the construction , location, exposure, stairs, and exits are concerned.

K - Requirements for Group J Occupancies :-

I - Definition : -

Group J is already defined (I,A,I).

For occupancy separations see table No 1.

For occupant load see section (II, B, 1).

2 - Construction Height and Area Allowable :-

Buildings or part of buildings classed in Group J because of the use or character of the occupancy shall not have a floor area exceeding 100 m2. The height shall not exceed one story.

When any building exceeds the limit specified in this Chapter it shall be classed in the occupancy group other than Group J that it most nearly resembles.

3 - Location on Property :-

For the limitation of location on property see section (I, A, 4).

4 - Exit Facilities: -

Stairs and exits shall be provided as specified in (II, B).

5 - Light and Ventilation :-

Private garages which are constructed in conjunction with any group Hor I occupancies and which have openings intosuch buildings shall be equipped with fixed louvered or screened opening or exhaust ventilature with exhaust openings located within 0.25 m. of the floor. The clear area of the louvered openning or of the openings into the exhaust ducts shall be not less than 0.04 m2 (or 400 cm2). per car stored in such private garage.Under no circumstances shall a private garage have any opening directly into a room used for sleeping purposes.

6 - Enclosure of Vertical Openings :-

Enclosure of vertical openings shall not be required.

II DETAILED REGULATIONS

A -Enclosure of Vertical Openings :-

1 - Enclosures when required : -

Vertical openings are required to be enclosed in certain buildings depending upon the occupancy of the

building, or height of building. Stairways and ramps require to be enclosed as specified in (II, B).

2 - Elevator Enclosures :-

Enclosing walls of elevator shafts may consist of wire glass set in metal frames on the entrance side only. Elevator shafts extending through more than two stories shall be equipped with an approved means of adequate ventilation to and through the main roof of the building.

3 - Air ducts.

Air ducts passing through a floor shall be enclosed in a shaft.

Dampers shall be installed where ducts pierce the shaft enclosure walls .

B - Stairs and Exits :-

1 - In General :-

a - Purpose :- The purpose of this part B is to provide minimum standards of egress facilities for occupants of buildings.

b - Scope :- Every building shall be provided with exits as required by this Part.

c - Definition :- " Occupant load " is the total number of persons actually occupying a building or portion there of at any one time, but shall never be assumed to be less than the result obtained by dividing the floor area by the square meters per occupant set fourth in table No 4 for the occupancy housed therein.

d- Room Capacity :- The occupant load of a room or building shall be the actual number of seats but not less than the result obtained by dividing the floor area by the square meters per occupamt set forth in table No.4.

Table No 4 - Square meters per occupant for Various Occupancies:

Group A and B :-	
Assembly Areas	0.65
Dining room Areas	1.40
Dance floors	0.65
Gymnasiums	1.40
Skating Rinks	1.40
Portions not used as assembly areas	9.30
Group C :-	
Class rooms	1.90
Dining room Areas	1.40
Shops and Vocational Rooms	4.65
Group D :-	
Children's Homes	4.65
Dinings Room Areas	1.40
Hospitals, Sanitariums	9.30
Group E :	9.30

Group F: Retail Sails :	
Basement	1.90
First Floor	2.80
Upper Floors	4.65
Dining-Room Areas	1.40
All Others	9.30
Group G :	
Assembly Areas	0.65
Dining Room Areas	1.40
All Others	9.30
Group H :	
Assembly Areas	0.65
Dining Room Areas	1.40
Homes for aged	4.65
All Others	9.30
Group I :	28.00

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e - Benches :- Where benches are used the number of seats shall be based on one person for each 0.50 m. of length of the benches.

f - Mixed Occupancies :- The capacity of a building containing mixed occupancies shall be determined by adding

the number of occupants of the various portions as set forth in table No.4.

g - More than one Occupancy :- The capacity of room or building which is used for different occupancies at different times shall be determined by the occupant load which gives the largest number of persons.

h - Exit Obstruction :- No obstruction shall be placed in the required width of an exit.

2 - Exits Required :-

a - Width : The total width of exits in meters shall be not less than the total occupant load served divided by 150. Such width of exits shall be divided approximately equally among separate exits.

The width of exits from any story of a building shall be determined from the occupant load in that story plus one-half the tributary occupant load in the story next above or below, provided the resulting width is not less than that required for the upper story considered separately.

b - Number of Exits : - Group D and H occupancies having an occupant lead of more than 10 shall have not less than 2 exits .

Other occupancies having an occupant load of more than 50 shall leave not less than 2 exits.

Buildings or portions thereof having an occupant load of 500 to 999 shall have not less than three exits.

Buildings or portion thereof having an occupant load of 1000 or more shall have not less than four exits.

If two or more exits are required, they shall be arranged a reasonable distance apart so that if one becomes blocked the other will be available.

Every such exit shall have a clear width of not less than 1.50 m.

3 - Doors :-

a - General :- This section shall apply to every exit door serving an occupant load of more than 10, and from hazardous rooms or areas.

b - Swing : Exit doors shall swing in the direction of exit travel when serving an occupant load of 50 or more .

c - Operation : - Exit doors shall be openable from the inside without the use of key or any special knowledge or effort.

d - Width :- The required width of a door opening shall not be reduced more than 0.075 m. (7.5 cm.) by any projections.

No required door way shall be less than 1.00 m. in width.

e - Door leaf width :- No leaf of any exit door shall exceed 1.25 m. in width.

f - Revolving Doors :- Revolving doors shall not be used unless exit doors of required width are installed adjadent thereto.

g - Egress from Door : - Every door shall open into a corridor, enclosed stairway, exterior stairway where permitted as a required exit, and exterior exit court, or public way.

h - Doors Openings into Stair way :- Every door opening into a stairway shall open on a landing within (5 cms). of the floor level. The width of the landing shall not be reduced more than (15 cms.) by the door when fully open.

4 - Corridors :-

a - General : - This section shall apply to every corridor serving as a required exit for an occupant load of more than 10.

b - Width : Every required corridor shall be not less in width than 1.20 m.

c - Projections :- The required width of corridors shall be unobstructed.

Exceptions : 1 - Trim and haundrails may project 9 cms.

2 - Doors, when fully open, may project 15 cm.

d - Access to Exits :- Floors above the first floor shall have exits so arranged that it is possible to go in either direction from any point in a corridor to a stairway.

5 - Stairs :-

a - Width :- Every stairway shall not be less than 1.20 m. in width .

Exceptions : 1 - Stairways serving an occupant load of 10 or less may be 1.00 ms. wide.

2 - Trim and handrails may project 10 cms. into the required width of any stairway.

b - Rise and Run :- The rise of every step in a stairway shall not exceed 18 cms. and the run shall be determined by the following expressed in centimeters.

2 X (Height of riser) + (run) : 63 centimeters.

Exception : In stairways serving an occupant load of 10 or less the rise may be of 20 cm. and the rum way be 23 cms.

c - Winders :-In group I occupancies and in monumental unrequired stairways, winders may be used if the required width is previded at a point not more than 30 cms. from the side of the stairway where the treads are narrower, but in no case shall any width of run be less than 15 cms. at any point.

d - Landings :- Every intermediate landing shall have a dimension measured in the direction of travel equal to the width of the stairway, but such dimension need not exceed 1.25 ms.

e - Distance between landings :- There shall be not more than fifteen steps between landings, nor less than 3 risers.

f - Handrails:- Stairways shall have handrails on each side and every stairway more than 2.25 m. in width shall have intermediate handrails dividing the stairway into portions not more than 1.60 m. in width.

Exceptions :- 1 - Stairways 1.00 m or less in width may have one handrail.

2 - Handrails shall not be required for exterior monumental stairways.

g - Stairway to roof :- In every building more than 2 stories in height one stairway shall extend to the roof surface unless the roof has a slope greater than one in three.

h - Headroom:- Every required stairway shall have headroom clearance of not less than 2.00 meters measured vertically from the nearest nosing to the nearest soffit.

6 - Ramps :-

a - General :- Ramps or inclines conforming to the requirements of this section may be used as exits. Aisles need not conform to this section.

b - Width :- The Width of ramps shall be as required for corridors .

c - Slope :- The slope of a ramp shall not exceed one in eight .

d - Handrails :- A ramp with slope exceeding one in ten shall have handrails as required for stairways.

e - Construction :- Ramps shall be constructed as required for stairways

f - Surface :- The surface of ramps shall be roughened or shall be of non-slip material.

7 - Horizontal Exits :-

a - Definition :- A horizontal exit is a horizontal passageway or ramp into another building or into another section of the same building through an " Ordinary Occupancy Separation ".

b - Used as a Required Exit :- If conforming to the provisions of this part B, a horizontal exit may be considered as a required exit.

c - Discharge Area :- A horizontal exit shall lead into a floor area having capacity for an occupant load not less than the occupant load served by such exit. The capacity shall be determined by allowing 0.27 m2 of net clear floor area per occupant. The area into which the horizontal exit leads shall be provided with exits as required in section 2 of this part B, at least one of which shall lead directly to a public way.

8 - Exit Outlets :-

Every exit shall discharge into a public way or exit court.

9 - Exit Courts :-

a - Discharge :- Every exit court shall discharge into a public way or passageway leading to a public way. The passageway shall be without other openings.

b - Width :- Every exit court shall be not less in width than the required total width of the tributary exits.

c - Slope : The slope of exit courts shall not exceed one in ten.

d - Obstructions :- The required width of exit courts shall be unobstructed except for trim and handrails which may project not more than 10 cms. into the required width.

At any point where the width of an exit court is reduced for any cause, the reduction in width shall be affected

gradually by a guard rail at least one meter high. The guard rail shall make an angle of not more than 30 degrees with the axis of the exit court.

10 - Exit Signs and Illumination :-

a - Exit illumination :- Exits shall be illuminated at alltimes with ~~with~~ light having an intensity of not less than one foot candle at floor level.

b - Exit signs :- Every exit doorway from an area with an occupant load of more than 100 persons shall be marked with an exit sign. Exit sign letters shall be at least 12 cms . high.

c - Illumination of signs :- Exit signs in every Group A occupancy ; Group B Division a and b occupancy; Group D Occupancy ; Group F Occupancy with an occupant load in excess of 1000 persons ; and Group H Occupancy with an occupant load of more than 100 p ersons, shall be lighted with 2 separate electric lamps of at least 20 Watts capacity on separate circuits, one such circuit being seperate from any other circuit in the building.

II - Aisles :-

a - General :- Every portion of every building in which are installed seats, tables, or equipment, shall be provided with ailes leading to an exit.

b - Width :- Every aisle shall be not less than 1.00 meter wide if having seats on only one side and not less than 1.20 m. wide if having seats on both sides. Such minimum

width shall be measured at the end farthest from the foyer and shall be increased by 3 cm. for each one meter in length toward the foyer.

Exception :- In group B Division d occupancies, aisles need not be over 1.20 m.

c - Distances to Nearest Exit :- In areas occupied by seats, and in group A and B occupancies without seats, the line of travel to an exit door by an aisle shall not be more than 45 meters.

d - Aisle spacing :- Aisles shall be located so that there will be not more than six intervening seats between any seat and the nearest aisle.

Exception :- In Group B division d occupancies there may be 20 intervening seats between any seat and the nearest aisle.

e - Cross Aisles :- Cross aisles shall be not less than 1.25 m. in clear width. Where aisles terminate in a cross aisle instead of a foyer, the width of the cross aisle shall be not less than the sum of the widths of all contributary aisles.

f - Vomitories :- Vomitories connecting the main exit with the cross ailes shall have a total width not less than the sum of the width of the widest aisle leading thereto plus 50 per cent of the total width of the remaining aisles leading thereto.

12 - Seats :-

a - Spacing :- The spacing of rows of seats from

back to back shall not be less than 1.00meter nor less than 0.85 meter plus the sum of the thickness of the back and inclination of the back.

Exception :- In group B, Division d occupancies, the spacing of rows of seats without backs may be 0.65 meter.

b - Width :- The width of any seat shall be not less than 0.50 meters.

13 - Exits for Group A and B Occupancies :-

a - Main Exit :- Every Group A occupancy shall be provided with a main exit. The main exit shall be of sufficient width to accomodate one-half the total occupant lead but shall not be less than the total width of all aisles and stairways leading thereto and shall connect to a stairway or rampsleading to a public way.

Steps may be used if separated from the main exit by a landing not less in area than the foyer.

b - Side Exits :- Every auditorium and balcony of a group A occupancy shall be provided with exits on each side. The exits on each side of the auditorium or balcony shall be of sufficient width to accomodate one-third of the total occupant load served. Side exits shall open directly into an exit court or a ramp leading to an exit court, except that side exits from balcony may lead to a stairway, and side exits from balconies above the first balcony shall be by way of a stairway or ramp in a smokeproof enclosure. Side exits shall be accessible from a cross aisle or a side aisle.

14 - Exits for Group C Occupancies :-

a - Corridors : - The width of a corridor in a Group C occupancy shall be the width required by section (II, B,2) plus 0.70 meter, but no corridor shall be less than 2.00 meters wide.

There shall be no change of elevation of less than 0.65 m. in a corridor unless ramps are used.

b - Corridors Serving Auditoriums :- An exit serving both an auditoriums and other rooms need provide only for the capacity of which ever required the greater width if the auditorium is not to be used simultaneously with the other rooms.

c - Stairs :- Each floor above or below the ground floor level shall have not less than 2 exit stairs and the required exit width shall be equally divided between such stairs, provided that no stair shall be less than 1.50 m. in width enclusive of rails.

Exception :- This subsection does not apply to rooms used for maintenance, storage or similar purposes.

d - Doors :- The width of exit doors from corridors, halls and stairs shall be not more than 0.50 meters narrower than the required width of such corridors , halls, or stairs.

Exit doors in schoolrooms shall swing in the direction of egress .

e - Corridor Dead End :- There shall be no dead end in any corridor or hall more than 3.50 meters beyond the

exit stair or door.

f - Exterior Exit :- Any room, the floor of which is below grade and which is used by pupils shall have at least one exit leading directly to the exterior of the building, and such exit shall be not less in width than one half the required aggregate width of exits from such room.

15 - Exits for Group D Occupancies : -

a - Separate exits :- Every room in a Group D occupancy shall have access to two separate exits.

b - Corridor Dead Ends :- There shall be no dead end in any corridor or hall more than 3.00 meters beyond the exit stair or door .

c - Corridors :- There shall be no change of elevation of less than 0.65 meter in a corridor unless ramps are used .

The corridors shall be not less than 1.80 meter wide in occupancies where bedridden patients are housed.

d - Basement exits :- One exit from every room below grade shall be to the exterior.

e - Doors :- Exit doors serving areas housing bedridden patients shall be not less than 1.00 meter in width.

f - Locks :- No exterior door shall be lockable from the inside, except in sanitoriums for mental patients.

16 - Exits for Group E Occupancies :-

Every portion of a group E occupancy having a floor area of 20 m2 or more shall be served by at least two separate exits.

C - Sky Lights :-

All glass in skylights shall be wire glass, except that skylights over vertical shafts extending through two or more stories shall be glazed with plain glass as specified in this Section; provided , that wire glass may be used if ventilation equal to not less than 1/8 the cross sectional area of the shaft but never less than 1.25 meter is provided at the top of such shaft.

When wire glass is required for skylights the size shall not exceed 4650 cm2 in area or 1.20 meter in any dimension in any one panel.

Any glass not wire glass shall be protected above and below with a screen. The screen shall be substantially supported below the glass.

Glass used for the transmission of light , if placed in floors or side walks, shall be supported by metal or reinforced concrete frames, and such glass shall be not less than 12 millimeters in thickness, Any such glass over 100 cm2 in area, shall have wire mesh embedded in the same or shall be provided with a wire screen underneeth as specified for skylights in this section.

D - Bays, Balconies, and Projections :-

Save as provided in the next section, no part of a building may project beyond the building line.

1 - Permitted projections :-

Where no part of any projection beyond the building

line is at a height above the adjoining foot way less than 3.50 meters :

a - Cornices may project not more than one meter.

b - Window Grilles may project not more than 0.50 meter.

c - Lamps, clocks, and signs, inclusive of any framework or other construction to which, or by means of which, they are attached to the building, may project not more than 0.75 meter. The surface area of any one facet of such lamp, clock or sign, shall not exceed I m2.

2 - Sunblinds :-

Sunblinds may project beyond the building line provided no part shall be at a height less than 3.00 meters above the level of the foot way ; and when opened to its fullest extent, it shall not project more than 2.00 meters beyond the building line and shall not be less than 0.30 meter from the carriage way.

Every such sunblind shall be constructed to bold, roll or otherwise collapse against the wall of the building, so that when so collapsed no part thereof projects a greater distance than 15 centimeters beyond the building line.

3 - Projecting Windows and Doors :-

a - Any window or part of a window which, when opened outwards projects over the public way shall be at a height not less than 3.00 meters above the level of the public way measured to the lowest part of such window or part thereof.

b - Every door or gate opening directly on to a road, except a door or gate of a public building, shall be constructed and fixed so as to open inwards .

E - Chimneys , Vents and Fireplaces :-

1 - Chimneys : -

a - Area : No flue area shall be smaller than the flue connection on the appliance attached thereto, and in no case shall the flue area be less than as set forth in table No. 5 .

Table No. 5 Flue Area For Solid or Liquid Fuels :

	Minimum Area of Flue Lined		Unlined
	Round	Rectangular	
Small stoves and Heaters	180 cm2	240 cm2	420 cm2
Ranges and Room Heater	260 cm2	320 cm2	550 cm2
Fire places	1/12 of opening minimum :320cm2	1/10 of opening minim:420 cm2	1/8 of opening minim:65 cm2
Warm air furnaces and boilers.	450 cm2	580 cm2	870 cm2

b - Height :- Every chimney shall extend to a a point at least 0.65 meter above the highest elevation of any portion of the building within 3.00 meters of the chimney; provided that the Municipality may approve a chimney of lesser height installed with an approved vent cowl.

2 - Metal Smokestacks :-

a - Tickness :- Metal smokestacks shall be constructed of material not less than 4 millimeter in thickness.

b - Support : Metal smokestacks shall be supported directly on their own foundation or may be supported upon boilers which are designed to support them.

3 - Fireplaces :-

a - Walls :- Fireplace and smoke chamber walls be of solid masonry not less than 20 centimeters thick.

b - Lintel :- The lintel should be of incombustible material .

c - Hearth :- Every fireplace shall be provided with an incombustible hearth slab at least 30 centimeters wider on each side than the fireplace opening and projecting at least 50 centimeters therefrom. This slab shall be not less than 10 centimeters thick and shall be supported by incombustible material or reinforced to carry its own weight and all imposed loads.

4 - Gaz Vents :-

a - Height :- Every gaz vent shall extend above the roof surface and terminate in an approved cover with a venting capacity not less than that of the vent.

b - Size :- The area of any flue or vent shall be not less than the area of the largest Connection plus 50 per cent of the areas of all additionnal connections with a minimum

area of not less than 80 cm2 and a minimum dimension of not less than 6 cm.

5 - Kitchen Ventillation :-

There shall be installed in the wall or ceiling, approximatively over the cooking facilities, a ventilating opening with an area of not less than (15 x 20 cms) connected to a ventillating duct leading to the outside air, such duct for each kitchen to be not less than 230 cm2 in cross sectional area.

B I B L I O G R A P H Y

- Lebanese Legislative Decree N° 61/L.E.

- Palestinian Gazette .

- Uniform Building Code 1949 Edition - Vol : 1 . ?

- Municipal Code of Chicago Related to Buildings
December 30, 1949.

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