



**SUBCHAPTER 9
LOADS**

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*"C26" omitted from section numbers in this column.

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Table No.

9-1 Percentage of Live Load

ARTICLE 1 GENERAL

§[C26-900.1] 27-550 Scope. -

Buildings and parts thereof, shall be capable of resisting all levels*** actually imposed thereon without exceeding the allowable stresses prescribed in subchapters ten and eleven of this chapter. In no cases shall the assumed loads be less than the minimum values described herein. In addition, within special flood hazard areas, and below the regulatory flood datum, as described in article ten of subchapter four of this chapter, applicable load requirements of reference standard RS 4-5 shall be applied.

*** *As enacted but "loads" probably intended.*

§[C26-900.2] 27-551 Standards. -

The provisions of reference standard RS-9 shall be a part of this subchapter.

§[C26-900.3] 27-552 Definitions. -

For definitions to be used in the interpretation of this subchapter, see subchapter two of this chapter.

ARTICLE 2 DEAD LOADS

§[C26-901.1] 27-553 Construction materials and assembled elements of construction. -

Except as provided in section 27-555 of this article, the dead load shall be the actual weight of the building materials or construction assemblies to be supported, computed from the unit weights given in reference standard RS 9-1. Where unit weights are not established in reference standard RS 9-1, the actual weights may be determined by analysis or from data in manufacturers' drawings or catalogs. Unit weights less than those given in reference standard RS 9-1 may be used only with approval of the commissioner.

§[C26-901.2] 27-554 Service equipment. -

Provision shall be made for the weights of all building service equipment including plumbing stacks, piping, heating and air conditioning equipment, electrical equipment, elevators, elevator machinery, flues, and similar fixed equipment. The weights of such equipment (or the allowances therefor) shall be included in the dead load. The weight of equipment that is part of the occupancy of a given area shall be considered as live load. See also paragraph two of subdivision (b) and subdivision (d) of section 27-557 of article three of this subchapter.

§[C26-901.3] 27-555 Partition loads. - Weights of all partitions shall be considered, using either actual weights at locations shown on the plans or the equivalent uniform load given in subdivision (b) of this section.

(a) Actual loads. - Where actual partition weights are

used, the uniform design live load may be omitted from the strip of floor area under each partition.

(b) Equivalent uniform load. - The equivalent uniform partition loads in reference standard RS 9-1 may be used in lieu of actual partition weights except for bearing partitions or partitions in toilet room areas (other than in one- and two-family dwellings), at stairs and elevators, and similar areas where partitions are concentrated. In such cases, actual partition weights shall be used in design. Except as otherwise exempted, equivalent uniform loads shall be used in areas where partitions are not definitely located on the plans, or in areas where partitions are subject to rearrangement or location.*

**As enacted but "relocation" probably intended.*

ARTICLE 3 LIVE LOADS

§[C26-902.1] 27-556 General. -

In addition to the applicable dead, wind, and other loads, the building shall be designed for uniform live loads, for concentrated live loads, or for concurrent combinations of uniform and concentrated live loads, whichever produce the greatest stress.

§[C26-902.2] 27-557 Floor live loads. -

(a) Uniformly distributed live loads. - The minimum design values established in reference standard RS 9-2 for various occupancies or uses shall be used subject to the provisions of subdivision (d) of this section. Where the occupancy or use of a space does not conform to any of those listed, the design load shall be determined by the architect or engineer subject to approval by the commissioner.

(b) Concentrated live loads. -

(1) The building framing shall be capable of supporting the concentrated live loads established in reference standard RS 9-2, placed so as to produce maximum stress.

(2) Floors that support any items of machinery, electrical or mechanical equipment, or other concentrated live load in excess of one thousand pounds (including the weights of pads or bases) shall be designed to support such weight as a concentrated load or group of concentrated loads.

(c) Nonconcurrency. -

(1) When a concentrated live load is present, the uniformly distributed load may be considered to be omitted in the area occupied by the concentrated load.

(2) Where reference standard RS 9-2 indicates that the concentrated live load is nonconcurrent with the uniform live load, it may be assumed that the total concentrated load is to be omitted when the uniform load is present and that the total uniform load is to be omitted when the concentrated load is present.

(d) Conformance. - For purposes of determining that the magnitude of the actual live load conforms to or is less than the minimum design live load established in this section, the actual uniform live load shall be approximated by averaging the total load actually applied over a rectangular area of one hundred fifty

square feet having no side less than eight feet.

§[C26-902.3] 27-558 Live loads for sidewalks, driveways, and railings. -

(a) Sidewalks and driveways. -

(1) When supported on grade, all sidewalks for new buildings and alterations shall be subject to inspection and acceptance by the commissioner. Portions of such sidewalks that are located between the curb line and the street line shall be constructed in compliance with the specifications for concrete sidewalks of the department of transportation.

(2) All sidewalks and driveways or portions thereof that are structurally supported shall be designed for a live load of one hundred psf uniformly distributed and in accordance with the provisions of subchapter ten of this chapter. Where subject to intentionally or accidentally imposed wheel loads of vehicles, such portions of sidewalks and driveways shall be designed for a uniformly distributed load of six hundred psf or for the maximum vehicular wheel load that could be imposed thereon, whichever develops the greater stresses.

(3) Appurtenant components of sidewalks and driveways, including manholes, manhole covers, vault covers, gratings, etc., shall be designed for the loads prescribed in paragraph two of this subdivision, or shall conform to the standards of the city agency having jurisdiction.

(b) Railings and parapets. -

(1) Railings and parapets around stairwells, balconies, areaways, and roofs, and other railings in similar locations other than those for places of assembly, shall be designed to resist the simultaneous application of a lateral force of forty plf and a vertical load of fifty plf, both applied to the top of the railing. For railings and parapets at the front of theater balconies and in similar locations in places of assembly, the lateral force shall be increased to fifty plf and the vertical load to one hundred plf. An exception is made for railings in one- and two-family dwellings, which shall be designed for a lateral force of twenty plf plus a vertical load of twenty plf, both applied at the top of the railing. The total lateral force and total vertical load shall be at least two hundred pounds each.

(2) Intermediate and bottom rails, if provided, shall be designed for the simultaneous application of forty plf applied horizontally and fifty plf applied vertically; however, lateral and vertical design loads on intermediate and bottom rails need not be considered in the design of posts and anchorages. For railings having solid panels, the panels shall be designed for a uniform lateral load of twenty psf.

(3) Where railings or parapets support fixtures, allowance shall be made for the additional loads imposed thereby.

(4) Railings, bumpers, or similar devices used in parking areas to resist the impact of moving vehicles shall be designed to resist a lateral load of three hundred plf applied at least twenty-one inches above

the roadway; but in no case shall the load be less than twenty-five hundred pounds per vehicle.

§[C26-902.4] 27-559 Columns in parking areas. -

Unless specially protected, columns in parking areas subject to impact of moving vehicles shall be designed to resist the lateral load due to impact and this load shall be considered a load of infrequent occurrence. For passenger vehicles, this lateral load shall be taken as a minimum of twenty-five hundred pounds applied at least twenty-one inches above the roadway and acting simultaneously with other design loads.

§[C26-902.5] 27-560 Stage areas using scenery or scenic elements. -

Scenery battens and suspension systems shall be designed for a load of thirty pounds per linear foot of batten length. Loft block and head block beams shall be designed to support vertical and horizontal loads corresponding to a four inch spacing of battens for the entire depth of the gridiron. Direction and magnitude of total forces shall be determined from the geometry of the rigging system including load concentrations from spot line rigging. Locking rails shall be designed for a uniform uplift of five hundred psf with a one thousand pound concentration. Impact factor for batten design shall be seventy-five percent and for loft and head block beams shall be twenty-five per cent. A plan drawn to a scale not less than one-quarter inch equals one foot shall be displayed in the stage area indicating the framing plan of the rigging loft and the design loads for all members used to support scenery or rigging. Gridirons over stages shall be designed to support a uniformly distributed live load of fifty psf in addition to the rigging loads indicated.

§[C26-902.6] 27-561 Roof loads. -

Roofs and marquees shall be designed for wind, live, and other loads as prescribed in subdivisions (a) through (d) of this section. It may be assumed that maximum wind load occurs with zero live load and that maximum live load occurs with zero wind load. For dwellings an exception is made for awnings, canopies, and patio covers, which may be designed for a live load of twenty psf of horizontal projection.

(a) Live load. - Minimum design live loads shall be as follows:

(1) For roofs with slopes up to and including twenty degrees from the horizontal, thirty psf of horizontal projection.

(2) For roofs with slopes greater than twenty degrees from the horizontal, thirty psf of horizontal projection, reduced by one psf for each degree of slope in excess of twenty degrees.

(3) For valleys, live loadings shall be increased to provide for accumulations of snow. The loading intensity shall be assumed to vary from forty-five psf at the low point to fifteen psf at the ridge.

(4) For roofs having curved or pyramidal shapes, the

proposed live load shall be established by the architect or engineer, subject to approval by the commissioner.

(b) Wind load. - The provisions of section 27-569 of article five of this subchapter shall apply.

(c) Concentrated loads. -

The provisions of subdivision (b) of section 27-557 of this article shall apply.

(d) Special loads. -

(1) When used for purposes such as promenades, assembly areas, or roof gardens, design shall be made for live loads corresponding to the particular usage, as indicated in reference standard RS 9-2. Such loads shall be considered as nonconcurrent with the wind load or with the live load specified in subdivision (a) of this section. The design live and wind loads for roofs, as specified elsewhere in this subchapter, shall be deemed to provide for incidental use of the roof of a building by the occupants thereof.

(2) Where roofs are intended for the ponding of water, the roof shall be designed for the maximum possible depth of water which may be ponded thereon as determined by the relative levels of roof deck and overflow weirs or scuppers. Such load need not be considered as occurring simultaneously with wind or live load.

(3) Girders and roof trusses (other than joists) over garage areas regularly utilized for the repair of vehicles and over manufacturing floors or storage floors used for commercial purposes shall be capable of supporting, in addition to the specified live and wind loads, a concentrated live load of two thousand pounds applied at any lower chord panel point for trusses, and at any point of the lower flange for girders.

(4) Where roofs are landscaped, the uniform design live load on the landscaped portions shall be thirty psf. The weight of the landscaping materials shall be considered as dead load and shall be computed on the basis of saturation of the earth. The areas adjacent to the landscaped portions shall be considered as assembly areas, unless specific provision is made to prevent such use.

(5) Where equipment is placed on roofs, the design shall provide for the support of such equipment.

§[C26-902.7] 27-562 Moving loads. -

Where applicable to the use or occupancy of the building, the design shall consider the moving loads described below.

(a) General. -The loads established in subdivisions (a) and (b) of section 27-557 of this article shall be assumed to include allowance for ordinary impact conditions.

(b) Passenger vehicles. - Areas used for, and restricted by physical limitations of clearance to, the transit or parking of passenger vehicles shall be designed for the uniformly distributed and concentrated loads for parking areas for such vehicles as provided in reference standard RS 9-2, applied without impact. An exception is made for members or constructions which,

because of physical limitations, cannot be subjected to direct load from the vehicle or from a jack or hoist used to shall be designed for the loads corresponding raise or suspend the vehicle. Such members or constructions to the actual usage.

(c) Truck loads. -Minimum loads (including vertical, lateral, and longitudinal) and the distribution thereof shall meet the applicable requirements or reference standard RS 9-3, except that impact shall be taken as ten percent of the vertical reaction.

(d) Railroad equipment. - Minimum loads (including vertical, lateral, longitudinal, and impact) and the distribution thereof shall meet the applicable requirements of reference standard RS 9-4.

(e) Crane runways and supports. -

(1) VERTICAL LOADS. - Actual maximum wheel loads occurring when the crane is lifting its capacity load shall be used. To allow for impact, the lifted load shall be increased twenty-five percent or the wheel loads increased fifteen percent whichever produces greater stress condition.

(2) HORIZONTAL LOADS. -

a. Lateral load (due to crane trolley travel) shall be twenty percent of the sum of the capacity load and the trolley weight, applied one-half at the top of each rail and acting in either direction normal to the runway rail.

b. Longitudinal load (due to crane travel) shall be twenty percent of the maximum total reaction (not including impact) on the rail being considered, applied at the top of the rail and acting parallel to the runway.

(f) Monorail beams and supports. -

(1) Vertical loads shall be the sum of the capacity load and trolley weight. To allow for impact, the lifted load shall be increased ten percent for hand-operated and twenty-five percent electrically-operated trolleys.

(2) Longitudinal loads shall be twenty percent of the sum of the capacity load and the weight of the trolley.

(3) Lateral loads shall be twenty percent of the sum of the capacity load and the weight of the trolley.

(4) Centrifugal forces shall be considered for curved tracks.

(g) Loads on supports for elevators, dumbwaiters, and escalators. - The provisions of subchapter eighteen of this chapter shall apply.

(h) Loads on machinery supports. -

Unless machinery is isolated from the support framing, the reactions of reciprocating or heavy power-driven units shall be increased at least fifty percent and reactions of light shaft - or motor-driven [*sic*] units shall be increased at least twenty-five percent to provide for impact.

(i) Assembly structures. -

Seating areas in grandstands, stadiums, and similar assembly structures shall be designed to resist the simultaneous application of a horizontal swaying load of at least twenty-four plf of seats applied in a direction parallel to the row of the seats, and of at least ten plf of

seats in a direction perpendicular to the row of the seats. When this load is used in combination with wind for outdoor structures, the wind load shall be one-half of the design wind load, and the provisions of subchapter ten of this chapter relating to infrequent stress conditions shall apply to this loading condition.

(j) Heliports and helistops. -

(1) CONCENTRATED LOADS. -

a. Landing area. - Helicopter landing areas shall be designed for either of the following vertical loads acting at any location:

1. A single concentrated load equal to three quarters of the gross weight of the helicopter and acting on an area of one square foot.

2. Concentrated loads representing the gross wheel reactions of the helicopter acting simultaneously and increased one-third for impact.

b. Taxiing area. - Helicopter taxiing areas shall be designed for concentrated loads in accordance with clause two of this subparagraph.

(2) UNIFORM LIVE LOAD. -

The landing and taxiing areas shall be capable of supporting a uniformly distributed live load of forty psf acting nonconcurrently with the concentrated loads.

§[C26-902.8] 27-563 Partial loading conditions. -

(a) Uniformly distributed loads. -

In continuous framing and cantilever construction, the design shall consider live load on all spans and arrangements of partial live load that will produce maximum stresses in the supporting members. The simplifications given in paragraphs one through three of this subdivision are permissible.

(1) FLOOR AND ROOF FRAMING. -

a. For vertical live load applied to the level under consideration, the far ends of the columns above and below that level may be assured* as fixed.

b. Combinations of live load may be limited to the following:

1. Live load placed on two adjacent spans.

2. Live load placed on alternate spans. The effects of live load on spans more than two spans away from the span under consideration may be neglected.

(2) ARCHES AND GABLED FRAMES. -

a. Live load placed on 1/2 span adjacent to one support.

b. Live load placed on the center 1/4 span.

c. Live load placed on 3/8 the span adjacent to each support.

(3) COLUMNS. - Moments due to vertical loads may be calculated from the live load on the largest single adjacent span of the floor under consideration. This moment shall be assumed to act concurrently with live load on all other floors.

(b) Moving concentrated loads. -

Structural members supporting moving concentrated loads shall be designed for only those loads that can physically occur simultaneously and are arranged to produce maximum stresses.

**As enacted but "assumed" probably intended.*

§[C26-902.9] 27-564 Floor loads to be posted. -

(a) Posting required. -

Posting requirements shall conform to the requirements of section 27-225 of article twenty-three of subchapter one of this chapter.

(b) Data required. - The following floor load data shall be shown:

(1) The uniformly distributed design live load for each floor or part thereof.

(2) The weight of any piece of machinery or equipment weighing more than one thousand pounds, and its identifying description and location.

(3) The maximum design wheel load and total maximum weight of any vehicle that may be brought into the building.

(4) The equivalent uniform partition loads or, in lieu of this, a statement to the effect that the design was predicated on actual partition loads.

ARTICLE 4 LIVE LOAD REDUCTION

§[C26-903.1] 27-565 Roof loads. -

No reduction shall be permitted.

§[C26-903.2] 27-566 Floor live loads. -

The uniform live load to be used for design shall be the basic value established in reference standard RS 9-2 multiplied by the percentages given in subdivisions (a) through (d) of this section.

(a) Except as provided in subdivisions (b), (c), and (d) the percentages in table 9-1 shall apply. Contributory areas shall be computed in accordance with section 27-567 of this article.

(b) No live load reduction shall be permitted for the following: members and connections (other than columns, piers, and walls) supporting floor areas used for storage (including warehouses, library stacks, and record storage); areas used for parking of vehicles; and areas used as place of assembly, for manufacturing, and for retail or wholesale sales. For columns, piers, and walls supporting such floor areas the maximum live load reduction shall be twenty percent.

(c) No live load reduction shall be permitted for calculating shear stresses at the heads of columns [sic] in flat slab or flat plate construction.

(d) In lieu of the percentages given in table 9-1, the live load reductions for columns, piers and walls may be taken as fifteen percent of the live load on the top floor, increased successively at the rate of five percent on each successive lower floor, with a maximum reduction of fifty percent; and for girders supporting two hundred square feet or more of floor area, the live load reduction may be taken at fifteen percent. The limitations of subdivisions (b), (c) and (d) of this section shall apply.

TABLE 9-1 PERCENTAGE OF LIVE LOAD*

Contributory Area (sq. ft.) [sic]	Ratio of Live Load to Dead Load*		
	0.625 or less	1	2 or more
149 or less.....	100	100	100
150-299.....	80	85	85
300-449.....	60	70	75
450-599.....	50	60	70
600 or more.....	40	55	65

Note for Table 9-1:

*For intermediate values of live load/dead load, the applicable percentages of live load may be interpolated.

§[C26-903.3] 27-567 Contributory floor areas. -

For purposes of computing live load reduction, contributory floor areas shall be determined as follows:

(a) For the design of one-way and two-way slabs: the product of the shorter span length and a width equal to one-half the shorter span length. Ribbed slabs shall be considered as though the slabs were solid.

(b) For the design of slabs in flat plate or flat slab construction: one-half the area of the panel.

(c) For the design of columns and girders or trusses framing into columns: the loaded area directly supported by the column, girder, or truss. For columns supporting more than one floor, the loaded area shall be the cumulative total area of all of the floors that are supported.

(d) For the design of joists and similar multiple members framing into girders or trusses, or minor framing around openings: twice the loaded area directly supported but not more than the area of the panel in which the framing occurs.

§[C26-903.4] 27-568 Foundations and column supports.-

The live load to be supported by the foundation or by trusses or girders that support columns shall be the total column reaction reduced as provided in section 27-566 and section 27-567 of this article.

ARTICLE 5

***WIND LOADS AND EARTHQUAKE LOADS**

***§[C26-904.0] 27-569 Wind loads and earthquake loads.-**

(a) Wind loads.-

The structural frame and exterior components of all buildings, tanks, and other exposed constructions shall be designed to resist the pressures due to wind as prescribed in reference standard RS 9-5. Wind shall be assumed to act from any direction. For continuous framing, the effects of partial loading conditions shall be considered.

(b) Earthquake loads.

Every building, structure and portion thereof shall, at a minimum, be designed and constructed to resist the effects of seismic ground motions as prescribed in reference standard RS 9-6.

*Local Law 17-1995.

ARTICLE 6 OTHER LOADS

§[C26-905.1] 27-570 **Earth pressures and foundation loads.** - The provisions of article three of subchapter eleven of this chapter shall apply.

§[C26-905.2] 27-571 **Bins and bunkers-**

Loads on component parts of bins and bunkers may be reduced for friction on sidewalls, provided that sidewalls and supports are proportioned for the increased vertical loads. Where stresses would be increased in any component by arching of the fill, the effect of such arching shall be considered.

§[C26-905.3] 27-572 **Prestressing forces.** -

Prestressing forces shall be considered in the design of prestressed concrete structures, cable structures, guyed structures, and multiple intersecting truss webs utilizing tension members.

§[C26-905.4] 27-573 **Construction loads.** -

The provisions of subchapter nineteen of this chapter shall apply.

§[C26-905.5] 27-574 **Fluid pressures.** -

The design of building components shall consider pressures, both positive and negative, of confined fluids and gases.

§[C26-905.6] 27-575 **Ice.** -

The weight of a one-half inch radial thickness of ice on all surfaces shall be considered as part of the live load in the design of open framed or guyed towers.

§[C26-905.7] 27-576 **Thermal forces.** -

The design of enclosed buildings more than two hundred fifty feet in plan dimension shall provide for the forces and/or movements resulting from an assumed expansion corresponding to a change in temperature of forty degrees F. For exterior exposed frames, arches, or shells regardless of plan dimensions, the design shall provide for the forces and/or movements resulting from an assumed expansion and contraction corresponding to an increase or decrease in temperature of forty degrees F for concrete or masonry construction and sixty degrees F for metal construction. For determining required anchorage for piping, the forces shall be determined on the basis of temperature variations for the specific service conditions. Friction forces in expansion bearings shall be considered.

§[C26-905.8] 27-577 **Shrinkage.** -

The design of reinforced concrete components shall provide for the forces and/or movements resulting from shrinkage of the concrete in the amount of 0.0002 times the length between contraction joints for standard weight concrete, and 0.0003 times the length between contraction joints for lightweight concrete. The design of arches and similar structures shall provide for effects of shrinkage, plus rib-shortening, plus plastic flow.

ARTICLE 7 DISTRIBUTION OF LOADS

§[C26-906.1] 27-578 **Distribution of vertical loads.-**

Distribution of vertical loads to supporting members shall be determined on the basis of a recognized method of elastic analysis or system of coefficients of approximation. Elastic or inelastic displacements of supports shall be considered and, for the distribution of dead loads, the modulus of elasticity of concrete or composition sections shall be reduced to consider plastic flow. Secondary effects, due to warping of the floors shall be considered.

§[C26-906.2] 27-579 **Distribution of horizontal loads.** -

The following provisions shall apply to superstructure framing only, and shall not apply to structures wherein horizontal loads are transmitted to the foundation by stay-cables, arches, non-rectangular frames, or by frames, trusses, or shear walls not oriented in vertical planes.

(a) Distribution of horizontal loads to vertical

frames, trusses and shear walls. - Horizontal loads on the superstructure shall be assumed to be distributed to vertical frames, trusses, and shear walls by floor and roof systems acting as horizontal diaphragms. The proportion of the total horizontal load to be resisted by any given vertical frame, truss, or shear wall shall be determined on the basis of relative rigidity, considering the eccentricity of the applied load with respect to the center of resistance of the frames, trusses, or shear walls. For vertical trusses, web deformations shall be considered in evaluating the rigidity.

(b) Distribution of horizontal loads within rigid frames of tier buildings. -

(1) ASSUMPTIONS. - The distribution of horizontal loads within rigid frames of tier buildings may be determined on the basis of a recognized method of elastic analysis or, subject to limitations in paragraph two of this subdivision, may be predicated on one or more of the following simplifying assumptions:

a. Points of inflection in beams or columns are at their midspan and midheight, respectively. The story shear is distributed to the columns in proportion to their stiffnesses.

b. The change in length of columns due to axial effects of the horizontal loads may be neglected.

c. Vertical column loads due to horizontal forces are taken by the exterior columns only, or are resisted by the columns in proportion to the column distances from the neutral axis of the bent.

(2) LIMITATIONS. -

a. For buildings over three hundred feet in height, the change in length of the columns, due to the effects of the horizontal loads, shall be evaluated or the framing proportioned to produce regular movements of the successive joints at each floor so that warping of the floor system may be neglected.

b. Simplifying assumptions used in design shall be subject to approval by the commissioner for any of the following conditions or circumstances:

1. For buildings over three hundred feet in height or for buildings with a height-width ratio greater than five.
2. At two-story entrances or intermediate floors.
3. Where offsets in the building occur.
4. Where transfer columns occur.
5. In any similar circumstances of irregularities or discontinuities in the framing.

(c) Distribution of load in self-relieving construction.- the framing of self-relieving construction may be proportioned on the assumption that connections are fully rigid in resisting moments due to lateral load and that any larger moments due to the gravity loads or due to a combination of gravity and lateral loads will be relieved by deformation of the connection material, provided that:

(1) The fasteners shall be capable of developing the full moment capacity of the connection at the allowable unit stress established in subchapter ten of this chapter.

(2) The connection shall be capable of resisting the moment due to lateral load, and the shear due to lateral load plus vertical load, all at the allowable unit stresses established in subchapter ten of this chapter.

(3) The framing and the building are within the limitations established in subparagraph (b) of paragraph two of subdivision (b) of this section.

(4) The connections shall be detailed to permit the required deformations without fracture, and their capacity to so function shall be verified by test or other means.

(d) Structural walls and partitions. -

Walls and partitions, if specifically designed to resist the applied forces, may be considered as contributing to the resistance or rigidity of the structure with regard to horizontal loads.

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