Rectangular Concrete Tanks

Revised Fifth Edition

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1 Introduction

Conventionally reinforced (non-prestressed) concrete tanks have been used extensively in municipal and industrial facilities for several decades. The design of these structures requires that attention be given not only to strength requirements, but to serviceability requirements as well. A properly designed tank must be able to withstand the applied loads without cracks that could cause leakage. The goal of designing and constructing a structurally sound tank that will not leak is achieved by providing the proper amount and distribution of reinforcement, the proper spacing and detailing of construction joints, and the use of quality concrete, placed using proper construction practices.

A thorough review of the latest report by ACI Committee 350 entitled *Environmental Engineering Concrete Structures* [1]* is essential in understanding the design of tanks. The document recommends that, unless noted otherwise, the structural design should conform to *Building Code Requirements for Structural Concrete (ACI 318)* [2]. Therefore, a working knowledge of ACI 318 is also necessary.

This publication consists of five chapters and an appendix. The contents of these are as follows:

Chapter 1 - Introduction

Except for the notations and the definitions, the topics discussed in this chapter are, for the most part, items presented in ACI 350 that are not addressed in ACI 318:

- Notations and Definitions
- Design Methods
- Durability
- Minimum Reinforcement
- Loading Conditions
- Crack Control
- Formwork Considerations
- Base Fixity
- Buoyancy Forces
- Earthquake Forces
- Codes, Specifications and Standards
- References
- Suggested Literature

Chapter 2 - Plate Analysis Results

This chapter gives the design coefficients for deflection (C_d), shear (C_s) and moments (M_x, M_y, M_{xy}) for plates with different end conditions. Results are provided from finite element analyses of two-dimensional plates subject to out-of-plane loads using SAP90 [19]. Convergence analysis was made to ensure the quality of the results.

The slab was assumed to act as a thin plate, for which equations and/or the design coefficients are available in some of the references listed [6-10]. However, since only a limited number of cases are available in such literature, this text was prepared to cover a wider range of loading configurations, end-restraint conditions, and width/height ratios.

*See the end of this chapter for cited references.

Coefficients for individual panels with fixed side edges apply without modification to continuous walls, provided there is no rotation about vertical edges. In a square tank, therefore, moment coefficients can be taken directly from the tables in Chapter 2. For a rectangular tank, adjustments must be made to account for redistribution of bending moments to adjacent walls. The design coefficients for rectangular tanks are given in Chapter 3.

Chapter 3 - Tank Analysis Results

This chapter gives the design coefficients for deflection (C_d) and moments (M_x, M_y, M_{xy} and M_{yz}) for tanks with different end conditions. The design coefficients are based on finite element analysis of tanks. The design coefficients (M_x, M_y, M_{xy}) presented in Chapter 2 for design of plates can also be used for tanks that have square plan dimensions. For rectangular tanks, the plate analysis results are not applicable since they do not account for moment distribution that will occur between the walls of different stiffnesses. An adjustment must be made similar to the modification of fixed-end moments in a frame analyzed by moment distribution. The shear coefficient (C_s) given in Chapter 2 for plates may be used for design of rectangular tanks.

If the moment distribution method is used, the common side-edge of adjacent panels is first considered artificially restrained, so that no rotation can take place about the edge. Fixed-edge moments taken from the results presented in Chapter 2 are usually dissimilar in adjacent panels, and the differences, which correspond to unbalanced moments, tend to rotate the edge. When the artificial restraint is removed, the unbalanced moments will induce additional moments in the panels. Adding the induced and fixed-end moments at the edge gives final moments, which must be identical on both sides of the common edge. Note, however, that moment distribution cannot be applied as easily to continuous tank walls as it can to framed structures, because bending moments must be distributed simultaneously along the entire length of the side edge so that moments become equal at both sides at any point of the edge. Moreover, tanks will develop in-plane axial compression or tension. Effects of the tension force, if significant, should be recognized. If significant compression forces are developed, the reduction in the effective stiffness of the member may also need to be considered.

Chapter 4 - Multicell Tanks

This chapter provides information on how to modify single-cell coefficients for use in multicell tank design. An appropriate method based on relative wall stiffnesses is given to compute the design moments in intersecting walls of multi-cell tanks.

Chapter 5 - Examples

A complete design for a wall and the roof slab of a rectangular tank is presented. Two examples that explain the determination of the bending moments for multicell tanks are also provided.

Appendix

A design aid that can be used for determining the required reinforcement for a rectangular concrete section subject to a given bending moment is located in the appendix.

Notations and Definitions

a = height of plate or wall.

w = unit weight of soil or water (for example, lb/ft^3).

q = $k\,wa$, pressure at bottom of plate/wall for triangular load distribution (for example, lb/ft^2).

= $k\,w$ for uniform pressure along height of plate/wall (for example, lb/ft^2).

k = coefficient of active or passive pressure, whichever is applicable [3]. For water, active pressure coefficient $k_a = 1$, while for soil $k_a = (1 - \sin\phi)/(1 + \sin\phi)$, where ϕ = angle of internal friction of soil [3].

C_s = shear coefficient given in tables of Chapter 2 for computation of shear: Shear per unit width = $C_s\,q\,a$.

C_d = deflection coefficient given in tables of Chapters 2 and 3 for computation of deflections. Deflection = $C_d\, q\, a^4/1000\, D$, where $D = E_c\, t^3 / 12(1-\mu^2)$.

E_c = modulus of elasticity of concrete ($E_c = w_c^{1.5}\, 33\sqrt{f_c'}$ from ACI 318-95, where w_c is the unit weight of concrete and f_c' is the specified compressive strength of concrete, psi).

t = thickness of plate or wall.

μ = Poisson's ratio, taken as 0.2 for concrete.

(M_x, M_y, M_z, M_{xy} and M_{yz}) Coef. = moment coefficients given in tables of Chapters 2 and 3 for computation of moments M_x, M_y, M_z, M_{xy} and M_{yz}, respectively. Note that M_{xy} and M_{yz} coefficients are given in absolute values.

M_x = moment per unit width about the x-axis stretching the fibers in the y-direction when the plate or wall is in the x-y plane (see Fig. 1-1). The moment is used to determine steel in the y (vertical) direction of the plate or wall (Fig. 1-1) and is given by:

$$M_x = M_x \text{ Coef.} \times q\, a^2/1000$$

M_y = moment per unit width about the y-axis stretching the fibers in the x-direction when the plate or wall is in the x-y plane, or in the z-direction when the plate is in the y-z plane (see Fig. 1-1). The moment is used to determine steel in the x or z (horizontal) direction of the plate or wall (Fig. 1-1) and is given by:

$$M_y = M_y \text{ Coef.} \times q\, a^2/1000$$

M_z = moment per unit width about the z-axis stretching the fibers in the y-direction when the plate or wall is in the y-z plane (see Fig. 1-1). The moment is used to determine steel in the y (vertical) direction of the plate or wall (Fig. 1-1) and is given by:

$$M_z = M_z \text{ Coef.} \times q\, a^2/1000$$

M_{xy}, M_{yz} = torsion or twisting moments for plate or wall in the x-y and y-z planes, respectively, given by:

$$M_{xy} = M_{xy} \text{ Coef.} \times q\, a^2/1000$$

$$M_{yz} = M_{yz} \text{ Coef.} \times q\, a^2/1000$$

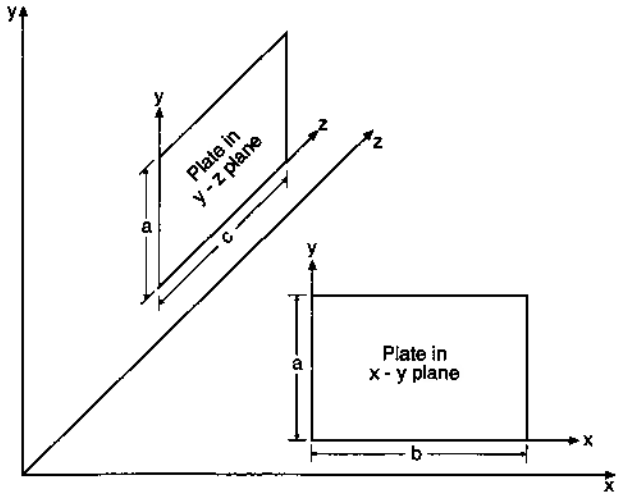

Figure 1-1 Coordinate System for Plates

The twisting moment such as M_{xy} may be used to add to the effects of orthogonal moments M_x and M_y for the purpose of determining the steel reinforcement when the plate is in the x-y plane. M_{yz} can be similarly used for the plate in the y-z plane. These moments should be considered for safe design wherever their effect is deemed to adversely affect the steel requirement. The Principle of Minimum Resistance [4] may be used for determining the equivalent orthogonal moments in this case.

The equivalent orthogonal moments M_{tx} and M_{ty} for a plate in x-y plane are computed as follows:

Where positive moments produce tension:

$$M_{tx} = M_x + |M_{xy}|$$

$$M_{ty} = M_y + |M_{xy}|$$

However, if either M_{tx} or M_{ty} is found to be negative, the negative value of the moment is changed to zero (no steel required) and the other moment is given as follows:

$$\text{if } M_{tx} < 0, \text{ then } M_{tx} = 0 \text{ and } M_{ty} = M_y + \left|\frac{M_{xy}^2}{M_x}\right| > 0$$

$$\text{if } M_{ty} < 0, \text{ then } M_{ty} = 0 \text{ and } M_{tx} = M_x + \left|\frac{M_{xy}^2}{M_y}\right| > 0$$

Where negative moments produce tension:

$$M_{tx} = M_x - |M_{xy}|$$

$$M_{ty} = M_y - |M_{xy}|$$

However, if either M_{tx} or M_{ty} is found to be positive, the positive value of the moment is changed to zero and the other moment is given as follows:

$$\text{if } M_{tx} > 0, \text{ then } M_{tx} = 0 \text{ and } M_{ty} = M_y - \left|\frac{M_{xy}^2}{M_x}\right| < 0$$

$$\text{if } M_{ty} > 0, \text{ then } M_{ty} = 0 \text{ and } M_{tx} = M_x - \left|\frac{M_{xy}^2}{M_y}\right| < 0$$

Design Methods

Two approaches currently exist for the design of reinforced concrete members: (1) Strength Design, and (2) Allowable Stress Design (referred to in *Building Code Requirements for Structural Concrete (ACI 318-95)* Appendix A, as the Alternate Design method).

The Strength Design method became the commonly adopted procedure for conventional buildings following the issuance of the 1963 edition of the ACI Building Code, and constitutes the basic procedure of design in the present ACI Building Code (ACI 318-95) with the Alternate Design method in an appendix (Appendix A). Until recently, the use of strength design for municipal and other facilities was considered inappropriate due to the lack of reliable assessment of crack widths at service loads. The advances in this area of knowledge in the last two decades has led to the acceptance of strength design for municipal liquid retaining structures. The latest ACI Committee 350 report recommends procedures for the use of both Allowable Stress Design and Strength Design for liquid retaining structures.

Service state analysis of reinforced concrete structures should include computations of crack widths and their long term effects on the structure in terms of its stability and functional performance. Current methods of reinforced concrete design lead to computations which are, at best, a modified form of elastic analysis of the composite reinforced steel/concrete system. Due to the well-known effects of creep, shrinkage, volume changes, and temperature, all analyses of this type, in terms of computed stresses, are indices of performance of the structure and should not be construed to have any more significance than that.

The following discussion describes the alterations in the design methods of ACI 318 provided by ACI 350.

Strength Design—The load combinations to determine the required strength, U, are given in Section 9.2 of ACI 318-95. ACI 350 requires the following two modifications to that section.

Modification 1—The load factor to be used for lateral liquid pressure, F, is 1.7 rather than 1.4. This value of 1.7 may be overconservative for some tanks, since they are filled to the top only during leak testing or because of accidental overflow. Since leak testing usually occurs only once and since most tanks are equipped with overflow pipes, some designers have considered using the load factor of 1.4 in an attempt to reduce the amount of required steel, which would result in less shrinkage restraint. However, this publication suggests that tank designs meet ACI 350 and, therefore, recommends the use of a load factor of 1.7 with F.

Modification 2—The members must be designed to meet the required strength, U, under ACI 318-95. ACI 350 requires that the value of U be increased by using a multiplier called the sanitary coefficient. The sanitary coefficient will increase the design loads to provide a more conservative design with less cracking. The increased required strength is given by:

$$\text{Required strength} = \text{Sanitary coefficient} \times U$$

where the sanitary coefficient equals:

1.3 for flexure
1.65 for direct tension
1.3 for shear beyond that of the capacity provided by the concrete

These sanitary exposure coefficients, together with an increase in the conventional load factor for fluids from 1.4 to 1.7, increase all load factors from ACI 318 a total of 30% for flexural reinforcement, 65% for direct tension reinforcement (such as ring tension), and 30% for stirrup or diagonal tension requirements. The strength equations are given as follows:

1. Flexural Reinforcement

$$\text{Req'd strength} \geq 1.3\,U$$
$$\phi M_n \geq 1.3\,(1.4M_D + 1.7M_L + 1.7M_F)$$

2. Direct Tension Reinforcement

$$\text{Req'd Strength} \geq 1.65\,U$$
$$\geq 1.65\,(1.4\,T_D + 1.7T_L + 1.7T_F)$$

3. Stirrup Reinforcement

$$\phi V_s \geq 1.3(V_u - \phi V_c)$$

4. Concrete Shear and Compression

Req'd Strength > 1.0 U

No increase is required in load factors for concrete shear, bond, or compression strength, so that proportioning member depths or thickness will be unchanged. For flexure, the proposed increase in load factors results in a maximum load factor of 1.3 times 1.7 = 2.21 for normal live and water and earth load and a minimum load factor of 1.3 times 1.4 = 1.82 for all dead load. In conjunction with ϕ-factors prescribed in ACI 318, these new load factors result in flexural service load stresses in the reinforcement between 24 and 29 ksi, consistent with allowable stresses for working stress design in the current report by ACI Committee 350. The same limits on bar spacing apply equally well with use of strength design (see ACI 350).

Durability

Durability, which is a concern for practically every type of structure, is of vital importance where environmental structures are concerned. Leakage from a tank can cause a multitude of problems. Loss of a valuable material from leakage will result in direct economic loss. Also, if the stored material is a waste product, in particular hazardous waste, costly cleanup may be required.

ACI 350 lists the effects that need to be adequately resisted to satisfy durability requirements. The concrete must be able to withstand the following:

- Alternate wetting and drying
- Freezing and thawing cycles
- Chemical action
- Exposure to the elements

Durability requirements can be satisfied by providing a properly placed, dense concrete that meets limits on water-cementitious materials ratios placed by the applicable codes and specifications.

The designer needs to consider more than just the concrete walls and must appropriately address the details of the entire structure. The joints between adjacent pours must have properly functioning water stops to prevent leakage. These water stops must also be immune to chemical attack from the stored liquid. Any architectural finishes must be taken into account, so as not to jeopardize the durability of the tank. For instance, tanks that have brick veneer must allow for moisture between the brick and the concrete tank wall to escape, as trapped moisture could lead to premature deterioration of the tank wall. Therefore, before any such finishes are used, the possible detrimental effects must be carefully considered and proper precautions taken.

Conditions may arise where the tank walls or water stops are unable to withstand the chemical attack of the liquid being contained. When such conditions exist, the designer needs to make use of a liner to protect the tank walls. In addition to protecting the tank walls, liners can also sometimes make it possible to relax crack control requirements, since leakage through cracks may cease to be an issue.

Minimum Reinforcement

The amount, size, and spacing of reinforcing bars has a great effect on the extent of cracking. The reinforcement provided must be sufficient for strength and serviceability, including consideration of temperature and shrinkage effects. The amount of temperature and shrinkage reinforcement is dependent on the length between construction joints and the yield stress of the reinforcement, as shown in Fig. 1-2. Figure 1-2 is based on the assumption that the wall segment is allowed complete shrinkage movement without being restrained at the ends by adjacent

sections. The designer should provide proper details to ensure that the joints which are likely to crack are properly leak-proofed. According to ACI 350, concrete sections that are 24 in. or thicker can have the minimum temperature and shrinkage reinforcement at each face, based on a 12 in. thickness. The reinforcement should be spaced not greater than 12 in. on center, divided equally between the two surfaces of concrete sections. The reinforcement near the bottom of base slabs in contact with soil may be reduced to 50 percent of the value given in Fig. 1-2.

The size of reinforcing bars should be chosen with the realization that cracking can be better controlled by using a larger number of small diameter bars rather than fewer larger diameter bars. The size of reinforcing bars, according to ACI 350, should not, preferably, exceed No. 11. Spacing of reinforcing bars should be limited to a maximum of 12 in., and the minimum concrete cover for reinforcement in the tank wall should be at least 2 in.

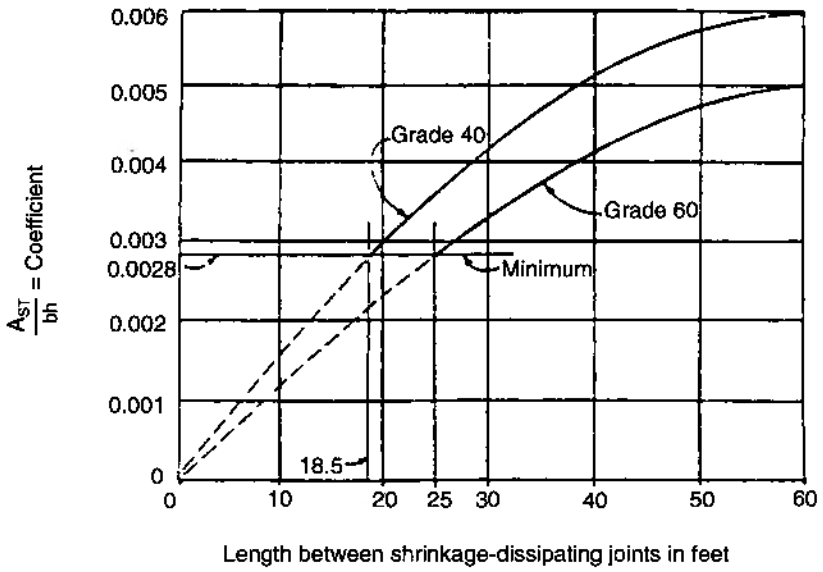

Figure 1-2 Ratio of Shrinkage and Temperature Reinforcement for Concrete Made with ASTM C150 and C595 Concrete (ACI 350 R-89)

Loading Conditions

A tank must be designed to withstand the loads that it will be subjected to during many years of use. But it is equally important to consider loads during construction. An example of some of the loading conditions that must be considered for a partially buried tank is shown in Fig. 1-3. The tank must be designed and detailed to withstand the forces from each of these loading conditions. The tank may also be subjected to uplift forces from hydrostatic pressure on the bottom of the slab when the tank is empty, as discussed in the "Buoyancy Forces" section of this chapter. Therefore, it is important for the design engineer to determine all possible loading conditions on the structure. According to ACI 350, the proper design of a tank will include the full effects of the soil loads and water pressure without taking into account loads acting in directions that minimize the effects of each other.

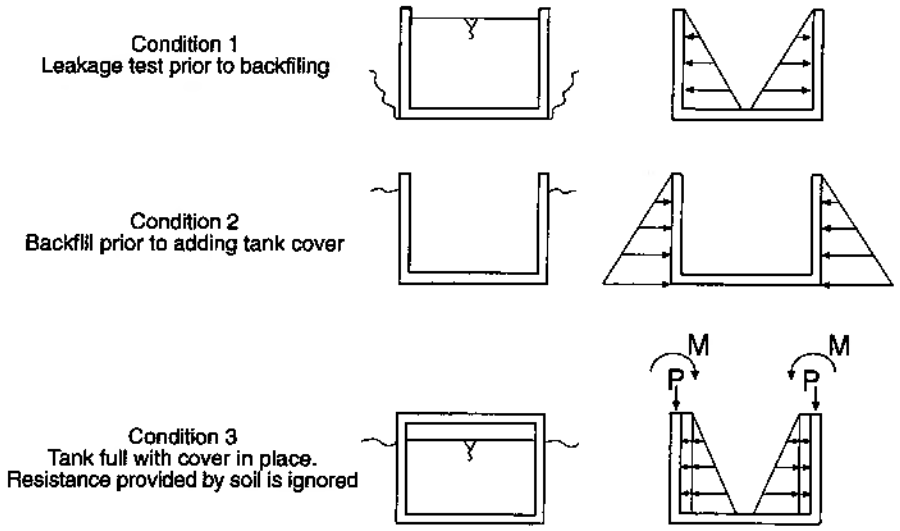

Figure 1-3 Possible Loading Conditions for a Tank

Crack Control

Crack widths must be minimized in tank walls to prevent leakage and corrosion of reinforcement. A criterion for flexural crack width is provided in ACI 318-95 (Section 10.6.4). This limitation is as follows:

$$z = f_s \sqrt[3]{d_c A}$$

where

z = quantity limiting distribution of flexural reinforcement.
f_s = calculated stress in reinforcement at service loads, ksi.
d_c = thickness of concrete cover measured from extreme tension fiber to center of bar located closest thereto, in.
A = effective tension area of concrete surrounding the flexural tension reinforcement having the same centroid as that reinforcement, divided by the number of bars, sq in.

The determination of d_c and A are shown in Fig. 1-4 for a single layer of reinforcement ($A = 2d_c\, b_w$). In ACI 350, the cover is taken equal to 2.0 in. for any cover greater than 2.0 in. Rearranging the above equation, and solving for the maximum bar spacing (b_w) for a given value of z, with f_s being the stress in the bars, gives

$$\text{max. spacing } (b_w) = \frac{z^3}{2 \times d_c^2 \times f_s^3}$$

ACI 318-95 does not allow z to exceed 175 kips/in. for interior exposure and 145 kips/in. for exterior exposure. These values of z correspond to crack widths of 0.016 in. and 0.013 in., respectively. ACI 350 has stricter requirements than ACI 318, since cracking is typically of greater consequence in liquid-retaining structures. The limiting value of z specified in ACI 350 is 115 kips/in. (crack width of 0.010 in.). For severe environmental exposures, the quantity z should not exceed 95 kips/in. (crack width of 0.008 in.).

Joints in the tank walls will allow dissipation of temperature and shrinkage stresses, thereby reducing cracking. As discussed previously, the amount of temperature and shrinkage reinforcement is a function of the distance between shrinkage-dissipating joints. Therefore, it is prudent to limit the size of concrete placement. Maximum length of wall placed at one time should usually not exceed 60 ft, with 30 ft to 50 ft being more common.

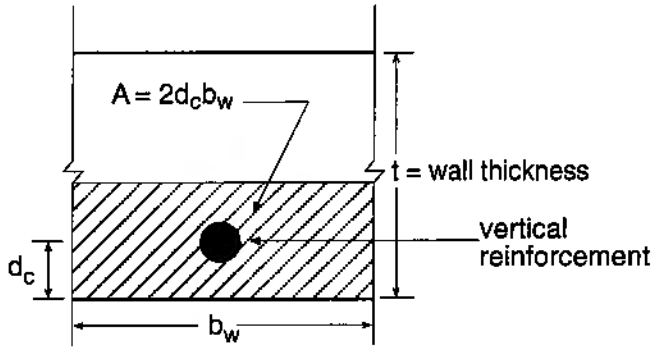

Figure 1-4 Effective Tension Area of Concrete for Calculation of z

Formwork Considerations

Formwork for tank structures is subject to the same considerations as that for other structures, such as proper bracing to maintain position and shape, time of removal, etc. However, there are additional considerations for formwork for tanks.

A tank must be a watertight structure. Proper design and detailing may not be enough to reach this goal. Construction procedures are equally important. One consideration, for example, is that form ties shall have no metal or other material within 1 1/2 inches from the formed surface. After the forms are removed, the void left from the form ties shall be cone shaped, at least 1 inch in diameter and 1 1/2 inches deep, to allow proper patching. Another consideration is that the individual sections of a tank wall shall be placed continuously to produce a monolithic unit, with a waiting period of 48 hours before casting the adjacent wall. There shall be integral water stops at each joint.

Base Fixity

The restraint condition of the wall at the base is needed to determine the deflection, shears and bending moments for a given loading condition. Base restraint conditions considered in this publication include both hinged and fixed edges. However, in reality, neither of these two extremes may actually exist. It is important that the designer have an understanding of the degree of restraint provided by the reinforcing that extends into the footing from the tank wall. If the designer is unsure of the fixity conditions, both extremes should be investigated.

Buoyancy Forces

Water pressure on the underside of the tank can possibly cause the tank to literally float. This situation may result in cracking of the tank walls and the base slab. It may also cause damage to piping attached to the structure.

The lifting force of the water pressure is resisted by the weight of the tank and the weight of soil on top of the base slab overhang. As the force of the water pressure tries to lift the tank, it will engage some of the soil adjacent to the tank. The angle of the soil engaged (see Fig. 1-5) is a function of the type of soil.

If the buoyancy force times an appropriate safety factor is in excess of the resisting force, pressure relief valves should be utilized to prevent the buildup of pressures. Even if uplift forces are small, it still may be prudent to place the pressure relief valves in the base slab.

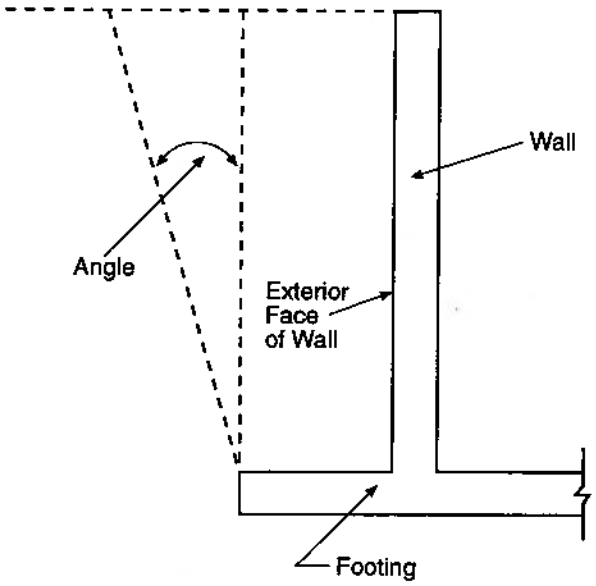

Figure 1-5 Angle of Soil Engagement Due to Uplift

Earthquake Forces

Earthquakes can induce large horizontal and overturning forces in tanks. The tanks should be properly designed and detailed for such forces. Concrete tanks, being typically rigid, are primarily designed to resist the forces due to the hydrodynamic mass of the contained fluid. The deformability of the wall and the interaction of the wall and the fluid are not, typically, considered in design. However, wall deformability may be considered where it is likely to effect the tank design. Reference [14] may be used for this purpose.

Hydrodynamic pressures include both impulsive and convective components. Impulsive pressures are developed by accelerations of the tank walls against the mass of the contained liquid. The fluid acts as a mass rigidly attached to the container walls. Convective pressures are produced by oscillations or sloshing of the upper portion of the liquid within the tank. The sloshing fluid acts as if it were an oscillating mass flexibly connected to the walls.

ACI Committee 350/350R is currently in the process of developing comprehensive seismic design and detailing standards for liquid-containing structures. The recommendations of the committee are expected to be out by the year 2000. Several references [12-18] are currently available which can be utilized for the seismic design of tanks. The most widely used method for computation of seismic forces on tanks is the one developed by Housner [13,15]. The engineer may use this method along with relevant seismic design and detailing provisions of the applicable codes in the region for the seismic design of tanks.

Earthquakes are also likely to produce external earth pressure on the walls of partially or fully buried tanks which should be taken into consideration. However, in case of buried vaults it has been found [17] that seismic pressures do not control design unless the peak ground acceleration exceeds a value of about $0.3g$, where g is the acceleration due to gravity. This would indicate that forces due to seismically induced earth pressure on buried tanks should not be of major concern in low to moderate seismic zones.

Both the reinforcement detailing and the detailing of the joints are critical for ensuring seismic safety and serviceability of tanks. Serviceability consideration is of particular importance in liquid retaining structures in the aftermath of an earthquake [16]. The detailing of joints at the base of the tank requires special attention when movement is allowed in the joint. In case of monolithic joint between the wall and the base slab and between wall and the roof, adequate and proper reinforcement details are necessary to prevent excessive distress at these

locations due to the anticipated stress concentration. Special detailing for joints in case of prestressed concrete circular tanks is given in [11]. Similar detailing would be necessary for nonprestressed rectangular tanks.

Codes, Specifications and Standards

Sizable construction projects are performed using comprehensive sets of detailed drawings in conjunction with specifications. The parts of the specifications regarding construction are compiled by experienced specifiers. However, the specifications alone do not list every requirement. Instead, the project specifications refer to codes, standards and guide specifications of the American Concrete Institute and the American Society of Testing Materials, to name a few. These requirements are strictly adhered to during construction, and it is worthwhile for the reader to review them. The most commonly referenced codes, specifications and standards can be divided into five groups, presented here in Tables 1-1 through 1-5.

Table 1-1 General Requirements

ACI 301	Specifications for Structural Concrete for Buildings
ACI 302	Guide for Concrete Floor and Slab Construction
ACI 318	Building Code Requirements for Reinforced Concrete
ACI 350	Environmental Engineering Structures

Table 1-2 Field Testing Guides and Standards

ACI 214	Recommended Practice for Evaluation of Strength Test Results of Concrete
ASTM C31	Standard Practice for Making and Curing Test Specimens in the Field
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C143	Standard Test Method for Slump of Portland Cement Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

Table 1-3 Concrete, Cement and Related Material Guides and Standards	
ACI 201	Guide to Durable Concrete
ACI 211	Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete
ACI 212	Guide for Use of Admixtures in Concrete
ACI 221	Guide for Use of Normal Weight Aggregate in Concrete
ACI 304	Guide for Measuring, Mixing, Transporting and Placing Concrete
ASTM C33	Standard Specifications for Concrete Aggregates
ASTM C94	Standard Specifications for Ready-Mixed Concrete
ASTM C150	Standard Specifications for Portland Cement
ASTM C260	Standard Specifications for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specifications for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C494	Standard Specifications for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete

Table 1-4 Reinforcing Steel Standards	
ASTM A615	Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM A616	Standard Specification for Rail-Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A617	Standard Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed Bar for Concrete Reinforcement
ASTM A767	Standard Specification for Galvanized Steel Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Reinforcing Steel Bars

Table 1-5 Concrete Placement Guides	
ACI 305	Hot Weather Concreting
ACI 306	Cold Weather Concreting
ACI 308	Standard Practice for Curing Concrete
ACI 309	Guide for Consolidtion of Concrete

References

1. ACI Committee 350, *Environmental Engineering Concrete Structures (ACI 350R-89)*, American Concrete Institute, Detroit, 1995.

2. ACI Committee 318, *Building Code Requirements for Structural Concrete (ACI 318-95)*, American Concrete Institute, Farmington Hills, MI, 1995.

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Suggested Literature

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1 Introduction

Conventionally reinforced (non-prestressed) concrete tanks have been used extensively in municipal and industrial facilities for several decades. The design of these structures requires that attention be given not only to strength requirements, but to serviceability requirements as well. A properly designed tank must be able to withstand the applied loads without cracks that could cause leakage. The goal of designing and constructing a structurally sound tank that will not leak is achieved by providing the proper amount and distribution of reinforcement, the proper spacing and detailing of construction joints, and the use of quality concrete, placed using proper construction practices.

A thorough review of the latest report by ACI Committee 350 entitled *Environmental Engineering Concrete Structures* [1]* is essential in understanding the design of tanks. The document recommends that, unless noted otherwise, the structural design should conform to *Building Code Requirements for Structural Concrete (ACI 318)* [2]. Therefore, a working knowledge of ACI 318 is also necessary.

This publication consists of five chapters and an appendix. The contents of these are as follows:

Chapter 1 - Introduction

Except for the notations and the definitions, the topics discussed in this chapter are, for the most part, items presented in ACI 350 that are not addressed in ACI 318:

- Notations and Definitions
- Design Methods
- Durability
- Minimum Reinforcement
- Loading Conditions
- Crack Control
- Formwork Considerations
- Base Fixity
- Buoyancy Forces
- Earthquake Forces
- Codes, Specifications and Standards
- References
- Suggested Literature

Chapter 2 - Plate Analysis Results

This chapter gives the design coefficients for deflection (C_d), shear (C_s) and moments (M_x, M_y, M_{xy}) for plates with different end conditions. Results are provided from finite element analyses of two-dimensional plates subject to out-of-plane loads using SAP90 [19]. Convergence analysis was made to ensure the quality of the results.

The slab was assumed to act as a thin plate, for which equations and/or the design coefficients are available in some of the references listed [6-10]. However, since only a limited number of cases are available in such literature, this text was prepared to cover a wider range of loading configurations, end-restraint conditions, and width/height ratios.

*See the end of this chapter for cited references.

Coefficients for individual panels with fixed side edges apply without modification to continuous walls, provided there is no rotation about vertical edges. In a square tank, therefore, moment coefficients can be taken directly from the tables in Chapter 2. For a rectangular tank, adjustments must be made to account for redistribution of bending moments to adjacent walls. The design coefficients for rectangular tanks are given in Chapter 3.

Chapter 3 - Tank Analysis Results

This chapter gives the design coefficients for deflection (C_d) and moments (M_x, M_y, M_{xy} and M_{yz}) for tanks with different end conditions. The design coefficients are based on finite element analysis of tanks. The design coefficients (M_x, M_y, M_{xy}) presented in Chapter 2 for design of plates can also be used for tanks that have square plan dimensions. For rectangular tanks, the plate analysis results are not applicable since they do not account for moment distribution that will occur between the walls of different stiffnesses. An adjustment must be made similar to the modification of fixed-end moments in a frame analyzed by moment distribution. The shear coefficient (C_s) given in Chapter 2 for plates may be used for design of rectangular tanks.

If the moment distribution method is used, the common side-edge of adjacent panels is first considered artificially restrained, so that no rotation can take place about the edge. Fixed-edge moments taken from the results presented in Chapter 2 are usually dissimilar in adjacent panels, and the differences, which correspond to unbalanced moments, tend to rotate the edge. When the artificial restraint is removed, the unbalanced moments will induce additional moments in the panels. Adding the induced and fixed-end moments at the edge gives final moments, which must be identical on both sides of the common edge. Note, however, that moment distribution cannot be applied as easily to continuous tank walls as it can to framed structures, because bending moments must be distributed simultaneously along the entire length of the side edge so that moments become equal at both sides at any point of the edge. Moreover, tanks will develop in-plane axial compression or tension. Effects of the tension force, if significant, should be recognized. If significant compression forces are developed, the reduction in the effective stiffness of the member may also need to be considered.

Chapter 4 - Multicell Tanks

This chapter provides information on how to modify single-cell coefficients for use in multicell tank design. An appropriate method based on relative wall stiffnesses is given to compute the design moments in intersecting walls of multi-cell tanks.

Chapter 5 - Examples

A complete design for a wall and the roof slab of a rectangular tank is presented. Two examples that explain the determination of the bending moments for multicell tanks are also provided.

Appendix

A design aid that can be used for determining the required reinforcement for a rectangular concrete section subject to a given bending moment is located in the appendix.

Notations and Definitions

a = height of plate or wall.

w = unit weight of soil or water (for example, lb/ft^3).

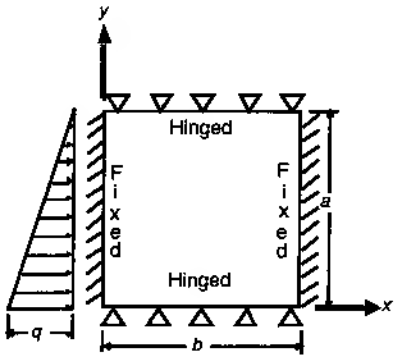
q = $k\,wa$, pressure at bottom of plate/wall for triangular load distribution (for example, lb/ft^2).
= $k\,w$ for uniform pressure along height of plate/wall (for example, lb/ft^2).

k = coefficient of active or passive pressure, whichever is applicable [3]. For water, active pressure coefficient $k_a = 1$, while for soil $k_a = (1 - \sin\phi)/(1 + \sin\phi)$, where ϕ = angle of internal friction of soil [3].

C_s = shear coefficient given in tables of Chapter 2 for computation of shear: Shear per unit width = $C_s\,q\,a$.

2 Plate Analysis Results

CASE 1

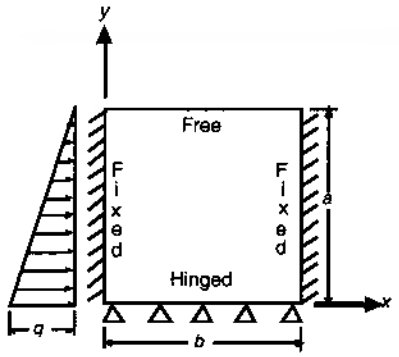


Shears & Deflections
on page 2-5

Moments

b/a	page
4.0	2-6
3.0	2-6
2.5	2-7
2.0	2-7
1.75	2-8
1.50	2-8
1.25	2-9
1.0	2-9
0.75	2-10
0.5	2-10

CASE 2

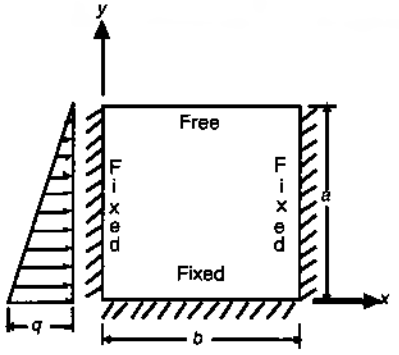


Shears & Deflections
on page 2-11

Moments

b/a	page
4.0	2-12
3.0	2-12
2.5	2-13
2.0	2-13
1.75	2-14
1.50	2-14
1.25	2-15
1.0	2-15
0.75	2-16
0.5	2-16

CASE 3

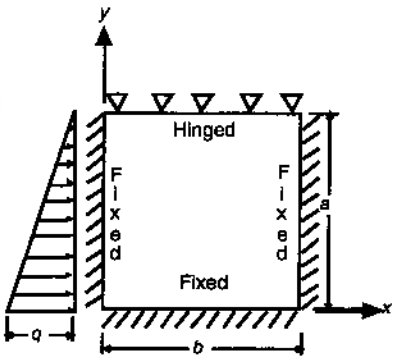


Shears & Deflections
on page 2-17

Moments

b/a	page
4.0	2-18
3.0	2-18
2.5	2-19
2.0	2-19
1.75	2-20
1.50	2-20
1.25	2-21
1.0	2-21
0.75	2-22
0.5	2-22

CASE 4

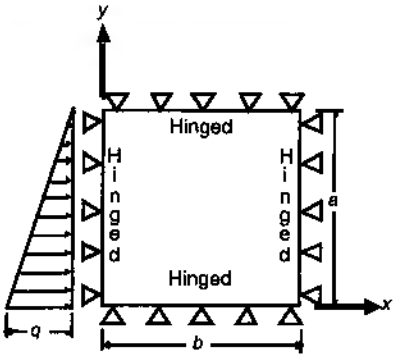


Shears & Deflections
on page 2-23

Moments

b/a	page
4.0	2-24
3.0	2-24
2.5	2-25
2.0	2-25
1.75	2-26
1.50	2-26
1.25	2-27
1.0	2-27
0.75	2-28
0.5	2-28

CASE 5

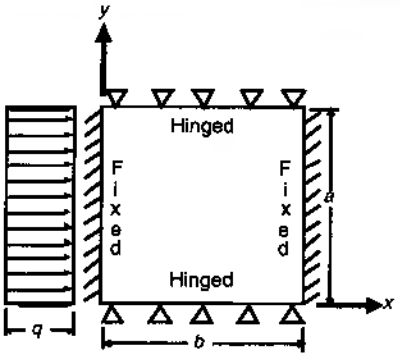


Shears & Deflections
on page 2-29

Moments

b/a	page
4.0	2-30
3.0	2-30
2.5	2-31
2.0	2-31
1.75	2-32
1.50	2-32
1.25	2-33
1.0	2-33
0.75	2-34
0.5	2-34

CASE 6

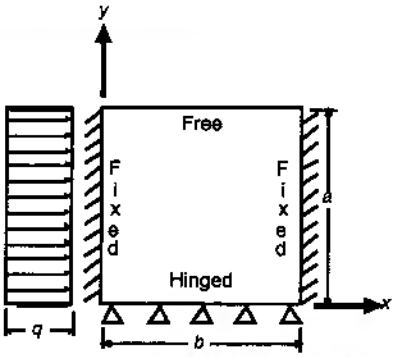


Shears & Deflections
on page 2-35

Moments

b/a	page
4.0	2-36
3.0	2-36
2.5	2-37
2.0	2-37
1.75	2-38
1.50	2-38
1.25	2-39
1.0	2-39
0.75	2-40
0.5	2-40

CASE 7

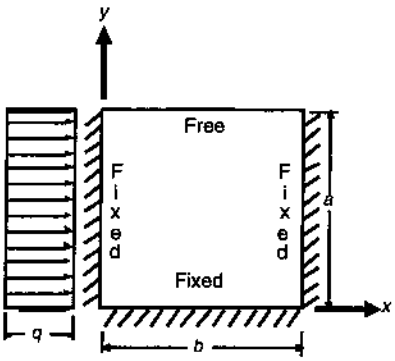


Shears & Deflections
on page 2-41

Moments

b/a	page
4.0	2-42
3.0	2-42
2.5	2-43
2.0	2-43
1.75	2-44
1.50	2-44
1.25	2-45
1.0	2-45
0.75	2-46
0.5	2-46

CASE 8

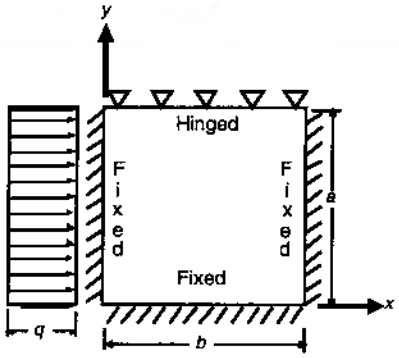


Shears & Deflections
on page 2-47

Moments

b/a	page
4.0	2-48
3.0	2-48
2.5	2-49
2.0	2-49
1.75	2-50
1.50	2-50
1.25	2-51
1.0	2-51
0.75	2-52
0.5	2-52

CASE 9

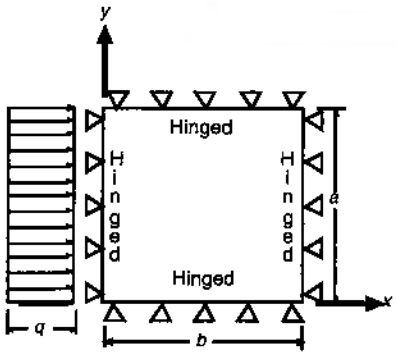


Shears & Deflections
on page 2-53

Moments

b/a	page
4.0	2-54
3.0	2-54
2.5	2-55
2.0	2-55
1.75	2-56
1.50	2-56
1.25	2-57
1.0	2-57
0.75	2-58
0.5	2-58

CASE 10



Shears & Deflections
on page 2-59

Moments

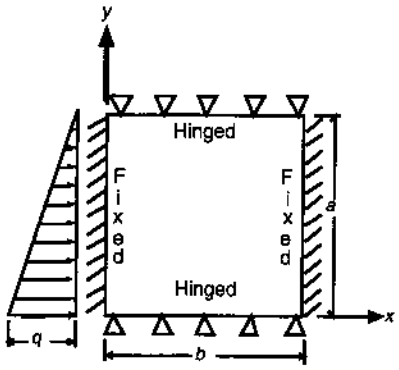
b/a	page
4.0	2-60
3.0	2-60
2.5	2-61
2.0	2-61
1.75	2-62
1.50	2-62
1.25	2-63
1.0	2-63
0.75	2-64
0.5	2-64

CASE 1

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.33	0.33	0.32	0.30	0.28	0.26	0.23	0.20	0.16	0.11
Side edge — maximum	0.41	0.41	0.41	0.40	0.39	0.38	0.35	0.32	0.26	0.20
Side edge — midpoint	0.37	0.37	0.37	0.36	0.35	0.33	0.30	0.26	0.20	0.13
Top edge — midpoint	0.17	0.16	0.15	0.13	0.12	0.10	0.07	0.05	0.03	0.01

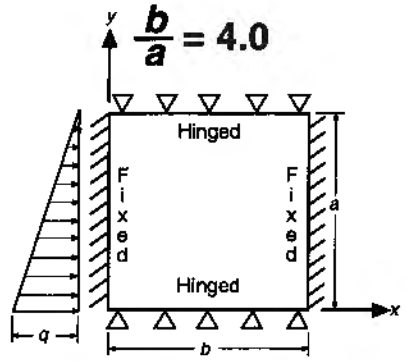
Deflection Coefficients, C_d

Along Midheight ($y = a/2$)

x \ b/a	END	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
4.0	0	2.60	6.20	8.70	10.10	10.50
3.0	0	1.60	4.20	6.40	7.70	8.10
2.5	0	1.10	3.10	4.80	6.00	6.30
2.0	0	0.70	2.00	3.20	4.00	4.30
1.75	0	0.50	1.50	2.40	3.00	3.20
1.5	0	0.40	1.00	1.70	2.10	2.30
1.25	0	0.20	0.60	1.10	1.40	1.50
1.0	0	0.10	0.30	0.60	0.70	0.80
0.75	0	0.00	0.10	0.20	0.30	0.30
0.5	0	0.00	0.00	0.00	0.00	0.00

Along Midspan ($x = b/2$)

y \ b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	2.10	4.00	5.30	6.10	6.30	5.90	5.00	3.60	1.90	0
3.0	0	2.00	3.70	4.90	5.70	5.80	5.40	4.60	3.30	1.70	0
2.5	0	1.80	3.30	4.50	5.10	5.20	4.90	4.10	2.90	1.50	0
2.0	0	1.50	2.70	3.60	4.10	4.20	3.90	3.30	2.30	1.20	0
1.75	0	1.20	2.30	3.00	3.40	3.50	3.20	2.70	1.90	1.00	0
1.5	0	1.00	1.80	2.40	2.60	2.70	2.40	2.00	1.40	0.70	0
1.25	0	0.70	1.20	1.60	1.80	1.80	1.60	1.30	0.90	0.50	0
1.0	0	0.40	0.70	0.90	1.00	1.00	0.80	0.70	0.50	0.20	0
0.75	0	0.20	0.30	0.40	0.40	0.40	0.30	0.20	0.20	0.10	0
0.5	0	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0



Moment = Coef. × $qa^2/1000$

M_x

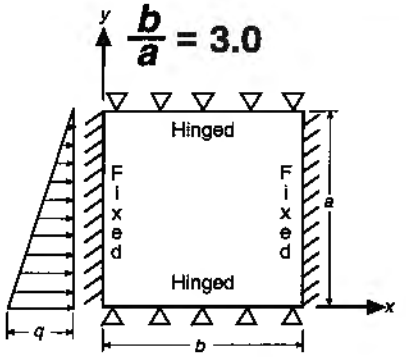
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-3	5	11	15	16	16
0.8a	-6	10	22	28	31	31
0.7a	-9	15	32	40	44	44
0.6a	-11	19	40	50	54	55
0.5a	-12	22	46	56	60	61
0.4a	-13	24	48	58	62	63
0.3a	-12	25	46	54	58	58
0.2a	-10	22	38	44	47	47
0.1a	-6	15	23	27	28	28
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-16	2	5	4	4	4
0.8a	-32	4	9	8	7	7
0.7a	-45	6	12	11	10	10
0.6a	-56	7	15	14	12	12
0.5a	-62	9	17	15	14	13
0.4a	-64	10	17	15	14	14
0.3a	-59	10	15	14	13	13
0.2a	-48	8	12	11	10	10
0.1a	-28	5	7	7	6	6
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	17	10	4	2	0
0.9a	0	17	10	4	1	0
0.8a	0	15	9	4	1	0
0.7a	0	11	6	3	1	0
0.6a	0	7	4	1	0	0
0.5a	0	2	0	0	0	0
0.4a	0	4	3	1	0	0
0.3a	0	10	6	3	1	0
0.2a	0	15	9	4	1	0
0.1a	0	19	10	4	1	0
BOT.	0	20	11	4	2	0



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-3	3	9	12	14	15
0.8a	-6	6	17	24	28	29
0.7a	-9	9	25	35	39	41
0.6a	-11	11	31	43	49	51
0.5a	-12	14	36	49	55	57
0.4a	-13	16	38	51	57	59
0.3a	-12	17	37	48	53	55
0.2a	-10	15	32	40	44	45
0.1a	-6	11	20	24	26	27
BOT.	0	0	0	0	0	0

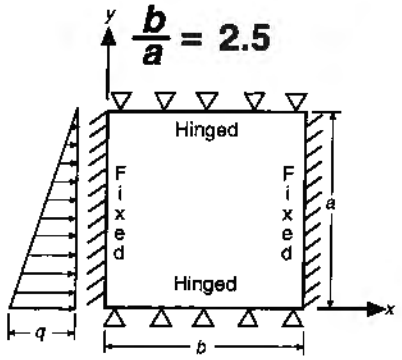
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-16	0	4	5	4	4
0.8a	-32	0	8	9	8	8
0.7a	-45	0	11	13	12	11
0.6a	-56	0	14	15	14	14
0.5a	-62	1	16	17	16	15
0.4a	-64	2	16	17	16	16
0.3a	-59	3	15	16	15	14
0.2a	-48	4	12	12	12	11
0.1a	-28	3	7	7	7	7
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	17	14	8	3	0
0.9a	0	17	14	8	3	0
0.8a	0	15	12	7	3	0
0.7a	0	12	9	5	2	0
0.6a	0	7	5	3	1	0
0.5a	0	2	1	0	0	0
0.4a	0	4	4	2	1	0
0.3a	0	10	8	5	2	0
0.2a	0	15	12	7	3	0
0.1a	0	20	14	8	3	0
BOT.	0	21	15	8	4	0

$\frac{b}{a} = 2.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-3	2	7	10	12	13
0.8a	-6	4	13	20	24	26
0.7a	-9	6	20	29	35	37
0.6a	-11	7	25	37	44	46
0.5a	-12	9	29	42	49	52
0.4a	-13	11	31	45	51	54
0.3a	-12	12	31	43	49	51
0.2a	-10	12	27	36	40	42
0.1a	-6	9	17	22	24	25
BOT.	0	0	0	0	0	0

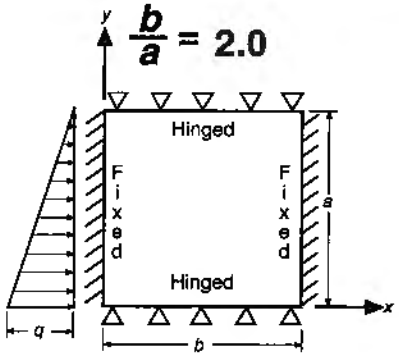
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-16	-2	3	5	5	5
0.8a	-32	-3	7	9	9	9
0.7a	-45	-4	10	13	13	13
0.6a	-55	-4	12	16	16	16
0.5a	-62	-4	14	18	18	17
0.4a	-63	-3	14	18	18	17
0.3a	-59	-1	13	16	16	16
0.2a	-48	0	11	13	13	13
0.1a	-28	1	6	7	7	7
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	16	15	10	5	0
0.9a	0	16	15	10	5	0
0.8a	0	14	13	8	4	0
0.7a	0	11	10	6	3	0
0.6a	0	7	6	4	2	0
0.5a	0	2	1	0	0	0
0.4a	0	3	4	3	1	0
0.3a	0	9	9	6	3	0
0.2a	0	15	13	8	4	0
0.1a	0	19	16	10	5	0
BOT.	0	21	17	11	5	0

$\frac{b}{a} = 2.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-3	1	5	8	10	10
0.8a	-6	2	9	15	19	20
0.7a	-9	2	14	22	28	29
0.6a	-11	3	18	28	35	37
0.5a	-12	5	21	33	40	42
0.4a	-12	6	23	35	42	45
0.3a	-11	7	24	35	41	43
0.2a	-9	8	21	30	34	36
0.1a	-6	6	14	19	21	22
BOT.	0	0	0	0	0	0

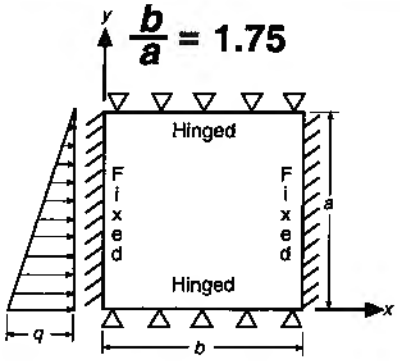
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-16	-3	2	5	5	5
0.8a	-30	-6	5	9	10	11
0.7a	-43	-9	7	13	14	15
0.6a	-53	-10	9	16	18	18
0.5a	-60	-10	10	17	19	20
0.4a	-61	-9	11	18	19	20
0.3a	-57	-7	11	16	18	18
0.2a	-46	-4	9	13	14	14
0.1a	-28	-1	5	7	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	14	15	11	6	0
0.9a	0	14	15	11	6	0
0.8a	0	12	13	9	5	0
0.7a	0	10	10	7	4	0
0.6a	0	7	6	4	2	0
0.5a	0	2	1	1	0	0
0.4a	0	3	4	3	2	0
0.3a	0	8	9	7	3	0
0.2a	0	13	14	10	5	0
0.1a	0	17	17	12	6	0
BOT.	0	19	18	12	6	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-3	0	3	6	8	8
0.8a	-6	0	7	12	15	17
0.7a	-8	1	10	18	23	24
0.6a	-10	2	13	23	29	31
0.5a	-11	2	16	27	33	36
0.4a	-12	4	18	30	36	38
0.3a	-11	5	19	30	35	37
0.2a	-9	6	18	26	30	32
0.1a	-5	5	12	17	19	20
BOT.	0	0	0	0	0	0

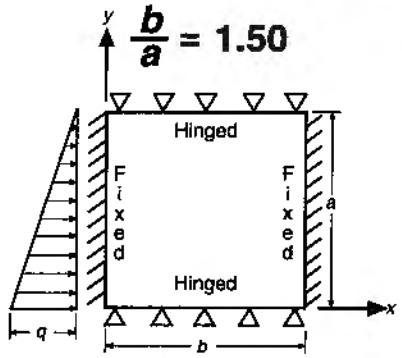
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-15	-4	2	4	5	6
0.8a	-29	-8	3	8	10	11
0.7a	-41	-10	5	12	15	15
0.6a	-51	-12	7	15	18	19
0.5a	-57	-13	8	17	20	20
0.4a	-59	-12	9	17	20	21
0.3a	-55	-9	9	16	18	19
0.2a	-45	-6	8	12	14	15
0.1a	-27	-2	5	7	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	13	14	11	6	0
0.9a	0	12	14	11	6	0
0.8a	0	11	12	9	5	0
0.7a	0	9	10	7	4	0
0.6a	0	6	6	4	2	0
0.5a	0	2	2	1	0	0
0.4a	0	2	3	3	2	0
0.3a	0	7	8	7	3	0
0.2a	0	12	13	10	5	0
0.1a	0	16	16	12	6	0
BOT.	0	18	18	13	6	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-3	0	2	4	6	6
0.8a	-5	0	5	9	11	12
0.7a	-7	0	7	13	17	18
0.6a	-9	0	9	17	22	23
0.5a	-10	1	12	20	26	28
0.4a	-11	1	13	23	29	30
0.3a	-10	3	15	24	29	31
0.2a	-8	4	14	21	25	27
0.1a	-5	4	10	14	17	17
BOT.	0	0	0	0	0	0

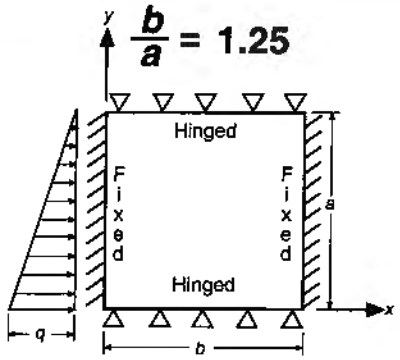
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-13	-4	1	4	5	6
0.8a	-26	-8	2	8	10	11
0.7a	-37	-12	3	11	14	15
0.6a	-46	-14	4	13	17	19
0.5a	-52	-15	5	15	19	21
0.4a	-54	-14	6	16	20	21
0.3a	-51	-11	7	15	18	19
0.2a	-42	-8	6	12	14	15
0.1a	-25	-3	4	7	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	10	12	10	5	0
0.9a	0	10	12	10	5	0
0.8a	0	9	11	9	5	0
0.7a	0	7	9	7	4	0
0.6a	0	5	6	4	2	0
0.5a	0	2	2	1	0	0
0.4a	0	1	2	2	1	0
0.3a	0	5	7	6	3	0
0.2a	0	10	12	9	5	0
0.1a	0	14	15	11	6	0
BOT.	0	16	16	12	6	0

$\frac{b}{a} = 1.25$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	-1	1	3	3	4
0.8a	-4	-1	2	5	7	8
0.7a	-6	-1	4	8	11	12
0.6a	-8	-1	5	11	14	15
0.5a	-9	-1	7	13	18	19
0.4a	-9	0	9	16	20	22
0.3a	-9	1	10	17	21	23
0.2a	-8	2	10	16	20	21
0.1a	-5	2	8	11	14	14
BOT.	0	0	0	0	0	0

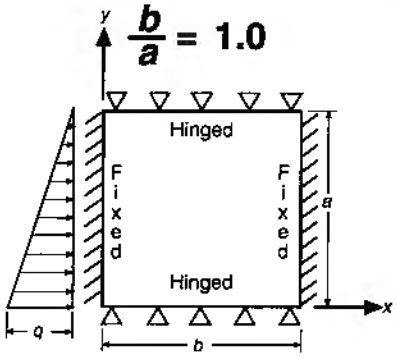
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	-4	0	3	5	5
0.8a	-22	-8	1	6	9	10
0.7a	-32	-11	1	9	13	14
0.6a	-40	-14	2	11	16	17
0.5a	-45	-15	3	13	18	19
0.4a	-47	-15	4	14	18	19
0.3a	-45	-13	4	13	17	18
0.2a	-38	-9	4	11	13	14
0.1a	-23	-4	3	6	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	8	9	8	4	0
0.9a	0	7	9	8	4	0
0.8a	0	7	8	7	4	0
0.7a	0	6	7	6	3	0
0.6a	0	4	5	4	2	0
0.5a	0	2	2	1	1	0
0.4a	0	1	1	2	1	0
0.3a	0	4	5	5	3	0
0.2a	0	7	9	8	4	0
0.1a	0	11	12	10	5	0
BOT.	0	13	14	11	6	0

$\frac{b}{a} = 1.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	-1	0	1	2	2
0.8a	-3	-1	1	2	3	4
0.7a	-5	-2	1	4	5	6
0.6a	-6	-2	2	5	7	8
0.5a	-7	-2	3	7	10	11
0.4a	-8	-1	4	9	12	13
0.3a	-7	-1	6	11	14	15
0.2a	-6	0	7	11	14	15
0.1a	-4	1	6	9	10	11
BOT.	0	0	0	0	0	0

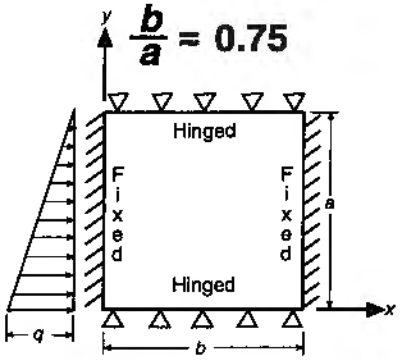
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-8	-3	0	2	3	4
0.8a	-16	-7	0	4	7	8
0.7a	-24	-10	0	6	10	11
0.6a	-30	-12	0	8	13	14
0.5a	-35	-13	1	10	14	16
0.4a	-38	-14	2	10	15	17
0.3a	-37	-12	2	10	14	16
0.2a	-31	-9	3	9	12	13
0.1a	-20	-4	2	5	7	7
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	5	6	5	3	0
0.9a	0	4	6	5	3	0
0.8a	0	4	5	5	3	0
0.7a	0	4	5	4	2	0
0.6a	0	3	4	3	2	0
0.5a	0	2	2	1	1	0
0.4a	0	0	0	0	0	0
0.3a	0	2	3	3	2	0
0.2a	0	5	6	5	3	0
0.1a	0	8	9	7	4	0
BOT.	0	9	10	8	4	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-1	0	0	0	1	1
0.8a	-2	-1	0	1	1	1
0.7a	-3	-1	0	1	2	2
0.6a	-4	-1	0	2	3	3
0.5a	-4	-2	1	3	4	5
0.4a	-5	-2	2	4	6	6
0.3a	-5	-1	2	5	7	8
0.2a	-5	0	3	6	8	9
0.1a	-3	0	4	6	7	7
BOT.	0	0	0	0	0	0

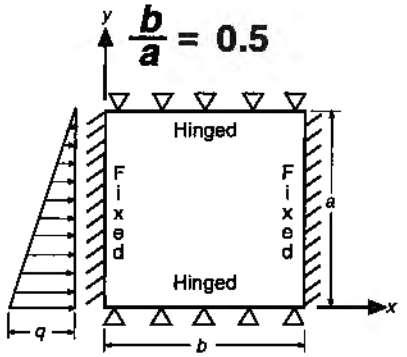
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-5	-2	0	1	2	2
0.8a	-10	-4	0	3	4	5
0.7a	-14	-6	0	4	6	7
0.6a	-19	-8	0	5	8	9
0.5a	-22	-10	0	6	10	11
0.4a	-25	-10	0	7	11	12
0.3a	-26	-10	1	7	11	12
0.2a	-23	-8	1	6	9	10
0.1a	-15	-4	1	4	6	6
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	2	3	2	1	0
0.9a	0	2	3	2	1	0
0.8a	0	2	3	2	1	0
0.7a	0	2	3	2	1	0
0.6a	0	2	2	2	1	0
0.5a	0	1	2	1	1	0
0.4a	0	1	1	0	0	0
0.3a	0	1	1	1	1	0
0.2a	0	2	3	3	2	0
0.1a	0	4	6	5	3	0
BOT.	0	6	7	5	3	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	0	0	0	0	0
0.8a	-1	0	0	0	0	0
0.7a	-1	-1	0	0	1	1
0.6a	-2	-1	0	0	1	1
0.5a	-2	-1	0	1	1	1
0.4a	-2	-1	0	1	2	2
0.3a	-3	-1	0	2	2	3
0.2a	-3	-1	1	3	3	4
0.1a	-2	0	2	3	4	4
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	-1	0	1	1	1
0.8a	-4	-2	0	1	2	2
0.7a	-6	-3	0	2	3	3
0.6a	-8	-4	0	2	4	4
0.5a	-11	-5	0	3	5	5
0.4a	-12	-6	0	3	5	6
0.3a	-14	-6	0	4	6	7
0.2a	-14	-5	0	4	6	6
0.1a	-10	-3	1	3	4	4
BOT.	0	0	0	0	0	0

M_{xy}

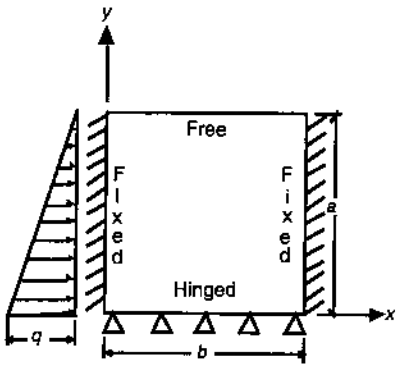
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	1	1	0	0
0.9a	0	1	1	1	0	0
0.8a	0	1	1	1	0	0
0.7a	0	1	1	1	0	0
0.6a	0	1	1	1	0	0
0.5a	0	1	1	1	0	0
0.4a	0	0	1	0	0	0
0.3a	0	0	0	0	0	0
0.2a	0	1	1	1	0	0
0.1a	0	2	2	2	1	0
BOT.	0	3	3	3	2	0

CASE 2

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d\, q a^4}{1000\, D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.39	0.36	0.33	0.31	0.28	0.26	0.23	0.19	0.15	0.11
Side edge — maximum	1.14	0.76	0.58	0.41	0.39	0.37	0.35	0.31	0.26	0.20
Side edge — midpoint	0.51	0.45	0.43	0.39	0.37	0.34	0.30	0.25	0.19	0.13

Deflection Coefficients, C_d

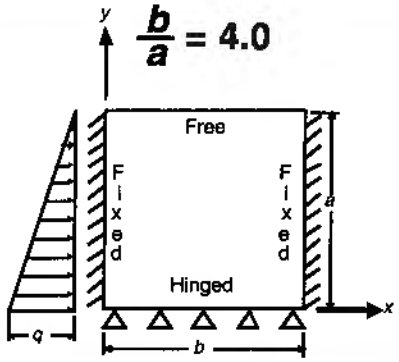
Along Midheight *(y = a/2)*

x / b/a	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
4.0	0	10.50	29.40	46.30	57.40	61.30
3.0	0	4.50	13.00	21.00	26.40	28.30
2.5	0	2.60	7.70	12.50	15.80	16.90
2.0	0	1.30	3.90	6.50	8.20	8.80
1.75	0	0.90	2.60	4.30	5.50	5.90
1.5	0	0.50	1.60	2.70	3.50	3.70
1.25	0	0.30	0.90	1.50	2.00	2.10
1.0	0	0.10	0.40	0.70	1.00	1.00
0.75	0	0.10	0.20	0.30	0.30	0.40
0.5	0	0.00	0.00	0.10	0.10	0.10

Along Midspan *(x = b/2)*

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	13.00	25.70	38.00	49.90	61.30	72.20	82.70	92.90	103.10	113.20
3.0	0	6.30	12.40	18.10	23.40	28.30	32.80	37.00	40.90	44.80	48.70
2.5	0	4.00	7.70	11.20	14.30	16.90	19.30	21.40	23.30	25.10	26.90
2.0	0	2.30	4.40	6.20	7.70	8.80	9.80	10.50	11.10	11.60	12.20
1.75	0	1.60	3.10	4.30	5.30	5.90	6.40	6.70	6.90	7.10	7.30
1.5	0	1.10	2.10	2.90	3.40	3.70	3.90	3.90	3.90	3.80	3.80
1.25	0	0.70	1.30	1.80	2.00	2.10	2.10	2.00	1.90	1.80	1.70
1.0	0	0.40	0.70	0.90	1.00	1.00	1.00	0.90	0.80	0.70	0.60
0.75	0	0.20	0.30	0.40	0.40	0.40	0.30	0.30	0.20	0.20	0.10
0.5	0	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-53	0	0	0	0	0
0.9a	-63	-9	4	10	13	14
0.8a	-55	-12	10	21	26	27
0.7a	-49	-10	17	31	38	40
0.6a	-43	-5	24	40	47	49
0.5a	-38	1	30	46	54	56
0.4a	-32	7	34	49	56	58
0.3a	-26	11	35	47	53	54
0.2a	-19	13	30	39	43	44
0.1a	-10	10	19	24	26	27
BOT.	0	0	0	0	0	0

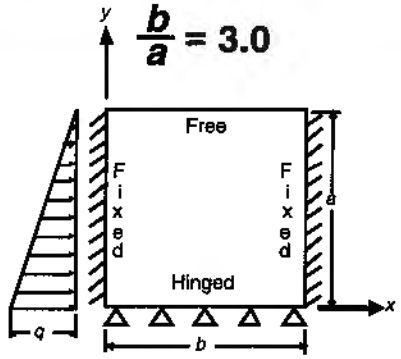
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-267	-83	21	66	84	89
0.9a	-317	-77	20	62	79	83
0.8a	-277	-70	20	58	73	77
0.7a	-244	-62	21	55	68	71
0.6a	-217	-52	21	50	62	65
0.5a	-190	-43	20	45	55	57
0.4a	-162	-32	19	39	47	49
0.3a	-131	-22	16	32	38	39
0.2a	-95	-13	13	23	27	28
0.1a	-52	-6	7	12	14	15
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	57	64	51	28	0
0.9a	0	53	63	50	27	0
0.8a	0	53	63	51	28	0
0.7a	0	54	64	51	28	0
0.6a	0	56	66	53	29	0
0.5a	0	60	69	54	29	0
0.4a	0	63	72	56	30	0
0.3a	0	67	75	58	31	0
0.2a	0	71	77	59	31	0
0.1a	0	74	79	60	31	0
BOT.	0	75	79	60	32	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

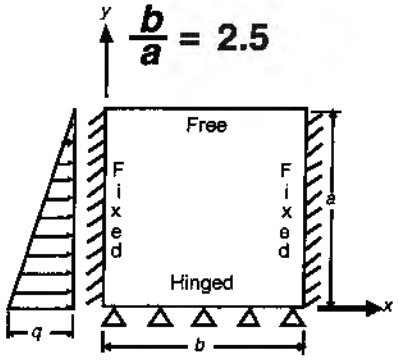
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-31	0	0	0	0	0
0.9a	-41	-8	2	7	10	11
0.8a	-37	-11	6	16	21	22
0.7a	-34	-9	11	24	31	33
0.6a	-31	-5	17	32	39	42
0.5a	-28	0	23	38	46	48
0.4a	-25	5	27	41	48	51
0.3a	-20	8	29	40	46	48
0.2a	-15	10	26	34	39	40
0.1a	-8	8	17	21	24	24
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-154	-72	7	48	68	74
0.9a	-205	-67	7	46	64	70
0.8a	-185	-61	8	44	61	66
0.7a	-169	-54	10	42	57	61
0.6a	-155	-47	11	39	52	56
0.5a	-140	-38	12	36	47	50
0.4a	-123	-29	12	32	41	43
0.3a	-102	-20	12	26	33	35
0.2a	-76	-12	10	19	24	25
0.1a	-42	-5	6	11	13	13
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	27	34	28	16	0
0.9a	0	24	32	28	16	0
0.8a	0	24	32	28	16	0
0.7a	0	25	33	29	16	0
0.6a	0	27	36	30	17	0
0.5a	0	30	39	32	18	0
0.4a	0	34	42	35	19	0
0.3a	0	38	46	37	20	0
0.2a	0	43	49	38	21	0
0.1a	0	46	51	39	21	0
BOT.	0	47	51	40	21	0



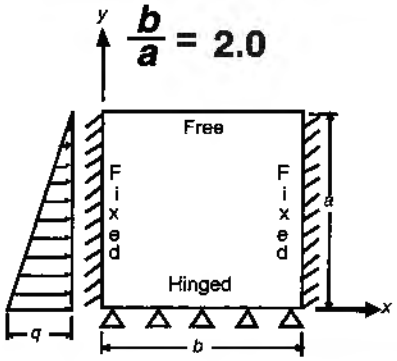
$\frac{b}{a} = 2.5$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-26	0	0	0	0	0
0.9a	-30	-7	1	5	8	9
0.8a	-28	-9	4	12	17	18
0.7a	-26	-8	8	19	25	27
0.6a	-25	-4	14	26	33	36
0.5a	-23	-1	19	32	39	42
0.4a	-21	3	23	36	43	45
0.3a	-18	6	24	36	42	43
0.2a	-13	8	22	31	35	36
0.1a	-7	7	15	19	22	22
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-130	-60	1	37	56	62
0.9a	-150	-56	2	36	53	59
0.8a	-140	-52	3	35	51	56
0.7a	-131	-47	5	34	48	53
0.6a	-124	-41	7	33	45	49
0.5a	-115	-34	9	31	41	44
0.4a	-104	-27	10	28	36	39
0.3a	-88	-19	10	23	30	32
0.2a	-66	-11	8	17	22	23
0.1a	-37	-5	5	10	12	12
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	15	20	18	10	0
0.9a	0	12	18	17	10	0
0.8a	0	12	18	17	10	0
0.7a	0	13	19	18	10	0
0.6a	0	15	22	20	11	0
0.5a	0	18	25	22	12	0
0.4a	0	22	29	24	13	0
0.3a	0	26	32	26	15	0
0.2a	0	31	36	28	15	0
0.1a	0	34	38	30	16	0
BOT.	0	36	39	30	16	0



$\frac{b}{a} = 2.0$

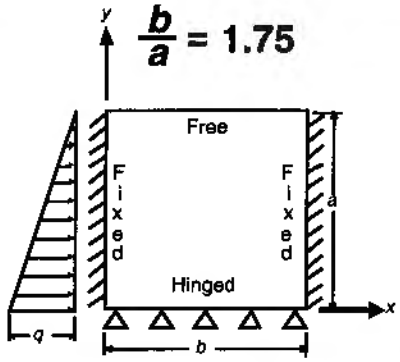
Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-17	0	0	0	0	0
0.9a	-20	-6	0	3	5	6
0.8a	-19	-7	2	8	12	13
0.7a	-19	-6	5	14	19	20
0.6a	-19	-4	10	19	25	27
0.5a	-18	-1	14	25	31	33
0.4a	-17	1	17	28	35	37
0.3a	-15	4	19	29	35	37
0.2a	-11	5	18	26	30	32
0.1a	-6	5	13	17	19	20
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-83	-45	-3	25	41	46
0.9a	-98	-42	-2	25	40	44
0.8a	-96	-40	0	25	39	43
0.7a	-94	-37	2	25	38	42
0.6a	-93	-33	4	25	36	40
0.5a	-90	-29	6	24	34	37
0.4a	-83	-23	7	23	30	33
0.3a	-73	-17	8	20	26	27
0.2a	-56	-11	7	15	19	20
0.1a	-32	-5	4	8	10	11
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	5	9	8	5	0
0.9a	0	3	7	7	4	0
0.8a	0	3	7	7	4	0
0.7a	0	4	8	8	5	0
0.6a	0	6	10	10	6	0
0.5a	0	8	13	12	7	0
0.4a	0	12	17	15	8	0
0.3a	0	16	21	17	10	0
0.2a	0	20	24	19	11	0
0.1a	0	24	27	21	11	0
BOT.	0	26	28	22	12	0

$\frac{b}{a} = 1.75$



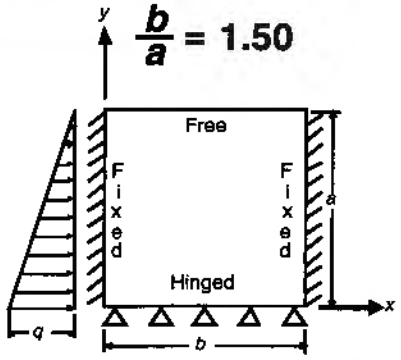
Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-12	0	0	0	0	0
0.9a	-15	-5	0	2	4	4
0.8a	-15	-6	1	6	9	10
0.7a	-15	-5	4	11	15	16
0.6a	-15	-4	7	16	21	22
0.5a	-15	-2	11	20	26	28
0.4a	-15	0	14	24	30	32
0.3a	-13	2	16	25	30	32
0.2a	-10	4	16	23	27	28
0.1a	-6	4	11	15	17	18
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-58	-36	-4	19	33	37
0.9a	-75	-34	-3	19	32	36
0.8a	-75	-33	-1	20	32	36
0.7a	-77	-31	0	20	32	35
0.6a	-77	-29	2	21	31	34
0.5a	-77	-26	4	21	30	32
0.4a	-73	-21	6	20	27	29
0.3a	-65	-16	6	18	23	25
0.2a	-51	-10	6	14	17	18
0.1a	-30	-5	4	8	10	10
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	2	4	5	3	0
0.9a	0	0	3	3	2	0
0.8a	0	0	2	3	2	0
0.7a	0	1	3	4	3	0
0.6a	0	2	5	5	3	0
0.5a	0	4	8	8	5	0
0.4a	0	8	11	10	6	0
0.3a	0	12	15	13	7	0
0.2a	0	16	19	15	8	0
0.1a	0	20	22	17	9	0
BOT.	0	21	23	18	10	0

$\frac{b}{a} = 1.50$

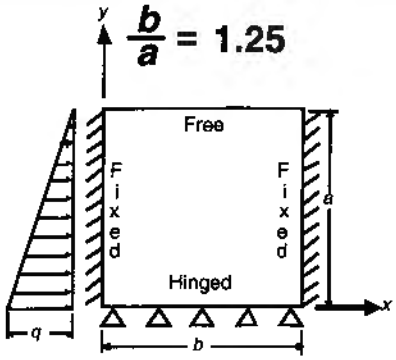


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-8	0	0	0	0	0
0.9a	-11	-4	-1	1	2	3
0.8a	-11	-5	0	4	6	7
0.7a	-12	-4	2	7	11	12
0.6a	-12	-3	5	12	16	17
0.5a	-13	-2	8	16	20	22
0.4a	-12	0	11	19	24	26
0.3a	-11	1	13	21	25	27
0.2a	-9	3	13	19	23	24
0.1a	-5	3	9	13	15	16
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-37	-27	-4	13	24	27
0.9a	-53	-25	-3	14	24	27
0.8a	-56	-25	-2	15	24	28
0.7a	-59	-25	0	16	25	28
0.6a	-62	-24	1	17	26	28
0.5a	-63	-22	3	17	25	28
0.4a	-62	-19	4	17	24	26
0.3a	-56	-15	5	16	21	22
0.2a	-45	-10	5	12	16	17
0.1a	-27	-5	3	7	9	9
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	1	2	1	0
0.9a	0	2	0	1	1	0
0.8a	0	2	1	0	0	0
0.7a	0	1	0	1	1	0
0.6a	0	0	1	2	1	0
0.5a	0	2	4	4	2	0
0.4a	0	4	7	6	4	0
0.3a	0	8	11	9	5	0
0.2a	0	12	14	12	7	0
0.1a	0	15	17	14	7	0
BOT.	0	17	19	14	8	0



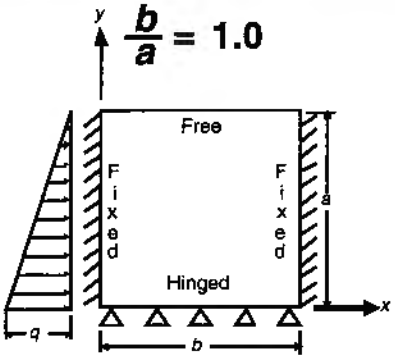
$\frac{b}{a} = 1.25$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-4	0	0	0	0	0
0.9a	-7	-3	-1	0	1	1
0.8a	-8	-4	0	2	3	4
0.7a	-9	-3	1	4	7	7
0.6a	-9	-3	3	8	10	11
0.5a	-10	-2	5	11	14	16
0.4a	-10	-1	7	14	18	19
0.3a	-9	0	9	16	20	21
0.2a	-8	1	10	15	19	20
0.1a	-5	2	8	11	13	14
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-20	-18	-3	8	16	18
0.9a	-34	-17	-3	9	16	18
0.8a	-38	-18	-2	10	17	20
0.7a	-43	-19	-1	11	19	21
0.6a	-47	-19	0	13	20	22
0.5a	-50	-19	2	14	20	22
0.4a	-50	-17	3	14	20	22
0.3a	-47	-14	4	13	18	19
0.2a	-39	-10	4	11	14	15
0.1a	-23	-5	3	6	8	9
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	2	1	0	0	0
0.9a	0	3	2	1	0	0
0.8a	0	3	3	2	1	0
0.7a	0	2	2	1	1	0
0.6a	0	2	1	0	0	0
0.5a	0	0	1	1	1	0
0.4a	0	2	3	3	2	0
0.3a	0	5	7	6	3	0
0.2a	0	8	10	9	5	0
0.1a	0	11	13	11	6	0
BOT.	0	13	14	11	6	0



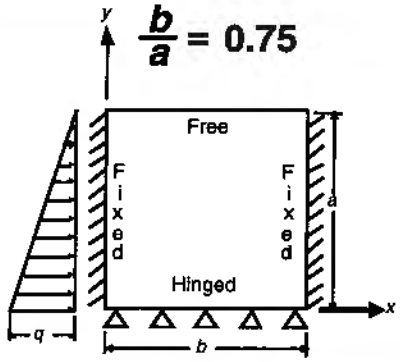
$\frac{b}{a} = 1.0$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-2	0	0	0	0	0
0.9a	-4	-2	-1	0	0	0
0.8a	-5	-2	-1	1	1	1
0.7a	-6	-2	0	2	3	4
0.6a	-6	-2	1	4	6	6
0.5a	-7	-2	2	6	9	9
0.4a	-8	-2	4	8	11	12
0.3a	-7	-1	5	10	13	14
0.2a	-6	0	6	11	14	14
0.1a	-4	1	6	8	10	11
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-9	-10	-2	4	8	10
0.9a	-19	-10	-2	5	9	11
0.8a	-23	-11	-1	6	11	12
0.7a	-28	-13	-1	7	12	14
0.6a	-32	-14	0	9	14	16
0.5a	-36	-15	0	10	15	17
0.4a	-38	-14	1	11	16	17
0.3a	-37	-12	2	10	15	16
0.2a	-32	-9	3	9	12	13
0.1a	-20	-4	2	5	7	7
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	2	1	1	0	0
0.9a	0	2	2	2	1	0
0.8a	0	2	3	2	1	0
0.7a	0	2	3	2	1	0
0.6a	0	2	2	2	1	0
0.5a	0	1	1	1	0	0
0.4a	0	0	1	1	1	0
0.3a	0	2	3	3	2	0
0.2a	0	5	6	6	3	0
0.1a	0	8	9	8	4	0
BOT.	0	9	11	8	5	0



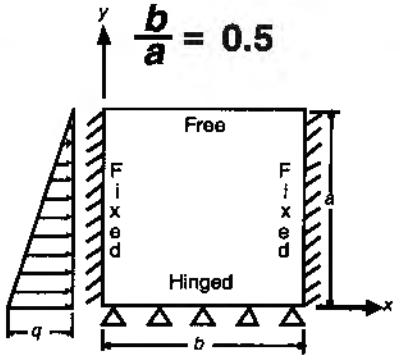
$\frac{b}{a} = 0.75$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-1	0	0	0	0	0
0.9a	-2	-1	0	0	0	0
0.8a	-2	-1	0	0	0	0
0.7a	-3	-1	0	1	1	1
0.6a	-4	-2	0	2	2	3
0.5a	-5	-2	1	3	4	4
0.4a	-5	-2	1	4	5	6
0.3a	-5	-1	2	5	7	8
0.2a	-5	0	3	6	8	9
0.1a	-3	0	4	6	7	7
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-4	-4	-1	2	3	4
0.9a	-8	-4	-1	2	4	5
0.8a	-12	-6	-1	3	5	6
0.7a	-15	-7	-1	4	7	8
0.6a	-19	-9	-1	5	8	9
0.5a	-23	-10	0	6	10	11
0.4a	-25	-10	0	7	11	12
0.3a	-26	-10	1	7	11	12
0.2a	-23	-8	1	6	9	10
0.1a	-15	-4	1	4	6	6
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	1	1	0	0
0.9a	0	1	1	1	1	0
0.8a	0	1	2	1	1	0
0.7a	0	2	2	2	1	0
0.6a	0	1	2	2	1	0
0.5a	0	1	1	1	1	0
0.4a	0	1	0	0	0	0
0.3a	0	1	1	1	1	0
0.2a	0	2	3	3	2	0
0.1a	0	4	6	5	3	0
BOT.	0	6	7	5	3	0



$\frac{b}{a} = 0.5$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-1	0	0	0	0	0
0.8a	-1	0	0	0	0	0
0.7a	-1	-1	0	0	0	1
0.6a	-2	-1	0	0	1	1
0.5a	-2	-1	0	1	1	1
0.4a	-2	-1	0	1	2	2
0.3a	-3	-1	0	2	2	3
0.2a	-3	-1	1	3	3	4
0.1a	-2	0	2	3	4	4
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-1	-1	0	0	1	1
0.9a	-3	-1	0	1	1	2
0.8a	-4	-2	0	1	2	2
0.7a	-6	-3	0	2	3	3
0.6a	-8	-4	0	2	4	4
0.5a	-11	-5	0	3	5	5
0.4a	-12	-6	0	3	5	6
0.3a	-14	-6	0	4	6	7
0.2a	-14	-5	0	4	6	6
0.1a	-10	-3	1	3	4	4
BOT.	0	0	0	0	0	0

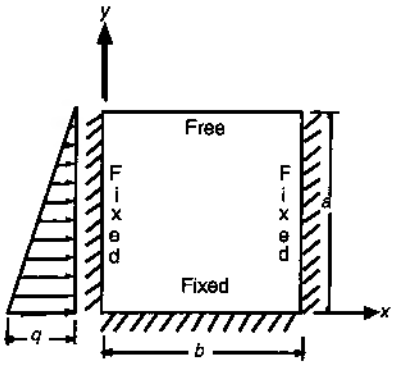
M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	0	0	0	0	0
0.8a	0	0	1	1	0	0
0.7a	0	1	1	1	0	0
0.6a	0	1	1	1	0	0
0.5a	0	1	1	1	0	0
0.4a	0	0	1	0	0	0
0.3a	0	0	0	0	0	0
0.2a	0	1	1	1	0	0
0.1a	0	2	2	2	1	0
BOT.	0	3	3	3	2	0

CASE 3

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d\, q a^4}{1000\, D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.50	0.50	0.48	0.45	0.43	0.40	0.36	0.32	0.26	0.19
Side edge — maximum	0.38	0.37	0.33	0.27	0.26	0.26	0.25	0.24	0.22	0.17
Side edge — midpoint	0.23	0.24	0.25	0.26	0.26	0.26	0.25	0.23	0.19	0.13

Deflection Coefficients, C_d

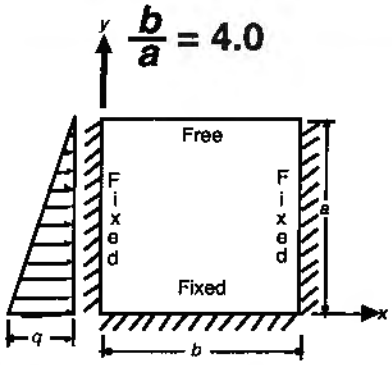
Along Midheight ***(y = a/2)***

x \ b/a	END	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
4.0	0	2.60	6.20	8.70	10.10	10.50
3.0	0	1.60	4.20	6.40	7.70	8.10
2.5	0	1.10	3.10	4.80	6.00	6.30
2.0	0	0.70	2.00	3.20	4.00	4.30
1.75	0	0.50	1.50	2.40	3.00	3.20
1.5	0	0.40	1.00	1.70	2.10	2.30
1.25	0	0.20	0.60	1.10	1.40	1.50
1.0	0	0.10	0.30	0.60	0.70	0.80
0.75	0	0.00	0.10	0.20	0.30	0.30
0.5	0	0.00	0.00	0.10	0.10	0.10

Along Midspan ***(x = b/2)***

y \ b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	0.70	2.40	4.70	7.50	10.50	13.60	16.70	19.70	22.70	25.80
3.0	0	0.60	1.90	3.80	5.90	8.10	10.30	12.40	14.40	16.40	18.40
2.5	0	0.50	1.60	3.10	4.70	6.30	7.90	9.30	10.70	12.00	13.20
2.0	0	0.40	1.20	2.20	3.30	4.30	5.10	5.90	6.50	7.10	7.70
1.75	0	0.30	1.00	1.80	2.60	3.20	3.80	4.20	4.60	4.90	5.20
1.5	0	0.20	0.80	1.30	1.90	2.30	2.60	2.80	2.90	3.00	3.10
1.25	0	0.20	0.60	0.90	1.30	1.50	1.60	1.60	1.60	1.50	1.50
1.0	0	0.10	0.40	0.60	0.70	0.80	0.80	0.70	0.70	0.60	0.60
0.75	0	0.10	0.20	0.30	0.30	0.30	0.30	0.30	0.20	0.20	0.10
0.5	0	0.00	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-20	0	0	0	0	0
0.9a	-20	-2	2	3	3	3
0.8a	-17	-1	5	6	5	5
0.7a	-15	0	6	7	5	5
0.6a	-13	2	6	5	2	1
0.5a	-11	2	4	-1	-5	-6
0.4a	-9	1	-3	-12	-18	-20
0.3a	-6	-3	-16	-29	-37	-39
0.2a	-4	-12	-35	-53	-64	-67
0.1a	-1	-27	-63	-87	-99	-103
BOT.	0	-50	-101	-130	-145	-149

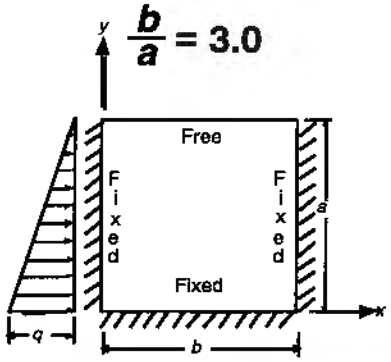
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-99	-14	13	17	16	15
0.9a	-98	-12	13	16	14	13
0.8a	-85	-10	12	15	13	12
0.7a	-75	-7	11	13	11	10
0.6a	-65	-5	10	10	8	7
0.5a	-56	-3	8	7	5	4
0.4a	-45	-1	5	3	0	-1
0.3a	-32	-1	1	-3	-5	-6
0.2a	-18	-2	-5	-9	-12	-12
0.1a	-5	-5	-12	-17	-20	-20
BOT.	0	-10	-20	-26	-29	-30

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	19	19	14	7	0
0.9a	0	18	19	14	7	0
0.8a	0	18	19	14	7	0
0.7a	0	18	19	14	7	0
0.6a	0	19	20	13	6	0
0.5a	0	20	19	13	6	0
0.4a	0	20	18	11	5	0
0.3a	0	19	16	10	4	0
0.2a	0	16	12	7	3	0
0.1a	0	10	7	4	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-17	0	0	0	0	0
0.9a	-18	-3	2	4	5	5
0.8a	-16	-3	4	7	8	9
0.7a	-14	-2	6	10	11	11
0.6a	-13	0	7	10	10	10
0.5a	-11	1	7	7	5	5
0.4a	-9	1	3	-1	-4	-6
0.3a	-6	-1	-6	-14	-21	-23
0.2a	-4	-7	-21	-35	-45	-48
0.1a	-1	-17	-44	-65	-78	-82
BOT.	0	-35	-77	-106	-122	-127

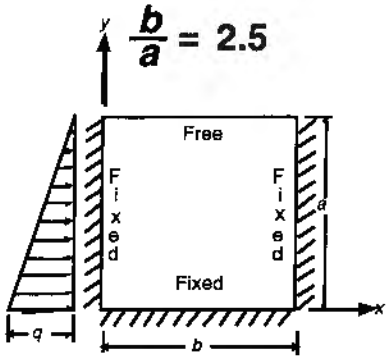
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-87	-24	8	20	24	24
0.9a	-91	-22	8	19	22	22
0.8a	-80	-19	8	17	20	20
0.7a	-71	-16	8	16	17	17
0.6a	-63	-12	8	14	14	14
0.5a	-55	-8	7	11	11	10
0.4a	-44	-5	5	7	6	5
0.3a	-32	-3	2	1	0	-1
0.2a	-18	-2	-2	-5	-7	-8
0.1a	-5	-4	-8	-12	-15	-16
BOT.	0	-7	-15	-21	-24	-25

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	15	17	14	7	0
0.9a	0	13	16	13	7	0
0.8a	0	13	17	14	7	0
0.7a	0	14	17	14	8	0
0.6a	0	15	18	14	8	0
0.5a	0	16	19	14	7	0
0.4a	0	17	18	13	7	0
0.3a	0	17	17	12	6	0
0.2a	0	15	14	9	5	0
0.1a	0	10	8	5	3	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 2.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-15	0	0	0	0	0
0.9a	-16	-4	1	4	5	5
0.8a	-15	-4	3	7	9	10
0.7a	-13	-3	6	10	13	13
0.6a	-12	-1	7	12	13	14
0.5a	-11	1	8	10	11	11
0.4a	-9	1	5	5	3	3
0.3a	-6	0	-1	-6	-10	-12
0.2a	-4	-4	-13	-24	-31	-34
0.1a	-1	-12	-33	-51	-62	-66
BOT.	0	-27	-63	-89	-104	-109

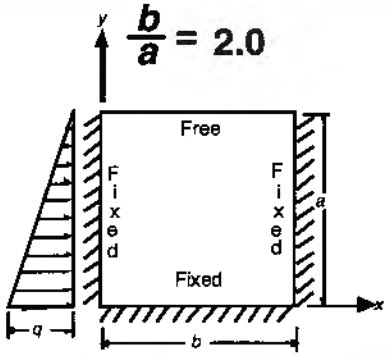
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-77	-28	4	20	26	28
0.9a	-82	-25	4	18	24	26
0.8a	-74	-22	5	17	22	24
0.7a	-67	-19	6	16	20	21
0.6a	-61	-15	6	14	17	18
0.5a	-53	-11	6	12	14	14
0.4a	-44	-7	5	8	9	9
0.3a	-32	-4	3	4	3	3
0.2a	-18	-3	-1	-2	-4	-4
0.1a	-6	-3	-6	-9	-12	-12
BOT.	0	-5	-13	-18	-21	-22

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	11	14	11	6	0
0.9a	0	9	13	11	6	0
0.8a	0	9	13	11	6	0
0.7a	0	10	14	12	7	0
0.6a	0	11	15	13	7	0
0.5a	0	13	16	13	7	0
0.4a	0	14	16	13	7	0
0.3a	0	14	16	12	6	0
0.2a	0	13	13	10	5	0
0.1a	0	9	9	6	3	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 2.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-12	0	0	0	0	0
0.9a	-13	-4	0	3	4	5
0.8a	-12	-4	2	6	9	10
0.7a	-12	-3	5	10	13	14
0.6a	-11	-1	7	12	15	16
0.5a	-10	0	8	13	15	15
0.4a	-8	1	7	10	10	10
0.3a	-6	1	3	2	0	0
0.2a	-4	-2	-6	-12	-17	-19
0.1a	-1	-8	-22	-35	-44	-47
BOT.	0	-20	-48	-69	-82	-86

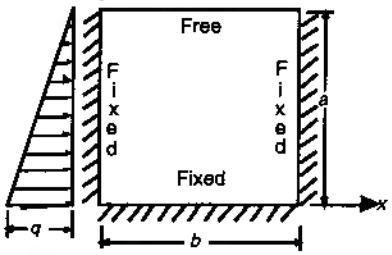
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-61	-27	0	17	25	28
0.9a	-66	-25	1	16	24	26
0.8a	-62	-23	2	16	22	24
0.7a	-59	-20	3	15	21	22
0.6a	-55	-16	4	14	19	20
0.5a	-50	-13	5	12	16	16
0.4a	-42	-9	5	10	12	12
0.3a	-32	-5	3	6	6	6
0.2a	-19	-3	1	0	0	-1
0.1a	-6	-2	-4	-6	-8	-8
BOT.	0	-4	-10	-14	-16	-17

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	6	8	7	4	0
0.9a	0	5	7	7	4	0
0.8a	0	5	8	7	4	0
0.7a	0	5	8	8	5	0
0.6a	0	7	10	9	5	0
0.5a	0	8	12	10	6	0
0.4a	0	10	13	11	6	0
0.3a	0	11	13	11	6	0
0.2a	0	11	12	9	5	0
0.1a	0	8	8	6	3	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-10	0	0	0	0	0
0.9a	-11	-3	0	2	4	4
0.8a	-11	-4	2	5	8	8
0.7a	-10	-3	4	9	12	13
0.6a	-10	-1	6	12	15	16
0.5a	-9	0	8	13	15	16
0.4a	-8	1	7	11	13	13
0.3a	-6	1	4	5	5	4
0.2a	-4	-1	-3	-7	-10	-11
0.1a	-1	-6	-17	-27	-34	-36
BOT.	0	-16	-40	-59	-70	-73

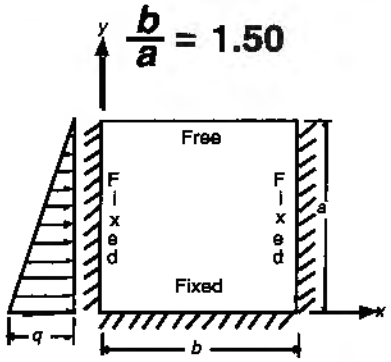
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-48	-25	-1	14	23	25
0.9a	-55	-23	0	14	22	24
0.8a	-54	-21	1	14	21	23
0.7a	-52	-19	2	14	20	22
0.6a	-50	-16	3	13	18	20
0.5a	-47	-13	4	12	16	17
0.4a	-40	-10	4	10	12	13
0.3a	-31	-6	3	7	8	8
0.2a	-19	-3	1	2	1	1
0.1a	-6	-2	-3	-4	-6	-6
BOT.	0	-3	-8	-12	-14	-15

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	3	5	5	3	0
0.9a	0	2	4	4	3	0
0.8a	0	2	4	5	3	0
0.7a	0	3	5	5	3	0
0.6a	0	4	7	6	4	0
0.5a	0	6	9	8	4	0
0.4a	0	8	10	9	5	0
0.3a	0	10	12	9	5	0
0.2a	0	10	11	8	4	0
0.1a	0	8	8	6	3	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-7	0	0	0	0	0
0.9a	-9	-3	0	2	3	3
0.8a	-9	-3	1	4	6	7
0.7a	-9	-3	3	7	10	11
0.6a	-9	-2	5	10	13	14
0.5a	-9	0	7	12	14	15
0.4a	-8	0	7	11	13	14
0.3a	-6	1	5	7	8	8
0.2a	-4	-1	-1	-2	-4	-5
0.1a	-1	-4	-12	-20	-25	-27
BOT.	0	-13	-32	-48	-57	-61

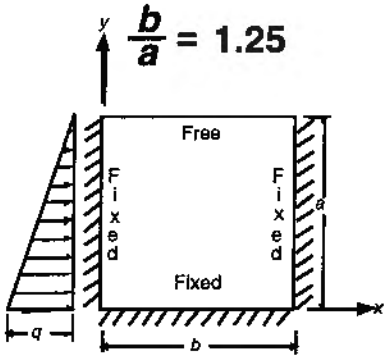
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-34	-21	-2	11	19	21
0.9a	-43	-19	-1	11	18	21
0.8a	-44	-18	0	11	18	20
0.7a	-44	-17	1	12	18	20
0.6a	-44	-15	2	12	17	19
0.5a	-43	-13	3	11	15	17
0.4a	-38	-10	4	10	13	13
0.3a	-30	-7	3	7	8	9
0.2a	-19	-4	1	3	3	3
0.1a	-6	-2	-2	-3	-4	-4
BOT.	0	-3	-6	-10	-11	-12

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	3	3	2	0
0.9a	0	0	2	2	1	0
0.8a	0	0	1	2	1	0
0.7a	0	1	2	3	2	0
0.6a	0	2	4	4	2	0
0.5a	0	4	6	5	3	0
0.4a	0	6	8	7	4	0
0.3a	0	8	9	8	4	0
0.2a	0	8	10	7	4	0
0.1a	0	7	7	5	3	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.25$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-4	0	0	0	0	0
0.9a	-6	-2	0	1	1	2
0.8a	-7	-3	0	3	4	4
0.7a	-7	-2	2	5	7	8
0.6a	-7	-2	4	8	10	11
0.5a	-7	-1	5	9	12	13
0.4a	-7	0	6	10	12	13
0.3a	-6	0	5	8	9	10
0.2a	-4	0	1	1	0	0
0.1a	-1	-3	-8	-13	-16	-18
BOT.	0	-9	-25	-37	-45	-48

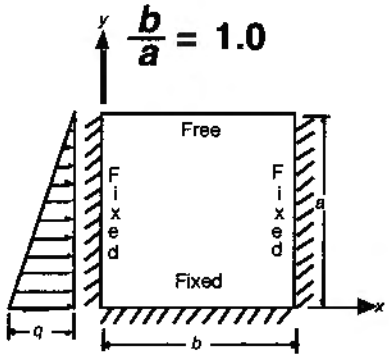
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-20	-15	-2	8	14	16
0.9a	-30	-15	-2	8	14	16
0.8a	-33	-15	-1	9	14	16
0.7a	-35	-14	0	9	15	16
0.6a	-37	-14	1	10	15	16
0.5a	-37	-12	2	10	14	15
0.4a	-34	-10	3	9	12	13
0.3a	-28	-7	3	7	9	9
0.2a	-18	-4	2	4	4	4
0.1a	-6	-2	-1	-1	-2	-2
BOT.	0	-2	-5	-7	-9	-10

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	0	1	0	0
0.9a	0	1	1	0	0	0
0.8a	0	1	1	0	0	0
0.7a	0	1	0	0	0	0
0.6a	0	0	1	1	1	0
0.5a	0	2	3	3	2	0
0.4a	0	4	5	5	3	0
0.3a	0	6	7	6	3	0
0.2a	0	7	8	6	3	0
0.1a	0	6	6	5	3	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-2	0	0	0	0	0
0.9a	-4	-2	0	0	0	1
0.8a	-4	-2	0	1	2	2
0.7a	-5	-2	1	3	4	4
0.6a	-6	-2	2	5	6	7
0.5a	-6	-1	3	6	9	9
0.4a	-6	-1	4	8	10	10
0.3a	-5	0	4	7	9	9
0.2a	-3	0	2	3	3	3
0.1a	-1	-2	-4	-7	-9	-10
BOT.	0	-6	-18	-27	-33	-35

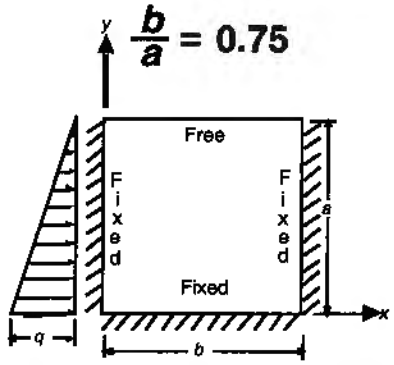
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-10	-9	-2	4	8	9
0.9a	-18	-9	-1	5	9	10
0.8a	-21	-10	-1	6	10	11
0.7a	-25	-11	0	7	11	12
0.6a	-28	-11	0	8	12	13
0.5a	-30	-11	1	8	12	13
0.4a	-29	-10	2	8	11	12
0.3a	-25	-7	2	7	9	10
0.2a	-17	-4	1	4	5	5
0.1a	-6	-2	0	0	0	0
BOT.	0	-1	-4	-5	-7	-7

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	1	0	0	0
0.9a	0	2	2	1	1	0
0.8a	0	2	2	1	1	0
0.7a	0	2	2	1	1	0
0.6a	0	1	1	0	0	0
0.5a	0	0	1	1	1	0
0.4a	0	2	3	2	1	0
0.3a	0	3	5	4	2	0
0.2a	0	5	6	5	3	0
0.1a	0	5	5	4	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-1	0	0	0	0	0
0.9a	-2	-1	0	0	0	0
0.8a	-2	-1	0	0	1	1
0.7a	-3	-1	0	1	2	2
0.6a	-4	-1	0	2	3	3
0.5a	-4	-1	1	3	4	5
0.4a	-4	-1	2	4	6	6
0.3a	-4	-1	2	5	6	7
0.2a	-3	0	2	3	4	5
0.1a	-1	-1	-1	-2	-3	-3
BOT.	0	-4	-11	-17	-21	-23

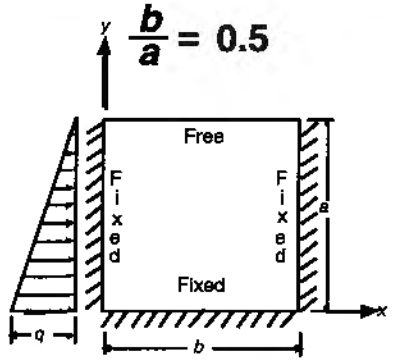
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-4	-4	-1	2	4	4
0.9a	-8	-4	-1	2	4	5
0.8a	-11	-6	-1	3	5	6
0.7a	-15	-7	-1	4	7	7
0.6a	-18	-8	0	5	8	9
0.5a	-21	-8	0	6	9	10
0.4a	-22	-8	0	6	9	10
0.3a	-20	-7	1	5	8	9
0.2a	-15	-5	1	4	5	6
0.1a	-6	-2	0	1	1	1
BOT.	0	-1	-2	-3	-4	-5

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	1	1	1	0	0
0.9a	0	1	1	1	1	0
0.8a	0	1	2	1	1	0
0.7a	0	1	2	1	1	0
0.6a	0	1	1	1	1	0
0.5a	0	1	1	0	0	0
0.4a	0	0	1	1	0	0
0.3a	0	2	2	2	1	0
0.2a	0	3	4	3	2	0
0.1a	0	3	4	3	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	-1	0	0	0	0	0
0.8a	-1	0	0	0	0	0
0.7a	-1	-1	0	0	0	1
0.6a	-2	-1	0	0	1	1
0.5a	-2	-1	0	1	1	1
0.4a	-2	-1	0	1	2	2
0.3a	-2	-1	1	2	3	3
0.2a	-2	0	1	2	3	3
0.1a	-1	0	0	0	0	0
BOT.	0	-2	-5	-9	-11	-11

M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-1	-1	0	0	1	1
0.9a	-3	-1	0	1	1	2
0.8a	-4	-2	0	1	2	2
0.7a	-6	-3	0	2	3	3
0.6a	-8	-4	0	2	4	4
0.5a	-10	-5	0	3	5	5
0.4a	-12	-5	0	3	5	6
0.3a	-12	-5	0	3	5	6
0.2a	-11	-4	0	3	4	5
0.1a	-5	-2	0	1	2	2
BOT.	0	0	-1	-2	-2	-2

M_{xy}

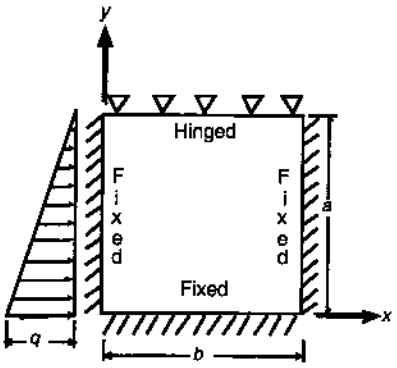
	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	0	0	0	0	0	0
0.8a	0	0	1	1	0	0
0.7a	0	1	1	1	0	0
0.6a	0	1	1	1	0	0
0.5a	0	0	1	1	0	0
0.4a	0	0	0	0	0	0
0.3a	0	0	0	0	0	0
0.2a	0	1	1	1	1	0
0.1a	0	2	2	2	1	0
BOT.	0	0	0	0	0	0

CASE 4

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.40	0.40	0.40	0.40	0.39	0.38	0.36	0.32	0.26	0.20
Side edge — maximum	0.26	0.26	0.26	0.27	0.26	0.26	0.25	0.24	0.22	0.17
Side edge — midpoint	0.26	0.26	0.26	0.26	0.26	0.26	0.25	0.23	0.19	0.13
Top edge — midpoint	0.10	0.11	0.11	0.11	0.11	0.11	0.09	0.07	0.05	0.03

Deflection Coefficients, C_d

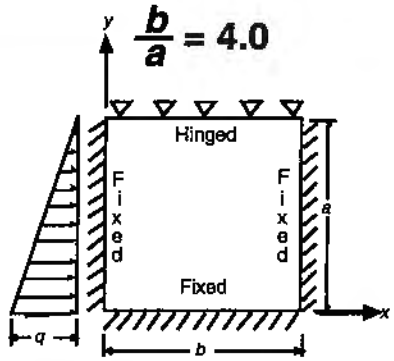
Along Midheight ***(y = a/2)***

x / b/a	END	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
4.0	0	1.20	2.00	2.30	2.30	2.30
3.0	0	0.80	1.70	2.10	2.30	2.30
2.5	0	0.60	1.40	1.90	2.20	2.20
2.0	0	0.50	1.10	1.70	1.90	2.00
1.75	0	0.40	1.00	1.50	1.70	1.80
1.5	0	0.30	0.80	1.20	1.50	1.60
1.25	0	0.20	0.50	0.90	1.10	1.20
1.0	0	0.10	0.30	0.50	0.70	0.70
0.75	0	0.00	0.10	0.20	0.30	0.30
0.5	0	0.00	0.00	0.10	0.10	0.10

Along Midspan ***(x = b/2)***

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	0.30	0.90	1.50	2.00	2.30	2.40	2.10	1.50	0.80	0
3.0	0	0.30	0.90	1.50	2.00	2.30	2.30	2.00	1.50	0.80	0
2.5	0	0.30	0.80	1.50	2.00	2.20	2.20	2.00	1.50	0.80	0
2.0	0	0.20	0.80	1.40	1.80	2.00	2.00	1.80	1.30	0.70	0
1.75	0	0.20	0.70	1.20	1.60	1.80	1.80	1.60	1.20	0.60	0
1.5	0	0.20	0.60	1.10	1.40	1.60	1.50	1.30	1.00	0.50	0
1.25	0	0.20	0.50	0.80	1.10	1.20	1.10	1.00	0.70	0.40	0
1.0	0	0.10	0.40	0.60	0.70	0.70	0.70	0.60	0.40	0.20	0
0.75	0	0.10	0.20	0.30	0.30	0.30	0.30	0.20	0.20	0.10	0
0.5	0	0.00	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	4	8	9	10	10
0.8a	-4	8	15	18	19	19
0.7a	-6	11	21	25	25	25
0.6a	-7	14	25	29	29	29
0.5a	-7	15	26	29	29	29
0.4a	-7	14	22	24	24	24
0.3a	-6	10	13	13	13	13
0.2a	-4	1	-3	-5	-5	-5
0.1a	-1	-15	-27	-31	-31	-31
BOT.	0	-41	-61	-66	-67	-67

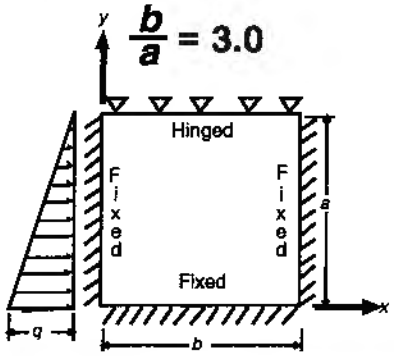
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	2	3	2	2	2
0.8a	-21	4	5	4	4	4
0.7a	-29	6	7	6	5	5
0.6a	-35	7	9	7	6	6
0.5a	-37	8	9	7	6	6
0.4a	-35	7	7	6	5	5
0.3a	-29	6	5	3	3	3
0.2a	-18	2	1	-1	-1	-1
0.1a	-6	-2	-5	-6	-6	-6
BOT.	0	-8	-12	-13	-13	-13

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	9	4	1	0	0
0.9a	0	9	4	1	0	0
0.8a	0	7	3	1	0	0
0.7a	0	5	2	0	0	0
0.6a	0	2	0	0	0	0
0.5a	0	1	1	0	0	0
0.4a	0	5	2	1	0	0
0.3a	0	7	3	1	0	0
0.2a	0	7	3	1	0	0
0.1a	0	5	2	0	0	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

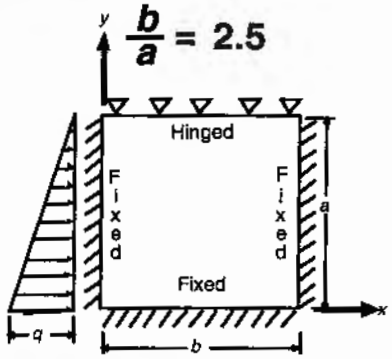
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	3	7	9	9	10
0.8a	-4	5	13	16	18	18
0.7a	-6	7	18	23	25	25
0.6a	-7	9	21	26	28	29
0.5a	-7	10	22	27	29	29
0.4a	-7	10	19	23	24	24
0.3a	-6	7	12	13	13	13
0.2a	-4	1	-1	-4	-5	-5
0.1a	-1	-11	-23	-28	-31	-31
BOT.	0	-31	-54	-63	-66	-66

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	1	3	3	2	2
0.8a	-21	2	6	5	4	4
0.7a	-29	3	8	7	6	6
0.6a	-35	3	9	8	7	7
0.5a	-37	4	9	8	7	7
0.4a	-35	4	8	7	6	5
0.3a	-29	4	6	4	3	3
0.2a	-18	2	2	0	-1	-1
0.1a	-6	-1	-4	-5	-6	-6
BOT.	0	-6	-11	-13	-13	-13

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	10	6	3	1	0
0.9a	0	9	6	3	1	0
0.8a	0	8	5	2	1	0
0.7a	0	5	3	1	0	0
0.6a	0	2	1	0	0	0
0.5a	0	1	1	1	0	0
0.4a	0	5	3	2	1	0
0.3a	0	7	5	2	1	0
0.2a	0	8	5	2	1	0
0.1a	0	6	3	1	0	0
BOT.	0	0	0	0	0	0



Moment = Coef. × $qa^2/1000$

M_x

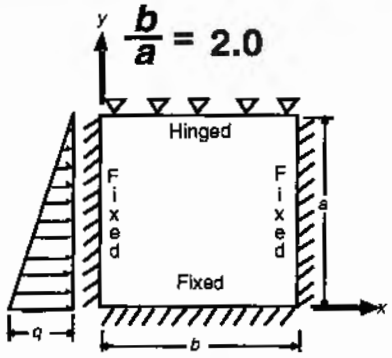
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	2	5	8	9	9
0.8a	-4	4	11	15	17	18
0.7a	-6	5	15	21	23	24
0.6a	-7	7	18	24	27	28
0.5a	-7	7	19	25	28	28
0.4a	-7	7	17	22	23	24
0.3a	-6	6	11	13	13	13
0.2a	-4	1	0	-2	-4	-4
0.1a	-1	-8	-19	-26	-29	-30
BOT.	0	-25	-49	-60	-64	-65

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	0	3	3	3	3
0.8a	-21	0	5	6	5	5
0.7a	-29	0	7	8	7	7
0.6a	-35	0	9	9	8	8
0.5a	-37	1	9	9	8	8
0.4a	-35	2	8	8	7	6
0.3a	-29	2	6	5	4	4
0.2a	-18	1	2	1	0	0
0.1a	-6	-1	-3	-5	-6	-6
BOT.	0	-5	-10	-12	-13	-13

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	10	8	4	2	0
0.9a	0	9	7	4	2	0
0.8a	0	8	6	3	1	0
0.7a	0	5	4	2	1	0
0.6a	0	2	1	0	0	0
0.5a	0	1	2	1	0	0
0.4a	0	4	4	2	1	0
0.3a	0	7	6	3	1	0
0.2a	0	8	6	3	1	0
0.1a	0	7	4	2	1	0
BOT.	0	0	0	0	0	0



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	1	4	6	8	8
0.8a	-4	2	8	12	15	16
0.7a	-6	3	11	17	21	22
0.6a	-7	4	14	21	24	25
0.5a	-7	5	15	22	25	26
0.4a	-7	5	14	19	22	22
0.3a	-6	4	10	12	13	13
0.2a	-4	1	1	-1	-2	-3
0.1a	-1	-6	-15	-22	-26	-27
BOT.	0	-19	-41	-54	-60	-62

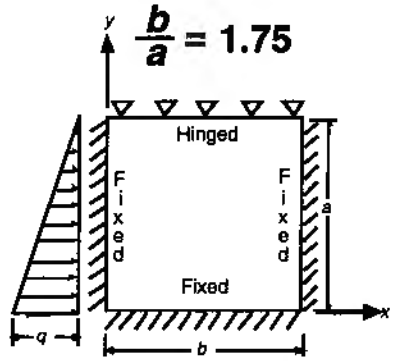
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	-1	2	3	3	3
0.8a	-21	-3	4	6	6	6
0.7a	-29	-3	6	8	8	8
0.6a	-34	-3	7	10	10	9
0.5a	-37	-3	8	10	10	9
0.4a	-35	-2	7	9	8	8
0.3a	-29	-1	6	6	5	5
0.2a	-18	0	3	2	1	1
0.1a	-6	-1	-2	-4	-5	-5
BOT.	0	-4	-8	-11	-12	-12

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	9	9	6	3	0
0.9a	0	9	8	6	3	0
0.8a	0	7	7	4	2	0
0.7a	0	5	5	3	1	0
0.6a	0	2	2	1	0	0
0.5a	0	1	1	1	1	0
0.4a	0	4	4	3	2	0
0.3a	0	7	7	4	2	0
0.2a	0	8	7	4	2	0
0.1a	0	7	5	3	1	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	1	3	5	7	7
0.8a	-4	1	6	10	13	14
0.7a	-6	2	9	15	18	19
0.6a	-7	2	11	18	22	23
0.5a	-7	3	12	19	23	24
0.4a	-7	3	12	17	20	21
0.3a	-6	3	9	12	13	13
0.2a	-4	1	1	0	-1	-1
0.1a	-1	-5	-13	-19	-24	-25
BOT.	0	-16	-36	-50	-57	-59

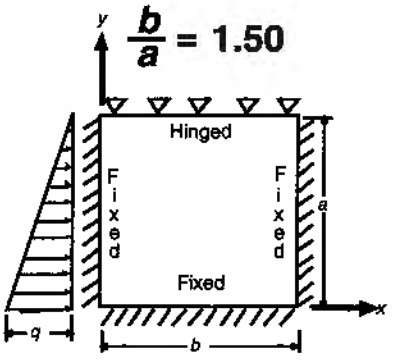
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	-2	2	3	4	4
0.8a	-21	-4	3	6	7	7
0.7a	-29	-5	5	8	9	9
0.6a	-34	-6	6	10	11	11
0.5a	-36	-5	7	10	11	11
0.4a	-35	-4	6	9	9	9
0.3a	-28	-3	5	7	6	6
0.2a	-18	-1	3	3	2	2
0.1a	-6	-1	-2	-3	-4	-4
BOT.	0	-3	-7	-10	-11	-12

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	8	9	6	3	0
0.9a	0	8	8	6	3	0
0.8a	0	7	7	5	2	0
0.7a	0	5	5	3	2	0
0.6a	0	2	2	1	0	0
0.5a	0	1	1	1	1	0
0.4a	0	4	4	3	2	0
0.3a	0	6	7	5	2	0
0.2a	0	8	8	5	2	0
0.1a	0	7	6	4	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

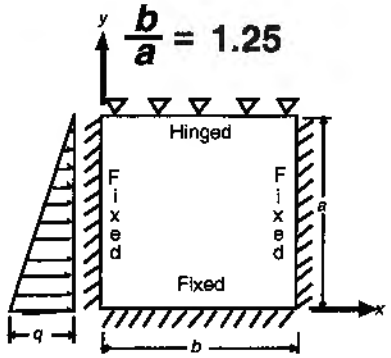
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	0	2	4	5	6
0.8a	-4	0	5	8	10	11
0.7a	-6	1	7	12	15	16
0.6a	-7	1	9	15	18	19
0.5a	-7	2	10	16	20	21
0.4a	-7	2	10	15	18	19
0.3a	-6	2	7	11	12	13
0.2a	-4	0	2	1	1	0
0.1a	-1	-4	-10	-16	-20	-21
BOT.	0	-13	-31	-44	-51	-53

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-10	-3	1	3	4	4
0.8a	-20	-5	2	6	7	7
0.7a	-28	-7	4	8	10	10
0.6a	-33	-8	4	10	11	12
0.5a	-36	-8	5	10	12	12
0.4a	-34	-6	5	9	10	11
0.3a	-28	-4	4	7	8	8
0.2a	-18	-2	2	3	3	3
0.1a	-6	-1	-1	-2	-3	-3
BOT.	0	-3	-6	-9	-10	-11

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	7	9	7	3	0
0.9a	0	7	8	6	3	0
0.8a	0	6	7	5	3	0
0.7a	0	5	5	4	2	0
0.6a	0	2	2	1	1	0
0.5a	0	0	1	1	1	0
0.4a	0	3	4	3	2	0
0.3a	0	6	7	5	3	0
0.2a	0	7	8	6	3	0
0.1a	0	6	6	4	2	0
BOT.	0	0	0	0	0	0



Moment = Coef. × $qa^2/1000$

M_x

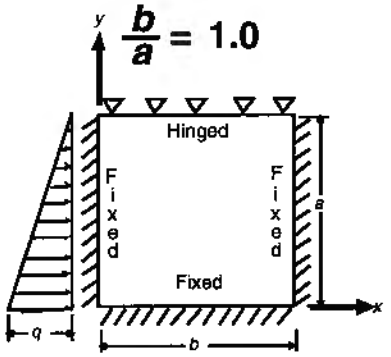
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	0	1	3	4	4
0.8a	-4	0	3	6	7	8
0.7a	-5	0	4	8	11	11
0.6a	-6	0	6	10	13	14
0.5a	-7	0	7	12	15	16
0.4a	-6	1	7	12	15	16
0.3a	-5	1	6	9	11	12
0.2a	-4	0	2	2	2	2
0.1a	-1	-3	-7	-11	-15	-16
BOT.	0	-9	-25	-36	-43	-45

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-9	-3	1	3	4	4
0.8a	-18	-6	1	5	7	8
0.7a	-25	-8	2	7	10	10
0.6a	-31	-9	3	9	12	12
0.5a	-33	-9	3	9	12	13
0.4a	-32	-8	4	9	11	12
0.3a	-27	-6	3	7	8	9
0.2a	-18	-3	2	4	4	4
0.1a	-6	-2	-1	-1	-2	-2
BOT.	0	-2	-5	-7	-9	-9

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	6	7	6	3	0
0.9a	0	6	7	6	3	0
0.8a	0	5	6	5	3	0
0.7a	0	4	5	4	2	0
0.6a	0	2	2	2	1	0
0.5a	0	0	0	1	0	0
0.4a	0	2	3	3	2	0
0.3a	0	5	6	5	3	0
0.2a	0	6	7	6	3	0
0.1a	0	6	6	4	2	0
BOT.	0	0	0	0	0	0



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	0	1	1	2	2
0.8a	-3	-1	1	3	4	4
0.7a	-4	-1	2	4	6	7
0.6a	-5	-1	3	6	8	9
0.5a	-6	-1	4	7	10	11
0.4a	-6	0	4	8	11	11
0.3a	-5	0	4	7	9	10
0.2a	-3	0	2	3	4	4
0.1a	-1	-2	-4	-7	-9	-9
BOT.	0	-6	-18	-27	-33	-35

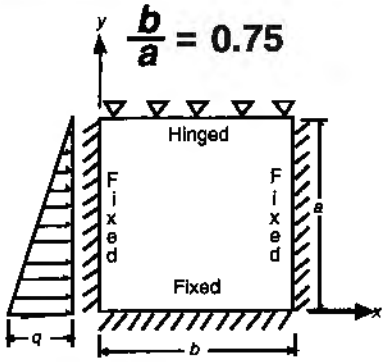
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-8	-3	0	2	3	3
0.8a	-15	-6	0	4	6	7
0.7a	-21	-8	1	6	9	9
0.6a	-26	-9	1	7	10	11
0.5a	-29	-10	1	8	11	12
0.4a	-28	-9	2	8	11	12
0.3a	-25	-7	2	7	9	9
0.2a	-17	-4	2	4	5	5
0.1a	-6	-2	0	0	0	0
BOT.	0	-1	-4	-5	-7	-7

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	4	5	4	3	0
0.9a	0	4	5	4	2	0
0.8a	0	4	5	4	2	0
0.7a	0	3	4	3	2	0
0.6a	0	2	2	2	1	0
0.5a	0	1	0	0	0	0
0.4a	0	1	2	2	1	0
0.3a	0	3	4	4	2	0
0.2a	0	5	6	5	3	0
0.1a	0	5	5	4	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-1	0	0	0	1	1
0.8a	-2	-1	0	1	1	2
0.7a	-3	-1	0	2	2	3
0.6a	-4	-1	1	2	3	4
0.5a	-4	-1	1	3	5	5
0.4a	-4	-1	2	4	6	6
0.3a	-4	-1	2	5	6	7
0.2a	-3	0	2	3	4	5
0.1a	-1	-1	-1	-2	-3	-3
BOT.	0	-4	-11	-17	-21	-23

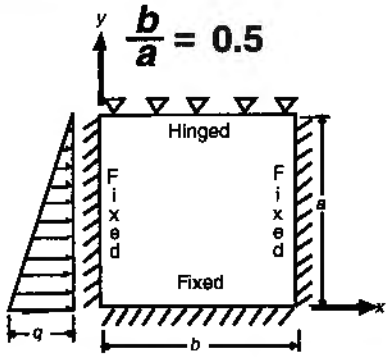
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-5	-2	0	1	2	2
0.8a	-9	-4	0	3	4	5
0.7a	-14	-6	0	4	6	7
0.6a	-18	-7	0	5	8	8
0.5a	-20	-8	0	6	9	10
0.4a	-22	-8	1	6	9	10
0.3a	-20	-7	1	6	8	9
0.2a	-15	-5	1	4	5	6
0.1a	-6	-2	0	1	1	1
BOT.	0	-1	-2	-3	-4	-5

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	2	3	2	1	0
0.9a	0	2	3	2	1	0
0.8a	0	2	3	2	1	0
0.7a	0	2	2	2	1	0
0.6a	0	1	2	1	1	0
0.5a	0	1	1	1	0	0
0.4a	0	0	0	1	0	0
0.3a	0	2	2	2	1	0
0.2a	0	3	4	3	2	0
0.1a	0	3	4	3	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	0	0	0	0	0
0.8a	-1	0	0	0	0	0
0.7a	-1	-1	0	0	1	1
0.6a	-2	-1	0	1	1	1
0.5a	-2	-1	0	1	1	1
0.4a	-2	-1	0	1	2	2
0.3a	-2	-1	1	2	3	3
0.2a	-2	0	1	2	3	3
0.1a	-1	0	0	0	0	0
BOT.	0	-2	-5	-9	-11	-11

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	-1	0	1	1	1
0.8a	-4	-2	0	1	2	2
0.7a	-6	-3	0	2	3	3
0.6a	-8	-4	0	2	4	4
0.5a	-10	-5	0	3	5	5
0.4a	-12	-5	0	3	5	6
0.3a	-12	-5	0	3	5	6
0.2a	-11	-4	0	3	4	5
0.1a	-5	-2	0	1	2	2
BOT.	0	0	-1	-2	-2	-2

M_{xy}

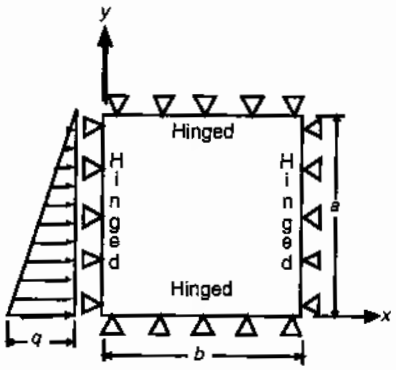
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	1	1	0	0
0.9a	0	1	1	1	0	0
0.8a	0	1	1	1	0	0
0.7a	0	1	1	1	0	0
0.6a	0	1	1	1	0	0
0.5a	0	1	1	1	0	0
0.4a	0	0	0	0	0	0
0.3a	0	0	0	0	0	0
0.2a	0	1	1	1	1	0
0.1a	0	2	2	2	1	0
BOT.	0	0	0	0	0	0

CASE 5

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.33	0.33	0.32	0.32	0.31	0.29	0.27	0.25	0.21	0.15
Side edge — maximum	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.19	0.18	0.14
Side edge — midpoint	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.17	0.15	0.12
Top edge — midpoint	0.17	0.16	0.16	0.15	0.14	0.13	0.11	0.09	0.06	0.03

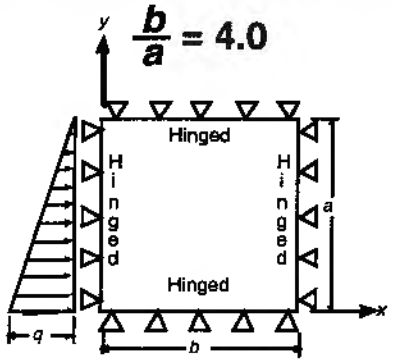
Deflection Coefficients, C_d

Along Midheight ***(y = a/2)***

x / b/a	END	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
4.0	0	3.50	5.30	6.10	6.30	6.40
3.0	0	2.80	4.60	5.50	6.00	6.10
2.5	0	2.30	4.00	5.10	5.60	5.70
2.0	0	1.90	3.30	4.30	4.90	5.10
1.75	0	1.60	2.90	3.80	4.40	4.50
1.5	0	1.30	2.40	3.20	3.70	3.90
1.25	0	1.00	1.90	2.50	2.90	3.00
1.0	0	0.70	1.20	1.70	1.90	2.00
0.75	0	0.30	0.60	0.90	1.00	1.00
0.5	0	0.10	0.20	0.30	0.30	0.30

Along Midspan ***(x = b/2)***

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	2.10	4.00	5.40	6.20	6.40	6.00	5.00	3.60	1.90	0
3.0	0	2.00	3.80	5.20	5.90	6.10	5.70	4.80	3.40	1.80	0
2.5	0	1.90	3.60	4.90	5.60	5.70	5.40	4.50	3.20	1.70	0
2.0	0	1.70	3.20	4.30	4.90	5.10	4.70	3.90	2.80	1.50	0
1.75	0	1.60	2.90	3.90	4.40	4.50	4.20	3.50	2.50	1.30	0
1.5	0	1.30	2.50	3.30	3.80	3.90	3.60	3.00	2.10	1.10	0
1.25	0	1.10	2.00	2.60	3.00	3.00	2.80	2.30	1.60	0.80	0
1.0	0	0.80	1.40	1.80	2.00	2.00	1.90	1.50	1.10	0.60	0
0.75	0	0.40	0.80	1.00	1.10	1.00	0.90	0.80	0.50	0.30	0
0.5	0	0.20	0.30	0.30	0.30	0.30	0.30	0.20	0.10	0.10	0



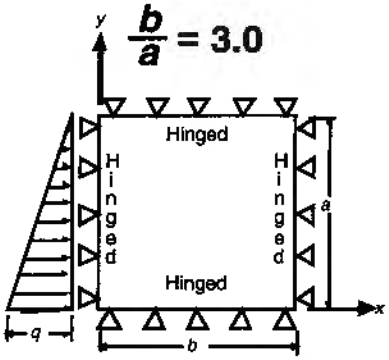
$\frac{b}{a} = 4.0$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	9	13	15	16	16
0.8a	0	17	26	30	31	32
0.7a	0	24	37	42	44	45
0.6a	0	31	46	52	55	55
0.5a	0	35	52	59	61	62
0.4a	0	37	54	60	63	63
0.3a	0	36	51	56	58	59
0.2a	0	30	42	46	47	48
0.1a	0	19	25	27	28	28
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	5	5	4	4	3
0.8a	0	9	9	8	7	7
0.7a	0	13	12	11	10	10
0.6a	0	16	15	13	12	12
0.5a	0	18	17	14	13	13
0.4a	0	18	17	15	14	13
0.3a	0	17	15	14	13	12
0.2a	0	13	12	11	10	10
0.1a	0	8	7	6	6	6
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	23	16	7	3	1	0
0.9a	22	15	7	3	1	0
0.8a	20	13	6	2	1	0
0.7a	16	10	4	2	1	0
0.6a	10	6	2	1	0	0
0.5a	3	1	0	0	0	0
0.4a	5	4	2	1	0	0
0.3a	13	9	4	2	1	0
0.2a	21	14	6	2	1	0
0.1a	27	17	7	3	1	0
BOT.	31	18	8	3	1	0



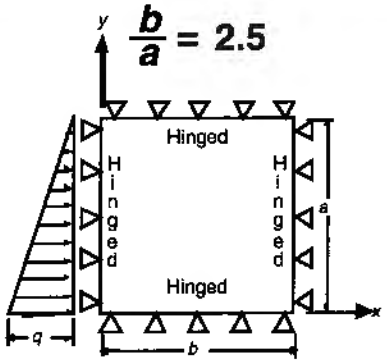
$\frac{b}{a} = 3.0$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	7	11	14	15	15
0.8a	0	13	22	27	29	30
0.7a	0	19	32	39	42	43
0.6a	0	24	40	48	52	53
0.5a	0	28	45	54	58	59
0.4a	0	30	47	56	60	61
0.3a	0	29	45	53	56	57
0.2a	0	25	37	43	45	46
0.1a	0	16	23	26	27	27
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	4	5	4	4	4
0.8a	0	8	9	9	8	8
0.7a	0	12	13	12	11	11
0.6a	0	15	16	15	13	13
0.5a	0	17	18	16	15	14
0.4a	0	17	18	16	15	15
0.3a	0	16	17	15	14	13
0.2a	0	13	13	12	11	11
0.1a	0	8	8	7	6	6
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	23	18	11	6	2	0
0.9a	22	18	10	5	2	0
0.8a	20	15	9	5	2	0
0.7a	16	12	7	3	1	0
0.6a	10	7	4	2	1	0
0.5a	3	2	0	0	0	0
0.4a	5	5	3	2	1	0
0.3a	13	11	6	3	1	0
0.2a	21	16	9	5	2	0
0.1a	27	20	11	5	2	0
BOT.	31	21	12	6	2	0



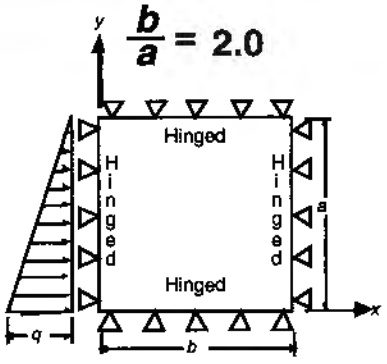
$\frac{b}{a} = 2.5$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	6	10	13	14	14
0.8a	0	11	20	25	27	28
0.7a	0	17	28	35	39	40
0.6a	0	21	35	44	48	50
0.5a	0	24	40	50	55	56
0.4a	0	26	42	52	56	58
0.3a	0	25	41	49	53	54
0.2a	0	22	34	40	43	44
0.1a	0	14	21	24	26	26
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	4	5	5	4	4
0.8a	0	8	10	9	9	8
0.7a	0	11	14	13	12	12
0.6a	0	14	17	16	15	14
0.5a	0	16	18	18	16	16
0.4a	0	16	19	18	17	16
0.3a	0	15	17	16	15	15
0.2a	0	13	14	13	12	12
0.1a	0	7	8	7	7	7
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	23	19	13	7	3	0
0.9a	22	19	12	7	3	0
0.8a	20	16	11	6	3	0
0.7a	16	13	8	5	2	0
0.6a	10	8	5	3	1	0
0.5a	3	2	1	0	0	0
0.4a	5	5	4	2	1	0
0.3a	13	11	8	4	2	0
0.2a	21	17	11	6	3	0
0.1a	27	21	13	7	3	0
BOT.	31	23	14	8	3	0



$\frac{b}{a} = 2.0$

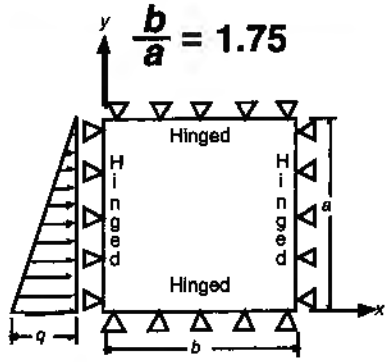
Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	5	8	11	12	13
0.8a	0	9	16	21	24	25
0.7a	0	13	23	30	34	35
0.6a	0	17	30	38	43	44
0.5a	0	20	34	43	48	50
0.4a	0	21	36	45	50	52
0.3a	0	21	35	43	48	49
0.2a	0	18	30	36	40	41
0.1a	0	12	19	22	24	25
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	4	5	5	5	5
0.8a	0	7	10	10	10	10
0.7a	0	10	14	14	14	14
0.6a	0	13	17	17	17	17
0.5a	0	14	19	19	19	18
0.4a	0	15	19	19	19	18
0.3a	0	14	17	17	17	17
0.2a	0	12	14	14	13	13
0.1a	0	7	8	8	8	8
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	23	20	15	9	4	0
0.9a	22	19	14	9	4	0
0.8a	19	17	12	8	4	0
0.7a	15	13	9	6	3	0
0.6a	10	8	6	3	2	0
0.5a	3	2	1	0	0	0
0.4a	4	4	4	3	1	0
0.3a	12	11	9	5	3	0
0.2a	20	18	13	8	4	0
0.1a	27	22	16	9	4	0
BOT.	30	24	17	10	5	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	4	7	10	11	11
0.8a	0	8	14	19	21	22
0.7a	0	11	21	27	31	32
0.6a	0	15	26	34	38	40
0.5a	0	17	30	39	44	45
0.4a	0	18	32	41	46	48
0.3a	0	18	31	40	44	45
0.2a	0	16	27	33	37	38
0.1a	0	11	17	21	22	23
BOT.	0	0	0	0	0	0

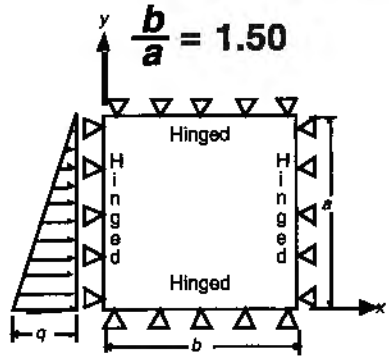
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	3	5	5	5	5
0.8a	0	7	10	10	11	11
0.7a	0	10	14	15	15	15
0.6a	0	12	17	18	18	18
0.5a	0	14	19	20	20	20
0.4a	0	14	19	20	20	20
0.3a	0	13	17	18	18	18
0.2a	0	11	14	14	14	14
0.1a	0	7	8	8	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	22	20	15	10	5	0
0.9a	21	19	15	10	5	0
0.8a	19	17	13	8	4	0
0.7a	15	13	10	6	3	0
0.6a	10	8	6	4	2	0
0.5a	3	2	1	1	0	0
0.4a	4	4	4	3	1	0
0.3a	12	11	9	6	3	0
0.2a	20	18	13	8	4	0
0.1a	26	23	16	10	5	0
BOT.	30	25	17	11	5	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

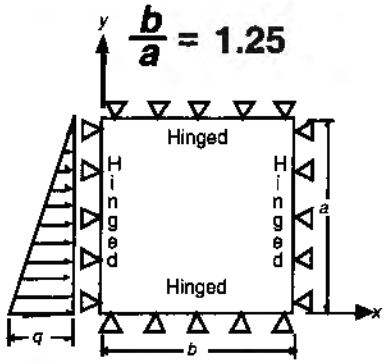
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	3	6	8	9	10
0.8a	0	6	12	16	18	19
0.7a	0	9	17	23	26	27
0.6a	0	12	22	29	33	34
0.5a	0	14	25	33	38	39
0.4a	0	15	27	35	40	42
0.3a	0	16	27	35	39	40
0.2a	0	14	24	30	33	34
0.1a	0	10	15	19	20	21
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	3	5	6	6	6
0.8a	0	6	9	11	11	11
0.7a	0	9	13	15	16	16
0.6a	0	11	16	19	19	19
0.5a	0	13	18	20	21	21
0.4a	0	13	19	21	21	21
0.3a	0	13	17	19	19	19
0.2a	0	11	14	15	15	15
0.1a	0	6	8	9	9	9
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	21	19	15	10	5	0
0.9a	20	18	14	10	5	0
0.8a	18	16	13	9	4	0
0.7a	14	13	10	7	3	0
0.6a	9	8	6	4	2	0
0.5a	3	3	2	1	0	0
0.4a	4	4	4	3	1	0
0.3a	11	11	9	6	3	0
0.2a	19	17	13	9	4	0
0.1a	25	22	17	11	5	0
BOT.	28	24	18	12	6	0



$\frac{b}{a} = 1.25$

Moment = Coef. × $qa^2/1000$

M_x

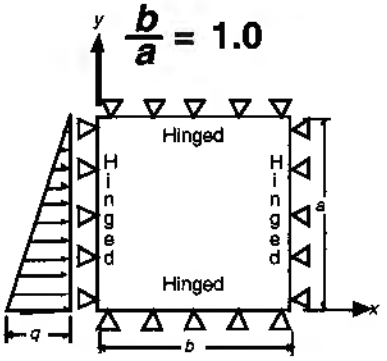
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	2	5	6	7	7
0.8a	0	5	9	12	14	14
0.7a	0	7	13	17	20	21
0.6a	0	9	17	22	26	27
0.5a	0	11	20	26	30	31
0.4a	0	12	22	29	33	34
0.3a	0	12	22	28	32	34
0.2a	0	11	20	25	28	29
0.1a	0	8	13	16	18	18
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	3	5	6	6	6
0.8a	0	6	9	11	12	12
0.7a	0	8	13	15	16	17
0.6a	0	10	16	19	20	20
0.5a	0	11	18	21	22	22
0.4a	0	12	18	21	22	22
0.3a	0	12	17	19	20	20
0.2a	0	10	14	15	16	16
0.1a	0	6	8	9	9	9
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	18	17	14	10	5	0
0.9a	18	17	13	9	5	0
0.8a	16	15	12	8	4	0
0.7a	13	12	9	6	3	0
0.6a	8	8	6	4	2	0
0.5a	3	3	2	1	0	0
0.4a	3	3	3	2	1	0
0.3a	10	10	8	6	3	0
0.2a	17	16	13	9	4	0
0.1a	23	21	16	11	5	0
BOT.	26	23	17	12	6	0



$\frac{b}{a} = 1.0$

Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	2	3	4	5	5
0.8a	0	3	6	8	9	10
0.7a	0	5	9	12	14	14
0.6a	0	6	11	15	18	18
0.5a	0	8	14	18	21	22
0.4a	0	9	15	21	24	25
0.3a	0	9	16	21	24	25
0.2a	0	8	15	19	22	23
0.1a	0	6	10	13	14	15
BOT.	0	0	0	0	0	0

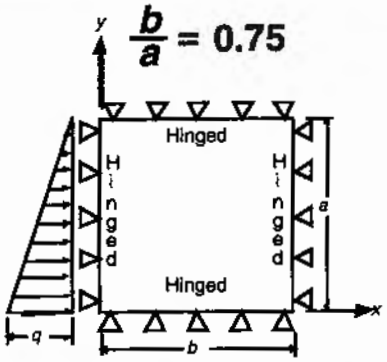
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	2	4	5	6	6
0.8a	0	5	8	10	11	11
0.7a	0	7	11	14	16	16
0.6a	0	9	14	18	19	20
0.5a	0	10	16	20	22	22
0.4a	0	10	17	20	22	22
0.3a	0	10	16	19	20	20
0.2a	0	9	13	15	16	16
0.1a	0	5	8	9	9	9
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	15	14	11	8	4	0
0.9a	14	13	11	8	4	0
0.8a	13	12	10	7	4	0
0.7a	11	10	8	6	3	0
0.6a	7	7	5	4	2	0
0.5a	3	3	2	1	1	0
0.4a	2	2	2	2	1	0
0.3a	8	8	6	5	2	0
0.2a	14	13	11	8	4	0
0.1a	19	18	14	10	5	0
BOT.	22	20	16	11	5	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	1	1	2	2	2
0.8a	0	2	3	4	5	5
0.7a	0	2	5	6	7	7
0.6a	0	3	6	8	9	10
0.5a	0	4	8	10	12	12
0.4a	0	5	9	12	14	15
0.3a	0	6	10	13	15	16
0.2a	0	5	10	13	15	15
0.1a	0	4	7	9	11	11
BOT.	0	0	0	0	0	0

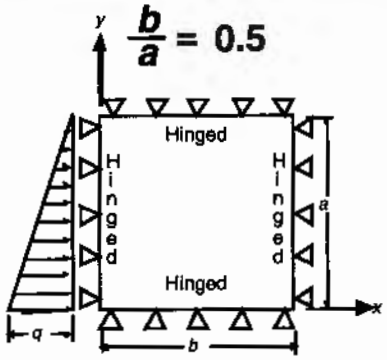
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	2	3	4	5	5
0.8a	0	4	6	8	9	10
0.7a	0	5	9	12	13	14
0.6a	0	7	11	15	16	17
0.5a	0	8	13	17	19	19
0.4a	0	8	14	17	19	20
0.3a	0	8	13	16	18	19
0.2a	0	7	11	13	15	15
0.1a	0	4	7	8	8	9
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	9	9	7	5	3	0
0.9a	9	9	7	5	3	0
0.8a	9	8	7	5	2	0
0.7a	7	7	6	4	2	0
0.6a	5	5	4	3	1	0
0.5a	3	2	2	1	1	0
0.4a	1	1	1	1	0	0
0.3a	5	5	4	3	2	0
0.2a	9	9	7	5	3	0
0.1a	14	13	11	7	4	0
BOT.	17	15	12	8	4	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	0	0	1	1	1
0.8a	0	1	1	1	2	2
0.7a	0	1	2	2	2	2
0.6a	0	1	2	3	3	3
0.5a	0	2	3	4	4	5
0.4a	0	2	4	5	6	6
0.3a	0	2	4	6	7	7
0.2a	0	3	5	6	7	8
0.1a	0	2	4	5	6	6
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	1	2	2	3	3
0.8a	0	2	4	5	5	6
0.7a	0	3	5	7	8	8
0.6a	0	4	7	9	10	11
0.5a	0	5	8	11	12	12
0.4a	0	5	9	12	13	14
0.3a	0	5	9	11	13	13
0.2a	0	5	8	10	11	11
0.1a	0	3	5	6	7	7
BOT.	0	0	0	0	0	0

M_{xy}

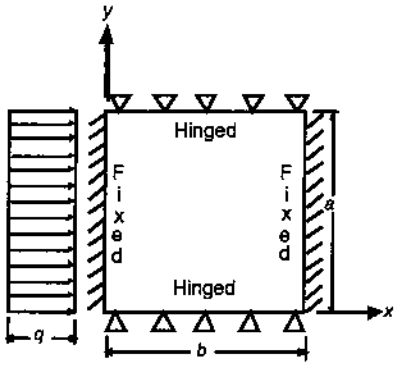
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	4	4	3	2	1	0
0.9a	4	4	3	2	1	0
0.8a	4	3	3	2	1	0
0.7a	3	3	3	2	1	0
0.6a	3	3	2	2	1	0
0.5a	2	2	1	1	1	0
0.4a	1	0	0	0	0	0
0.3a	1	1	1	1	0	0
0.2a	4	4	3	2	1	0
0.1a	7	7	6	4	2	0
BOT.	9	9	7	5	2	0

CASE 6

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.50	0.48	0.47	0.43	0.40	0.36	0.31	0.24	0.18	0.12
Side edge — maximum	0.74	0.74	0.74	0.72	0.70	0.67	0.60	0.52	0.40	0.26
Side edge — midpoint	0.74	0.74	0.74	0.72	0.70	0.67	0.60	0.52	0.40	0.26
Top edge — midpoint	0.50	0.48	0.47	0.43	0.40	0.36	0.31	0.24	0.18	0.12

Deflection Coefficients, C_d

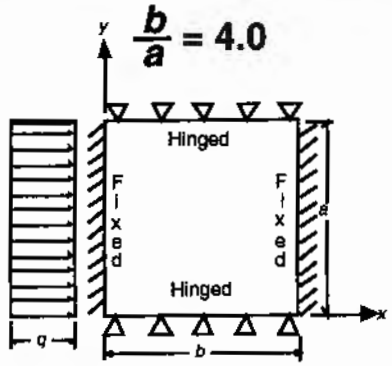
Along Midheight ***(y = a/2)***

x / b/a	END	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
4.0	0	4.60	9.30	11.60	12.40	12.70
3.0	0	3.10	7.20	9.90	11.30	11.70
2.5	0	2.40	5.90	8.50	10.00	10.50
2.0	0	1.60	4.30	6.60	8.00	8.40
1.75	0	1.20	3.40	5.30	6.60	7.00
1.5	0	0.90	2.50	4.00	5.00	5.30
1.25	0	0.50	1.60	2.60	3.30	3.50
1.0	0	0.30	0.80	1.40	1.80	1.90
0.75	0	0.10	0.30	0.50	0.70	0.70
0.5	0	0.00	0.10	0.10	0.20	0.20

Along Midspan ***(x = b/2)***

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	4.00	7.50	10.30	12.10	12.70	12.10	10.30	7.50	4.00	0
3.0	0	3.70	6.90	9.50	11.10	11.70	11.10	9.50	6.90	3.70	0
2.5	0	3.30	6.30	8.50	10.00	10.50	10.00	8.50	6.30	3.30	0
2.0	0	2.70	5.00	6.90	8.00	8.40	8.00	6.90	5.00	2.70	0
1.75	0	2.20	4.20	5.70	6.70	7.00	6.70	5.70	4.20	2.20	0
1.5	0	1.70	3.20	4.40	5.10	5.30	5.10	4.40	3.20	1.70	0
1.25	0	1.20	2.20	2.90	3.40	3.50	3.40	2.90	2.20	1.20	0
1.0	0	0.70	1.20	1.60	1.80	1.90	1.80	1.60	1.20	0.70	0
0.75	0	0.30	0.50	0.60	0.70	0.70	0.70	0.60	0.50	0.30	0
0.5	0	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.10	0.10	0

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-9	20	35	41	43	44
0.8a	-16	32	60	73	77	78
0.7a	-21	39	78	95	101	103
0.6a	-24	43	88	108	115	117
0.5a	-25	44	91	112	120	122
0.4a	-24	43	88	108	115	117
0.3a	-21	39	78	95	101	103
0.2a	-16	32	60	73	77	78
0.1a	-9	20	35	41	43	44
BOT.	0	0	0	0	0	0

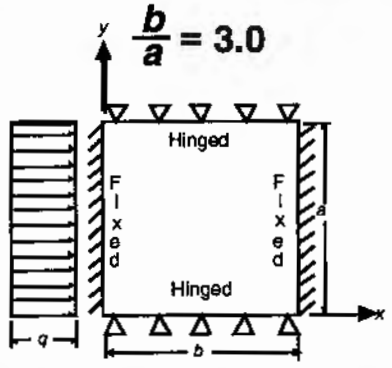
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-45	7	12	11	10	10
0.8a	-80	12	21	19	18	17
0.7a	-105	15	28	25	23	22
0.6a	-120	17	32	29	27	26
0.5a	-125	18	34	31	28	27
0.4a	-120	17	32	29	27	26
0.3a	-105	15	28	25	23	22
0.2a	-80	12	21	19	18	17
0.1a	-45	7	12	11	10	10
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	37	21	9	3	0
0.9a	0	36	20	9	3	0
0.8a	0	30	17	7	2	0
0.7a	0	22	13	5	2	0
0.6a	0	12	7	3	1	0
0.5a	0	0	0	0	0	0
0.4a	0	12	7	3	1	0
0.3a	0	22	13	5	2	0
0.2a	0	30	17	7	2	0
0.1a	0	36	20	9	3	0
BOT.	0	37	21	9	3	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

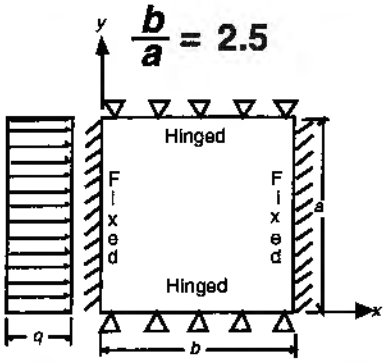
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-9	14	28	36	40	41
0.8a	-16	21	48	64	71	73
0.7a	-21	25	62	83	93	96
0.6a	-24	27	69	94	106	109
0.5a	-25	28	72	97	110	114
0.4a	-24	27	69	94	106	109
0.3a	-21	25	62	83	93	96
0.2a	-16	21	48	64	71	73
0.1a	-9	14	28	36	40	41
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-45	2	11	12	11	11
0.8a	-80	3	20	21	20	19
0.7a	-105	3	26	28	27	26
0.6a	-120	3	30	32	31	30
0.5a	-125	3	31	34	32	31
0.4a	-120	3	30	32	31	30
0.3a	-105	3	26	28	27	26
0.2a	-80	3	20	21	20	19
0.1a	-45	2	11	12	11	11
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	38	29	16	7	0
0.9a	0	36	28	16	7	0
0.8a	0	30	24	13	6	0
0.7a	0	22	17	10	4	0
0.6a	0	12	9	5	2	0
0.5a	0	0	0	0	0	0
0.4a	0	12	9	5	2	0
0.3a	0	22	17	10	4	0
0.2a	0	30	24	13	6	0
0.1a	0	36	28	16	7	0
BOT.	0	38	29	16	7	0



$\frac{b}{a} = 2.5$

Moment = Coef. × $qa^2/1000$

M_x

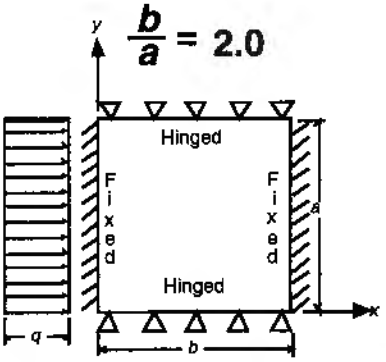
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-9	10	24	32	37	38
0.8a	-16	15	40	56	65	67
0.7a	-21	18	51	72	84	87
0.6a	-24	18	56	82	95	99
0.5a	-25	19	58	85	99	103
0.4a	-24	18	56	82	95	99
0.3a	-21	18	51	72	84	87
0.2a	-16	15	40	56	65	67
0.1a	-9	10	24	32	37	38
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-44	-1	10	12	12	12
0.8a	-79	-3	18	22	22	22
0.7a	-104	-5	23	29	29	29
0.6a	-118	-7	26	34	34	33
0.5a	-123	-8	27	35	35	35
0.4a	-118	-7	26	34	34	33
0.3a	-104	-5	23	29	29	29
0.2a	-79	-3	18	22	22	22
0.1a	-44	-1	10	12	12	12
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	37	33	21	10	0
0.9a	0	35	31	20	9	0
0.8a	0	29	26	17	8	0
0.7a	0	21	19	12	6	0
0.6a	0	11	10	7	3	0
0.5a	0	0	0	0	0	0
0.4a	0	11	10	7	3	0
0.3a	0	21	19	12	6	0
0.2a	0	29	26	17	8	0
0.1a	0	35	31	20	9	0
BOT.	0	37	33	21	10	0



$\frac{b}{a} = 2.0$

Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-9	7	19	27	31	32
0.8a	-15	9	30	45	53	56
0.7a	-20	10	37	57	69	72
0.6a	-23	9	41	64	77	82
0.5a	-24	9	42	66	80	85
0.4a	-23	9	41	64	77	82
0.3a	-20	10	37	57	69	72
0.2a	-15	9	30	45	53	56
0.1a	-9	7	19	27	31	32
BOT.	0	0	0	0	0	0

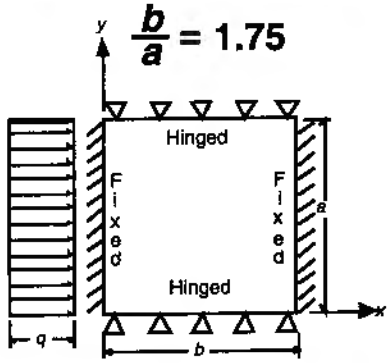
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-43	-5	8	12	13	13
0.8a	-77	-10	14	22	24	24
0.7a	-100	-15	18	29	32	33
0.6a	-114	-19	20	33	37	38
0.5a	-119	-20	21	35	39	39
0.4a	-114	-19	20	33	37	38
0.3a	-100	-15	18	29	32	33
0.2a	-77	-10	14	22	24	24
0.1a	-43	-5	8	12	13	13
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	33	33	24	12	0
0.9a	0	31	32	23	11	0
0.8a	0	26	27	19	10	0
0.7a	0	18	19	14	7	0
0.6a	0	9	10	8	4	0
0.5a	0	0	0	0	0	0
0.4a	0	9	10	8	4	0
0.3a	0	18	19	14	7	0
0.2a	0	26	27	19	10	0
0.1a	0	31	32	23	11	0
BOT.	0	33	33	24	12	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-8	5	16	23	27	28
0.8a	-15	6	25	38	46	48
0.7a	-19	6	30	47	58	61
0.6a	-22	5	32	52	65	69
0.5a	-23	5	33	54	67	71
0.4a	-22	5	32	52	65	69
0.3a	-19	6	30	47	58	61
0.2a	-15	6	25	38	46	48
0.1a	-8	5	16	23	27	28
BOT.	0	0	0	0	0	0

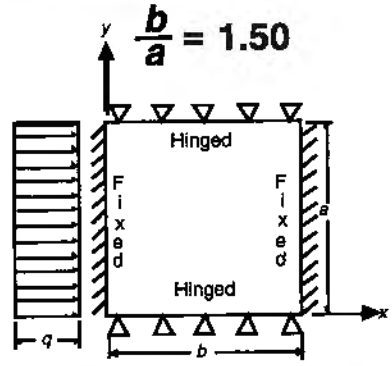
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-42	-6	6	12	14	14
0.8a	-73	-13	11	21	25	25
0.7a	-96	-20	14	28	33	34
0.6a	-109	-24	15	32	38	39
0.5a	-114	-25	16	33	39	41
0.4a	-109	-24	15	32	38	39
0.3a	-96	-20	14	28	33	34
0.2a	-73	-13	11	21	25	25
0.1a	-42	-6	6	12	14	14
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	30	32	24	12	0
0.9a	0	28	30	23	12	0
0.8a	0	23	26	19	10	0
0.7a	0	16	18	14	7	0
0.6a	0	8	10	7	4	0
0.5a	0	0	0	0	0	0
0.4a	0	8	10	7	4	0
0.3a	0	16	18	14	7	0
0.2a	0	23	26	19	10	0
0.1a	0	28	30	23	12	0
BOT.	0	30	32	24	12	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-8	3	12	19	22	23
0.8a	-14	3	19	30	37	39
0.7a	-18	2	22	36	46	49
0.6a	-20	1	23	40	50	54
0.5a	-21	1	23	41	52	55
0.4a	-20	1	23	40	50	54
0.3a	-18	2	22	36	46	49
0.2a	-14	3	19	30	37	39
0.1a	-8	3	12	19	22	23
BOT.	0	0	0	0	0	0

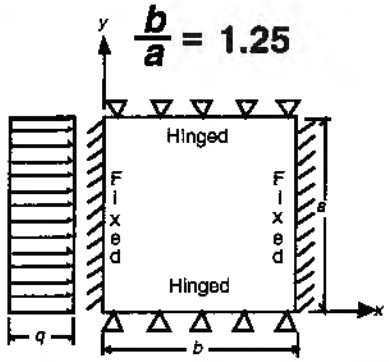
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-39	-8	5	11	13	14
0.8a	-68	-16	8	19	24	25
0.7a	-89	-23	10	25	32	34
0.6a	-101	-28	11	29	37	39
0.5a	-105	-29	11	30	39	41
0.4a	-101	-28	11	29	37	39
0.3a	-89	-23	10	25	32	34
0.2a	-68	-16	8	19	24	25
0.1a	-39	-8	5	11	13	14
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	26	29	22	12	0
0.9a	0	24	27	21	11	0
0.8a	0	19	23	18	10	0
0.7a	0	13	16	13	7	0
0.6a	0	7	8	7	4	0
0.5a	0	0	0	0	0	0
0.4a	0	7	8	7	4	0
0.3a	0	13	16	13	7	0
0.2a	0	19	23	18	10	0
0.1a	0	24	27	21	11	0
BOT.	0	26	29	22	12	0

$\frac{b}{a} = 1.25$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	2	9	14	17	18
0.8a	-12	1	13	21	27	29
0.7a	-15	-1	14	25	32	34
0.6a	-17	-2	14	27	34	37
0.5a	-18	-2	14	27	35	38
0.4a	-17	-2	14	27	34	37
0.3a	-15	-1	14	25	32	34
0.2a	-12	1	13	21	27	29
0.1a	-7	2	9	14	17	18
BOT.	0	0	0	0	0	0

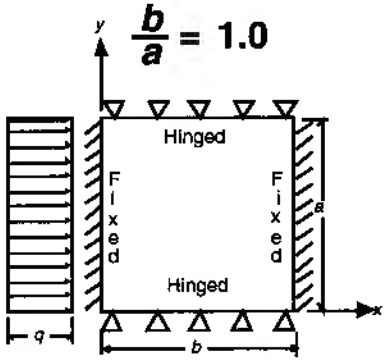
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-34	-8	3	9	12	13
0.8a	-60	-17	5	17	22	24
0.7a	-77	-24	6	22	30	32
0.6a	-87	-29	6	25	34	37
0.5a	-90	-30	6	26	35	38
0.4a	-87	-29	6	25	34	37
0.3a	-77	-24	6	22	30	32
0.2a	-60	-17	5	17	22	24
0.1a	-34	-8	3	9	12	13
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	20	23	19	10	0
0.9a	0	19	22	18	10	0
0.8a	0	15	18	15	8	0
0.7a	0	10	13	10	6	0
0.6a	0	5	6	5	3	0
0.5a	0	0	0	0	0	0
0.4a	0	5	6	5	3	0
0.3a	0	10	13	10	6	0
0.2a	0	15	18	15	8	0
0.1a	0	19	22	18	10	0
BOT.	0	20	23	19	10	0

$\frac{b}{a} = 1.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	1	6	10	12	13
0.8a	-10	-1	7	14	17	19
0.7a	-12	-2	7	15	19	21
0.6a	-14	-3	7	15	20	21
0.5a	-14	-3	6	15	20	22
0.4a	-14	-3	7	15	20	21
0.3a	-12	-2	7	15	19	21
0.2a	-10	-1	7	14	17	19
0.1a	-6	1	6	10	12	13
BOT.	0	0	0	0	0	0

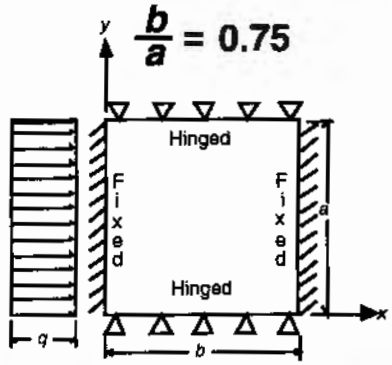
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-28	-8	2	8	10	11
0.8a	-48	-16	3	13	19	20
0.7a	-60	-22	2	17	24	27
0.6a	-68	-25	2	19	28	30
0.5a	-70	-27	2	19	29	32
0.4a	-68	-25	2	19	28	30
0.3a	-60	-22	2	17	24	27
0.2a	-48	-16	3	13	19	20
0.1a	-28	-8	2	8	10	11
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	14	16	13	7	0
0.9a	0	12	15	13	7	0
0.8a	0	9	12	10	6	0
0.7a	0	6	8	7	4	0
0.6a	0	3	4	4	2	0
0.5a	0	0	0	0	0	0
0.4a	0	3	4	4	2	0
0.3a	0	6	8	7	4	0
0.2a	0	9	12	10	6	0
0.1a	0	12	15	13	7	0
BOT.	0	14	16	13	7	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-4	0	4	6	7	8
0.8a	-7	-1	3	7	9	10
0.7a	-8	-2	3	7	9	10
0.6a	-9	-3	2	6	8	9
0.5a	-9	-3	2	6	8	9
0.4a	-9	-3	2	6	8	9
0.3a	-8	-2	3	7	9	10
0.2a	-7	-1	3	7	9	10
0.1a	-4	0	4	6	7	8
BOT.	0	0	0	0	0	0

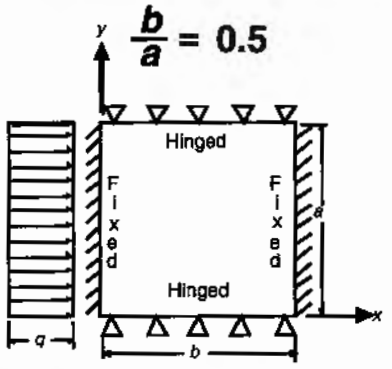
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-20	-6	1	5	8	8
0.8a	-33	-12	1	9	13	15
0.7a	-40	-16	0	11	17	19
0.6a	-44	-18	0	12	19	21
0.5a	-45	-19	0	12	19	22
0.4a	-44	-18	0	12	19	21
0.3a	-40	-16	0	11	17	19
0.2a	-33	-12	1	9	13	15
0.1a	-20	-6	1	5	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	8	10	8	4	0
0.9a	0	7	8	7	4	0
0.8a	0	4	6	5	3	0
0.7a	0	3	4	3	2	0
0.6a	0	1	2	2	1	0
0.5a	0	0	0	0	0	0
0.4a	0	1	2	2	1	0
0.3a	0	3	4	3	2	0
0.2a	0	4	6	5	3	0
0.1a	0	7	8	7	4	0
BOT.	0	8	10	8	4	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	0	2	3	4	4
0.8a	-4	-1	1	3	4	4
0.7a	-4	-2	0	2	3	3
0.6a	-4	-2	0	2	2	3
0.5a	-4	-2	0	1	2	3
0.4a	-4	-2	0	2	2	3
0.3a	-4	-2	0	2	3	3
0.2a	-4	-1	1	3	4	4
0.1a	-2	0	2	3	4	4
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-12	-4	1	3	5	5
0.8a	-18	-7	0	5	7	8
0.7a	-20	-9	0	5	9	10
0.6a	-21	-9	-1	5	9	10
0.5a	-21	-10	-1	6	9	10
0.4a	-21	-9	-1	5	9	10
0.3a	-20	-9	0	5	9	10
0.2a	-18	-7	0	5	7	8
0.1a	-12	-4	1	3	5	5
BOT.	0	0	0	0	0	0

M_{xy}

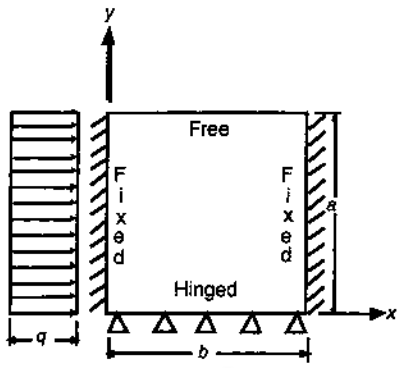
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	4	4	3	2	0
0.9a	0	2	3	3	2	0
0.8a	0	1	2	2	1	0
0.7a	0	0	1	1	0	0
0.6a	0	0	0	0	0	0
0.5a	0	0	0	0	0	0
0.4a	0	0	0	0	0	0
0.3a	0	0	1	1	0	0
0.2a	0	1	2	2	1	0
0.1a	0	2	3	3	2	0
BOT.	0	4	4	3	2	0

CASE 7

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.68	0.61	0.52	0.45	0.40	0.35	0.30	0.24	0.18	0.12
Side edge — maximum	3.74	2.61	2.10	1.45	1.30	1.00	0.78	0.58	0.40	0.26
Side edge — midpoint	1.17	1.02	0.94	0.83	0.76	0.69	0.60	0.50	0.38	0.25

Deflection Coefficients, C_d

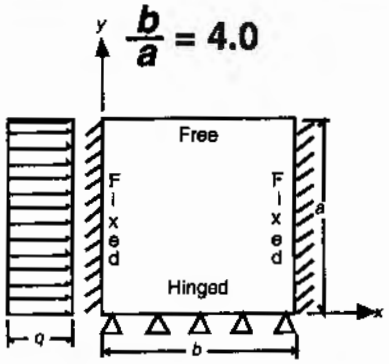
Along Midheight *(y = a/2)*

x / b/a	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
4.0	0	29.90	84.90	134.90	167.90	179.30
3.0	0	12.40	36.50	59.60	75.40	80.90
2.5	0	7.00	20.80	34.50	43.90	47.20
2.0	0	3.40	10.20	17.10	21.90	23.60
1.75	0	2.20	6.60	11.00	14.20	15.30
1.5	0	1.30	3.90	6.60	8.50	9.20
1.25	0	0.70	2.10	3.50	4.60	4.90
1.0	0	0.30	0.90	1.60	2.10	2.30
0.75	0	0.10	0.30	0.60	0.70	0.80
0.5	0	0.00	0.10	0.10	0.10	0.20

Along Midspan *(x = b/2)*

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	36.90	73.50	109.50	144.80	179.30	213.00	246.10	278.70	311.00	343.40
3.0	0	17.10	33.80	50.20	65.80	80.90	95.40	109.30	122.80	136.30	149.80
2.5	0	10.20	20.20	29.70	38.70	47.20	55.20	62.80	70.10	77.20	84.50
2.0	0	5.30	10.40	15.20	19.60	23.60	27.20	30.50	33.60	36.70	39.80
1.75	0	3.60	7.00	10.10	12.90	15.30	17.50	19.40	21.20	22.90	24.70
1.5	0	2.30	4.40	6.20	7.80	9.20	10.30	11.30	12.20	13.00	13.90
1.25	0	1.30	2.50	3.50	4.30	4.90	5.40	5.80	6.20	6.50	6.90
1.0	0	0.70	1.20	1.70	2.00	2.30	2.40	2.50	2.60	2.70	2.80
0.75	0	0.30	0.50	0.60	0.70	0.80	0.80	0.80	0.80	0.80	0.90
0.5	0	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-177	0	0	0	0	0
0.9a	-199	-26	11	28	36	38
0.8a	-169	-39	21	50	64	67
0.7a	-144	-40	29	66	83	88
0.6a	-123	-33	37	77	96	101
0.5a	-104	-22	42	81	101	106
0.4a	-84	-12	45	80	97	103
0.3a	-65	-2	43	72	86	90
0.2a	-45	4	36	56	67	70
0.1a	-23	6	22	33	38	40
BOT.	0	0	0	0	0	0

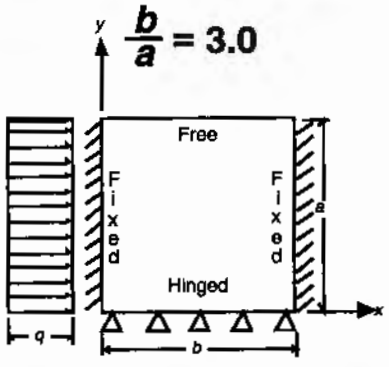
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-885	-240	69	199	252	266
0.9a	-995	-225	64	186	235	248
0.8a	-845	-206	60	172	217	229
0.7a	-722	-186	56	157	197	207
0.6a	-616	-163	52	141	175	184
0.5a	-518	-137	46	122	151	159
0.4a	-422	-110	40	102	125	131
0.3a	-324	-82	32	79	97	102
0.2a	-223	-53	23	55	67	70
0.1a	-116	-26	12	28	34	36
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	189	202	156	84	0
0.9a	0	178	197	155	83	0
0.8a	0	176	197	155	84	0
0.7a	0	179	200	157	85	0
0.6a	0	183	204	160	86	0
0.5a	0	187	210	164	88	0
0.4a	0	192	216	167	90	0
0.3a	0	196	221	171	91	0
0.2a	0	200	226	174	92	0
0.1a	0	203	228	175	93	0
BOT.	0	204	229	176	93	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

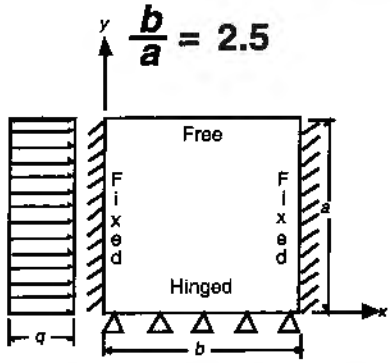
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-109	0	0	0	0	0
0.9a	-132	-24	6	21	28	31
0.8a	-114	-34	12	37	50	54
0.7a	-99	-33	18	49	66	71
0.6a	-86	-26	25	58	77	82
0.5a	-74	-17	30	63	81	87
0.4a	-61	-9	34	63	80	85
0.3a	-48	-1	34	58	71	76
0.2a	-33	4	30	47	56	59
0.1a	-18	5	19	28	33	34
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-544	-209	28	149	206	223
0.9a	-660	-195	26	139	193	208
0.8a	-569	-179	25	130	179	193
0.7a	-496	-162	24	119	163	176
0.6a	-430	-142	24	107	146	157
0.5a	-368	-119	22	94	127	137
0.4a	-305	-95	20	79	106	114
0.3a	-239	-70	18	62	83	88
0.2a	-167	-46	13	43	57	61
0.1a	-88	-22	8	23	30	32
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	101	116	92	51	0
0.9a	0	92	110	90	50	0
0.8a	0	91	109	89	50	0
0.7a	0	94	112	92	51	0
0.6a	0	97	116	95	52	0
0.5a	0	101	122	99	54	0
0.4a	0	105	127	103	57	0
0.3a	0	110	133	107	59	0
0.2a	0	115	137	110	60	0
0.1a	0	118	140	112	61	0
BOT.	0	120	141	113	61	0



Moment = Coef. × $qa^2/1000$

M_x

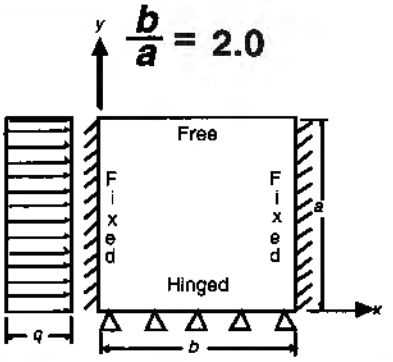
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-93	0	0	0	0	0
0.9a	-99	-22	3	16	23	25
0.8a	-87	-29	7	29	41	44
0.7a	-77	-27	13	39	54	59
0.6a	-68	-21	19	47	63	68
0.5a	-59	-14	24	51	67	72
0.4a	-49	-8	28	52	67	72
0.3a	-39	-2	28	49	61	65
0.2a	-28	3	25	40	49	51
0.1a	-15	4	17	24	29	30
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-464	-178	12	118	172	188
0.9a	-496	-166	11	111	161	177
0.8a	-434	-153	11	104	150	164
0.7a	-384	-138	12	96	138	151
0.6a	-338	-122	13	87	124	136
0.5a	-293	-103	13	77	109	118
0.4a	-247	-82	13	65	91	99
0.3a	-195	-61	12	52	72	77
0.2a	-138	-40	10	37	50	54
0.1a	-73	-19	6	19	26	28
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	64	77	62	35	0
0.9a	0	56	71	59	33	0
0.8a	0	56	70	59	33	0
0.7a	0	58	72	61	34	0
0.6a	0	61	77	64	36	0
0.5a	0	65	82	68	38	0
0.4a	0	69	87	72	40	0
0.3a	0	74	92	76	42	0
0.2a	0	79	97	79	44	0
0.1a	0	83	100	81	45	0
BOT.	0	85	101	82	45	0



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-65	0	0	0	0	0
0.9a	-68	-18	1	11	17	18
0.8a	-61	-23	4	20	29	32
0.7a	-55	-21	8	28	39	43
0.6a	-49	-16	12	34	46	51
0.5a	-44	-11	17	38	51	55
0.4a	-37	-7	20	40	51	55
0.3a	-30	-2	22	38	48	51
0.2a	-22	2	20	32	39	42
0.1a	-12	3	14	20	24	25
BOT.	0	0	0	0	0	0

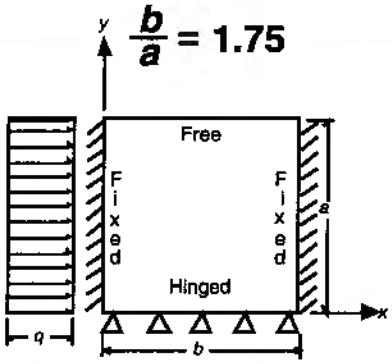
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-326	-137	0	84	130	144
0.9a	-340	-127	1	80	123	136
0.8a	-304	-118	2	75	115	128
0.7a	-274	-108	3	71	107	118
0.6a	-247	-96	5	65	97	107
0.5a	-219	-82	6	58	86	95
0.4a	-187	-66	7	50	73	80
0.3a	-151	-50	8	41	58	63
0.2a	-109	-32	7	29	41	44
0.1a	-59	-16	4	16	21	23
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	34	43	36	20	0
0.9a	0	28	38	33	19	0
0.8a	0	29	37	32	18	0
0.7a	0	30	39	34	19	0
0.6a	0	32	42	37	21	0
0.5a	0	35	47	40	23	0
0.4a	0	39	52	44	25	0
0.3a	0	44	57	48	27	0
0.2a	0	49	61	51	28	0
0.1a	0	53	64	53	30	0
BOT.	0	55	66	54	30	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-44	0	0	0	0	0
0.9a	-53	-16	0	9	13	15
0.8a	-48	-19	2	16	23	26
0.7a	-44	-17	5	21	31	34
0.6a	-40	-14	9	27	37	41
0.5a	-36	-10	13	31	41	45
0.4a	-32	-6	16	33	43	46
0.3a	-26	-2	18	32	41	43
0.2a	-19	1	17	28	34	36
0.1a	-10	3	12	18	21	22
BOT.	0	0	0	0	0	0

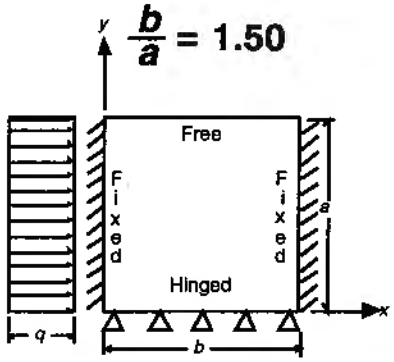
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-221	-114	-3	67	107	119
0.9a	-267	-105	-2	64	101	113
0.8a	-242	-99	-1	61	95	106
0.7a	-221	-91	0	58	89	99
0.6a	-202	-81	2	54	82	91
0.5a	-182	-70	4	49	73	81
0.4a	-158	-57	5	43	63	69
0.3a	-129	-43	6	35	50	55
0.2a	-94	-29	6	25	36	39
0.1a	-51	-14	4	14	19	20
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	22	30	25	14	0
0.9a	0	17	25	22	13	0
0.8a	0	18	24	21	12	0
0.7a	0	19	25	22	13	0
0.6a	0	21	28	25	14	0
0.5a	0	24	32	28	16	0
0.4a	0	27	37	32	18	0
0.3a	0	32	42	36	20	0
0.2a	0	37	46	39	22	0
0.1a	0	41	49	41	23	0
BOT.	0	42	51	42	23	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

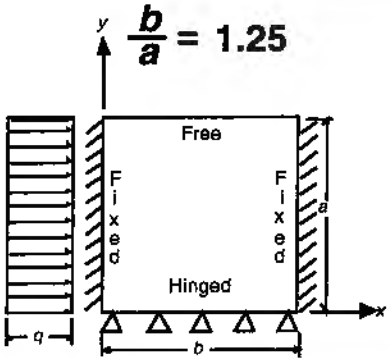
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-37	0	0	0	0	0
0.9a	-40	-13	0	6	10	11
0.8a	-37	-16	1	11	17	19
0.7a	-34	-14	3	15	23	26
0.6a	-32	-11	6	20	28	31
0.5a	-29	-9	9	23	31	34
0.4a	-26	-6	12	25	33	36
0.3a	-21	-3	14	26	33	35
0.2a	-16	0	13	23	28	30
0.1a	-9	2	10	15	18	19
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-182	-89	-5	51	83	93
0.9a	-200	-83	-4	49	79	89
0.8a	-184	-78	-3	47	75	84
0.7a	-171	-73	-2	45	71	79
0.6a	-159	-66	0	42	66	74
0.5a	-145	-58	2	39	60	66
0.4a	-128	-48	3	35	52	57
0.3a	-106	-37	4	29	42	46
0.2a	-79	-25	4	21	30	33
0.1a	-44	-12	3	12	16	18
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	13	19	16	9	0
0.9a	0	9	14	13	8	0
0.8a	0	10	14	12	7	0
0.7a	0	11	15	13	8	0
0.6a	0	12	17	15	9	0
0.5a	0	14	20	18	10	0
0.4a	0	18	24	21	12	0
0.3a	0	21	29	25	14	0
0.2a	0	26	33	28	16	0
0.1a	0	30	36	30	17	0
BOT.	0	31	37	31	17	0

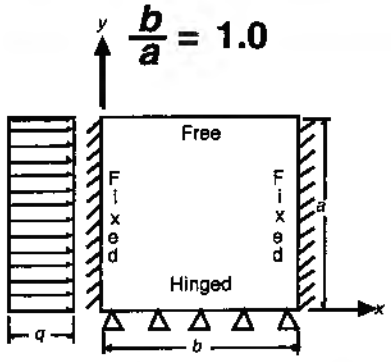


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-25	0	0	0	0	0
0.9a	-28	-10	-1	4	7	7
0.8a	-26	-12	0	7	11	13
0.7a	-25	-11	1	10	15	17
0.6a	-24	-9	3	13	19	21
0.5a	-22	-7	6	16	22	24
0.4a	-20	-5	8	18	24	26
0.3a	-17	-3	9	19	24	26
0.2a	-13	-1	10	17	22	23
0.1a	-7	1	8	12	15	15
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-124	-64	-5	36	60	68
0.9a	-139	-60	-4	34	57	65
0.8a	-131	-57	-3	34	55	62
0.7a	-124	-54	-2	33	53	59
0.6a	-118	-50	-1	31	50	56
0.5a	-110	-45	0	29	46	51
0.4a	-99	-39	2	27	41	45
0.3a	-84	-30	3	23	34	37
0.2a	-63	-21	3	17	25	27
0.1a	-36	-10	3	10	13	15
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	7	11	9	5	0
0.9a	0	4	7	7	4	0
0.8a	0	5	6	6	3	0
0.7a	0	5	7	6	4	0
0.6a	0	6	8	8	5	0
0.5a	0	7	11	10	6	0
0.4a	0	10	14	13	7	0
0.3a	0	13	18	16	9	0
0.2a	0	17	22	18	10	0
0.1a	0	20	25	21	11	0
BOT.	0	22	26	21	12	0



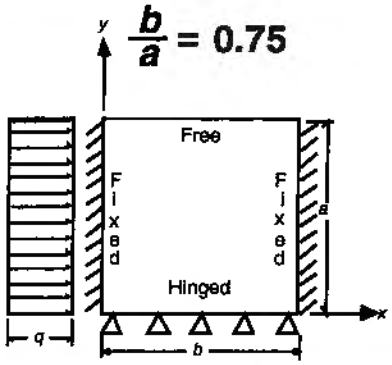
Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0
0.9a	-18	-7	-1	2	4	5
0.8a	-17	-8	-1	4	7	8
0.7a	-16	-7	0	6	9	10
0.6a	-16	-7	1	7	11	12
0.5a	-15	-6	3	9	13	14
0.4a	-14	-4	4	11	15	16
0.3a	-12	-3	6	12	16	17
0.2a	-10	-1	6	12	15	16
0.1a	-6	1	6	9	11	12
BOT.	0	0	0	0	0	0

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-77	-42	-4	23	39	44
0.9a	-88	-39	-3	22	37	42
0.8a	-84	-38	-3	22	36	41
0.7a	-82	-37	-2	21	35	40
0.6a	-80	-35	-2	21	34	39
0.5a	-76	-32	-1	20	32	36
0.4a	-70	-29	0	19	30	33
0.3a	-61	-23	1	17	25	28
0.2a	-48	-17	2	13	19	21
0.1a	-28	-8	2	8	11	12
BOT.	0	0	0	0	0	0

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	3	6	5	3	0
0.9a	0	2	3	3	2	0
0.8a	0	2	2	2	1	0
0.7a	0	2	2	2	1	0
0.6a	0	2	3	3	2	0
0.5a	0	3	5	4	3	0
0.4a	0	5	7	6	4	0
0.3a	0	7	9	8	5	0
0.2a	0	10	13	11	6	0
0.1a	0	12	15	13	7	0
BOT.	0	14	17	14	8	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-9	0	0	0	0	0
0.9a	-10	-4	-1	1	2	3
0.8a	-9	-4	-1	2	3	4
0.7a	-9	-4	0	3	4	5
0.6a	-9	-4	0	3	5	6
0.5a	-9	-4	1	4	6	7
0.4a	-9	-3	1	5	7	8
0.3a	-8	-2	2	6	9	9
0.2a	-7	-1	3	7	9	10
0.1a	-4	0	3	6	7	8
BOT.	0	0	0	0	0	0

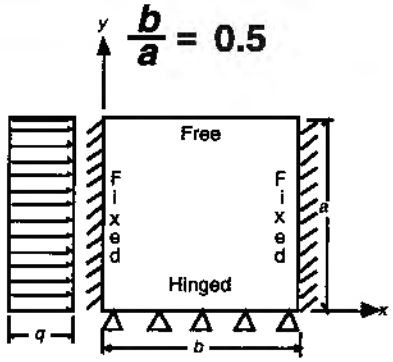
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-43	-23	-2	13	22	25
0.9a	-49	-22	-2	12	21	24
0.8a	-47	-22	-2	12	21	23
0.7a	-47	-21	-2	12	20	23
0.6a	-46	-21	-2	12	20	23
0.5a	-46	-20	-1	12	20	22
0.4a	-44	-19	-1	12	19	21
0.3a	-40	-16	0	11	17	19
0.2a	-33	-12	1	9	13	15
0.1a	-20	-6	1	5	8	8
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	1	3	2	1	0
0.9a	0	1	1	1	1	0
0.8a	0	0	0	0	0	0
0.7a	0	0	0	0	0	0
0.6a	0	0	1	1	0	0
0.5a	0	1	1	1	1	0
0.4a	0	1	2	2	1	0
0.3a	0	3	4	3	2	0
0.2a	0	4	6	5	3	0
0.1a	0	6	8	7	4	0
BOT.	0	8	9	8	4	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-4	0	0	0	0	0
0.9a	-4	-2	0	1	1	1
0.8a	-4	-2	0	1	2	2
0.7a	-4	-2	0	1	2	2
0.6a	-4	-2	0	1	2	2
0.5a	-4	-2	0	1	2	2
0.4a	-4	-2	0	1	2	3
0.3a	-4	-2	0	2	3	3
0.2a	-4	-1	1	3	4	4
0.1a	-2	0	2	3	4	4
BOT.	0	0	0	0	0	0

M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-19	-10	-1	6	10	11
0.9a	-21	-10	-1	5	9	10
0.8a	-21	-10	-1	5	9	10
0.7a	-21	-10	-1	5	9	10
0.6a	-21	-10	-1	5	9	10
0.5a	-21	-10	-1	5	9	10
0.4a	-21	-9	-1	5	9	10
0.3a	-20	-9	0	5	9	10
0.2a	-18	-7	0	5	7	8
0.1a	-12	-4	1	3	5	5
BOT.	0	0	0	0	0	0

M_{xy}

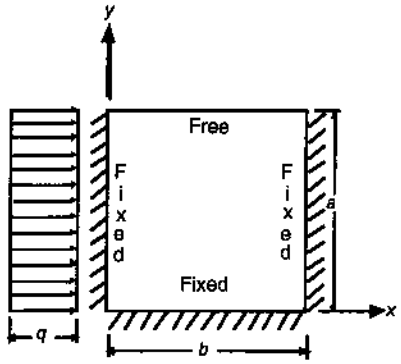
	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	1	1	1	1	0
0.9a	0	0	0	0	0	0
0.8a	0	0	0	0	0	0
0.7a	0	0	0	0	0	0
0.6a	0	0	0	0	0	0
0.5a	0	0	0	0	0	0
0.4a	0	0	0	0	0	0
0.3a	0	0	1	1	0	0
0.2a	0	1	2	2	1	0
0.1a	0	2	3	3	2	0
BOT.	0	4	4	3	2	0

CASE 8

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	1.03	1.01	0.95	0.85	0.75	0.66	0.56	0.45	0.33	0.22
Side edge — maximum	1.68	1.59	1.47	1.26	1.12	0.95	0.77	0.58	0.40	0.25
Side edge — midpoint	0.45	0.47	0.50	0.53	0.54	0.54	0.51	0.46	0.37	0.25

Deflection Coefficients, C_d

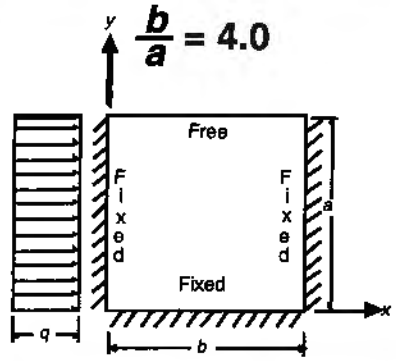
Along Midheight ($y = a/2$)

x / b/a	END	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
4.0	0	8.00	20.20	29.30	34.30	35.80
3.0	0	4.80	13.30	20.80	25.40	27.00
2.5	0	3.30	9.50	15.30	19.10	20.40
2.0	0	2.00	5.80	9.60	12.20	13.10
1.75	0	1.40	4.20	6.90	8.90	9.50
1.5	0	0.90	2.80	4.60	5.90	6.40
1.25	0	0.50	1.60	2.70	3.50	3.80
1.0	0	0.30	0.80	1.40	1.80	1.90
0.75	0	0.10	0.30	0.50	0.70	0.70
0.5	0	0.00	0.10	0.10	0.10	0.20

Along Midspan ($x = b/2$)

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	2.00	7.40	15.20	24.90	35.80	47.50	59.60	71.80	84.20	96.50
3.0	0	1.60	5.80	11.80	19.00	27.00	35.30	43.70	52.20	60.60	69.00
2.5	0	1.30	4.60	9.20	14.60	20.40	26.40	32.40	38.30	44.10	50.00
2.0	0	0.90	3.10	6.20	9.60	13.10	16.60	20.00	23.20	26.40	29.60
1.75	0	0.70	2.40	4.60	7.10	9.50	11.90	14.10	16.20	18.20	20.30
1.5	0	0.50	1.70	3.20	4.80	6.40	7.80	9.00	10.20	11.30	12.40
1.25	0	0.40	1.10	2.10	3.00	3.80	4.50	5.10	5.60	6.00	6.60
1.0	0	0.20	0.70	1.10	1.60	1.90	2.10	2.30	2.50	2.60	2.80
0.75	0	0.10	0.30	0.50	0.60	0.70	0.80	0.80	0.80	0.80	0.90
0.5	0	0.00	0.10	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-81	0	0	0	0	0
0.9a	-77	-6	7	9	8	7
0.8a	-62	-10	7	8	5	4
0.7a	-51	-12	1	-2	-8	-10
0.6a	-40	-13	-10	-21	-31	-35
0.5a	-30	-17	-29	-49	-65	-71
0.4a	-21	-25	-55	-88	-111	-119
0.3a	-13	-37	-90	-138	-168	-178
0.2a	-6	-54	-135	-200	-238	-250
0.1a	-1	-76	-192	-276	-321	-335
BOT.	0	-105	-263	-366	-417	-433

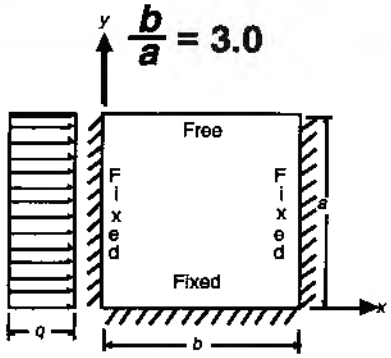
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-404	-45	50	64	58	54
0.9a	-386	-41	46	58	52	48
0.8a	-312	-36	41	50	44	40
0.7a	-253	-32	34	40	33	30
0.6a	-201	-26	26	29	21	18
0.5a	-152	-22	17	15	7	4
0.4a	-106	-18	5	0	-8	-11
0.3a	-63	-15	-7	-17	-25	-28
0.2a	-28	-14	-22	-35	-44	-47
0.1a	-4	-16	-37	-54	-63	-66
BOT.	0	-21	-53	-73	-83	-87

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	82	76	52	25	0
0.9a	0	78	75	52	25	0
0.8a	0	78	75	52	25	0
0.7a	0	78	74	51	25	0
0.6a	0	78	73	49	24	0
0.5a	0	75	70	46	22	0
0.4a	0	70	65	42	19	0
0.3a	0	61	56	35	16	0
0.2a	0	48	43	26	12	0
0.1a	0	29	25	14	6	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-76	0	0	0	0	0
0.9a	-72	-11	5	11	13	14
0.8a	-59	-15	6	15	18	18
0.7a	-48	-15	4	11	13	12
0.6a	-39	-13	-2	0	-2	-3
0.5a	-30	-13	-12	-19	-26	-29
0.4a	-21	-16	-29	-47	-62	-67
0.3a	-13	-23	-53	-86	-109	-117
0.2a	-6	-33	-86	-136	-169	-180
0.1a	-1	-47	-128	-199	-243	-258
BOT.	0	-64	-183	-278	-333	-351

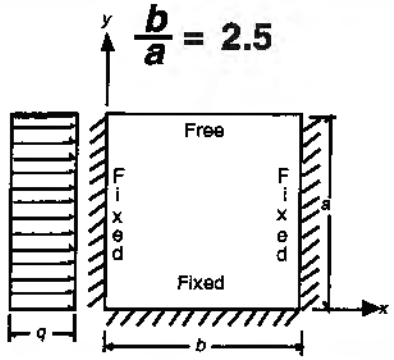
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	-379	-83	33	75	87	89
0.9a	-360	-76	30	68	79	80
0.8a	-294	-68	27	60	69	70
0.7a	-241	-59	23	51	57	58
0.6a	-193	-49	18	40	43	43
0.5a	-148	-38	12	27	28	27
0.4a	-105	-28	5	12	11	10
0.3a	-64	-20	-3	-3	-7	-9
0.2a	-28	-14	-13	-20	-27	-29
0.1a	-5	-12	-24	-38	-47	-50
BOT.	0	-13	-37	-56	-67	-70

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	68	70	53	28	0
0.9a	0	63	68	52	28	0
0.8a	0	63	68	53	28	0
0.7a	0	64	69	53	28	0
0.6a	0	63	69	53	28	0
0.5a	0	62	68	51	27	0
0.4a	0	58	64	48	25	0
0.3a	0	52	57	41	21	0
0.2a	0	41	44	32	16	0
0.1a	0	25	26	18	9	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 2.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-67	0	0	0	0	0
0.9a	-65	-13	4	12	15	16
0.8a	-54	-17	6	17	22	24
0.7a	-45	-15	6	17	22	23
0.6a	-36	-12	3	10	13	13
0.5a	-28	-11	-4	-3	-5	-6
0.4a	-20	-12	-15	-24	-32	-35
0.3a	-13	-15	-33	-54	-70	-76
0.2a	-6	-23	-59	-95	-121	-130
0.1a	-1	-34	-93	-149	-186	-199
BOT.	0	-46	-139	-219	-269	-286

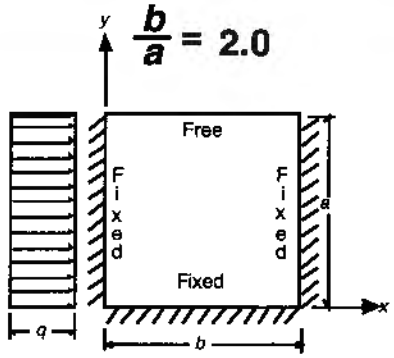
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-334	-96	20	74	96	102
0.9a	-325	-88	19	68	88	93
0.8a	-269	-79	17	61	78	82
0.7a	-224	-68	15	52	66	70
0.6a	-182	-56	12	42	53	56
0.5a	-142	-44	9	31	38	39
0.4a	-102	-32	4	18	21	22
0.3a	-64	-22	-2	4	3	3
0.2a	-29	-14	-9	-12	-16	-17
0.1a	-5	-9	-18	-28	-35	-37
BOT.	0	-9	-28	-44	-54	-57

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	54	60	47	25	0
0.9a	0	49	57	45	25	0
0.8a	0	49	57	46	25	0
0.7a	0	50	58	47	25	0
0.6a	0	51	59	47	26	0
0.5a	0	50	59	47	25	0
0.4a	0	48	57	45	24	0
0.3a	0	44	51	40	21	0
0.2a	0	36	41	32	17	0
0.1a	0	22	25	19	10	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 2.0$



Moment = Coef. × $qa^2/1000$

M_x

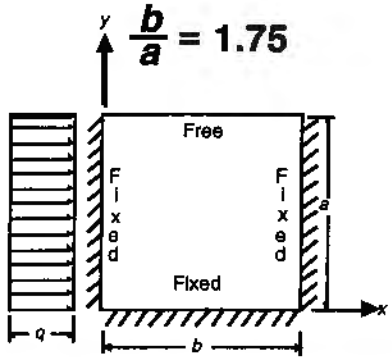
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-55	0	0	0	0	0
0.9a	-53	-14	2	10	14	16
0.8a	-45	-16	4	16	23	25
0.7a	-38	-14	6	19	26	28
0.6a	-32	-10	6	17	23	24
0.5a	-26	-8	4	10	13	14
0.4a	-19	-7	-3	-3	-4	-5
0.3a	-12	-9	-14	-24	-31	-34
0.2a	-6	-13	-33	-54	-70	-75
0.1a	-1	-21	-59	-97	-122	-131
BOT.	0	-30	-96	-155	-193	-206

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-275	-97	8	65	93	102
0.9a	-266	-88	7	60	86	94
0.8a	-226	-79	7	55	78	85
0.7a	-192	-69	7	48	68	74
0.6a	-161	-57	6	41	57	61
0.5a	-129	-45	5	32	44	47
0.4a	-96	-33	3	21	29	31
0.3a	-62	-22	0	10	13	13
0.2a	-30	-13	-5	-3	-4	-5
0.1a	-6	-7	-11	-17	-22	-23
BOT.	0	-6	-19	-31	-39	-41

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	36	42	34	19	0
0.9a	0	31	39	32	18	0
0.8a	0	32	39	32	18	0
0.7a	0	33	41	34	19	0
0.6a	0	34	43	35	20	0
0.5a	0	35	44	36	20	0
0.4a	0	35	44	36	20	0
0.3a	0	33	41	33	18	0
0.2a	0	28	34	27	15	0
0.1a	0	18	22	17	9	0
BOT.	0	0	0	0	0	0

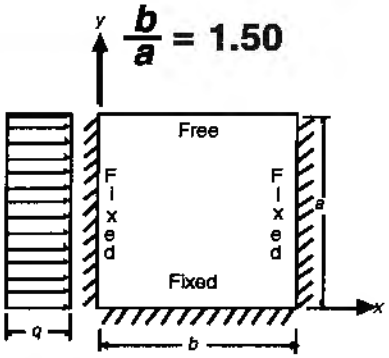


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-46	0	0	0	0	0
0.9a	-45	-13	1	9	13	14
0.8a	-39	-15	3	15	21	23
0.7a	-34	-12	5	18	25	27
0.6a	-29	-9	7	18	24	26
0.5a	-24	-7	6	14	18	20
0.4a	-18	-5	2	5	6	6
0.3a	-12	-6	-7	-11	-15	-16
0.2a	-6	-9	-21	-35	-46	-50
0.1a	-1	-16	-43	-71	-91	-98
BOT.	0	-23	-75	-122	-153	-164

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-228	-90	3	57	85	94
0.9a	-226	-82	3	53	79	87
0.8a	-195	-74	3	49	72	79
0.7a	-170	-65	4	44	64	70
0.6a	-145	-54	4	37	55	60
0.5a	-119	-43	4	30	43	47
0.4a	-90	-32	3	22	30	33
0.3a	-60	-21	1	11	16	17
0.2a	-30	-12	-3	0	1	0
0.1a	-7	-6	-8	-12	-15	-17
BOT.	0	-5	-15	-24	-31	-33

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	26	32	26	15	0
0.9a	0	22	28	24	14	0
0.8a	0	23	28	24	14	0
0.7a	0	24	30	26	14	0
0.6a	0	25	32	27	15	0
0.5a	0	27	34	29	16	0
0.4a	0	28	35	29	16	0
0.3a	0	27	34	28	16	0
0.2a	0	24	29	24	13	0
0.1a	0	16	19	15	8	0
BOT.	0	0	0	0	0	0



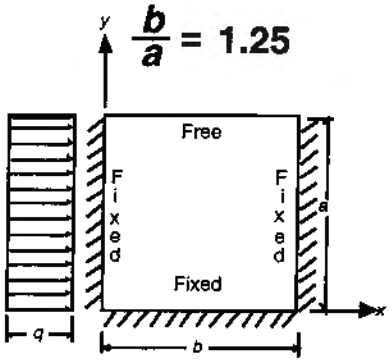
Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-35	0	0	0	0	0
0.9a	-36	-12	1	7	10	12
0.8a	-32	-13	2	12	17	19
0.7a	-28	-11	4	15	21	24
0.6a	-25	-8	6	16	23	25
0.5a	-21	-6	6	15	20	22
0.4a	-16	-4	4	10	12	13
0.3a	-11	-4	-1	-1	-2	-2
0.2a	-6	-6	-12	-20	-26	-28
0.1a	-1	-11	-29	-49	-62	-67
BOT.	0	-17	-56	-92	-116	-124

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-176	-77	-1	46	73	81
0.9a	-181	-70	-1	43	68	75
0.8a	-160	-65	0	41	63	70
0.7a	-142	-57	1	37	57	63
0.6a	-124	-49	2	33	49	54
0.5a	-105	-39	2	27	40	44
0.4a	-82	-29	2	21	30	33
0.3a	-56	-20	1	13	18	19
0.2a	-30	-11	-1	3	4	5
0.1a	-7	-5	-5	-8	-10	-10
BOT.	0	-3	-11	-18	-23	-25

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	17	22	18	10	0
0.9a	0	13	18	16	9	0
0.8a	0	14	18	16	9	0
0.7a	0	15	20	17	10	0
0.6a	0	16	22	19	11	0
0.5a	0	18	24	21	12	0
0.4a	0	20	26	22	13	0
0.3a	0	21	26	22	12	0
0.2a	0	19	23	19	11	0
0.1a	0	13	16	13	7	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.25$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-25	0	0	0	0	0
0.9a	-27	-10	0	5	8	8
0.8a	-24	-10	1	8	13	14
0.7a	-22	-9	3	11	16	18
0.6a	-20	-7	4	13	18	20
0.5a	-17	-5	6	13	18	20
0.4a	-14	-3	5	11	14	16
0.3a	-10	-3	2	5	6	6
0.2a	-6	-3	-5	-8	-10	-11
0.1a	-2	-7	-18	-29	-38	-41
BOT.	0	-12	-40	-65	-82	-87

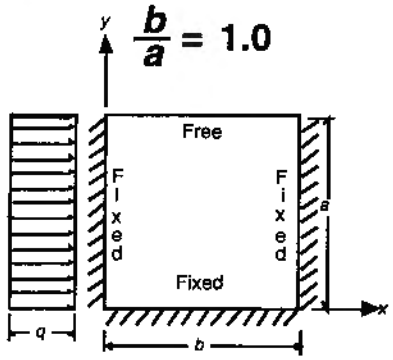
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-124	-60	-3	35	56	63
0.9a	-133	-55	-3	33	53	59
0.8a	-121	-51	-2	31	50	56
0.7a	-111	-47	-1	29	46	51
0.6a	-100	-41	0	27	41	46
0.5a	-87	-34	1	23	35	39
0.4a	-71	-26	2	18	27	30
0.3a	-51	-18	1	12	18	20
0.2a	-28	-10	0	5	7	8
0.1a	-8	-5	-3	-4	-5	-5
BOT.	0	-2	-8	-13	-16	-17

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	9	13	11	6	0
0.9a	0	7	9	9	5	0
0.8a	0	7	9	8	5	0
0.7a	0	8	11	9	5	0
0.6a	0	9	12	11	6	0
0.5a	0	11	15	13	8	0
0.4a	0	13	17	15	8	0
0.3a	0	14	18	16	9	0
0.2a	0	14	18	15	8	0
0.1a	0	10	13	10	6	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.0$



Moment = Coef. × $qa^2/1000$

M_x

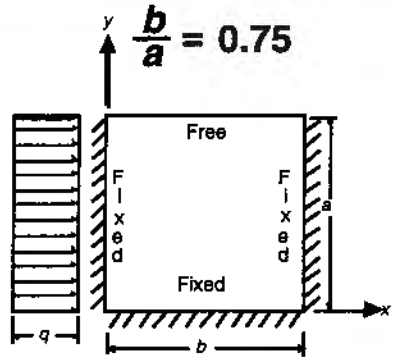
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0
0.9a	-17	-7	-1	3	5	5
0.8a	-16	-7	0	5	8	9
0.7a	-16	-6	1	7	10	11
0.6a	-15	-5	2	8	12	13
0.5a	-13	-4	3	9	13	14
0.4a	-11	-3	4	9	12	13
0.3a	-9	-2	3	7	9	9
0.2a	-5	-2	0	0	-1	-1
0.1a	-2	-4	-9	-15	-19	-21
BOT.	0	-8	-26	-42	-53	-56

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-78	-41	-3	23	38	43
0.9a	-87	-38	-3	22	36	41
0.8a	-82	-36	-2	21	35	39
0.7a	-78	-34	-2	20	33	37
0.6a	-73	-31	-1	19	31	35
0.5a	-66	-27	0	18	27	31
0.4a	-56	-22	1	15	23	25
0.3a	-43	-16	1	11	16	18
0.2a	-26	-9	1	6	8	9
0.1a	-8	-4	-1	-1	-1	-1
BOT.	0	-2	-5	-8	-11	-11

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	4	6	6	3	0
0.9a	0	2	4	4	2	0
0.8a	0	2	3	3	2	0
0.7a	0	3	4	4	2	0
0.6a	0	4	5	5	3	0
0.5a	0	5	7	6	4	0
0.4a	0	7	9	8	5	0
0.3a	0	9	11	10	6	0
0.2a	0	9	12	10	6	0
0.1a	0	8	9	8	4	0
BOT.	0	0	0	0	0	0



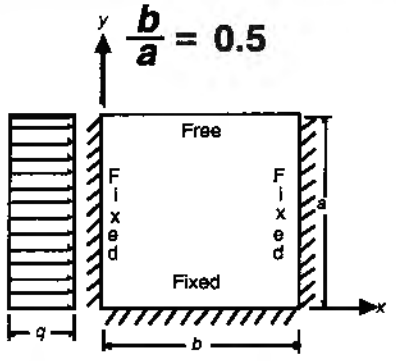
$\frac{b}{a} = 0.75$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-9	0	0	0	0	0
0.9a	-10	-4	-1	1	2	3
0.8a	-9	-4	-1	2	4	4
0.7a	-9	-4	0	3	5	5
0.6a	-9	-4	1	4	6	7
0.5a	-9	-3	1	5	7	8
0.4a	-8	-3	2	5	8	8
0.3a	-6	-2	2	5	7	8
0.2a	-4	-1	1	3	4	4
0.1a	-2	-2	-3	-5	-7	-7
BOT.	0	-4	-14	-24	-30	-32

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-43	-23	-2	13	22	25
0.9a	-49	-22	-2	12	21	24
0.8a	-47	-22	-2	12	20	23
0.7a	-46	-21	-2	12	20	23
0.6a	-45	-20	-1	12	20	22
0.5a	-43	-18	-1	11	18	21
0.4a	-39	-16	0	10	16	18
0.3a	-32	-12	1	9	13	14
0.2a	-21	-8	1	5	8	9
0.1a	-8	-3	0	1	1	1
BOT.	0	-1	-3	-5	-6	-6

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	3	2	1	0
0.9a	0	1	1	1	1	0
0.8a	0	0	1	1	0	0
0.7a	0	0	1	1	0	0
0.6a	0	1	1	1	1	0
0.5a	0	1	2	2	1	0
0.4a	0	2	4	3	2	0
0.3a	0	4	5	5	3	0
0.2a	0	5	7	6	3	0
0.1a	0	5	6	5	3	0
BOT.	0	0	0	0	0	0



$\frac{b}{a} = 0.5$

Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-4	0	0	0	0	0
0.9a	-4	-2	0	1	1	1
0.8a	-4	-2	0	1	2	2
0.7a	-4	-2	0	1	2	2
0.6a	-4	-2	0	1	2	2
0.5a	-4	-2	0	1	2	3
0.4a	-4	-2	0	2	3	3
0.3a	-4	-1	1	2	3	4
0.2a	-3	-1	1	2	3	3
0.1a	-1	0	0	0	0	0
BOT.	0	-2	-6	-11	-13	-14

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-19	-10	-1	6	10	11
0.9a	-21	-10	-1	5	9	10
0.8a	-21	-10	-1	5	9	10
0.7a	-21	-10	-1	5	9	10
0.6a	-21	-10	-1	5	9	10
0.5a	-21	-9	-1	5	9	10
0.4a	-20	-9	0	5	9	10
0.3a	-18	-8	0	5	8	9
0.2a	-14	-5	0	4	6	6
0.1a	-6	-2	0	1	2	2
BOT.	0	0	-1	-2	-3	-3

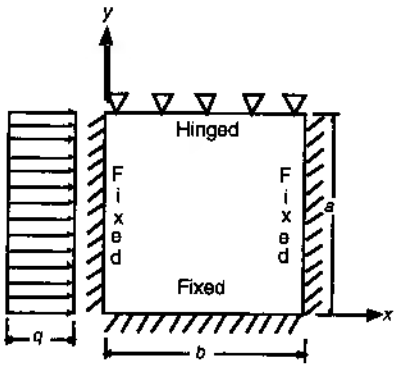
M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	1	1	1	1	0
0.9a	0	0	0	0	0	0
0.8a	0	0	0	0	0	0
0.7a	0	0	0	0	0	0
0.6a	0	0	0	0	0	0
0.5a	0	0	0	0	0	0
0.4a	0	0	1	1	0	0
0.3a	0	1	1	1	1	0
0.2a	0	2	2	2	1	0
0.1a	0	2	3	3	1	0
BOT.	0	0	0	0	0	0

CASE 9

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.62	0.62	0.63	0.62	0.61	0.58	0.53	0.45	0.34	0.22
Side edge — maximum	0.55	0.56	0.56	0.56	0.56	0.56	0.53	0.48	0.39	0.26
Side edge — midpoint	0.53	0.54	0.54	0.54	0.54	0.54	0.52	0.47	0.38	0.26
Top edge — midpoint	0.39	0.39	0.39	0.40	0.40	0.39	0.35	0.32	0.25	0.18

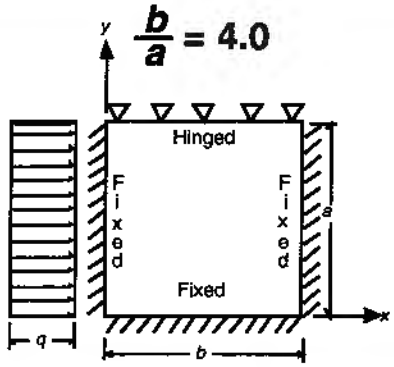
Deflection Coefficients, C_d

Along Midheight ***(y = a/2)***

x / b/a	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
4.0	0	2.50	4.40	5.10	5.20	5.20
3.0	0	1.80	3.70	4.70	5.00	5.10
2.5	0	1.40	3.20	4.30	4.80	5.00
2.0	0	1.00	2.50	3.60	4.30	4.50
1.75	0	0.80	2.10	3.20	3.80	4.10
1.5	0	0.60	1.70	2.60	3.20	3.40
1.25	0	0.40	1.20	1.90	2.40	2.60
1.0	0	0.20	0.70	1.10	1.50	1.60
0.75	0	0.10	0.30	0.50	0.60	0.70
0.5	0	0.00	0.10	0.10	0.10	0.20

Along Midspan ***(x = b/2)***

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	0.50	1.70	3.20	4.40	5.20	5.40	4.90	3.70	2.00	0
3.0	0	0.50	1.70	3.10	4.30	5.10	5.30	4.80	3.70	2.00	0
2.5	0	0.50	1.70	3.00	4.20	5.00	5.10	4.60	3.50	1.90	0
2.0	0	0.50	1.50	2.80	3.80	4.50	4.60	4.20	3.20	1.70	0
1.75	0	0.40	1.40	2.50	3.50	4.10	4.20	3.80	2.90	1.60	0
1.5	0	0.40	1.20	2.20	2.90	3.40	3.50	3.20	2.40	1.30	0
1.25	0	0.30	1.00	1.60	2.20	2.60	2.60	2.40	1.80	1.00	0
1.0	0	0.20	0.60	1.10	1.40	1.60	1.60	1.40	1.10	0.60	0
0.75	0	0.10	0.30	0.50	0.60	0.70	0.70	0.60	0.50	0.30	0
0.5	0	0.00	0.10	0.10	0.20	0.20	0.20	0.20	0.10	0.10	0

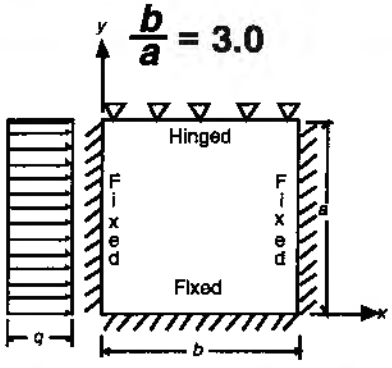


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	18	28	32	32	32
0.8a	-12	28	47	53	55	55
0.7a	-15	33	58	65	67	67
0.6a	-16	34	60	68	70	70
0.5a	-16	31	54	61	62	63
0.4a	-14	24	41	44	45	45
0.3a	-10	12	18	18	18	18
0.2a	-6	-6	-14	-19	-20	-20
0.1a	-2	-32	-57	-65	-67	-67
BOT.	0	-70	-112	-123	-125	-125

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-35	7	9	7	7	7
0.8a	-60	12	15	13	11	11
0.7a	-75	16	19	16	14	14
0.6a	-81	17	20	16	15	14
0.5a	-79	16	19	15	13	13
0.4a	-68	13	15	11	9	9
0.3a	-50	9	8	5	4	4
0.2a	-29	3	0	-3	-4	-4
0.1a	-8	-5	-11	-13	-13	-13
BOT.	0	-14	-22	-25	-25	-25

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	22	9	2	0	0
0.9a	0	21	8	2	0	0
0.8a	0	16	6	2	0	0
0.7a	0	10	4	1	0	0
0.6a	0	2	1	0	0	0
0.5a	0	5	2	1	0	0
0.4a	0	11	5	1	0	0
0.3a	0	15	6	2	0	0
0.2a	0	15	6	1	0	0
0.1a	0	11	4	1	0	0
BOT.	0	0	0	0	0	0

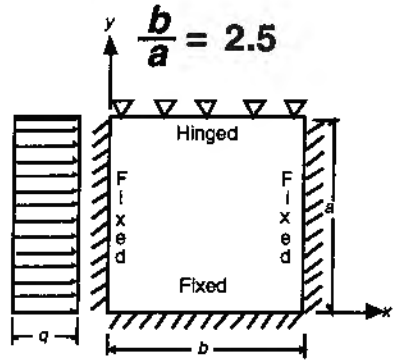


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	13	24	30	32	32
0.8a	-12	20	40	50	53	54
0.7a	-15	23	49	61	65	67
0.6a	-16	23	50	63	68	69
0.5a	-16	21	46	57	61	62
0.4a	-14	16	35	42	44	45
0.3a	-10	9	16	18	18	18
0.2a	-6	-4	-10	-16	-18	-19
0.1a	-2	-22	-48	-61	-65	-67
BOT.	0	-51	-97	-117	-123	-124

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-35	4	9	8	7	7
0.8a	-60	7	16	14	13	12
0.7a	-75	8	20	18	16	15
0.6a	-81	8	21	19	17	16
0.5a	-79	8	20	18	15	14
0.4a	-68	7	17	14	11	10
0.3a	-50	5	10	7	5	5
0.2a	-29	1	2	-1	-3	-3
0.1a	-8	-4	-8	-12	-13	-13
BOT.	0	-10	-19	-23	-25	-25

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	25	15	7	2	0
0.9a	0	23	14	6	2	0
0.8a	0	18	11	5	2	0
0.7a	0	11	7	3	1	0
0.6a	0	2	1	0	0	0
0.5a	0	5	4	2	1	0
0.4a	0	12	8	4	1	0
0.3a	0	16	10	4	1	0
0.2a	0	17	10	4	1	0
0.1a	0	12	7	3	1	0
BOT.	0	0	0	0	0	0



Moment = Coef. × $qa^2/1000$

M_x

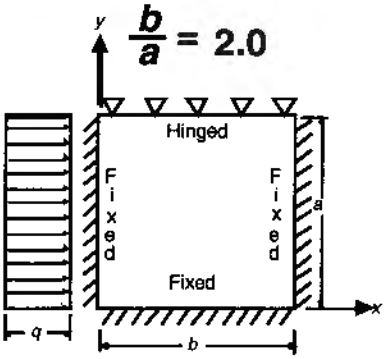
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	10	22	27	30	31
0.8a	-12	15	35	46	51	52
0.7a	-15	17	42	56	62	64
0.6a	-16	17	43	58	65	67
0.5a	-16	15	39	53	59	60
0.4a	-14	12	30	39	43	44
0.3a	-10	6	15	18	18	18
0.2a	-6	-3	-8	-13	-17	-18
0.1a	-2	-17	-40	-55	-62	-64
BOT.	0	-40	-86	-110	-119	-122

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-35	2	9	9	8	8
0.8a	-60	3	15	16	14	14
0.7a	-75	2	19	20	18	17
0.6a	-81	2	20	21	19	18
0.5a	-79	1	19	20	17	16
0.4a	-68	1	16	16	13	12
0.3a	-50	1	10	9	7	6
0.2a	-29	0	3	0	-2	-2
0.1a	-8	-3	-7	-10	-12	-13
BOT.	0	-8	-17	-22	-24	-24

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	25	19	10	4	0
0.9a	0	23	17	9	4	0
0.8a	0	18	14	7	3	0
0.7a	0	10	8	4	2	0
0.6a	0	2	2	1	0	0
0.5a	0	5	4	3	1	0
0.4a	0	12	10	5	2	0
0.3a	0	16	13	7	3	0
0.2a	0	17	13	7	3	0
0.1a	0	13	9	4	2	0
BOT.	0	0	0	0	0	0



Moment = Coef. × $qa^2/1000$

M_x

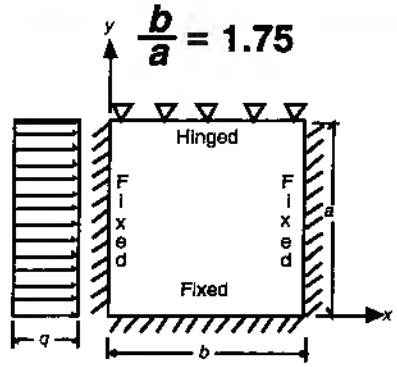
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	7	18	24	27	28
0.8a	-12	10	28	40	46	48
0.7a	-15	10	33	48	56	58
0.6a	-16	10	34	50	58	61
0.5a	-16	9	31	45	53	55
0.4a	-14	7	24	35	40	42
0.3a	-10	4	12	17	18	19
0.2a	-6	-2	-5	-10	-13	-14
0.1a	-2	-13	-32	-47	-55	-58
BOT.	0	-29	-70	-97	-111	-115

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-35	-1	7	9	9	9
0.8a	-60	-3	13	16	17	16
0.7a	-75	-6	16	21	21	21
0.6a	-81	-7	17	23	23	22
0.5a	-78	-7	16	21	21	21
0.4a	-68	-6	14	18	17	16
0.3a	-50	-4	9	11	10	9
0.2a	-29	-3	3	2	1	0
0.1a	-8	-3	-5	-8	-10	-11
BOT.	0	-6	-14	-19	-22	-23

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	24	22	14	7	0
0.9a	0	22	20	13	6	0
0.8a	0	17	16	10	5	0
0.7a	0	10	10	6	3	0
0.6a	0	2	2	1	1	0
0.5a	0	5	5	3	2	0
0.4a	0	11	11	7	4	0
0.3a	0	15	15	10	5	0
0.2a	0	16	15	10	4	0
0.1a	0	12	11	7	3	0
BOT.	0	0	0	0	0	0



$\frac{b}{a} = 1.75$

Moment = Coef. × $qa^2/1000$

M_x

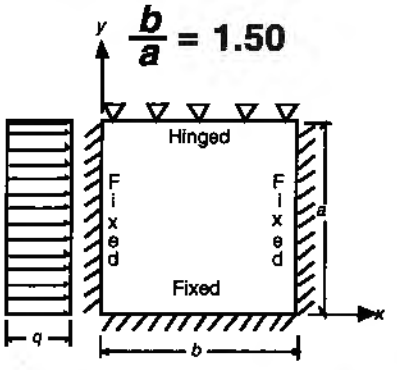
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	6	15	22	25	26
0.8a	-12	7	24	35	41	43
0.7a	-15	7	28	42	50	53
0.6a	-16	7	28	44	52	55
0.5a	-16	6	26	40	48	51
0.4a	-13	5	20	31	37	39
0.3a	-10	2	11	16	18	19
0.2a	-6	-2	-4	-7	-10	-11
0.1a	-2	-10	-27	-41	-49	-52
BOT.	0	-23	-60	-87	-102	-107

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-34	-3	7	9	10	10
0.8a	-59	-7	11	17	18	18
0.7a	-74	-10	14	21	23	23
0.6a	-80	-12	14	23	25	25
0.5a	-78	-12	14	22	23	23
0.4a	-67	-10	12	18	19	19
0.3a	-50	-8	8	12	12	12
0.2a	-29	-5	3	3	3	2
0.1a	-8	-3	-4	-7	-9	-9
BOT.	0	-5	-12	-17	-20	-21

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	23	22	15	8	0
0.9a	0	21	21	14	7	0
0.8a	0	16	16	11	6	0
0.7a	0	9	10	7	3	0
0.6a	0	2	2	2	1	0
0.5a	0	5	5	4	2	0
0.4a	0	11	11	8	4	0
0.3a	0	15	15	11	5	0
0.2a	0	16	16	11	5	0
0.1a	0	12	11	8	4	0
BOT.	0	0	0	0	0	0



$\frac{b}{a} = 1.50$

Moment = Coef. × $qa^2/1000$

M_x

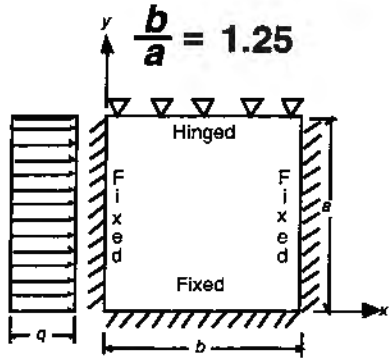
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	4	13	18	22	23
0.8a	-11	4	19	29	35	37
0.7a	-14	4	21	35	42	45
0.6a	-16	3	22	36	44	47
0.5a	-15	3	20	33	41	43
0.4a	-13	2	16	26	32	34
0.3a	-10	1	9	14	17	18
0.2a	-6	-2	-2	-5	-7	-7
0.1a	-2	-8	-21	-33	-41	-44
BOT.	0	-18	-50	-75	-90	-95

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-33	-5	5	9	11	11
0.8a	-57	-11	9	16	19	20
0.7a	-72	-15	10	21	24	25
0.6a	-78	-17	11	22	26	27
0.5a	-76	-17	10	22	25	26
0.4a	-66	-14	9	18	21	22
0.3a	-49	-11	6	12	14	14
0.2a	-28	-6	2	5	5	4
0.1a	-8	-4	-3	-5	-6	-7
BOT.	0	-4	-10	-15	-18	-19

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	21	22	16	8	0
0.9a	0	19	20	15	8	0
0.8a	0	14	16	12	6	0
0.7a	0	8	10	7	4	0
0.6a	0	2	2	2	1	0
0.5a	0	4	5	4	2	0
0.4a	0	9	11	8	4	0
0.3a	0	13	15	11	6	0
0.2a	0	14	16	12	6	0
0.1a	0	11	12	8	4	0
BOT.	0	0	0	0	0	0

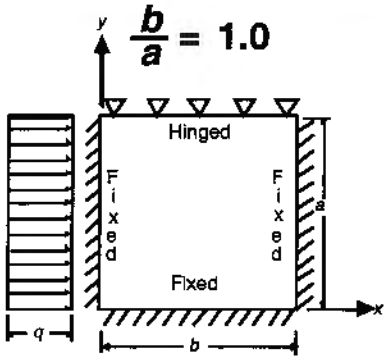


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	2	10	14	17	18
0.8a	-11	2	13	22	27	29
0.7a	-13	1	15	25	32	34
0.6a	-14	0	15	26	33	36
0.5a	-14	0	14	24	31	33
0.4a	-12	0	11	20	26	27
0.3a	-9	0	7	12	15	16
0.2a	-6	-2	-1	-1	-2	-3
0.1a	-2	-6	-15	-24	-30	-32
BOT.	0	-13	-38	-59	-73	-77

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-31	-7	4	9	11	11
0.8a	-53	-13	6	15	19	20
0.7a	-67	-18	7	19	25	26
0.6a	-72	-21	7	21	27	29
0.5a	-71	-21	7	20	26	28
0.4a	-62	-18	6	17	22	24
0.3a	-47	-13	4	12	16	16
0.2a	-28	-8	2	6	7	7
0.1a	-8	-4	-2	-3	-4	-4
BOT.	0	-3	-8	-12	-15	-15

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	18	20	15	8	0
0.9a	0	16	18	14	8	0
0.8a	0	12	14	11	6	0
0.7a	0	7	9	7	4	0
0.6a	0	2	2	2	1	0
0.5a	0	3	4	3	2	0
0.4a	0	8	9	7	4	0
0.3a	0	11	13	10	6	0
0.2a	0	12	14	11	6	0
0.1a	0	10	11	8	4	0
BOT.	0	0	0	0	0	0

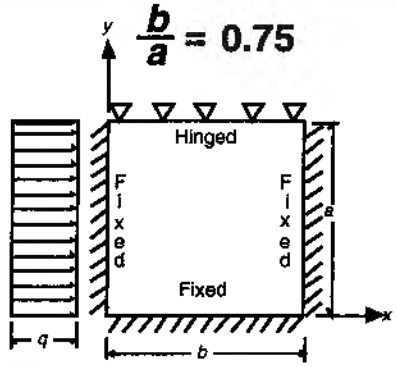


Moment = Coef. × $qa^2/1000$

M_x	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-5	1	6	10	12	13
0.8a	-9	0	8	14	18	19
0.7a	-11	-1	8	16	20	22
0.6a	-12	-2	8	16	21	22
0.5a	-12	-2	7	15	20	21
0.4a	-11	-2	7	13	17	19
0.3a	-8	-1	5	9	12	13
0.2a	-5	-1	1	1	2	2
0.1a	-2	-4	-8	-14	-18	-19
BOT.	0	-8	-26	-41	-52	-55

M_y	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-27	-7	2	7	10	11
0.8a	-45	-14	3	13	17	19
0.7a	-56	-19	3	16	22	24
0.6a	-61	-22	3	17	24	27
0.5a	-60	-21	3	17	24	26
0.4a	-54	-19	3	15	21	23
0.3a	-42	-14	2	11	16	17
0.2a	-26	-8	1	6	8	9
0.1a	-8	-3	-1	-1	-1	-1
BOT.	0	-2	-5	-8	-10	-11

M_{xy}	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	13	15	12	7	0
0.9a	0	12	14	11	6	0
0.8a	0	8	11	9	5	0
0.7a	0	5	6	5	3	0
0.6a	0	1	2	2	1	0
0.5a	0	2	2	2	1	0
0.4a	0	5	6	5	3	0
0.3a	0	8	10	8	5	0
0.2a	0	9	11	9	5	0
0.1a	0	8	9	7	4	0
BOT.	0	0	0	0	0	0



$\frac{b}{a} = 0.75$

Moment = Coef. × $qa^2/1000$

M_x

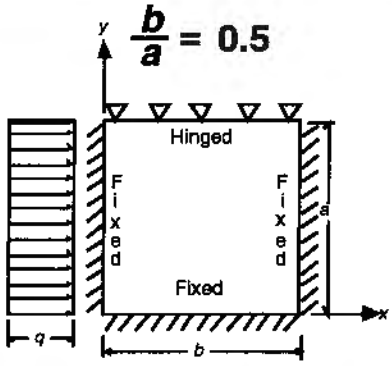
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-4	0	4	6	8	8
0.8a	-7	-1	4	7	10	11
0.7a	-8	-2	3	7	10	11
0.6a	-8	-3	2	7	9	10
0.5a	-8	-3	2	6	9	10
0.4a	-8	-2	3	6	9	10
0.3a	-6	-2	3	6	8	8
0.2a	-4	-1	1	3	4	4
0.1a	-2	-2	-3	-5	-7	-7
BOT.	0	-4	-15	-24	-30	-32

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-20	-6	1	5	8	8
0.8a	-33	-12	1	9	13	14
0.7a	-39	-16	1	11	16	18
0.6a	-42	-17	0	12	18	20
0.5a	-42	-17	0	11	18	20
0.4a	-39	-16	0	11	16	18
0.3a	-32	-12	1	9	13	14
0.2a	-21	-8	1	5	8	9
0.1a	-8	-3	0	1	1	1
BOT.	0	-1	-3	-5	-6	-6

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	8	9	8	4	0
0.9a	0	7	8	7	4	0
0.8a	0	4	6	5	3	0
0.7a	0	2	3	3	2	0
0.6a	0	1	1	1	1	0
0.5a	0	1	1	1	1	0
0.4a	0	2	3	3	2	0
0.3a	0	4	5	4	3	0
0.2a	0	5	7	6	3	0
0.1a	0	5	6	5	3	0
BOT.	0	0	0	0	0	0



$\frac{b}{a} = 0.5$

Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	0	2	3	4	4
0.8a	-4	-1	1	3	4	4
0.7a	-4	-2	0	2	3	3
0.6a	-4	-2	0	2	3	3
0.5a	-4	-2	0	2	2	3
0.4a	-4	-2	0	2	3	3
0.3a	-4	-1	1	2	3	4
0.2a	-3	-1	1	2	3	3
0.1a	-1	0	0	0	0	0
BOT.	0	-2	-6	-11	-13	-14

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-12	-4	1	3	5	5
0.8a	-18	-7	0	5	7	8
0.7a	-20	-9	0	5	9	10
0.6a	-21	-9	-1	5	9	10
0.5a	-21	-9	-1	5	9	10
0.4a	-20	-9	0	5	9	10
0.3a	-18	-8	0	5	8	9
0.2a	-14	-6	0	4	6	6
0.1a	-6	-2	0	1	2	2
BOT.	0	0	-1	-2	-3	-3

M_{xy}

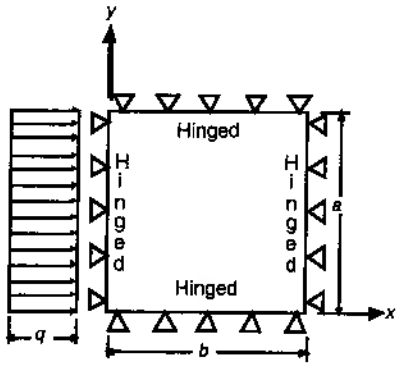
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	4	4	3	2	0
0.9a	0	2	3	3	2	0
0.8a	0	1	2	2	1	0
0.7a	0	0	1	1	0	0
0.6a	0	0	0	0	0	0
0.5a	0	0	0	0	0	0
0.4a	0	0	1	1	0	0
0.3a	0	1	1	1	1	0
0.2a	0	2	2	2	1	0
0.1a	0	2	3	3	1	0
BOT.	0	0	0	0	0	0

CASE 10

$$\text{Shear} = C_s \times q \times a$$

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Shear Coefficients, C_s

LOCATION \ b/a	4.0	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.5
Bottom edge — midpoint	0.50	0.49	0.48	0.46	0.45	0.42	0.39	0.34	0.27	0.18
Side edge — maximum	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.34	0.30	0.23
Side edge — midpoint	0.37	0.37	0.37	0.37	0.37	0.36	0.36	0.34	0.30	0.23
Top edge — midpoint	0.50	0.49	0.48	0.46	0.45	0.42	0.39	0.34	0.27	0.18

Deflection Coefficients, C_d

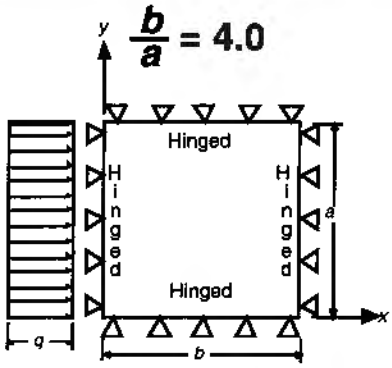
Along Midheight *(y = a/2)*

x / b/a	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
4.0	0	7.00	10.60	12.10	12.70	12.80
3.0	0	5.50	9.10	11.10	12.00	12.20
2.5	0	4.70	8.10	10.10	11.20	11.50
2.0	0	3.80	6.70	8.70	9.80	10.10
1.75	0	3.20	5.80	7.70	8.70	9.10
1.5	0	2.60	4.90	6.50	7.40	7.70
1.25	0	2.00	3.70	5.00	5.80	6.00
1.0	0	1.30	2.50	3.30	3.90	4.10
0.75	0	0.70	1.30	1.70	2.00	2.10
0.5	0	0.20	0.40	0.50	0.60	0.60

Along Midspan *(x = b/2)*

y / b/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	0	4.00	7.60	10.40	12.20	12.80	12.20	10.40	7.60	4.00	0
3.0	0	3.80	7.30	9.90	11.60	12.20	11.60	9.90	7.30	3.80	0
2.5	0	3.60	6.80	9.40	10.90	11.50	10.90	9.40	6.80	3.60	0
2.0	0	3.20	6.00	8.20	9.60	10.10	9.60	8.20	6.00	3.20	0
1.75	0	2.90	5.40	7.40	8.70	9.10	8.70	7.40	5.40	2.90	0
1.5	0	2.50	4.60	6.30	7.40	7.70	7.40	6.30	4.60	2.50	0
1.25	0	1.90	3.60	4.90	5.70	6.00	5.70	4.90	3.60	1.90	0
1.0	0	1.30	2.50	3.30	3.90	4.10	3.90	3.30	2.50	1.30	0
0.75	0	0.70	1.30	1.70	2.00	2.10	2.00	1.70	1.30	0.70	0
0.5	0	0.20	0.40	0.50	0.60	0.60	0.60	0.50	0.40	0.20	0

$\frac{b}{a} = 4.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	0	28	39	43	44	44
0.8a	0	47	68	76	78	79
0.7a	0	60	88	99	103	104
0.6a	0	68	100	113	117	118
0.5a	0	70	104	117	122	123
0.4a	0	68	100	113	117	118
0.3a	0	60	88	99	103	104
0.2a	0	47	68	76	78	79
0.1a	0	28	39	43	44	44
BOT.	0	0	0	0	0	0

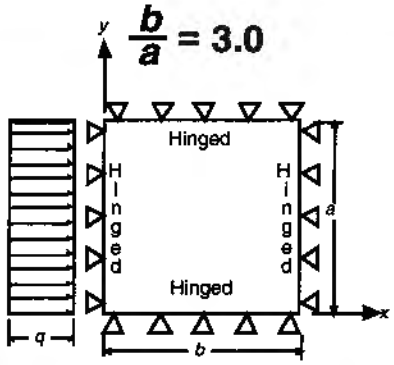
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	0	13	12	10	10	9
0.8a	0	23	21	18	17	17
0.7a	0	30	28	24	22	22
0.6a	0	34	32	28	26	25
0.5a	0	36	33	29	27	26
0.4a	0	34	32	28	26	25
0.3a	0	30	28	24	22	22
0.2a	0	23	21	18	17	17
0.1a	0	13	12	10	10	9
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	54	34	15	6	2	0
0.9a	50	32	14	5	2	0
0.8a	41	27	12	5	1	0
0.7a	29	20	9	3	1	0
0.6a	15	11	5	2	1	0
0.5a	0	0	0	0	0	0
0.4a	15	11	5	2	1	0
0.3a	29	20	9	3	1	0
0.2a	41	27	12	5	1	0
0.1a	50	32	14	5	2	0
BOT.	54	34	15	6	2	0

$\frac{b}{a} = 3.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	0	23	34	40	42	43
0.8a	0	39	60	70	75	76
0.7a	0	49	77	91	98	100
0.6a	0	54	87	104	112	114
0.5a	0	56	90	108	116	118
0.4a	0	54	87	104	112	114
0.3a	0	49	77	91	98	100
0.2a	0	39	60	70	75	76
0.1a	0	23	34	40	42	43
BOT.	0	0	0	0	0	0

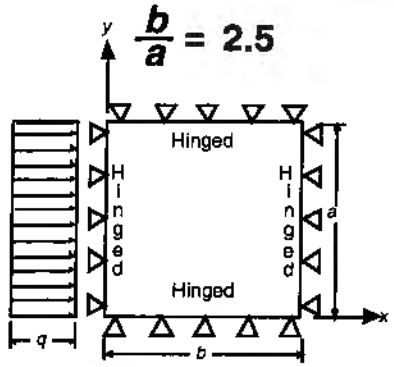
M_y

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	0	0	0	0	0	0
0.9a	0	12	12	11	10	10
0.8a	0	22	23	20	19	18
0.7a	0	28	30	27	25	24
0.6a	0	32	34	31	29	28
0.5a	0	34	36	33	30	29
0.4a	0	32	34	31	29	28
0.3a	0	28	30	27	25	24
0.2a	0	22	23	20	19	18
0.1a	0	12	12	11	10	10
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
TOP	54	40	23	11	5	0
0.9a	50	38	22	11	4	0
0.8a	41	32	18	9	4	0
0.7a	29	23	13	7	3	0
0.6a	15	12	7	4	1	0
0.5a	0	0	0	0	0	0
0.4a	15	12	7	4	1	0
0.3a	29	23	13	7	3	0
0.2a	41	32	18	9	4	0
0.1a	50	38	22	11	4	0
BOT.	54	40	23	11	5	0

$\frac{b}{a} = 2.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	20	31	37	40	41
0.8a	0	34	54	65	71	72
0.7a	0	42	69	84	92	94
0.6a	0	47	78	96	105	108
0.5a	0	48	81	100	109	112
0.4a	0	47	78	96	105	108
0.3a	0	42	69	84	92	94
0.2a	0	34	54	65	71	72
0.1a	0	20	31	37	40	41
BOT.	0	0	0	0	0	0

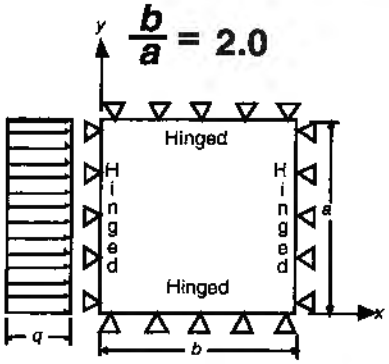
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	11	13	12	11	11
0.8a	0	20	23	22	21	20
0.7a	0	27	31	29	27	27
0.6a	0	30	35	34	31	31
0.5a	0	32	37	35	33	32
0.4a	0	30	35	34	31	31
0.3a	0	27	31	29	27	27
0.2a	0	20	23	22	21	20
0.1a	0	11	13	12	11	11
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	54	42	27	15	7	0
0.9a	50	40	26	14	6	0
0.8a	41	34	22	12	5	0
0.7a	29	24	16	9	4	0
0.6a	15	13	9	5	2	0
0.5a	0	0	0	0	0	0
0.4a	15	13	9	5	2	0
0.3a	29	24	16	9	4	0
0.2a	41	34	22	12	5	0
0.1a	50	40	26	14	6	0
BOT.	54	42	27	15	7	0

$\frac{b}{a} = 2.0$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	17	27	33	36	37
0.8a	0	28	46	57	63	65
0.7a	0	34	58	74	82	85
0.6a	0	38	66	83	93	96
0.5a	0	39	68	86	97	100
0.4a	0	38	66	83	93	96
0.3a	0	34	58	74	82	85
0.2a	0	28	46	57	63	65
0.1a	0	17	27	33	36	37
BOT.	0	0	0	0	0	0

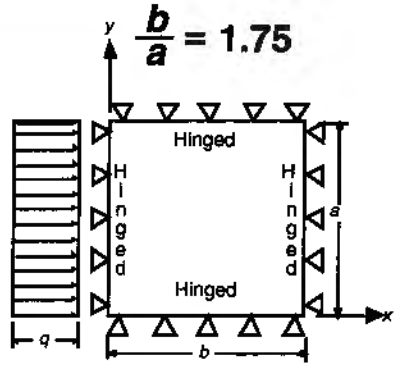
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	11	13	13	13	13
0.8a	0	19	23	24	23	23
0.7a	0	24	31	32	31	30
0.6a	0	28	36	37	36	35
0.5a	0	29	37	38	37	37
0.4a	0	28	36	37	36	35
0.3a	0	24	31	32	31	30
0.2a	0	19	23	24	23	23
0.1a	0	11	13	13	13	13
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	53	44	31	19	9	0
0.9a	49	42	30	18	9	0
0.8a	40	35	25	16	7	0
0.7a	28	25	18	11	5	0
0.6a	15	13	10	6	3	0
0.5a	0	0	0	0	0	0
0.4a	15	13	10	6	3	0
0.3a	28	25	18	11	5	0
0.2a	40	35	25	16	7	0
0.1a	49	42	30	18	9	0
BOT.	53	44	31	19	9	0

$\frac{b}{a} = 1.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	15	24	30	33	34
0.8a	0	24	41	52	58	60
0.7a	0	30	52	66	75	77
0.6a	0	33	58	75	84	87
0.5a	0	34	60	77	87	91
0.4a	0	33	58	75	84	87
0.3a	0	30	52	66	75	77
0.2a	0	24	41	52	58	60
0.1a	0	15	24	30	33	34
BOT.	0	0	0	0	0	0

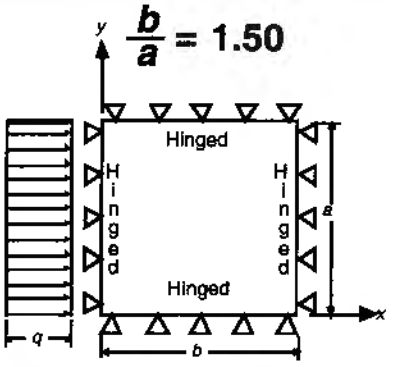
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	10	13	14	14	14
0.8a	0	18	23	25	25	25
0.7a	0	23	31	33	33	33
0.6a	0	26	36	38	38	38
0.5a	0	27	37	40	40	40
0.4a	0	26	36	38	38	38
0.3a	0	23	31	33	33	33
0.2a	0	18	23	25	25	25
0.1a	0	10	13	14	14	14
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	51	44	33	21	10	0
0.9a	48	42	31	20	10	0
0.8a	39	35	26	17	8	0
0.7a	27	25	19	12	6	0
0.6a	14	13	10	7	3	0
0.5a	0	0	0	0	0	0
0.4a	14	13	10	7	3	0
0.3a	27	25	19	12	6	0
0.2a	39	35	26	17	8	0
0.1a	48	42	31	20	10	0
BOT.	51	44	33	21	10	0

$\frac{b}{a} = 1.50$



Moment = Coef. × $qa^2/1000$

M_x

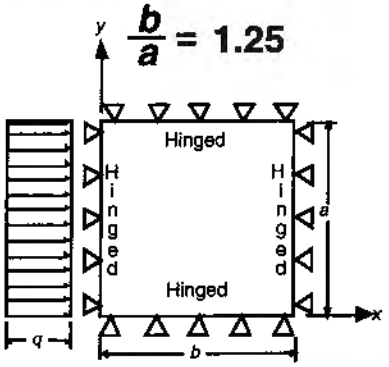
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	13	21	27	30	31
0.8a	0	20	35	45	51	53
0.7a	0	25	44	57	65	67
0.6a	0	27	49	64	73	76
0.5a	0	28	50	66	75	78
0.4a	0	27	49	64	73	76
0.3a	0	25	44	57	65	67
0.2a	0	20	35	45	51	53
0.1a	0	13	21	27	30	31
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	10	13	14	14	14
0.8a	0	17	23	26	26	26
0.7a	0	21	31	34	35	35
0.6a	0	24	35	39	40	41
0.5a	0	25	37	41	42	43
0.4a	0	24	35	39	40	41
0.3a	0	21	31	34	35	35
0.2a	0	17	23	26	26	26
0.1a	0	10	13	14	14	14
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	49	43	33	22	11	0
0.9a	45	41	31	21	10	0
0.8a	37	34	26	18	9	0
0.7a	26	24	19	13	6	0
0.6a	14	13	10	7	3	0
0.5a	0	0	0	0	0	0
0.4a	14	13	10	7	3	0
0.3a	26	24	19	13	6	0
0.2a	37	34	26	18	9	0
0.1a	45	41	31	21	10	0
BOT.	49	43	33	22	11	0



$\frac{b}{a} = 1.25$

Moment = Coef. × $qa^2/1000$

M_x

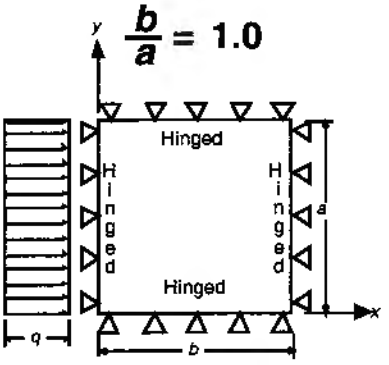
	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	10	18	22	25	26
0.8a	0	16	28	37	42	43
0.7a	0	20	35	46	52	55
0.6a	0	21	39	51	58	61
0.5a	0	22	40	52	60	63
0.4a	0	21	39	51	58	61
0.3a	0	20	35	46	52	55
0.2a	0	16	28	37	42	43
0.1a	0	10	18	22	25	26
BOT.	0	0	0	0	0	0

M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	9	13	14	15	15
0.8a	0	15	22	26	27	28
0.7a	0	20	30	34	36	37
0.6a	0	22	34	40	42	43
0.5a	0	23	35	41	44	45
0.4a	0	22	34	40	42	43
0.3a	0	20	30	34	36	37
0.2a	0	15	22	26	27	28
0.1a	0	9	13	14	15	15
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	45	40	31	21	11	0
0.9a	41	38	30	20	10	0
0.8a	33	31	25	17	9	0
0.7a	23	22	18	12	6	0
0.6a	12	11	9	7	3	0
0.5a	0	0	0	0	0	0
0.4a	12	11	9	7	3	0
0.3a	23	22	18	12	6	0
0.2a	33	31	25	17	9	0
0.1a	41	38	30	20	10	0
BOT.	45	40	31	21	11	0



$\frac{b}{a} = 1.0$

Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	8	13	17	19	20
0.8a	0	12	21	27	31	32
0.7a	0	14	25	33	38	39
0.6a	0	15	27	36	41	43
0.5a	0	15	28	37	42	44
0.4a	0	15	27	36	41	43
0.3a	0	14	25	33	38	39
0.2a	0	12	21	27	31	32
0.1a	0	8	13	17	19	20
BOT.	0	0	0	0	0	0

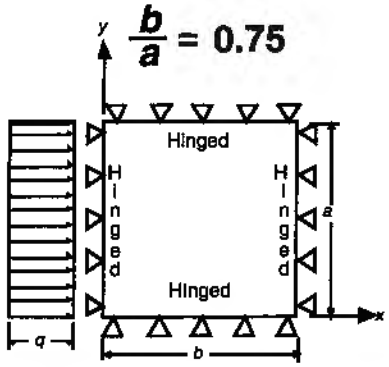
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	8	12	14	15	15
0.8a	0	13	21	25	27	28
0.7a	0	17	27	33	36	37
0.6a	0	19	31	38	41	42
0.5a	0	20	32	39	43	44
0.4a	0	19	31	38	41	42
0.3a	0	17	27	33	36	37
0.2a	0	13	21	25	27	28
0.1a	0	8	12	14	15	15
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	37	34	27	19	10	0
0.9a	34	31	25	18	9	0
0.8a	27	25	21	15	8	0
0.7a	19	18	15	10	5	0
0.6a	10	9	8	5	3	0
0.5a	0	0	0	0	0	0
0.4a	10	9	8	5	3	0
0.3a	19	18	15	10	5	0
0.2a	27	25	21	15	8	0
0.1a	34	31	25	18	9	0
BOT.	37	34	27	19	10	0

$\frac{b}{a} = 0.75$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	5	9	11	13	13
0.8a	0	7	13	17	19	20
0.7a	0	8	15	19	22	23
0.6a	0	8	15	20	23	25
0.5a	0	8	15	21	24	25
0.4a	0	8	15	20	23	25
0.3a	0	8	15	19	22	23
0.2a	0	7	13	17	19	20
0.1a	0	5	9	11	13	13
BOT.	0	0	0	0	0	0

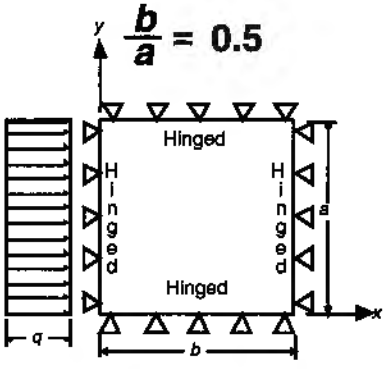
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	6	10	12	13	14
0.8a	0	11	17	21	24	24
0.7a	0	13	22	28	31	32
0.6a	0	15	25	32	36	37
0.5a	0	15	26	33	37	38
0.4a	0	15	25	32	36	37
0.3a	0	13	22	28	31	32
0.2a	0	11	17	21	24	24
0.1a	0	6	10	12	13	14
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	26	24	19	14	7	0
0.9a	23	22	18	13	7	0
0.8a	18	17	14	10	5	0
0.7a	12	12	10	7	4	0
0.6a	6	6	5	4	2	0
0.5a	0	0	0	0	0	0
0.4a	6	6	5	4	2	0
0.3a	12	12	10	7	4	0
0.2a	18	17	14	10	5	0
0.1a	23	22	18	13	7	0
BOT.	26	24	19	14	7	0

$\frac{b}{a} = 0.5$



Moment = Coef. × $qa^2/1000$

M_x

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	3	5	6	7	7
0.8a	0	3	6	8	9	9
0.7a	0	3	6	8	9	10
0.6a	0	3	6	8	9	9
0.5a	0	3	6	8	9	9
0.4a	0	3	6	8	9	9
0.3a	0	3	6	8	9	10
0.2a	0	3	6	8	9	9
0.1a	0	3	5	6	7	7
BOT.	0	0	0	0	0	0

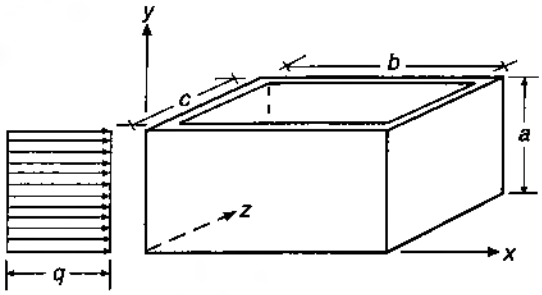
M_y

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	0	4	7	9	9	10
0.8a	0	7	11	15	16	17
0.7a	0	8	14	18	21	22
0.6a	0	9	16	21	23	24
0.5a	0	9	16	21	24	25
0.4a	0	9	16	21	23	24
0.3a	0	8	14	18	21	22
0.2a	0	7	11	15	16	17
0.1a	0	4	7	9	9	10
BOT.	0	0	0	0	0	0

M_{xy}

	END	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	13	12	10	7	4	0
0.9a	11	11	9	6	3	0
0.8a	8	7	6	5	2	0
0.7a	5	5	4	3	2	0
0.6a	2	2	2	1	1	0
0.5a	0	0	0	0	0	0
0.4a	2	2	2	1	1	0
0.3a	5	5	4	3	2	0
0.2a	8	7	6	5	2	0
0.1a	11	11	9	6	3	0
BOT.	13	12	10	7	4	0

CASE 5



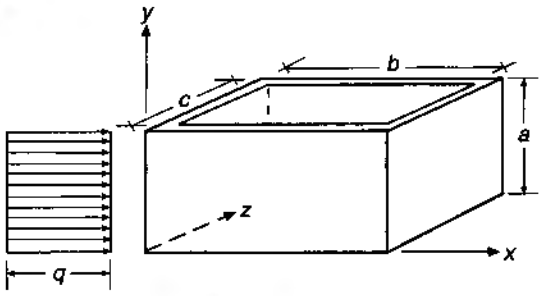
Hinged Top
Hinged Base

Deflections
on pages 3-45 & 3-46

Moments

b/a	c/a	page
4.0	3.0	3-47
	2.0	3-47
	1.5	3-48
	1.0	3-48
	0.5	3-49
3.0	2.0	3-49
	1.5	3-50
	1.0	3-50
	0.5	3-51
2.0	1.5	3-51
	1.0	3-52
	0.5	3-52
1.5	1.0	3-53
	0.5	3-53
1.0	0.5	3-54

CASE 6



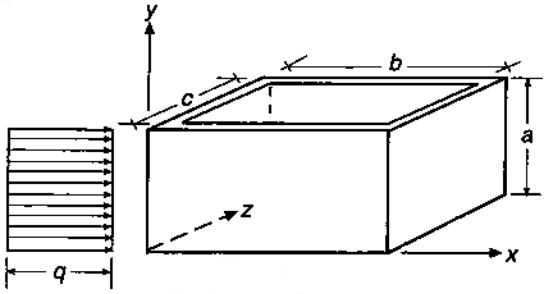
Free Top
Hinged Base

Deflections
on pages 3-55 & 3-56

Moments

b/a	c/a	page
4.0	3.0	3-57
	2.0	3-57
	1.5	3-58
	1.0	3-58
	0.5	3-59
3.0	2.0	3-59
	1.5	3-60
	1.0	3-60
	0.5	3-61
2.0	1.5	3-61
	1.0	3-62
	0.5	3-62
1.5	1.0	3-63
	0.5	3-63
1.0	0.5	3-64

CASE 7



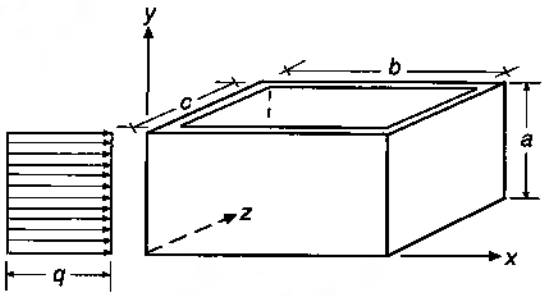
Free Top
Fixed Base

Deflections
on pages 3-65 & 3-66

Moments

b/a	*c/a*	page
4.0	3.0	3-67
	2.0	3-67
	1.5	3-68
	1.0	3-68
	0.5	3-69
3.0	2.0	3-69
	1.5	3-70
	1.0	3-70
	0.5	3-71
2.0	1.5	3-71
	1.0	3-72
	0.5	3-72
1.5	1.0	3-73
	0.5	3-73
1.0	0.5	3-74

CASE 8



Hinged Top
Fixed Base

Deflections
on pages 3-75 & 3-76

Moments

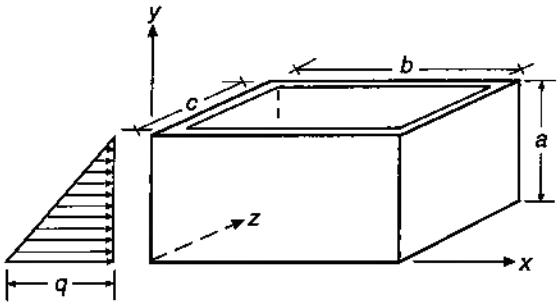
b/a	*c/a*	page
4.0	3.0	3-77
	2.0	3-77
	1.5	3-78
	1.0	3-78
	0.5	3-79
3.0	2.0	3-79
	1.5	3-80
	1.0	3-80
	0.5	3-81
2.0	1.5	3-81
	1.0	3-82
	0.5	3-82
1.5	1.0	3-83
	0.5	3-83
1.0	0.5	3-84

CASE 1

Hinged Top
Hinged Base

$$\text{Deflection} = \frac{C_d\, q a^4}{1000\, D}$$

$$D = \frac{E t^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
4.0	3.0	0	2.30	4.70	5.80	6.20	6.30
4.0	2.0	0	2.30	4.70	5.80	6.20	6.30
4.0	1.5	0	2.40	4.70	5.80	6.20	6.30
4.0	1.0	0	2.60	4.80	5.80	6.30	6.30
4.0	0.5	0	2.80	4.90	5.90	6.30	6.40
3.0	2.0	0	1.60	3.60	5.00	5.60	5.80
3.0	1.5	0	1.70	3.70	5.00	5.70	5.90
3.0	1.0	0	1.80	3.80	5.10	5.70	5.90
3.0	0.5	0	2.10	4.00	5.20	5.80	6.00
2.0	1.5	0	0.90	2.20	3.30	4.00	4.30
2.0	1.0	0	1.00	2.40	3.50	4.20	4.40
2.0	0.5	0	1.20	2.60	3.70	4.40	4.60
1.5	1.0	0	0.60	1.40	2.20	2.70	2.90
1.5	0.5	0	0.80	1.70	2.50	3.00	3.10
1.0	0.5	0	0.30	0.70	1.00	1.20	1.30

Short Side - Along Midheight ($y = a/2$)

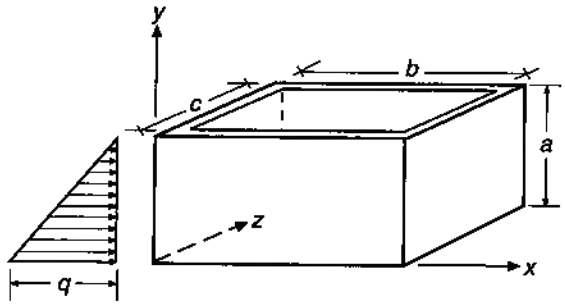
b/a	z / c/a	END	0.1c / 0.9c	0.2c / 0.8c	0.3c / 0.7c	0.4c / 0.6c	0.5c
4.0	3.0	0	1.60	3.60	5.00	5.60	5.80
4.0	2.0	0	0.80	2.10	3.30	4.00	4.20
4.0	1.5	0	0.30	1.10	1.90	2.40	2.60
4.0	1.0	0	0.00	0.10	0.40	0.50	0.60
4.0	0.5	0	-0.20	-0.30	-0.40	-0.40	-0.40
3.0	2.0	0	0.80	2.10	3.30	4.00	4.20
3.0	1.5	0	0.30	1.10	1.90	2.40	2.60
3.0	1.0	0	0.00	0.10	0.40	0.50	0.60
3.0	0.5	0	-0.20	-0.30	-0.40	-0.40	-0.40
2.0	1.5	0	0.40	1.20	1.90	2.40	2.60
2.0	1.0	0	0.00	0.20	0.40	0.60	0.60
2.0	0.5	0	-0.20	-0.30	-0.30	-0.40	-0.40
1.5	1.0	0	0.00	0.20	0.50	0.70	0.70
1.5	0.5	0	-0.10	-0.20	-0.30	-0.30	-0.30
1.0	0.5	0	-0.10	-0.10	-0.20	-0.20	-0.20

Hinged Top
Hinged Base

CASE 1

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	3.0	0	2.10	4.00	5.30	6.10	6.30	5.90	5.00	3.60	1.90	0
4.0	2.0	0	2.10	4.00	5.30	6.10	6.30	5.90	5.00	3.60	1.90	0
4.0	1.5	0	2.10	4.00	5.30	6.10	6.30	5.90	5.00	3.60	1.90	0
4.0	1.0	0	2.10	4.00	5.40	6.20	6.30	5.90	5.00	3.60	1.90	0
4.0	0.5	0	2.10	4.00	5.40	6.20	6.40	5.90	5.00	3.60	1.90	0
3.0	2.0	0	2.00	3.70	4.90	5.70	5.80	5.50	4.60	3.30	1.70	0
3.0	1.5	0	2.00	3.70	5.00	5.70	5.90	5.50	4.60	3.30	1.70	0
3.0	1.0	0	2.00	3.70	5.00	5.70	5.90	5.50	4.60	3.30	1.70	0
3.0	0.5	0	2.00	3.70	5.00	5.80	6.00	5.60	4.70	3.30	1.70	0
2.0	1.5	0	1.50	2.70	3.70	4.20	4.30	4.00	3.30	2.40	1.20	0
2.0	1.0	0	1.50	2.80	3.80	4.30	4.40	4.10	3.40	2.40	1.30	0
2.0	0.5	0	1.60	2.90	3.90	4.50	4.60	4.20	3.50	2.50	1.30	0
1.5	1.0	0	1.00	1.90	2.50	2.80	2.90	2.60	2.20	1.50	0.80	0
1.5	0.5	0	1.10	2.10	2.70	3.10	3.10	2.90	2.40	1.70	0.90	0
1.0	0.5	0	0.50	0.90	1.20	1.30	1.30	1.20	1.00	0.70	0.30	0

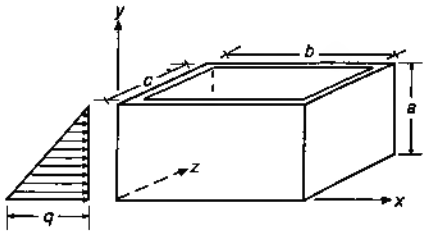
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	BOT.	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	TOP
4.0	3.0	0	2.00	3.70	4.90	5.70	5.80	5.50	4.60	3.30	1.70	0
4.0	2.0	0	1.50	2.70	3.60	4.10	4.20	3.90	3.20	2.30	1.20	0
4.0	1.5	0	0.90	1.70	2.30	2.50	2.60	2.30	1.90	1.40	0.70	0
4.0	1.0	0	0.30	0.50	0.60	0.60	0.60	0.50	0.40	0.30	0.10	0
4.0	0.5	0	-0.10	-0.20	-0.30	-0.40	-0.40	-0.40	-0.30	-0.20	-0.10	0
3.0	2.0	0	1.50	2.70	3.60	4.10	4.20	3.90	3.20	2.30	1.20	0
3.0	1.5	0	0.90	1.70	2.30	2.50	2.60	2.30	1.90	1.40	0.70	0
3.0	1.0	0	0.30	0.50	0.60	0.60	0.60	0.50	0.40	0.30	0.10	0
3.0	0.5	0	-0.10	-0.20	-0.30	-0.40	-0.40	-0.40	-0.30	-0.20	-0.10	0
2.0	1.5	0	0.90	1.70	2.30	2.60	2.60	2.40	1.90	1.40	0.70	0
2.0	1.0	0	0.30	0.50	0.70	0.70	0.60	0.50	0.40	0.30	0.10	0
2.0	0.5	0	-0.10	-0.20	-0.30	-0.40	-0.40	-0.40	-0.30	-0.20	-0.10	0
1.5	1.0	0	0.30	0.60	0.70	0.80	0.70	0.60	0.50	0.30	0.20	0
1.5	0.5	0	-0.10	-0.20	-0.20	-0.30	-0.30	-0.30	-0.30	-0.20	-0.10	0
1.0	0.5	0	0.00	-0.10	-0.10	-0.10	-0.20	-0.20	-0.10	-0.10	-0.10	0

CASE 1

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	17	10	4	1	0
0.9a	-3	5	11	15	16	16	-16	2	5	4	4	4	1	17	10	4	1	0
0.8a	-6	10	22	28	31	31	-32	4	9	8	7	7	1	14	8	4	1	0
0.7a	-9	15	32	40	44	44	-45	6	12	11	10	10	1	11	6	3	1	0
0.6a	-11	19	40	50	54	55	-56	8	15	14	12	12	1	7	3	1	0	0
0.5a	-12	22	46	56	60	61	-62	9	17	15	14	13	0	1	0	0	0	0
0.4a	-13	24	48	58	62	63	-64	10	17	15	14	14	0	4	3	1	0	0
0.3a	-12	25	46	54	58	58	-59	10	15	14	13	13	1	10	6	2	1	0
0.2a	-10	22	38	44	47	47	-48	8	12	11	10	10	1	15	8	3	1	0
0.1a	-6	15	23	27	28	28	-28	5	7	7	6	6	2	18	10	4	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	2	20	10	4	1	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	17	14	8	4	0
0.9a	-3	3	9	12	14	15	-16	0	4	5	4	4	1	17	14	8	3	0
0.8a	-6	6	17	24	28	29	-32	0	8	9	8	8	1	15	12	7	3	0
0.7a	-9	9	25	35	39	41	-45	0	11	13	12	11	1	12	9	5	2	0
0.6a	-11	11	31	43	49	51	-56	0	14	15	14	14	1	7	5	3	1	0
0.5a	-12	14	36	49	55	57	-62	1	16	17	16	15	0	2	1	0	0	0
0.4a	-13	16	38	51	57	59	-64	2	16	17	16	16	0	4	4	2	1	0
0.3a	-12	17	37	48	53	55	-59	3	15	16	15	14	1	10	8	5	2	0
0.2a	-10	15	32	40	44	45	-48	4	12	12	12	11	1	15	12	7	3	0
0.1a	-6	11	20	24	26	27	-28	3	7	7	7	7	2	20	14	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	2	21	15	8	4	0

Short Side

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	17	10	4	1	0
0.9a	-3	5	12	15	16	16	-16	2	5	4	4	4	2	16	10	4	1	0
0.8a	-6	10	22	28	31	31	-31	4	9	8	7	7	2	14	8	3	1	0
0.7a	-9	15	32	40	44	44	-44	6	12	11	10	10	1	11	6	3	1	0
0.6a	-11	19	40	50	54	55	-54	8	15	14	12	12	1	7	3	1	0	0
0.5a	-12	23	46	56	60	61	-61	9	17	15	14	13	0	1	0	0	0	0
0.4a	-12	25	48	58	62	63	-62	10	17	15	14	14	0	4	3	1	0	0
0.3a	-12	25	46	54	58	58	-58	10	15	14	13	13	1	10	6	2	1	0
0.2a	-9	22	38	44	47	47	-47	8	12	11	10	10	2	15	8	3	1	0
0.1a	-6	15	23	27	28	28	-28	5	7	7	6	6	2	18	10	4	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	3	20	10	4	1	0

Long Side

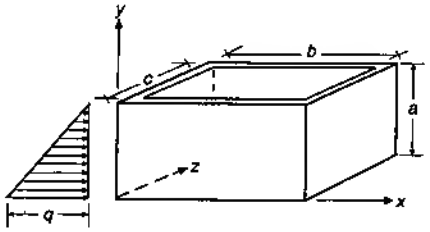
M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	14	15	11	6	0
0.9a	-3	1	5	8	10	10	-16	-3	2	5	5	5	2	14	15	11	6	0
0.8a	-6	1	9	15	19	20	-31	-7	5	9	10	11	2	12	13	10	5	0
0.7a	-9	2	13	22	27	29	-44	-9	7	13	14	15	1	10	10	7	4	0
0.6a	-11	3	17	28	35	37	-54	-10	9	16	18	18	1	6	6	4	2	0
0.5a	-12	4	21	33	40	42	-61	-10	10	17	19	20	0	2	1	1	0	0
0.4a	-12	6	23	35	42	44	-62	-9	11	18	19	20	0	3	4	3	2	0
0.3a	-12	7	23	35	41	43	-58	-7	11	16	18	18	1	8	9	7	3	0
0.2a	-9	7	21	30	34	36	-47	-4	9	13	14	14	2	13	14	10	5	0
0.1a	-6	6	14	19	21	22	-28	-1	5	7	8	8	2	17	17	12	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	3	19	18	13	6	0

Short Side

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 1.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	17	10	4	1	0
0.9a	-3	5	12	15	16	16	-15	2	5	4	4	4	3	16	9	4	1	0
0.8a	-6	11	23	28	31	31	-29	4	9	8	7	7	3	14	8	3	1	0
0.7a	-8	15	33	41	44	44	-41	6	12	11	10	10	2	11	6	3	1	0
0.6a	-10	20	41	50	54	55	-51	8	15	14	12	12	1	7	3	1	0	0
0.5a	-11	23	46	56	60	61	-57	10	17	15	14	13	0	1	0	0	0	0
0.4a	-12	25	48	58	62	63	-59	10	17	15	14	14	1	4	3	1	0	0
0.3a	-11	26	46	55	58	58	-55	10	15	14	13	13	2	10	6	2	1	0
0.2a	-9	23	38	44	47	47	-45	9	12	11	10	10	3	15	8	3	1	0
0.1a	-5	15	23	27	28	28	-27	5	7	7	6	6	4	18	10	4	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	20	10	4	1	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	9	12	10	6	0
0.9a	-3	-1	2	4	5	6	-15	-5	1	4	5	6	3	9	12	10	5	0
0.8a	-6	-1	4	8	11	12	-29	-10	1	7	10	11	3	8	11	9	5	0
0.7a	-8	-1	6	12	16	17	-41	-13	2	10	14	15	2	7	9	7	4	0
0.6a	-10	-1	8	16	21	22	-51	-16	3	13	17	19	1	5	6	4	2	0
0.5a	-11	-1	10	19	25	27	-57	-17	4	15	19	20	0	2	2	1	1	0
0.4a	-12	0	12	22	28	29	-59	-16	5	15	19	21	1	1	2	2	1	0
0.3a	-11	2	14	23	28	30	-55	-13	6	14	18	19	2	5	7	6	3	0
0.2a	-9	3	13	21	25	26	-45	-9	5	12	14	15	3	9	11	9	5	0
0.1a	-5	3	10	14	16	17	-27	-4	4	7	8	8	4	13	15	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	15	16	12	6	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 1.0

Long Side

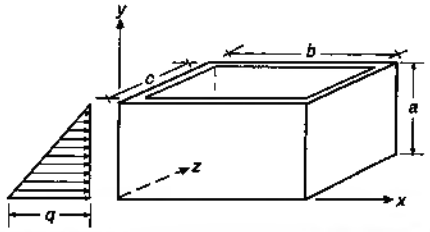
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	17	9	4	1	0
0.9a	-2	6	12	15	16	16	-12	3	5	4	4	4	6	16	9	4	1	0
0.8a	-5	12	23	29	31	31	-23	5	9	8	7	7	6	14	8	3	1	0
0.7a	-7	17	33	41	44	44	-34	7	12	11	10	10	4	11	6	2	1	0
0.6a	-8	22	42	51	54	55	-42	9	15	14	12	12	2	7	3	1	0	0
0.5a	-10	25	47	57	60	61	-48	11	17	15	14	13	0	1	0	0	0	0
0.4a	-10	27	49	59	62	63	-50	12	17	15	14	14	2	4	3	1	0	0
0.3a	-9	27	47	55	58	58	-47	11	15	14	13	13	4	10	5	2	1	0
0.2a	-8	24	39	45	47	47	-39	9	12	11	10	10	6	15	8	3	1	0
0.1a	-5	15	24	27	28	28	-24	6	7	7	6	6	7	18	9	4	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	8	19	10	4	1	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	1	4	4	3	0
0.9a	-2	-2	-1	0	0	1	-12	-6	-2	1	3	3	6	1	4	4	3	0
0.8a	-5	-3	-1	0	1	1	-23	-11	-3	2	5	6	6	1	4	4	2	0
0.7a	-7	-4	-2	1	2	3	-34	-16	-4	4	8	9	4	2	4	3	2	0
0.6a	-8	-5	-1	2	4	4	-42	-20	-5	5	10	12	2	2	3	3	2	0
0.5a	-10	-5	0	3	6	7	-48	-22	-4	6	12	14	0	2	2	1	1	0
0.4a	-10	-5	1	6	9	10	-50	-21	-3	7	13	14	2	1	0	0	0	0
0.3a	-9	-3	3	8	11	12	-47	-19	-2	8	12	14	4	0	2	2	1	0
0.2a	-8	-2	4	9	12	13	-39	-14	0	7	10	11	6	2	5	5	3	0
0.1a	-5	0	4	7	9	10	-24	-7	1	4	6	7	7	4	7	7	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	8	6	9	7	4	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	17	14	8	3	0
0.9a	-3	3	9	12	14	15	-15	0	4	5	4	4	3	17	13	7	3	0
0.8a	-6	7	17	24	28	29	-29	0	8	9	8	8	2	15	11	6	3	0
0.7a	-8	10	25	35	40	41	-41	1	12	13	12	11	2	12	9	5	2	0
0.6a	-10	12	32	43	49	51	-51	2	14	15	14	14	1	7	5	3	1	0
0.5a	-11	15	37	49	55	57	-57	3	16	17	16	15	0	2	1	0	0	0
0.4a	-12	17	39	51	57	59	-59	4	16	17	16	16	1	4	4	2	1	0
0.3a	-11	17	38	49	54	55	-55	4	15	16	15	14	2	10	8	4	2	0
0.2a	-9	16	32	40	44	45	-45	4	12	12	12	11	2	15	11	6	3	0
0.1a	-5	11	20	24	26	27	-27	3	7	7	7	7	3	20	14	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	21	15	8	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	9	12	10	6	0
0.9a	-3	-1	2	4	5	6	-15	-5	1	4	5	6	3	9	12	10	5	0
0.8a	-6	-1	4	8	11	12	-29	-10	1	7	10	11	2	8	11	9	5	0
0.7a	-8	-1	6	12	16	17	-41	-13	2	10	14	15	2	7	9	7	4	0
0.6a	-10	-1	8	16	21	22	-51	-16	3	13	17	19	1	5	6	4	2	0
0.5a	-11	-1	10	19	25	27	-57	-17	4	15	19	20	0	2	2	1	1	0
0.4a	-12	0	12	22	28	30	-59	-16	5	15	19	21	1	1	2	2	1	0
0.3a	-11	2	14	23	28	30	-55	-13	6	14	18	19	2	5	7	6	3	0
0.2a	-9	3	13	21	25	26	-45	-9	5	12	14	15	2	9	11	9	5	0
0.1a	-5	3	10	14	16	17	-27	-4	4	7	8	8	3	13	15	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	15	16	12	6	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

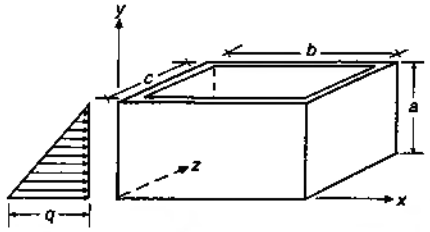
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	17	13	7	3	0
0.9a	-2	4	9	13	14	15	-12	1	4	5	4	4	6	17	13	7	3	0
0.8a	-5	8	18	25	28	29	-23	2	8	9	8	8	5	15	11	6	3	0
0.7a	-7	11	26	36	40	41	-34	3	12	12	12	11	4	12	8	4	2	0
0.6a	-8	15	33	44	50	51	-42	4	15	15	14	14	2	7	5	2	1	0
0.5a	-10	17	38	50	56	57	-48	5	16	17	16	15	0	2	1	0	0	0
0.4a	-10	19	40	52	57	59	-50	6	17	17	16	15	2	4	4	2	1	0
0.3a	-9	19	39	49	54	55	-47	6	15	15	15	14	4	10	8	4	2	0
0.2a	-8	17	33	40	44	45	-39	6	12	12	12	11	5	16	11	6	2	0
0.1a	-5	12	20	25	26	27	-24	4	7	7	7	7	7	20	13	7	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	21	14	8	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	1	4	4	3	0
0.9a	-2	-2	-1	0	0	1	-12	-6	-2	1	3	3	6	1	4	4	3	0
0.8a	-5	-3	-1	0	1	1	-23	-11	-3	2	5	6	5	1	4	4	2	0
0.7a	-7	-4	-2	1	2	3	-34	-16	-4	4	8	9	4	2	4	3	2	0
0.6a	-8	-5	-1	2	4	4	-42	-20	-5	5	10	12	2	2	3	3	2	0
0.5a	-10	-5	0	3	6	7	-48	-21	-4	6	12	14	0	2	2	1	1	0
0.4a	-10	-5	1	6	9	10	-50	-21	-3	7	13	15	2	1	0	0	0	0
0.3a	-9	-3	3	8	11	12	-47	-19	-2	8	12	14	4	0	2	2	1	0
0.2a	-8	-2	4	9	12	13	-39	-14	0	7	10	11	5	2	5	5	3	0
0.1a	-5	0	4	7	9	10	-24	-7	1	4	6	7	7	4	7	7	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	6	9	7	4	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	17	14	8	3	0
0.9a	-3	3	9	12	14	15	-15	0	4	5	4	4	3	17	13	7	3	0
0.8a	-6	7	17	24	28	29	-29	0	8	9	8	8	2	15	11	6	3	0
0.7a	-8	10	25	35	40	41	-41	1	12	13	12	11	2	12	9	5	2	0
0.6a	-10	12	32	43	49	51	-51	2	14	15	14	14	1	7	5	3	1	0
0.5a	-11	15	37	49	55	57	-57	3	16	17	16	15	0	2	1	0	0	0
0.4a	-12	17	39	51	57	59	-59	4	16	17	16	16	1	4	4	2	1	0
0.3a	-11	17	38	49	54	55	-55	4	15	16	15	14	2	10	8	4	2	0
0.2a	-9	16	32	40	44	45	-45	4	12	12	12	11	2	15	11	6	3	0
0.1a	-5	11	20	24	26	27	-27	3	7	7	7	7	3	20	14	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	21	15	8	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	9	12	10	6	0
0.9a	-3	-1	2	4	5	6	-15	-5	1	4	5	6	3	9	12	10	5	0
0.8a	-6	-1	4	8	11	12	-29	-10	1	7	10	11	2	8	11	9	5	0
0.7a	-8	-1	6	12	16	17	-41	-13	2	10	14	15	2	7	9	7	4	0
0.6a	-10	-1	8	16	21	22	-51	-16	3	13	17	19	1	5	6	4	2	0
0.5a	-11	-1	10	19	25	27	-57	-17	4	15	19	20	0	2	2	1	1	0
0.4a	-12	0	12	22	28	30	-59	-16	5	15	19	21	1	1	2	2	1	0
0.3a	-11	2	14	23	28	30	-55	-13	6	14	18	19	2	5	7	6	3	0
0.2a	-9	3	13	21	25	26	-45	-9	5	12	14	15	2	9	11	9	5	0
0.1a	-5	3	10	14	16	17	-27	-4	4	7	8	8	3	13	15	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	15	16	12	6	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

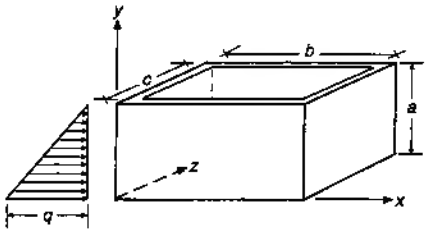
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	17	13	7	3	0
0.9a	-2	4	9	13	14	15	-12	1	4	5	4	4	6	17	13	7	3	0
0.8a	-5	8	18	25	28	29	-23	2	8	9	8	8	5	15	11	6	3	0
0.7a	-7	11	26	36	40	41	-34	3	12	12	12	11	4	12	8	4	2	0
0.6a	-8	15	33	44	50	51	-42	4	15	15	14	14	2	7	5	2	1	0
0.5a	-10	17	38	50	56	57	-48	5	16	17	16	15	0	2	1	0	0	0
0.4a	-10	19	40	52	57	59	-50	6	17	17	16	15	2	4	4	2	1	0
0.3a	-9	19	39	49	54	55	-47	6	15	15	15	14	4	10	8	4	2	0
0.2a	-8	17	33	40	44	45	-39	6	12	12	12	11	5	16	11	6	2	0
0.1a	-5	12	20	25	26	27	-24	4	7	7	7	7	7	20	13	7	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	21	14	8	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	1	4	4	3	0
0.9a	-2	-2	-1	0	0	1	-12	-6	-2	1	3	3	6	1	4	4	3	0
0.8a	-5	-3	-1	0	1	1	-23	-11	-3	2	5	6	5	1	4	4	2	0
0.7a	-7	-4	-2	1	2	3	-34	-16	-4	4	8	9	4	2	4	3	2	0
0.6a	-8	-5	-1	2	4	4	-42	-20	-5	5	10	12	2	2	3	3	2	0
0.5a	-10	-5	0	3	6	7	-48	-21	-4	6	12	14	0	2	2	1	1	0
0.4a	-10	-5	1	6	9	10	-50	-21	-3	7	13	15	2	1	0	0	0	0
0.3a	-9	-3	3	8	11	12	-47	-19	-2	8	12	14	4	0	2	2	1	0
0.2a	-8	-2	4	9	12	13	-39	-14	0	7	10	11	5	2	5	5	3	0
0.1a	-5	0	4	7	9	10	-24	-7	1	4	6	7	7	4	7	7	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	6	9	7	4	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b				0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	11	18	12	7	3	0
0.9a	-2	5	10	13	15	15	-9	2	4	5	4	4	10	17	12	7	3	0
0.8a	-3	9	19	25	28	29	-17	3	9	9	8	8	9	15	10	6	2	0
0.7a	-5	13	28	36	40	42	-25	5	12	12	12	11	7	12	8	4	2	0
0.6a	-6	17	35	45	50	52	-31	7	15	15	14	14	4	7	5	2	1	0
0.5a	-7	20	40	51	56	58	-35	8	17	17	16	15	1	2	1	0	0	0
0.4a	-7	22	42	53	58	60	-37	9	17	17	16	15	3	4	3	2	1	0
0.3a	-7	22	40	50	54	56	-35	9	16	15	14	14	6	10	7	4	2	0
0.2a	-6	19	34	41	44	45	-30	8	12	12	11	11	9	16	11	6	2	0
0.1a	-4	13	21	25	27	27	-19	5	7	7	7	6	12	20	13	7	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	13	21	13	7	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c				0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	11	7	5	3	1	0
0.9a	-2	-2	-2	-2	-2	-2	-9	-7	-5	-4	-4	-3	10	7	4	3	1	0
0.8a	-3	-4	-4	-4	-4	-4	-17	-13	-10	-8	-7	-6	9	6	4	2	1	0
0.7a	-5	-5	-5	-5	-5	-5	-25	-19	-14	-11	-9	-9	7	4	3	2	1	0
0.6a	-6	-6	-6	-6	-6	-6	-31	-23	-17	-13	-11	-10	4	2	1	1	0	0
0.5a	-7	-7	-7	-6	-6	-6	-35	-26	-19	-14	-11	-10	1	0	0	0	0	0
0.4a	-7	-7	-6	-6	-6	-6	-37	-26	-18	-12	-9	-8	3	3	2	1	1	0
0.3a	-7	-6	-5	-5	-4	-4	-35	-24	-16	-10	-7	-6	6	5	3	2	1	0
0.2a	-6	-5	-3	-2	-1	-1	-30	-19	-11	-6	-4	-3	9	6	4	2	1	0
0.1a	-4	-2	-1	0	1	1	-19	-10	-5	-3	-1	-1	12	6	3	2	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	13	6	3	1	0	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 1.5$

Long Side

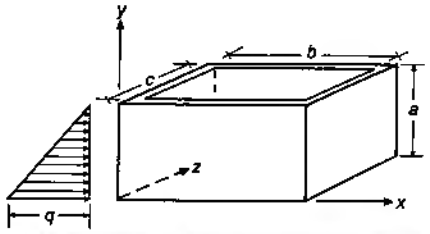
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b				0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	15	15	11	6	0
0.9a	-3	1	5	8	10	10	-14	-3	3	5	5	5	2	14	15	11	5	0
0.8a	-6	2	10	16	19	21	-28	-5	5	9	10	10	2	13	13	9	5	0
0.7a	-8	3	14	23	28	30	-40	-7	7	13	14	15	1	10	10	7	3	0
0.6a	-10	4	18	29	35	37	-50	-8	9	16	18	18	1	7	6	4	2	0
0.5a	-11	6	22	34	40	43	-56	-8	11	17	19	20	0	2	1	1	0	0
0.4a	-12	7	24	36	43	45	-58	-7	11	18	19	20	0	3	4	3	2	0
0.3a	-11	8	24	35	41	43	-54	-5	11	16	18	18	1	8	9	6	3	0
0.2a	-9	8	22	30	35	36	-44	-3	9	13	14	14	2	14	13	9	5	0
0.1a	-5	7	14	19	22	22	-26	-1	6	7	8	8	2	18	17	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	3	20	18	12	6	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c				0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	10	12	10	6	0
0.9a	-3	-1	2	4	5	6	-14	-5	1	4	5	6	2	9	12	10	5	0
0.8a	-6	-1	4	8	11	12	-28	-9	2	7	10	11	2	9	11	9	5	0
0.7a	-8	-1	6	12	16	17	-40	-13	3	11	14	15	1	7	9	7	4	0
0.6a	-10	-1	8	16	21	23	-50	-15	4	13	17	19	1	5	6	4	2	0
0.5a	-11	0	11	20	25	27	-56	-16	5	15	19	20	0	2	2	1	1	0
0.4a	-12	1	13	22	28	30	-58	-15	6	15	19	21	0	1	2	2	1	0
0.3a	-11	2	14	23	28	30	-54	-13	6	14	18	19	1	5	7	6	3	0
0.2a	-9	3	14	21	25	26	-44	-9	6	12	14	15	2	9	11	9	5	0
0.1a	-5	3	10	14	16	17	-26	-4	4	7	8	8	2	13	15	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	3	15	16	12	6	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 2.0, \frac{c}{a} = 1.0$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	16	15	11	5	0
0.9a	-2	2	6	8	10	11	-12	-2	3	5	5	5	5	15	14	10	5	0
0.8a	-5	3	11	17	20	21	-23	-3	6	9	10	10	5	13	13	9	4	0
0.7a	-7	5	16	24	29	31	-33	-4	8	13	14	15	4	11	10	7	3	0
0.6a	-8	7	20	30	36	38	-41	-5	11	16	17	18	2	7	6	4	2	0
0.5a	-9	8	24	35	42	44	-46	-5	12	18	19	19	0	2	1	1	0	0
0.4a	-10	9	26	38	44	46	-49	-4	13	18	19	19	2	3	4	3	1	0
0.3a	-9	10	26	37	42	44	-46	-2	12	16	17	18	3	9	9	6	3	0
0.2a	-8	10	23	31	36	37	-38	-1	10	13	14	14	5	14	13	9	4	0
0.1a	-5	7	15	20	22	23	-23	0	6	8	8	8	6	19	16	11	5	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	6	20	18	12	6	0

Short Side

	M_x Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	1	4	4	3	0
0.9a	-2	-1	-1	0	1	1	-12	-6	-1	1	3	3	5	1	4	4	3	0
0.8a	-5	-3	-1	0	1	2	-23	-11	-3	3	6	7	5	2	4	4	2	0
0.7a	-7	-4	-1	1	2	3	-33	-16	-4	4	8	10	4	2	4	3	2	0
0.6a	-8	-5	-1	2	4	5	-41	-19	-4	5	10	12	2	2	3	3	2	0
0.5a	-9	-5	0	4	6	7	-46	-21	-4	7	12	14	0	2	2	1	1	0
0.4a	-10	-4	1	6	9	10	-49	-21	-3	8	13	15	2	1	0	0	0	0
0.3a	-9	-3	3	8	11	12	-46	-18	-2	8	13	14	3	0	2	2	1	0
0.2a	-8	-1	5	9	12	13	-38	-13	0	7	10	11	5	2	5	5	3	0
0.1a	-5	0	5	7	9	10	-23	-7	1	4	6	7	6	5	8	7	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	6	6	9	7	4	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 0.5$

Long Side

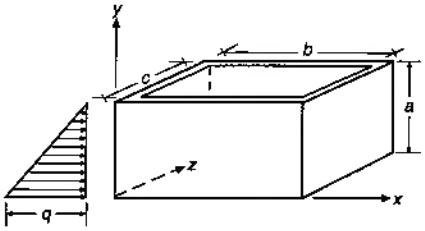
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	10	17	15	10	5	0
0.9a	-2	2	6	9	11	11	-9	0	3	5	5	5	10	16	14	10	5	0
0.8a	-3	5	12	18	21	22	-17	0	7	9	10	10	9	14	13	9	4	0
0.7a	-5	7	18	26	30	32	-24	-1	10	13	14	14	7	11	10	6	3	0
0.6a	-6	9	23	32	38	40	-30	0	12	16	17	17	4	7	6	4	2	0
0.5a	-7	11	26	37	43	45	-34	0	14	18	19	19	1	2	1	1	0	0
0.4a	-7	12	28	40	46	48	-36	1	14	18	19	19	2	3	4	3	1	0
0.3a	-7	13	28	38	44	46	-35	2	14	17	17	17	6	9	9	6	3	0
0.2a	-6	12	25	32	37	38	-29	2	11	13	14	14	9	15	13	9	4	0
0.1a	-4	8	16	20	22	23	-18	2	7	8	8	8	11	20	16	11	5	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	12	21	17	11	5	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	10	7	4	3	1	0
0.9a	-2	-2	-2	-2	-2	-2	-9	-7	-5	-4	-3	-3	10	7	4	3	1	0
0.8a	-3	-3	-3	-3	-3	-3	-17	-13	-10	-8	-6	-6	9	6	4	2	1	0
0.7a	-5	-5	-5	-5	-5	-5	-24	-18	-14	-11	-9	-8	7	4	3	1	1	0
0.6a	-6	-6	-6	-6	-6	-6	-30	-22	-17	-12	-10	-9	4	2	1	1	0	0
0.5a	-7	-7	-6	-6	-6	-6	-34	-25	-18	-13	-10	-9	1	0	0	0	0	0
0.4a	-7	-7	-6	-6	-5	-5	-36	-25	-17	-12	-9	-8	2	2	2	1	1	0
0.3a	-7	-6	-5	-4	-4	-4	-35	-23	-15	-9	-6	-5	6	4	3	2	1	0
0.2a	-6	-5	-3	-2	-1	-1	-29	-18	-11	-6	-3	-2	9	6	4	2	1	0
0.1a	-4	-2	-1	0	1	1	-18	-10	-5	-2	-1	0	11	6	3	1	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	12	5	2	1	0	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.5, \frac{c}{a} = 1.0$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	12	13	10	5	0
0.9a	-2	0	3	5	6	7	-11	-3	2	4	5	6	4	12	12	10	5	0
0.8a	-4	1	6	10	12	13	-21	-6	3	8	10	11	3	10	11	8	4	0
0.7a	-6	2	9	15	18	20	-30	-8	5	12	15	15	3	8	9	7	3	0
0.6a	-8	2	11	19	24	25	-38	-9	6	14	18	19	1	6	6	4	2	0
0.5a	-9	3	14	22	28	30	-43	-10	8	16	20	21	0	2	2	1	0	0
0.4a	-9	4	16	25	30	32	-46	-9	8	16	20	21	1	2	3	2	1	0
0.3a	-9	4	17	25	31	32	-44	-8	8	15	18	19	2	6	7	6	3	0
0.2a	-7	5	15	23	27	28	-36	-5	7	12	14	15	3	11	12	9	5	0
0.1a	-4	4	11	15	17	18	-22	-2	5	7	8	8	4	15	15	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	5	17	16	12	6	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	2	5	5	3	0
0.9a	-2	-1	0	0	1	1	-11	-5	-1	2	3	3	4	2	5	4	3	0
0.8a	-4	-2	-1	1	2	2	-21	-10	-2	3	6	7	3	2	4	4	2	0
0.7a	-6	-3	-1	2	3	4	-30	-14	-3	5	9	10	3	2	4	4	2	0
0.6a	-8	-4	0	3	5	6	-38	-17	-3	6	11	13	1	2	3	3	2	0
0.5a	-9	-4	1	5	7	8	-43	-19	-3	7	13	14	0	2	2	1	1	0
0.4a	-9	-4	2	7	10	11	-46	-19	-2	8	14	15	1	1	0	0	0	0
0.3a	-9	-2	4	9	12	13	-44	-17	-1	8	13	14	2	1	2	3	2	0
0.2a	-7	-1	5	10	12	13	-36	-12	1	7	11	12	3	3	5	5	3	0
0.1a	-4	1	5	8	9	10	-22	-6	1	5	6	7	4	6	8	7	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	5	7	9	8	4	0

$\frac{b}{a} = 1.5, \frac{c}{a} = 0.5$

Long Side

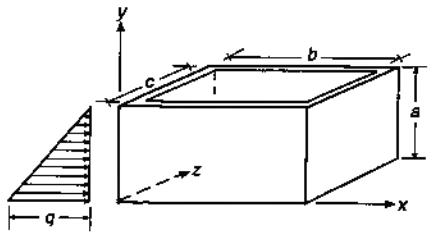
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	9	14	13	10	5	0
0.9a	-2	1	4	6	7	7	-8	-1	3	5	5	6	8	13	13	10	5	0
0.8a	-3	3	8	11	14	15	-15	-2	5	9	11	11	7	12	11	8	4	0
0.7a	-4	4	11	17	20	22	-22	-3	7	13	15	16	6	10	9	7	3	0
0.6a	-5	5	14	22	26	28	-27	-4	9	15	18	19	4	6	6	4	2	0
0.5a	-6	6	17	25	31	32	-31	-4	10	17	20	21	1	2	2	1	0	0
0.4a	-7	7	19	28	33	35	-33	-3	11	18	20	21	2	2	3	2	1	0
0.3a	-6	7	19	28	33	34	-32	-2	11	16	18	19	5	8	8	6	3	0
0.2a	-5	7	18	24	28	30	-27	-1	9	13	14	15	8	13	12	9	4	0
0.1a	-3	6	12	16	18	19	-17	0	6	8	8	8	10	17	16	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	11	19	17	12	6	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	9	6	4	2	1	0
0.9a	-2	-2	-2	-2	-2	-2	-8	-6	-4	-3	-3	-3	8	6	4	2	1	0
0.8a	-3	-3	-3	-3	-3	-3	-15	-11	-9	-7	-5	-5	7	5	3	2	1	0
0.7a	-4	-4	-4	-4	-4	-4	-22	-16	-12	-9	-7	-7	6	4	2	1	1	0
0.6a	-5	-5	-5	-5	-5	-5	-27	-20	-14	-11	-8	-7	4	2	1	0	0	0
0.5a	-6	-6	-6	-5	-5	-5	-31	-22	-16	-11	-8	-7	1	0	0	0	0	0
0.4a	-7	-6	-5	-5	-5	-4	-33	-23	-15	-10	-7	-6	2	2	2	1	1	0
0.3a	-6	-5	-5	-4	-3	-3	-32	-21	-13	-8	-5	-4	5	4	3	2	1	0
0.2a	-5	-4	-3	-2	-1	-1	-27	-17	-9	-5	-2	-1	8	5	3	2	1	0
0.1a	-3	-2	0	1	1	2	-17	-9	-5	-2	0	0	10	5	2	1	0	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	11	4	2	0	0	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	5	8	8	6	3	0
0.9a	-1	0	1	2	3	3	-5	-1	1	3	4	5	5	7	8	6	3	0
0.8a	-2	0	3	4	5	6	-10	-3	3	6	8	9	4	7	7	5	3	0
0.7a	-3	1	4	6	8	9	-15	-4	4	9	12	13	4	6	6	4	2	0
0.6a	-4	1	5	9	11	12	-20	-5	5	11	15	16	2	4	4	3	2	0
0.5a	-5	1	7	11	14	14	-23	-6	6	13	17	18	1	2	2	1	1	0
0.4a	-5	2	8	13	16	17	-25	-6	6	14	17	18	1	1	1	1	0	0
0.3a	-5	2	9	14	17	18	-25	-5	7	13	16	17	3	4	4	3	2	0
0.2a	-5	3	9	14	16	17	-23	-4	6	11	13	14	5	8	8	6	3	0
0.1a	-3	3	7	10	12	12	-15	-2	4	6	8	8	6	11	11	8	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	13	12	9	5	0

Short Side

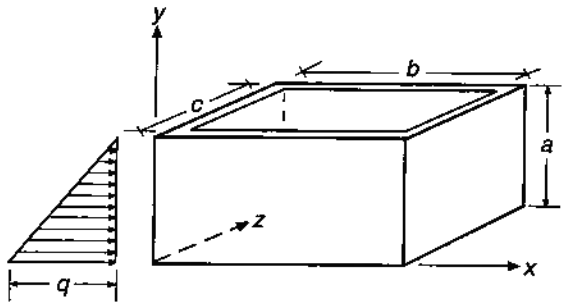
	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	5	3	2	1	0	0
0.9a	-1	-1	-1	-1	-1	-1	-5	-4	-3	-2	-1	-1	5	3	2	1	0	0
0.8a	-2	-2	-2	-2	-2	-1	-10	-7	-5	-3	-2	-2	4	3	2	1	0	0
0.7a	-3	-3	-2	-2	-2	-2	-15	-11	-7	-5	-3	-3	4	2	1	0	0	0
0.6a	-4	-3	-3	-3	-3	-3	-20	-14	-9	-6	-4	-3	2	1	0	0	0	0
0.5a	-5	-4	-3	-3	-3	-3	-23	-15	-10	-6	-3	-2	1	0	1	1	0	0
0.4a	-5	-4	-3	-3	-2	-2	-25	-16	-10	-5	-2	-1	1	1	1	1	1	0
0.3a	-5	-4	-3	-2	-1	-1	-25	-16	-8	-3	-1	0	3	2	2	1	1	0
0.2a	-5	-3	-1	0	1	1	-23	-13	-6	-2	1	2	5	3	2	1	0	0
0.1a	-3	-1	0	1	2	2	-15	-7	-3	0	1	2	6	3	1	0	0	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	2	0	1	1	0

Free Top
Hinged Base

CASE 2

$$\text{Deflection} = \frac{C_d\, q a^4}{1000\, D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b	0.2b	0.3b	0.4b	0.5b
			0.9b	0.8b	0.7b	0.6b	
4.0	3.0	0	14.10	34.30	51.80	63.20	67.00
4.0	2.0	0	17.40	39.10	57.10	68.60	72.50
4.0	1.5	0	18.80	41.00	59.20	70.80	74.70
4.0	1.0	0	19.40	41.80	60.10	71.70	75.70
4.0	0.5	0	17.90	39.60	57.60	69.10	73.00
3.0	2.0	0	7.30	17.30	26.00	31.70	33.70
3.0	1.5	0	8.60	19.10	28.10	33.90	35.90
3.0	1.0	0	9.30	20.20	29.30	35.20	37.20
3.0	0.5	0	8.70	19.20	28.10	33.90	36.00
2.0	1.5	0	2.30	5.50	8.30	10.30	10.90
2.0	1.0	0	3.00	6.60	9.70	11.70	12.40
2.0	0.5	0	3.00	6.60	9.70	11.70	12.40
1.5	1.0	0	1.10	2.60	3.90	4.80	5.10
1.5	0.5	0	1.40	2.90	4.30	5.30	5.60
1.0	0.5	0	0.40	0.80	1.30	1.50	1.60

Short Side - Along Midheight ($y = a/2$)

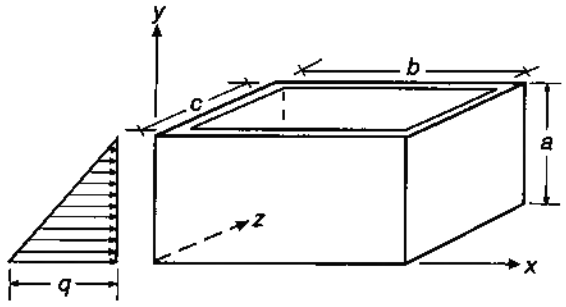
b/a	z / c/a	END	0.1c	0.2c	0.3c	0.4c	0.5c
			0.9c	0.8c	0.7c	0.6c	
4.0	3.0	0	1.60	8.60	15.90	21.00	22.80
4.0	2.0	0	-2.80	-2.90	-1.90	-1.00	-0.60
4.0	1.5	0	-3.40	-5.00	-5.70	-6.00	-6.00
4.0	1.0	0	-2.80	-4.70	-5.90	-6.50	-6.80
4.0	0.5	0	-1.20	-2.20	-2.80	-3.20	-3.40
3.0	2.0	0	-0.70	0.60	2.30	3.70	4.20
3.0	1.5	0	-1.80	-2.30	-2.30	-2.10	-2.00
3.0	1.0	0	-1.80	-2.90	-3.60	-3.90	-4.00
3.0	0.5	0	-0.90	-1.50	-1.90	-2.20	-2.30
2.0	1.5	0	-0.20	0.40	1.10	1.70	1.90
2.0	1.0	0	-0.80	-1.10	-1.30	-1.30	-1.30
2.0	0.5	0	-0.50	-0.80	-1.10	-1.20	-1.20
1.5	1.0	0	-0.30	-0.30	-0.20	-0.10	0.00
1.5	0.5	0	-0.30	-0.50	-0.60	-0.70	-0.70
1.0	0.5	0	-0.10	-0.20	-0.20	-0.30	-0.30

CASE 2

Free Top
Hinged Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	14.10	28.00	41.50	54.50	67.00	79.10	90.80	102.20	113.40	124.70
4.0	2.0	0	15.20	30.20	44.80	58.90	72.50	85.70	98.40	110.90	123.20	135.60
4.0	1.5	0	15.70	31.10	46.20	60.70	74.70	88.30	101.50	114.40	127.20	140.00
4.0	1.0	0	15.90	31.50	46.70	61.40	75.70	89.40	102.80	115.80	128.80	141.80
4.0	0.5	0	15.30	30.40	45.10	59.30	73.00	86.20	99.10	111.70	124.10	136.60
3.0	2.0	0	7.40	14.60	21.40	27.70	33.70	39.20	44.40	49.30	54.20	59.10
3.0	1.5	0	7.90	15.50	22.70	29.60	35.90	41.90	47.50	52.90	58.20	63.50
3.0	1.0	0	8.10	16.00	23.50	30.60	37.20	43.40	49.30	54.90	60.50	66.00
3.0	0.5	0	7.90	15.50	22.80	29.60	36.00	41.90	47.50	52.90	58.20	63.50
2.0	1.5	0	2.70	5.20	7.50	9.40	10.90	12.20	13.30	14.30	15.20	16.10
2.0	1.0	0	3.00	5.80	8.40	10.60	12.40	14.00	15.40	16.60	17.70	18.90
2.0	0.5	0	3.00	5.90	8.40	10.60	12.40	14.00	15.30	16.50	17.60	18.80
1.5	1.0	0	1.40	2.70	3.80	4.60	5.10	5.50	5.80	6.00	6.10	6.30
1.5	0.5	0	1.50	2.90	4.10	4.90	5.60	6.00	6.30	6.50	6.70	7.00
1.0	0.5	0	0.60	1.00	1.40	1.50	1.60	1.60	1.60	1.50	1.40	1.40

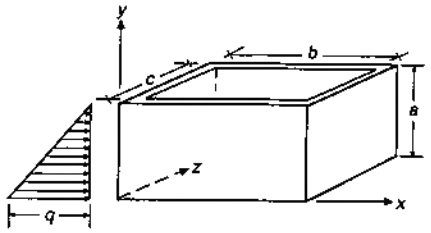
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	5.20	10.20	14.80	19.00	22.80	26.20	29.30	32.20	35.00	37.80
4.0	2.0	0	0.30	0.50	0.40	0.00	-0.60	-1.50	-2.50	-3.60	-4.80	-5.90
4.0	1.5	0	-0.90	-1.90	-3.10	-4.50	-6.00	-7.60	-9.30	-11.00	-12.60	-14.30
4.0	1.0	0	-1.20	-2.50	-3.90	-5.30	-6.80	-8.20	-9.60	-10.90	-12.20	-13.60
4.0	0.5	0	-0.70	-1.40	-2.00	-2.70	-3.40	-4.00	-4.50	-5.00	-5.50	-6.20
3.0	2.0	0	1.30	2.40	3.30	3.90	4.20	4.20	4.10	3.80	3.50	3.30
3.0	1.5	0	-0.10	-0.30	-0.70	-1.20	-2.00	-2.90	-3.80	-4.80	-5.80	-6.80
3.0	1.0	0	-0.70	-1.40	-2.20	-3.10	-4.00	-4.90	-5.80	-6.70	-7.60	-8.50
3.0	0.5	0	-0.50	-0.90	-1.40	-1.90	-2.30	-2.70	-3.00	-3.40	-3.70	-4.10
2.0	1.5	0	0.70	1.40	1.80	1.90	1.90	1.80	1.50	1.20	0.80	0.50
2.0	1.0	0	-0.10	-0.30	-0.50	-0.90	-1.30	-1.80	-2.20	-2.60	-3.10	-3.50
2.0	0.5	0	-0.20	-0.50	-0.80	-1.00	-1.20	-1.40	-1.60	-1.70	-1.90	-2.00
1.5	1.0	0	0.20	0.30	0.30	0.10	0.00	-0.30	-0.50	-0.80	-1.00	-1.20
1.5	0.5	0	-0.10	-0.30	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00	-1.00	-1.10
1.0	0.5	0	0.00	-0.10	-0.20	-0.20	-0.30	-0.30	-0.30	-0.30	-0.40	-0.40

CASE 2

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-39	0	0	0	0	0
0.9a	-52	-6	5	11	14	14
0.8a	-46	-8	12	22	27	28
0.7a	-41	-5	19	32	38	40
0.6a	-37	-1	27	41	48	50
0.5a	-33	5	33	48	54	56
0.4a	-29	10	36	50	57	58
0.3a	-23	14	37	48	53	55
0.2a	-17	15	32	40	44	45
0.1a	-9	11	20	24	26	27
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-196	-61	30	70	86	90
-261	-57	29	66	80	84
-231	-51	28	62	75	79
-207	-45	28	58	69	72
-186	-37	27	53	63	66
-165	-30	26	48	56	58
-143	-22	23	41	48	49
-117	-14	20	33	38	39
-85	-8	15	24	27	28
-47	-3	8	13	14	15
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
11	65	68	52	27	0
22	62	66	51	27	0
23	62	66	51	27	0
22	63	68	52	28	0
22	66	70	54	28	0
22	69	73	55	29	0
23	73	75	57	29	0
23	77	78	58	30	0
23	81	80	59	30	0
24	83	82	60	31	0
25	84	82	60	31	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-39	0	0	0	0	0
0.9a	-52	-12	0	6	9	10
0.8a	-46	-16	3	14	19	21
0.7a	-41	-14	8	22	29	31
0.6a	-37	-10	14	29	37	40
0.5a	-33	-4	20	35	44	46
0.4a	-29	1	24	39	47	49
0.3a	-23	6	26	39	45	47
0.2a	-17	8	24	33	38	39
0.1a	-9	7	16	21	23	24
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-196	-99	-8	40	63	70
-261	-92	-7	38	60	66
-231	-84	-4	37	56	62
-207	-75	-2	36	53	58
-186	-65	1	34	49	53
-165	-54	4	32	44	48
-143	-42	5	28	39	41
-117	-30	6	24	31	34
-85	-19	6	17	23	24
-47	-8	4	10	12	13
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
11	17	29	26	15	0
22	14	27	25	14	0
23	14	26	25	15	0
22	15	28	26	15	0
22	17	30	28	16	0
22	19	33	30	17	0
23	23	37	32	18	0
23	27	40	34	19	0
23	31	43	36	20	0
24	34	45	37	20	0
25	36	46	37	21	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-30	0	0	0	0	0
0.9a	-42	-4	6	11	14	15
0.8a	-38	-4	14	23	27	28
0.7a	-34	-1	22	34	39	41
0.6a	-31	4	29	43	49	51
0.5a	-28	9	35	49	55	57
0.4a	-25	14	39	52	57	59
0.3a	-20	17	38	49	54	55
0.2a	-15	17	33	41	44	45
0.1a	-8	12	21	25	26	27
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-150	-41	39	74	88	91
-209	-37	37	70	82	86
-188	-33	36	65	77	80
-170	-28	35	61	71	73
-155	-23	33	56	64	66
-140	-17	31	50	57	59
-123	-12	28	43	48	50
-102	-7	23	35	39	40
-75	-3	17	25	28	28
-42	0	10	13	15	15
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
33	72	71	53	28	0
40	70	70	53	28	0
41	69	70	53	28	0
41	71	71	54	28	0
41	73	73	55	29	0
41	77	76	56	29	0
42	81	79	58	30	0
43	85	81	59	30	0
43	89	83	60	31	0
44	92	85	61	31	0
45	93	85	61	31	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-30	0	0	0	0	0
0.9a	-42	-15	-6	-1	2	3
0.8a	-38	-20	-7	1	6	7
0.7a	-34	-19	-5	5	11	13
0.6a	-31	-15	-1	11	17	20
0.5a	-28	-11	5	16	23	26
0.4a	-25	-6	9	21	28	30
0.3a	-20	-2	13	23	29	31
0.2a	-15	1	14	22	26	28
0.1a	-8	3	11	15	17	18
BOT.	0	0	0	0	0	0

M_y Coefficient

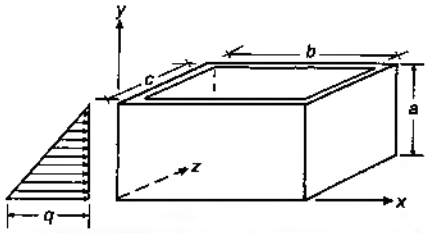
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-150	-116	-49	-8	15	22
-209	-107	-45	-6	15	22
-188	-99	-40	-4	16	23
-170	-90	-34	-1	18	23
-155	-79	-28	2	18	24
-140	-67	-22	5	19	23
-123	-54	-15	7	18	22
-102	-40	-9	8	16	19
-75	-26	-4	7	13	14
-42	-12	-1	4	7	8
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
33	18	5	0	1	0
40	20	7	1	0	0
41	20	8	2	0	0
41	19	7	1	1	0
41	19	5	1	2	0
41	17	3	3	3	0
42	14	1	5	4	0
43	11	4	8	5	0
43	7	7	10	6	0
44	4	10	11	7	0
45	2	11	12	7	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-27	0	0	0	0	0	-135	-32	43	75	88	92	41	75	72	54	28	0
0.9a	-38	-3	7	12	14	15	-191	-30	41	71	83	86	47	73	71	54	28	0
0.8a	-34	-2	15	23	27	29	-171	-26	39	67	77	80	47	72	71	54	28	0
0.7a	-31	1	23	34	40	41	-155	-22	38	62	71	74	47	74	73	55	28	0
0.6a	-28	6	30	43	49	51	-141	-17	36	57	65	67	48	76	75	56	29	0
0.5a	-26	11	36	50	56	57	-128	-12	33	51	57	59	49	80	77	57	29	0
0.4a	-23	16	40	52	58	59	-113	-8	29	43	49	50	50	84	80	58	30	0
0.3a	-19	18	39	50	54	56	-94	-4	24	35	39	40	51	88	83	60	31	0
0.2a	-14	18	33	41	44	45	-70	-1	18	25	28	28	52	92	85	61	31	0
0.1a	-8	12	21	25	27	27	-39	1	10	13	15	15	53	95	86	61	31	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	54	96	86	62	31	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-27	0	0	0	0	0	-135	-128	-79	-47	-28	-22	41	31	17	10	4	0
0.9a	-38	-18	-10	-6	-4	-3	-191	-119	-73	-43	-25	-19	47	32	20	11	5	0
0.8a	-34	-23	-14	-8	-5	-4	-171	-110	-66	-37	-21	-15	47	31	20	12	5	0
0.7a	-31	-22	-13	-7	-3	-1	-155	-100	-59	-31	-16	-11	47	31	20	12	5	0
0.6a	-28	-19	-10	-3	2	3	-141	-89	-50	-25	-11	-6	48	32	19	11	5	0
0.5a	-26	-15	-5	2	7	9	-128	-76	-41	-18	-6	-2	49	31	18	9	4	0
0.4a	-23	-11	0	8	13	14	-113	-62	-31	-12	-2	2	50	30	16	7	3	0
0.3a	-19	-7	4	12	16	18	-94	-47	-22	-7	1	4	51	27	13	5	2	0
0.2a	-14	-3	7	13	17	18	-70	-32	-13	-3	3	4	52	24	10	3	1	0
0.1a	-8	1	7	10	12	13	-39	-15	-6	0	2	3	53	21	7	2	0	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	54	20	6	1	0	0

$\frac{b}{a} = 4.0, \frac{c}{a} = 1.0$

Long Side

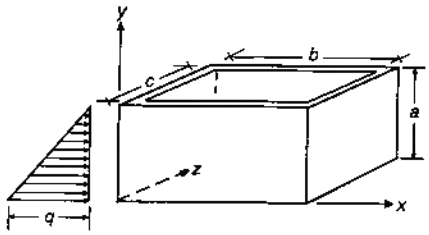
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-27	0	0	0	0	0	-133	-29	44	76	89	92	43	77	73	54	28	0
0.9a	-37	-3	7	12	14	15	-187	-26	42	72	83	86	47	74	72	54	28	0
0.8a	-33	-2	15	24	28	29	-165	-23	41	67	78	80	47	74	72	54	28	0
0.7a	-29	2	23	35	40	41	-147	-19	39	62	72	74	48	75	73	55	29	0
0.6a	-27	7	31	44	49	51	-133	-15	37	57	65	67	49	78	75	56	29	0
0.5a	-24	13	37	50	56	58	-119	-10	34	51	57	59	51	81	78	57	30	0
0.4a	-21	17	41	52	58	59	-105	-6	30	44	49	50	53	85	81	59	30	0
0.3a	-17	19	40	50	54	56	-87	-2	25	35	39	40	55	90	83	60	31	0
0.2a	-13	19	34	41	44	45	-65	0	18	25	28	28	56	93	85	61	31	0
0.1a	-7	13	21	25	27	27	-36	1	10	14	15	15	58	96	86	62	31	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	59	97	87	62	31	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-27	0	0	0	0	0	-133	-154	-124	-103	-91	-87	43	38	24	15	7	0
0.9a	-37	-24	-17	-13	-11	-11	-187	-142	-114	-96	-84	-81	47	35	25	16	8	0
0.8a	-33	-28	-23	-19	-17	-17	-165	-131	-105	-87	-76	-72	47	34	25	16	8	0
0.7a	-29	-26	-23	-20	-18	-18	-147	-119	-94	-77	-66	-63	48	36	26	17	8	0
0.6a	-27	-23	-20	-17	-16	-15	-133	-105	-82	-66	-56	-53	49	37	27	17	8	0
0.5a	-24	-20	-16	-13	-11	-10	-119	-91	-69	-54	-45	-42	51	39	27	17	8	0
0.4a	-21	-16	-11	-8	-5	-4	-105	-75	-55	-41	-34	-31	53	39	27	17	8	0
0.3a	-17	-12	-6	-2	1	1	-87	-58	-40	-29	-23	-21	55	39	26	16	7	0
0.2a	-13	-7	-1	3	5	6	-65	-40	-26	-18	-14	-12	56	37	24	14	7	0
0.1a	-7	-2	2	4	6	6	-36	-20	-12	-8	-6	-5	58	35	22	13	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	59	34	21	12	6	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 0.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-31	0	0	0	0	0	-153	-39	40	74	88	91	33	73	72	54	28	0
0.9a	-43	-4	7	12	14	15	-216	-36	38	70	82	86	37	71	71	53	28	0
0.8a	-38	-3	14	23	27	29	-188	-31	37	66	77	80	37	70	71	53	28	0
0.7a	-33	0	22	34	39	41	-165	-27	35	61	71	73	37	72	72	54	28	0
0.6a	-29	6	30	43	49	51	-145	-21	34	56	64	67	39	75	74	55	29	0
0.5a	-25	11	36	49	56	57	-127	-16	31	50	57	59	41	78	76	57	29	0
0.4a	-22	16	40	52	58	59	-109	-10	28	43	48	50	43	82	79	58	30	0
0.3a	-18	19	39	49	54	55	-89	-5	23	35	39	40	46	86	81	59	30	0
0.2a	-13	18	34	41	44	45	-65	-2	17	25	28	28	48	89	83	60	31	0
0.1a	-7	13	21	25	26	27	-36	0	10	13	15	15	50	92	85	61	31	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	51	93	85	61	31	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-31	0	0	0	0	0	-153	-211	-198	-189	-184	-182	33	41	26	16	8	0
0.9a	-43	-37	-31	-26	-24	-23	-216	-195	-182	-175	-171	-169	37	27	21	14	7	0
0.8a	-38	-36	-35	-34	-33	-33	-188	-177	-168	-161	-157	-156	37	26	19	12	6	0
0.7a	-33	-33	-33	-33	-33	-33	-165	-157	-151	-145	-142	-141	37	28	20	13	7	0
0.6a	-29	-29	-29	-29	-29	-29	-145	-138	-132	-128	-125	-124	39	30	22	15	7	0
0.5a	-25	-25	-25	-25	-25	-25	-127	-119	-113	-108	-105	-104	41	32	24	16	8	0
0.4a	-22	-21	-21	-20	-20	-20	-109	-100	-92	-87	-84	-83	43	34	26	17	9	0
0.3a	-18	-17	-16	-15	-14	-14	-89	-78	-71	-66	-63	-62	46	35	26	18	9	0
0.2a	-13	-12	-10	-9	-8	-8	-65	-55	-48	-43	-41	-40	48	36	27	17	9	0
0.1a	-7	-6	-4	-3	-2	-2	-36	-28	-24	-21	-19	-19	50	36	26	17	8	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	51	35	25	16	8	0

$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 2.0

Long Side

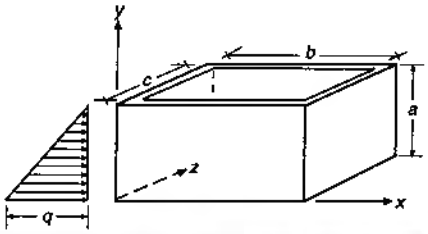
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-19	0	0	0	0	0	-97	-45	20	56	73	78	12	37	39	31	16	0
0.9a	-30	-5	3	8	11	12	-152	-42	20	53	69	73	19	34	37	30	16	0
0.8a	-28	-6	9	17	22	24	-141	-38	20	51	65	69	20	34	37	30	16	0
0.7a	-26	-3	15	26	32	34	-132	-34	20	48	60	64	20	35	39	31	17	0
0.6a	-25	0	21	34	41	43	-124	-29	21	45	56	59	20	37	41	33	18	0
0.5a	-23	4	27	40	47	50	-115	-23	20	41	50	52	20	41	44	35	18	0
0.4a	-21	8	30	43	50	52	-103	-17	19	36	43	45	21	45	47	37	19	0
0.3a	-17	11	31	42	48	50	-87	-11	17	29	35	36	21	49	51	39	20	0
0.2a	-13	12	27	36	40	41	-66	-6	13	21	25	26	22	54	54	40	21	0
0.1a	-7	9	18	22	24	25	-37	-2	7	12	13	14	22	57	56	41	21	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	23	59	56	42	21	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-19	0	0	0	0	0	-97	-80	-26	9	28	34	12	6	2	4	3	0
0.9a	-30	-10	-3	1	4	4	-152	-74	-23	10	28	33	19	8	0	3	2	0
0.8a	-28	-13	-3	5	9	10	-141	-69	-20	11	28	33	20	8	1	3	2	0
0.7a	-26	-12	0	9	15	17	-132	-63	-16	12	28	33	20	7	0	4	3	0
0.6a	-25	-10	4	15	21	24	-124	-56	-12	14	27	32	20	6	2	5	4	0
0.5a	-23	-6	9	20	27	29	-115	-48	-8	15	26	30	20	4	5	8	5	0
0.4a	-21	-3	13	25	31	33	-103	-39	-4	15	24	27	21	1	9	10	6	0
0.3a	-17	1	16	26	32	34	-87	-29	-1	14	21	23	21	3	12	13	8	0
0.2a	-13	3	16	24	28	30	-66	-18	1	11	16	17	22	7	16	15	9	0
0.1a	-7	4	12	16	18	19	-37	-8	2	6	9	10	22	10	18	16	9	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	23	12	19	17	10	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 1.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0	-82	-34	26	59	75	80	20	40	41	32	17	0
0.9a	-26	-4	4	9	11	12	-132	-32	25	56	71	75	26	38	40	31	17	0
0.8a	-25	-4	10	18	23	24	-123	-29	25	53	67	70	26	38	40	31	17	0
0.7a	-23	-1	16	27	33	35	-116	-25	25	50	62	65	27	39	41	32	17	0
0.6a	-22	3	23	35	42	44	-109	-21	25	47	57	60	27	41	43	34	18	0
0.5a	-20	7	28	41	48	50	-102	-16	24	43	51	53	28	45	46	36	19	0
0.4a	-19	10	32	44	51	53	-93	-11	22	37	44	46	29	49	50	38	20	0
0.3a	-16	13	32	43	49	50	-79	-7	19	30	35	37	30	54	53	40	21	0
0.2a	-12	13	28	36	40	41	-60	-3	15	22	25	26	31	58	56	41	21	0
0.1a	-7	10	18	22	24	25	-34	-1	8	12	14	14	32	62	58	42	22	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	32	63	58	42	22	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-16	0	0	0	0	0	-82	-86	-48	-22	-7	-2	20	18	10	5	2	0
0.9a	-26	-12	-6	-3	-2	-1	-132	-80	-44	-19	-5	0	26	19	12	6	3	0
0.8a	-25	-15	-8	-3	0	0	-123	-75	-40	-16	-2	2	26	19	12	7	3	0
0.7a	-23	-15	-7	-1	3	4	-116	-69	-35	-12	1	5	27	19	12	7	3	0
0.6a	-22	-13	-4	3	7	9	-109	-62	-29	-8	4	8	27	19	11	5	2	0
0.5a	-20	-10	0	8	12	14	-102	-54	-23	-3	7	10	28	18	9	4	1	0
0.4a	-19	-7	4	12	17	19	-93	-45	-17	0	9	12	29	16	6	2	0	0
0.3a	-16	-4	7	15	20	21	-79	-35	-11	2	9	11	30	13	3	1	1	0
0.2a	-12	-1	9	16	19	20	-60	-23	-6	4	8	9	31	10	0	3	2	0
0.1a	-7	2	8	11	13	14	-34	-11	-2	3	5	6	32	6	3	5	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	32	5	4	6	4	0

$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 1.0

Long Side

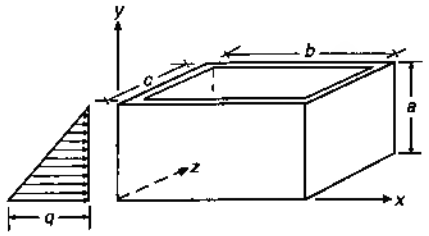
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0	-78	-29	30	61	76	81	24	43	42	33	17	0
0.9a	-25	-3	5	9	12	12	-124	-26	29	58	72	76	28	40	41	32	17	0
0.8a	-23	-2	11	19	23	24	-113	-23	28	55	68	71	28	40	41	32	17	0
0.7a	-21	1	17	28	34	35	-105	-20	28	52	63	66	29	41	42	33	18	0
0.6a	-20	5	24	36	43	45	-99	-16	27	48	58	60	30	44	45	35	18	0
0.5a	-18	9	30	42	49	51	-92	-12	26	44	52	54	32	47	48	36	19	0
0.4a	-17	12	33	45	51	53	-83	-8	24	38	44	46	34	52	51	38	20	0
0.3a	-14	14	33	44	49	51	-72	-4	20	31	36	37	35	56	54	40	21	0
0.2a	-11	14	29	37	40	42	-55	-1	15	22	26	26	37	61	57	42	21	0
0.1a	-6	10	18	23	25	25	-31	0	9	12	14	14	38	64	59	43	22	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	39	66	59	43	22	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-16	0	0	0	0	0	-78	-101	-80	-65	-56	-53	24	25	16	10	5	0
0.9a	-25	-16	-11	-8	-7	-7	-124	-93	-74	-60	-51	-48	28	23	17	11	5	0
0.8a	-23	-19	-15	-12	-11	-10	-113	-88	-68	-54	-45	-42	28	22	17	11	6	0
0.7a	-21	-18	-15	-12	-11	-10	-105	-81	-61	-47	-38	-36	29	23	17	11	6	0
0.6a	-20	-16	-13	-10	-9	-8	-99	-73	-53	-39	-31	-28	30	24	18	12	6	0
0.5a	-18	-14	-10	-7	-5	-4	-92	-65	-45	-31	-24	-21	32	25	18	11	6	0
0.4a	-17	-12	-7	-3	0	1	-83	-55	-36	-23	-16	-14	34	25	17	10	5	0
0.3a	-14	-8	-3	2	4	5	-72	-43	-26	-15	-10	-8	35	24	15	9	4	0
0.2a	-11	-5	1	5	7	8	-55	-30	-16	-9	-5	-3	37	22	13	7	3	0
0.1a	-6	-1	3	5	7	7	-31	-15	-7	-3	-1	-1	38	20	11	5	2	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	39	19	10	5	2	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-31	0	0	0	0	0
0.9a	-43	-4	7	12	14	15
0.8a	-38	-3	14	23	27	29
0.7a	-33	0	22	34	39	41
0.6a	-29	6	30	43	49	51
0.5a	-25	11	36	49	56	57
0.4a	-22	16	40	52	58	59
0.3a	-18	19	39	49	54	55
0.2a	-13	18	34	41	44	45
0.1a	-7	13	21	25	26	27
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-153	-39	40	74	88	91
-216	-36	38	70	82	86
-188	-31	37	66	77	80
-165	-27	35	61	71	73
-145	-21	34	56	64	67
-127	-16	31	50	57	59
-109	-10	28	43	48	50
-89	-5	23	35	39	40
-65	-2	17	25	28	28
-36	0	10	13	15	15
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
33	73	72	54	28	0
37	71	71	53	28	0
37	70	71	53	28	0
37	72	72	54	28	0
39	75	74	55	29	0
41	78	76	57	29	0
43	82	79	58	30	0
46	86	81	59	30	0
48	89	83	60	31	0
50	92	85	61	31	0
51	93	85	61	31	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-31	0	0	0	0	0
0.9a	-43	-37	-31	-26	-24	-23
0.8a	-38	-36	-35	-34	-33	-33
0.7a	-33	-33	-33	-33	-33	-33
0.6a	-29	-29	-29	-29	-29	-29
0.5a	-25	-25	-25	-25	-25	-25
0.4a	-22	-21	-21	-20	-20	-20
0.3a	-18	-17	-16	-15	-14	-14
0.2a	-13	-12	-10	-9	-8	-8
0.1a	-7	-6	-4	-3	-2	-2
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-153	-211	-198	-189	-184	-182
-216	-195	-182	-175	-171	-169
-188	-177	-168	-161	-157	-156
-165	-157	-151	-145	-142	-141
-145	-138	-132	-128	-125	-124
-127	-119	-113	-108	-105	-104
-109	-100	-92	-87	-84	-83
-89	-78	-71	-66	-63	-62
-65	-55	-48	-43	-41	-40
-36	-28	-24	-21	-19	-19
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
33	41	26	16	8	0
37	27	21	14	7	0
37	26	19	12	6	0
37	28	20	13	7	0
39	30	22	15	7	0
41	32	24	16	8	0
43	34	26	17	9	0
46	35	26	18	9	0
48	36	27	17	9	0
50	36	26	17	8	0
51	35	25	16	8	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 2.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-19	0	0	0	0	0
0.9a	-30	-5	3	8	11	12
0.8a	-28	-6	9	17	22	24
0.7a	-26	-3	15	26	32	34
0.6a	-25	0	21	34	41	43
0.5a	-23	4	27	40	47	50
0.4a	-21	8	30	43	50	52
0.3a	-17	11	31	42	48	50
0.2a	-13	12	27	36	40	41
0.1a	-7	9	18	22	24	25
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-97	-45	20	56	73	78
-152	-42	20	53	69	73
-141	-38	20	51	65	69
-132	-34	20	48	60	64
-124	-29	21	45	56	59
-115	-23	20	41	50	52
-103	-17	19	36	43	45
-87	-11	17	29	35	36
-66	-6	13	21	25	26
-37	-2	7	12	13	14
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
12	37	39	31	16	0
19	34	37	30	16	0
20	34	37	30	16	0
20	35	39	31	17	0
20	37	41	33	18	0
20	41	44	35	18	0
21	45	47	37	19	0
21	49	51	39	20	0
22	54	54	40	21	0
22	57	56	41	21	0
23	59	56	42	21	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-19	0	0	0	0	0
0.9a	-30	-10	-3	1	4	4
0.8a	-28	-13	-3	5	9	10
0.7a	-26	-12	0	9	15	17
0.6a	-25	-10	4	15	21	24
0.5a	-23	-6	9	20	27	29
0.4a	-21	-3	13	25	31	33
0.3a	-17	1	16	26	32	34
0.2a	-13	3	16	24	28	30
0.1a	-7	4	12	16	18	19
BOT.	0	0	0	0	0	0

M_y Coefficient

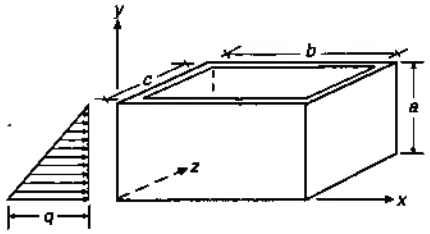
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-97	-80	-26	9	28	34
-152	-74	-23	10	28	33
-141	-69	-20	11	28	33
-132	-63	-16	12	28	33
-124	-56	-12	14	27	32
-115	-48	-8	15	26	30
-103	-39	-4	15	24	27
-87	-29	-1	14	21	23
-66	-18	1	11	16	17
-37	-8	2	6	9	10
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
12	6	2	4	3	0
19	8	0	3	2	0
20	8	1	3	2	0
20	7	0	4	3	0
20	6	2	5	4	0
20	4	5	8	5	0
21	1	9	10	6	0
21	3	12	13	8	0
22	7	16	15	9	0
22	10	18	16	9	0
23	12	19	17	10	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 1.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0	-82	-34	26	59	75	80	20	40	41	32	17	0
0.9a	-26	-4	4	9	11	12	-132	-32	25	56	71	75	26	38	40	31	17	0
0.8a	-25	-4	10	18	23	24	-123	-29	25	53	67	70	26	38	40	31	17	0
0.7a	-23	-1	16	27	33	35	-116	-25	25	50	62	65	27	39	41	32	17	0
0.6a	-22	3	23	35	42	44	-109	-21	25	47	57	60	27	41	43	34	18	0
0.5a	-20	7	28	41	48	50	-102	-16	24	43	51	53	28	45	46	36	19	0
0.4a	-19	10	32	44	51	53	-93	-11	22	37	44	46	29	49	50	38	20	0
0.3a	-16	13	32	43	49	50	-79	-7	19	30	35	37	30	54	53	40	21	0
0.2a	-12	13	28	36	40	41	-60	-3	15	22	25	26	31	58	56	41	21	0
0.1a	-7	10	18	22	24	25	-34	-1	8	12	14	14	32	62	58	42	22	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	32	63	58	42	22	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-16	0	0	0	0	0	-82	-86	-48	-22	-7	-2	20	18	10	5	2	0
0.9a	-26	-12	-6	-3	-2	-1	-132	-80	-44	-19	-5	0	26	19	12	6	3	0
0.8a	-25	-15	-8	-3	0	0	-123	-75	-40	-16	-2	2	26	19	12	7	3	0
0.7a	-23	-15	-7	-1	3	4	-116	-69	-35	-12	1	5	27	19	12	7	3	0
0.6a	-22	-13	-4	3	7	9	-109	-62	-29	-8	4	8	27	19	11	5	2	0
0.5a	-20	-10	0	8	12	14	-102	-54	-23	-3	7	10	28	18	9	4	1	0
0.4a	-19	-7	4	12	17	19	-93	-45	-17	0	9	12	29	16	6	2	0	0
0.3a	-16	-4	7	15	20	21	-79	-35	-11	2	9	11	30	13	3	1	1	0
0.2a	-12	-1	9	16	19	20	-60	-23	-6	4	8	9	31	10	0	3	2	0
0.1a	-7	2	8	11	13	14	-34	-11	-2	3	5	6	32	6	3	5	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	32	5	4	6	4	0

$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 1.0

Long Side

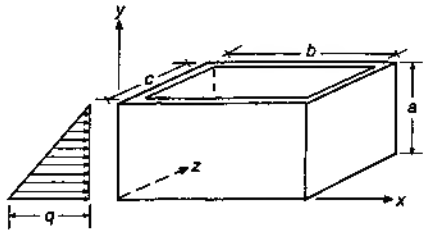
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0	-78	-29	30	61	76	81	24	43	42	33	17	0
0.9a	-25	-3	5	9	12	12	-124	-26	29	58	72	76	28	40	41	32	17	0
0.8a	-23	-2	11	19	23	24	-113	-23	28	55	68	71	28	40	41	32	17	0
0.7a	-21	1	17	28	34	35	-105	-20	28	52	63	66	29	41	42	33	18	0
0.6a	-20	5	24	36	43	45	-99	-16	27	48	58	60	30	44	45	35	18	0
0.5a	-18	9	30	42	49	51	-92	-12	26	44	52	54	32	47	48	36	19	0
0.4a	-17	12	33	45	51	53	-83	-8	24	38	44	46	34	52	51	38	20	0
0.3a	-14	14	33	44	49	51	-72	-4	20	31	36	37	35	56	54	40	21	0
0.2a	-11	14	29	37	40	42	-55	-1	15	22	26	26	37	61	57	42	21	0
0.1a	-6	10	18	23	25	25	-31	0	9	12	14	14	38	64	59	43	22	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	39	66	59	43	22	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-16	0	0	0	0	0	-78	-101	-80	-65	-56	-53	24	25	16	10	5	0
0.9a	-25	-16	-11	-8	-7	-7	-124	-93	-74	-60	-51	-48	28	23	17	11	5	0
0.8a	-23	-19	-15	-12	-11	-10	-113	-88	-68	-54	-45	-42	28	22	17	11	6	0
0.7a	-21	-18	-15	-12	-11	-10	-105	-81	-61	-47	-38	-36	29	23	17	11	6	0
0.6a	-20	-16	-13	-10	-9	-8	-99	-73	-53	-39	-31	-28	30	24	18	12	6	0
0.5a	-18	-14	-10	-7	-5	-4	-92	-65	-45	-31	-24	-21	32	25	18	11	6	0
0.4a	-17	-12	-7	-3	0	1	-83	-55	-36	-23	-16	-14	34	25	17	10	5	0
0.3a	-14	-8	-3	2	4	5	-72	-43	-26	-15	-10	-8	35	24	15	9	4	0
0.2a	-11	-5	1	5	7	8	-55	-30	-16	-9	-5	-3	37	22	13	7	3	0
0.1a	-6	-1	3	5	7	7	-31	-15	-7	-3	-1	-1	38	20	11	5	2	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	39	19	10	5	2	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-18	0	0	0	0	0	-90	-35	27	60	75	80	18	41	41	32	17	0
0.9a	-28	-4	4	9	11	12	-142	-32	26	56	71	75	22	38	40	31	17	0
0.8a	-25	-4	10	18	23	24	-126	-29	25	53	67	70	22	38	40	32	17	0
0.7a	-23	0	17	28	33	35	-114	-25	25	50	62	65	22	39	41	33	17	0
0.6a	-21	4	24	36	42	44	-103	-20	25	47	57	60	24	42	44	34	18	0
0.5a	-19	9	29	42	49	51	-93	-15	24	43	51	53	26	45	47	36	19	0
0.4a	-16	12	33	45	51	53	-82	-10	22	37	44	46	28	49	50	38	20	0
0.3a	-14	15	33	44	49	50	-69	-5	19	30	35	37	31	54	53	39	21	0
0.2a	-10	15	29	37	40	41	-52	-2	15	22	25	26	34	58	55	41	21	0
0.1a	-6	11	19	23	25	25	-30	0	8	12	14	14	36	62	57	42	22	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	37	63	58	42	22	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-18	0	0	0	0	0	-90	-137	-130	-125	-122	-121	18	26	17	10	5	0
0.9a	-28	-24	-20	-17	-16	-15	-142	-129	-121	-116	-113	-112	22	17	13	9	5	0
0.8a	-25	-24	-23	-22	-22	-22	-126	-119	-112	-107	-105	-104	22	16	12	8	4	0
0.7a	-23	-22	-22	-22	-22	-22	-114	-108	-102	-98	-95	-94	22	17	13	9	4	0
0.6a	-21	-20	-20	-20	-20	-20	-103	-97	-91	-86	-84	-83	24	19	14	10	5	0
0.5a	-19	-18	-18	-18	-18	-18	-93	-85	-79	-74	-71	-70	26	21	16	11	5	0
0.4a	-16	-16	-15	-15	-14	-14	-82	-72	-65	-60	-57	-56	28	23	17	12	6	0
0.3a	-14	-13	-12	-11	-10	-10	-69	-58	-50	-45	-42	-41	31	24	18	12	6	0
0.2a	-10	-9	-7	-6	-5	-5	-52	-41	-34	-30	-27	-26	34	25	18	12	6	0
0.1a	-6	-4	-3	-2	-1	-1	-30	-22	-17	-14	-13	-12	36	25	17	11	5	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	37	24	17	11	5	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 1.5$

Long Side

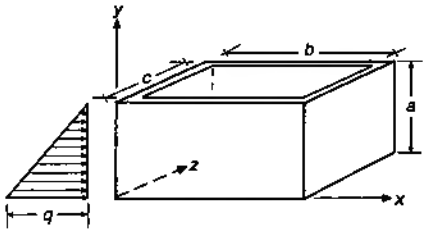
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-7	0	0	0	0	0	-36	-30	7	33	47	51	3	10	12	10	6	0
0.9a	-15	-4	1	4	6	7	-76	-28	7	32	45	49	7	8	10	9	5	0
0.8a	-15	-4	4	10	13	14	-77	-27	8	31	44	48	7	8	10	9	5	0
0.7a	-15	-3	8	16	20	22	-77	-25	10	31	42	46	8	9	11	10	6	0
0.6a	-16	-1	12	22	27	29	-78	-23	11	30	40	43	8	11	13	11	6	0
0.5a	-15	1	16	27	33	35	-77	-20	12	29	37	40	9	14	16	14	8	0
0.4a	-15	3	19	30	36	38	-73	-16	12	26	33	35	9	18	20	16	9	0
0.3a	-13	5	21	31	36	38	-64	-11	11	22	28	29	10	22	24	19	10	0
0.2a	-10	7	19	27	31	32	-51	-7	9	17	20	21	10	27	28	21	11	0
0.1a	-6	6	13	17	20	20	-30	-3	6	9	11	12	11	30	30	23	12	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	11	32	31	23	12	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-7	0	0	0	0	0	-36	-45	-18	2	14	18	3	6	2	0	0	0
0.9a	-15	-6	-2	0	1	1	-76	-42	-16	3	15	19	7	7	4	2	1	0
0.8a	-15	-8	-2	2	4	5	-77	-41	-14	5	16	20	7	7	4	2	1	0
0.7a	-15	-8	-1	5	8	9	-77	-39	-11	7	18	21	8	7	4	2	0	0
0.6a	-16	-6	2	9	13	14	-78	-36	-8	9	19	22	8	6	3	0	0	0
0.5a	-15	-5	5	13	18	19	-77	-33	-5	11	20	22	9	4	0	2	1	0
0.4a	-15	-3	8	17	22	23	-73	-28	-2	12	19	21	9	2	3	4	3	0
0.3a	-13	-1	11	19	24	25	-64	-22	0	11	17	19	10	1	6	7	4	0
0.2a	-10	1	11	18	22	23	-51	-14	2	10	13	15	10	5	10	9	5	0
0.1a	-6	3	9	13	15	15	-30	-7	2	6	8	8	11	8	13	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	11	10	14	12	7	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 2.0, \frac{c}{a} = 1.0$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-6	0	0	0	0	0	-29	-21	14	38	51	55	8	13	14	11	6	0
0.9a	-13	-2	2	5	7	7	-64	-19	14	36	49	53	11	12	13	10	6	0
0.8a	-13	-2	5	11	14	15	-64	-18	15	36	47	51	11	12	12	10	6	0
0.7a	-13	-1	10	17	22	23	-64	-17	15	35	45	49	12	13	13	11	6	0
0.6a	-13	2	14	23	29	31	-65	-15	16	34	43	46	13	15	16	13	7	0
0.5a	-13	4	18	29	35	37	-64	-13	16	32	40	42	14	18	19	15	8	0
0.4a	-12	6	21	32	38	40	-62	-10	16	29	35	37	15	22	22	18	10	0
0.3a	-11	7	22	32	37	39	-56	-7	14	24	29	30	17	26	26	20	11	0
0.2a	-9	8	21	28	32	33	-44	-3	11	18	21	22	18	31	30	23	12	0
0.1a	-5	6	14	18	20	21	-26	-1	7	10	12	12	19	35	33	24	12	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	19	37	34	25	13	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-6	0	0	0	0	0	-29	-49	-37	-27	-21	-19	8	12	8	5	2	0
0.9a	-13	-8	-5	-4	-3	-3	-64	-47	-34	-24	-18	-16	11	11	9	6	3	0
0.8a	-13	-10	-7	-5	-4	-4	-64	-46	-31	-21	-15	-13	11	11	9	6	3	0
0.7a	-13	-10	-7	-5	-4	-3	-64	-44	-29	-18	-11	-9	12	11	9	6	3	0
0.6a	-13	-9	-6	-3	-1	-1	-65	-42	-25	-14	-7	-5	13	12	9	6	3	0
0.5a	-13	-8	-4	-1	2	3	-64	-39	-21	-9	-3	-1	14	12	9	5	3	0
0.4a	-12	-7	-2	3	5	6	-62	-34	-16	-5	1	3	15	11	7	4	2	0
0.3a	-11	-5	1	6	9	10	-56	-28	-12	-2	3	5	17	10	5	2	1	0
0.2a	-9	-3	3	8	10	11	-44	-20	-7	0	4	5	18	8	3	0	0	0
0.1a	-5	0	4	7	8	9	-26	-10	-3	1	3	4	19	6	0	2	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	19	4	1	2	2	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 0.5$

Long Side

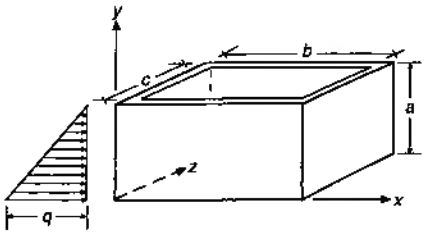
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-7	0	0	0	0	0	-35	-23	14	38	51	55	6	13	14	12	6	0
0.9a	-14	-3	2	5	7	7	-71	-21	14	36	49	53	8	11	13	11	6	0
0.8a	-13	-3	5	11	14	15	-67	-19	14	36	47	51	8	11	13	11	6	0
0.7a	-13	0	10	18	22	24	-64	-17	15	35	45	48	8	12	14	12	6	0
0.6a	-12	2	15	24	29	31	-62	-14	16	34	43	46	10	14	16	13	7	0
0.5a	-12	5	19	29	35	37	-59	-11	16	32	39	42	12	17	19	15	8	0
0.4a	-11	7	23	33	38	40	-55	-8	16	29	35	37	14	21	22	18	10	0
0.3a	-10	9	24	33	38	40	-48	-5	15	24	29	30	17	26	26	20	11	0
0.2a	-8	9	21	29	32	34	-38	-2	12	18	21	22	19	31	30	22	12	0
0.1a	-5	7	14	18	20	21	-23	0	7	10	12	12	21	35	32	24	12	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	22	37	33	24	13	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-7	0	0	0	0	0	-35	-67	-65	-63	-61	-61	6	12	8	5	2	0
0.9a	-14	-12	-10	-8	-8	-7	-71	-64	-61	-59	-57	-57	8	7	6	4	2	0
0.8a	-13	-13	-12	-11	-11	-11	-67	-62	-58	-55	-53	-53	8	6	5	4	2	0
0.7a	-13	-12	-12	-12	-12	-12	-64	-59	-54	-51	-49	-48	8	7	6	4	2	0
0.6a	-12	-12	-12	-12	-11	-11	-62	-55	-50	-46	-44	-43	10	9	7	5	2	0
0.5a	-12	-11	-11	-11	-10	-10	-59	-51	-45	-40	-37	-36	12	10	8	6	3	0
0.4a	-11	-10	-10	-9	-9	-9	-55	-45	-38	-33	-30	-29	14	12	9	6	3	0
0.3a	-10	-9	-8	-7	-6	-6	-48	-38	-30	-25	-22	-21	17	13	10	7	3	0
0.2a	-8	-6	-5	-4	-3	-2	-38	-28	-21	-16	-14	-13	19	14	10	6	3	0
0.1a	-5	-3	-1	0	0	1	-23	-15	-10	-7	-6	-5	21	14	9	6	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	22	13	8	5	2	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.5, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-2	0	0	0	0	0
0.9a	-7	-2	1	2	3	4
0.8a	-8	-2	2	6	8	8
0.7a	-9	-1	5	10	13	14
0.6a	-10	0	8	14	18	19
0.5a	-10	1	11	18	23	24
0.4a	-10	2	13	21	26	28
0.3a	-9	3	15	23	27	29
0.2a	-8	4	14	21	25	26
0.1a	-5	4	10	14	16	17
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-12	-14	6	22	31	35
-37	-14	7	22	31	34
-41	-14	7	22	31	34
-45	-14	8	23	31	34
-48	-14	9	23	31	33
-50	-13	10	23	30	32
-50	-12	10	21	27	29
-47	-9	10	19	23	25
-38	-6	8	15	18	19
-23	-2	5	8	10	10
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
2	3	4	3	2	0
4	2	2	2	1	0
4	2	2	2	1	0
4	2	3	3	2	0
5	4	4	4	2	0
6	6	7	6	3	0
7	9	10	8	5	0
8	13	14	11	6	0
9	17	18	14	7	0
9	21	21	16	8	0
10	23	22	16	8	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-2	0	0	0	0	0
0.9a	-7	-4	-3	-2	-1	-1
0.8a	-8	-6	-4	-2	-1	-1
0.7a	-9	-6	-3	-1	0	0
0.6a	-10	-6	-2	0	2	3
0.5a	-10	-5	-1	3	5	6
0.4a	-10	-4	1	5	8	9
0.3a	-9	-3	3	8	11	12
0.2a	-8	-1	5	9	12	13
0.1a	-5	0	5	8	9	10
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-12	-26	-17	-10	-5	-3
-37	-26	-16	-8	-3	-1
-41	-26	-15	-6	-1	1
-45	-27	-13	-4	2	4
-48	-27	-12	-1	4	6
-50	-26	-10	1	7	9
-50	-24	-7	3	9	10
-47	-20	-4	5	9	11
-38	-15	-2	5	8	9
-23	-7	0	3	5	6
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
2	6	4	3	1	0
4	6	5	3	2	0
4	6	5	4	2	0
4	6	5	4	2	0
5	6	5	4	2	0
6	6	4	3	1	0
7	5	3	1	0	0
8	3	1	1	1	0
9	1	2	3	2	0
9	1	5	5	3	0
10	3	6	6	3	0

$\frac{b}{a} = 1.5, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-3	0	0	0	0	0
0.9a	-8	-2	1	2	4	4
0.8a	-8	-2	3	6	8	9
0.7a	-8	0	6	11	14	15
0.6a	-8	1	9	16	20	21
0.5a	-8	3	13	20	24	26
0.4a	-8	4	15	23	28	29
0.3a	-8	6	17	24	29	30
0.2a	-6	6	16	22	26	27
0.1a	-4	5	11	15	17	17
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-15	-13	8	24	34	37
-39	-12	9	24	33	36
-39	-12	10	24	33	36
-40	-11	10	25	33	35
-42	-10	11	25	32	35
-42	-9	12	24	31	33
-41	-7	12	23	28	30
-38	-5	12	20	24	25
-31	-3	10	15	18	19
-19	-1	6	9	10	10
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
1	3	4	4	2	0
3	2	3	3	2	0
2	2	3	3	2	0
3	3	3	3	2	0
4	4	5	5	3	0
6	7	8	6	4	0
8	10	11	9	5	0
10	15	15	12	6	0
12	19	19	14	7	0
14	23	22	16	8	0
15	25	23	17	9	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-3	0	0	0	0	0
0.9a	-8	-6	-5	-4	-4	-4
0.8a	-8	-7	-7	-6	-6	-6
0.7a	-8	-8	-7	-7	-7	-7
0.6a	-8	-8	-7	-7	-7	-7
0.5a	-8	-8	-7	-7	-7	-7
0.4a	-8	-7	-7	-6	-6	-6
0.3a	-8	-6	-5	-4	-4	-4
0.2a	-6	-5	-3	-2	-1	-1
0.1a	-4	-2	-1	1	1	1
BOT.	0	0	0	0	0	0

M_y Coefficient

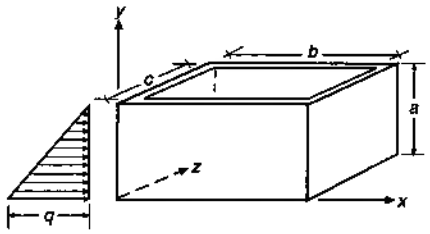
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-15	-36	-35	-34	-34	-33
-39	-35	-34	-32	-32	-31
-39	-36	-33	-31	-30	-29
-40	-36	-32	-29	-28	-27
-42	-35	-30	-27	-25	-24
-42	-34	-28	-24	-21	-20
-41	-32	-25	-20	-17	-16
-38	-27	-20	-15	-12	-11
-31	-21	-14	-9	-7	-6
-19	-11	-7	-4	-3	-2
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
1	6	4	2	1	0
3	3	3	2	1	0
2	3	2	2	1	0
3	3	3	2	1	0
4	4	4	3	1	0
6	5	4	3	2	0
8	7	5	4	2	0
10	8	6	4	2	0
12	9	6	4	2	0
14	9	5	3	1	0
15	8	4	2	1	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-1	0	0	0	0	0
0.9a	-3	-1	0	0	1	1
0.8a	-3	-1	1	2	3	3
0.7a	-4	-1	2	4	5	6
0.6a	-5	0	4	7	8	9
0.5a	-5	1	5	9	11	12
0.4a	-5	1	7	11	14	15
0.3a	-5	2	8	13	16	17
0.2a	-5	2	9	13	16	16
0.1a	-3	2	7	10	11	12
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-3	-4	4	10	15	16
-14	-4	4	11	15	17
-17	-5	5	12	16	18
-20	-6	5	13	18	19
-23	-6	6	14	19	20
-25	-6	7	15	20	21
-27	-6	7	15	19	21
-26	-5	7	14	17	19
-23	-4	6	11	14	15
-15	-2	4	7	8	8
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
1	1	0	0	0	0
0	2	1	1	0	0
1	2	2	1	1	0
0	2	2	1	1	0
0	1	1	1	0	0
1	0	0	0	0	0
3	3	3	2	1	0
4	5	6	4	2	0
6	9	9	7	4	0
7	12	12	9	5	0
8	14	13	10	5	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-1	0	0	0	0	0
0.9a	-3	-2	-2	-1	-1	-1
0.8a	-3	-3	-2	-2	-2	-2
0.7a	-4	-3	-3	-3	-2	-2
0.6a	-5	-4	-3	-3	-3	-3
0.5a	-5	-4	-4	-3	-3	-3
0.4a	-5	-4	-3	-3	-2	-2
0.3a	-5	-4	-3	-2	-1	-1
0.2a	-5	-3	-1	0	1	1
0.1a	-3	-1	0	1	2	2
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-3	-12	-12	-12	-11	-11
-14	-13	-12	-11	-11	-10
-17	-14	-12	-11	-10	-10
-20	-16	-13	-10	-9	-9
-23	-17	-13	-10	-8	-7
-25	-18	-13	-9	-6	-6
-27	-18	-12	-7	-4	-4
-26	-17	-10	-5	-2	-1
-23	-13	-7	-3	0	1
-15	-7	-3	-1	1	1
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
1	2	1	1	0	0
0	1	1	1	0	0
1	0	1	1	0	0
0	1	1	1	0	0
0	1	1	1	1	0
1	2	2	1	1	0
3	3	2	2	1	0
4	3	3	2	1	0
6	4	2	1	1	0
7	3	1	0	0	0
8	2	0	0	0	0

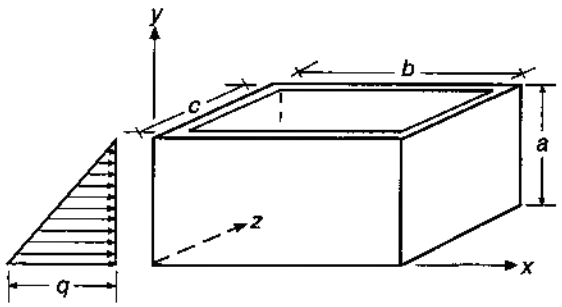
Short Side

CASE 3

Free Top
Fixed Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
4.0	3.0	0	2.60	6.30	8.80	10.10	10.50
4.0	2.0	0	2.90	6.50	8.90	10.30	10.70
4.0	1.5	0	3.20	6.80	9.10	10.40	10.80
4.0	1.0	0	3.50	7.10	9.30	10.50	10.90
4.0	0.5	0	3.60	7.10	9.40	10.60	10.90
3.0	2.0	0	1.80	4.50	6.60	7.90	8.30
3.0	1.5	0	2.10	4.80	6.90	8.10	8.60
3.0	1.0	0	2.40	5.20	7.20	8.40	8.80
3.0	0.5	0	2.50	5.30	7.30	8.50	8.90
2.0	1.5	0	0.90	2.30	3.60	4.40	4.60
2.0	1.0	0	1.20	2.70	4.00	4.80	5.10
2.0	0.5	0	1.30	2.90	4.20	5.00	5.20
1.5	1.0	0	0.60	1.40	2.10	2.60	2.80
1.5	0.5	0	0.80	1.60	2.40	2.90	3.10
1.0	0.5	0	0.30	0.60	0.90	1.10	1.20

Short Side - Along Midheight ($y = a/2$)

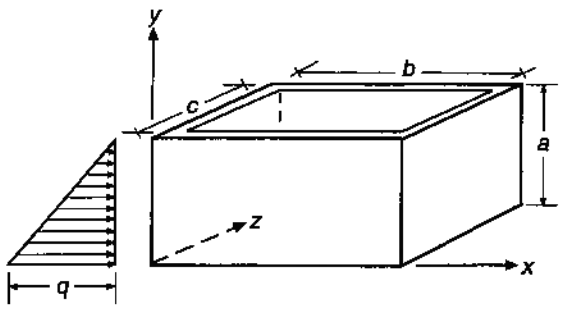
b/a	z / c/a	END	0.1c / 0.9c	0.2c / 0.8c	0.3c / 0.7c	0.4c / 0.6c	0.5c
4.0	3.0	0	1.50	4.10	6.30	7.60	8.10
4.0	2.0	0	0.50	1.60	2.80	3.60	3.90
4.0	1.5	0	0.00	0.40	1.00	1.30	1.50
4.0	1.0	0	-0.30	-0.40	-0.40	-0.30	-0.30
4.0	0.5	0	-0.20	-0.40	-0.50	-0.60	-0.60
3.0	2.0	0	0.50	1.70	2.90	3.70	3.90
3.0	1.5	0	0.00	0.50	1.00	1.40	1.60
3.0	1.0	0	-0.30	-0.30	-0.30	-0.20	-0.20
3.0	0.5	0	-0.20	-0.40	-0.50	-0.60	-0.60
2.0	1.5	0	0.20	0.70	1.30	1.80	1.90
2.0	1.0	0	-0.20	-0.20	-0.10	0.00	0.00
2.0	0.5	0	-0.20	-0.30	-0.40	-0.50	-0.50
1.5	1.0	0	-0.10	0.00	0.20	0.30	0.40
1.5	0.5	0	-0.10	-0.20	-0.30	-0.30	-0.40
1.0	0.5	0	-0.10	-0.10	-0.10	-0.10	-0.20

Free Top
Fixed Base

CASE 3

$$\text{Deflection} = \frac{C_d\, q a^4}{1000\, D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	0.70	2.40	4.80	7.50	10.50	13.60	16.70	19.80	22.80	25.90
4.0	2.0	0	0.70	2.40	4.80	7.60	10.70	13.80	16.90	20.00	23.10	26.20
4.0	1.5	0	0.70	2.40	4.80	7.70	10.80	13.90	17.10	20.30	23.40	26.60
4.0	1.0	0	0.70	2.40	4.90	7.80	10.90	14.10	17.30	20.60	23.80	27.00
4.0	0.5	0	0.70	2.40	4.90	7.80	10.90	14.10	17.40	20.60	23.80	27.00
3.0	2.0	0	0.60	2.00	3.90	6.10	8.30	10.60	12.80	14.90	17.00	19.00
3.0	1.5	0	0.60	2.00	4.00	6.20	8.60	10.90	13.20	15.40	17.50	19.70
3.0	1.0	0	0.60	2.10	4.10	6.40	8.80	11.20	13.60	15.90	18.20	20.40
3.0	0.5	0	0.60	2.10	4.10	6.40	8.90	11.30	13.70	16.00	18.30	20.60
2.0	1.5	0	0.40	1.30	2.40	3.50	4.60	5.60	6.50	7.20	8.00	8.70
2.0	1.0	0	0.40	1.40	2.60	3.80	5.10	6.20	7.20	8.10	9.00	9.90
2.0	0.5	0	0.40	1.40	2.60	4.00	5.20	6.40	7.50	8.40	9.40	10.30
1.5	1.0	0	0.30	0.90	1.60	2.20	2.80	3.20	3.60	3.80	4.00	4.30
1.5	0.5	0	0.30	0.90	1.70	2.40	3.10	3.60	4.00	4.30	4.60	4.90
1.0	0.5	0	0.20	0.50	0.80	1.00	1.20	1.20	1.20	1.20	1.20	1.20

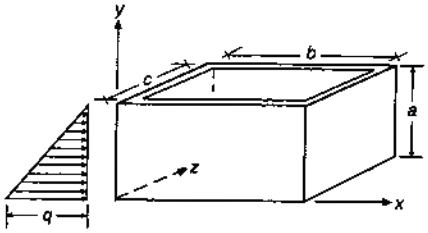
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	0.60	1.90	3.80	5.90	8.10	10.20	12.30	14.30	16.30	18.20
4.0	2.0	0	0.30	1.10	2.10	3.00	3.90	4.60	5.20	5.70	6.10	6.60
4.0	1.5	0	0.20	0.60	1.00	1.30	1.50	1.50	1.40	1.30	1.10	0.90
4.0	1.0	0	0.10	0.10	0.10	-0.10	-0.30	-0.60	-1.00	-1.30	-1.70	-2.10
4.0	0.5	0	0.00	-0.10	-0.30	-0.40	-0.60	-0.80	-1.00	-1.20	-1.30	-1.50
3.0	2.0	0	0.30	1.10	2.10	3.10	3.90	4.70	5.30	5.80	6.30	6.80
3.0	1.5	0	0.20	0.60	1.00	1.40	1.60	1.60	1.60	1.40	1.30	1.20
3.0	1.0	0	0.10	0.10	0.10	0.00	-0.20	-0.50	-0.90	-1.20	-1.50	-1.90
3.0	0.5	0	0.00	-0.10	-0.20	-0.40	-0.60	-0.80	-1.00	-1.10	-1.30	-1.40
2.0	1.5	0	0.20	0.70	1.20	1.60	1.90	2.10	2.10	2.10	2.10	2.10
2.0	1.0	0	0.10	0.20	0.20	0.20	0.00	-0.20	-0.40	-0.70	-0.90	-1.20
2.0	0.5	0	0.00	-0.10	-0.20	-0.30	-0.50	-0.60	-0.80	-0.90	-1.00	-1.10
1.5	1.0	0	0.10	0.30	0.40	0.40	0.40	0.20	0.10	-0.10	-0.30	-0.40
1.5	0.5	0	0.00	-0.10	-0.10	-0.20	-0.40	-0.50	-0.50	-0.60	-0.70	-0.70
1.0	0.5	0	0.00	0.00	0.00	-0.10	-0.20	-0.20	-0.20	-0.30	-0.30	-0.30

CASE 3

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-15	0	0	0	0	0
0.9a	-19	-2	2	3	3	3
0.8a	-17	-1	5	6	5	5
0.7a	-15	0	6	7	5	5
0.6a	-13	2	6	5	2	1
0.5a	-11	2	3	-1	-5	-7
0.4a	-9	1	-3	-12	-18	-20
0.3a	-6	-3	-16	-29	-37	-40
0.2a	-4	-12	-35	-53	-64	-67
0.1a	-1	-27	-63	-87	-99	-103
BOT.	0	-51	-102	-131	-145	-149

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-76	-13	13	17	16	14
-95	-11	13	16	14	13
-83	-9	12	15	13	12
-73	-7	11	13	11	10
-64	-4	10	10	8	7
-55	-2	8	7	5	4
-44	-1	5	3	0	-1
-32	-1	1	-3	-5	-6
-18	-2	-5	-9	-12	-13
-5	-5	-12	-17	-20	-20
0	-10	-20	-26	-29	-30

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
2	19	19	13	6	0
2	18	19	13	6	0
2	18	19	13	6	0
2	19	19	13	6	0
2	20	19	13	6	0
2	20	19	12	6	0
2	20	18	11	5	0
2	19	16	9	4	0
1	16	12	7	3	0
1	10	7	4	2	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-15	0	0	0	0	0
0.9a	-19	-3	1	4	5	5
0.8a	-17	-4	4	7	8	9
0.7a	-15	-2	6	10	11	11
0.6a	-13	0	7	10	10	10
0.5a	-11	1	7	7	6	5
0.4a	-9	2	3	-1	-4	-5
0.3a	-6	-1	-6	-14	-20	-22
0.2a	-4	-6	-20	-35	-44	-47
0.1a	-1	-17	-43	-65	-77	-82
BOT.	0	-34	-76	-105	-121	-126

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-76	-26	7	20	24	24
-95	-23	7	19	22	22
-83	-20	8	17	20	20
-73	-16	8	16	17	18
-64	-13	8	14	14	14
-55	-9	7	11	11	10
-44	-5	5	7	6	5
-32	-3	2	2	0	-1
-18	-2	-2	-5	-7	-8
-5	-3	-8	-12	-15	-16
0	-7	-15	-21	-24	-25

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
2	14	17	14	7	0
2	13	16	14	7	0
2	13	17	14	8	0
2	14	17	14	8	0
2	15	18	14	8	0
2	16	19	14	7	0
2	16	18	14	7	0
2	16	17	12	6	0
1	14	14	9	5	0
1	10	8	5	3	0
0	0	0	0	0	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-12	0	0	0	0	0
0.9a	-16	-1	2	3	3	3
0.8a	-15	-1	5	6	5	5
0.7a	-13	1	6	6	5	4
0.6a	-12	2	6	4	2	1
0.5a	-10	2	3	-2	-6	-7
0.4a	-9	0	-4	-13	-19	-21
0.3a	-6	-5	-17	-30	-38	-40
0.2a	-4	-14	-37	-55	-65	-68
0.1a	-1	-30	-65	-89	-100	-104
BOT.	0	-54	-104	-133	-146	-150

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-61	-9	14	17	15	14
-81	-8	13	16	14	13
-73	-6	13	14	12	11
-66	-4	12	12	10	9
-60	-2	10	10	8	7
-52	-1	8	7	4	3
-43	0	5	2	0	-1
-32	0	0	-3	-5	-6
-18	-2	-5	-9	-12	-13
-6	-6	-13	-17	-20	-21
0	-11	-21	-27	-29	-30

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
3	20	19	13	6	0
6	19	19	13	6	0
6	19	19	13	6	0
6	19	19	13	6	0
5	20	19	13	6	0
5	21	19	12	5	0
5	21	18	11	5	0
4	19	15	9	4	0
3	16	12	7	3	0
2	10	7	4	2	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-12	0	0	0	0	0
0.9a	-16	-5	0	3	4	5
0.8a	-15	-5	2	6	9	10
0.7a	-13	-4	4	10	13	14
0.6a	-12	-2	7	12	16	16
0.5a	-10	0	9	13	16	16
0.4a	-9	2	8	11	12	12
0.3a	-6	2	4	4	3	2
0.2a	-4	0	-4	-10	-14	-16
0.1a	-1	-6	-19	-31	-40	-43
BOT.	0	-17	-43	-64	-77	-81

M_y Coefficient

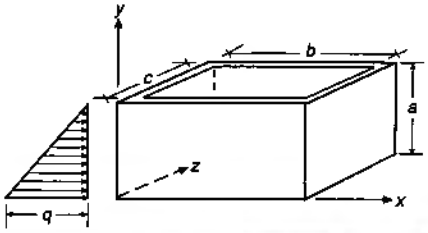
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-61	-35	-4	15	24	27
-81	-32	-3	14	23	26
-73	-29	-1	14	22	24
-66	-25	0	14	20	22
-60	-20	2	13	18	20
-52	-15	3	12	16	17
-43	-11	4	9	12	12
-32	-6	3	6	7	7
-18	-3	1	1	0	0
-6	-2	-3	-5	-7	-8
0	-3	-9	-13	-15	-16

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
3	4	8	7	4	0
6	2	6	6	4	0
6	3	6	7	4	0
6	3	7	7	4	0
5	4	9	9	5	0
5	6	11	10	6	0
5	8	12	10	6	0
4	10	13	10	6	0
3	10	11	9	5	0
2	7	8	6	3	0
0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 1.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-10	0	0	0	0	0	-49	-6	15	17	15	13	7	20	18	13	6	0
0.9a	-14	-1	3	3	3	3	-69	-5	14	15	13	12	10	19	18	13	6	0
0.8a	-13	0	5	6	5	5	-63	-3	13	14	12	11	10	19	18	13	6	0
0.7a	-12	1	6	6	5	4	-58	-2	12	12	10	9	9	20	19	13	6	0
0.6a	-11	2	6	4	1	0	-54	0	11	10	7	6	9	20	19	12	6	0
0.5a	-10	2	3	-2	-6	-8	-48	1	8	6	4	3	8	21	18	12	5	0
0.4a	-8	0	-5	-13	-19	-21	-41	1	5	2	0	-1	8	21	17	10	5	0
0.3a	-6	-6	-18	-31	-39	-41	-31	1	0	-3	-6	-6	7	20	15	9	4	0
0.2a	-4	-16	-39	-56	-66	-69	-18	-2	-6	-10	-12	-13	5	17	12	6	3	0
0.1a	-1	-32	-68	-90	-102	-105	-6	-6	-13	-18	-20	-21	3	10	7	4	1	0
BOT.	0	-58	-107	-134	-147	-151	0	-12	-21	-27	-29	-30	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-10	0	0	0	0	0	-49	-37	-12	4	14	17	7	4	0	1	1	0
0.9a	-14	-6	-2	1	2	2	-69	-34	-11	5	14	17	10	5	1	0	1	0
0.8a	-13	-6	-1	3	5	6	-63	-31	-9	6	14	17	10	5	1	0	1	0
0.7a	-12	-5	1	6	9	10	-58	-27	-6	7	15	17	9	4	1	1	1	0
0.6a	-11	-3	4	10	13	14	-54	-23	-3	8	14	16	9	3	1	2	2	0
0.5a	-10	-1	7	12	15	16	-48	-19	-1	9	14	15	8	1	3	4	2	0
0.4a	-8	1	8	13	15	16	-41	-13	1	8	12	13	8	1	5	5	3	0
0.3a	-6	2	7	10	11	12	-31	-9	2	6	8	9	7	4	7	6	4	0
0.2a	-4	2	3	2	1	1	-18	-4	1	3	4	4	5	5	8	6	4	0
0.1a	-1	-1	-7	-13	-17	-19	-6	-2	-1	-2	-2	-3	3	5	6	5	3	0
BOT.	0	-8	-25	-39	-47	-50	0	-2	-5	-8	-9	-10	0	0	0	0	0	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 1.0

Long Side

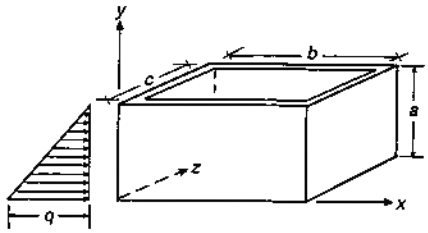
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-8	0	0	0	0	0	-39	-1	16	17	14	13	11	21	18	12	6	0
0.9a	-11	0	3	3	3	3	-56	-1	15	15	13	12	13	20	18	12	6	0
0.8a	-10	1	5	5	5	4	-51	0	14	14	11	10	13	20	18	12	6	0
0.7a	-10	2	7	6	4	4	-48	2	13	12	9	8	13	20	18	12	6	0
0.6a	-9	3	6	4	1	0	-45	3	11	9	7	6	13	21	18	12	5	0
0.5a	-8	3	2	-3	-7	-8	-41	3	8	6	3	3	12	22	18	11	5	0
0.4a	-7	0	-6	-14	-20	-22	-36	3	5	2	-1	-2	12	21	17	10	4	0
0.3a	-6	-7	-20	-32	-40	-42	-28	1	0	-4	-6	-7	10	20	15	8	4	0
0.2a	-3	-18	-41	-58	-67	-70	-17	-2	-6	-10	-12	-13	8	17	11	6	3	0
0.1a	-1	-36	-71	-92	-103	-106	-6	-6	-14	-18	-20	-21	5	10	6	3	1	0
BOT.	0	-63	-111	-137	-149	-152	0	-13	-22	-27	-30	-30	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-8	0	0	0	0	0	-39	-40	-26	-15	-9	-7	11	10	6	3	2	0
0.9a	-11	-7	-4	-3	-2	-2	-56	-37	-23	-13	-7	-5	13	10	7	4	2	0
0.8a	-10	-7	-5	-3	-2	-1	-51	-34	-20	-10	-5	-3	13	10	7	5	2	0
0.7a	-10	-6	-3	-1	1	1	-48	-30	-17	-7	-2	0	13	10	7	4	2	0
0.6a	-9	-5	-1	2	4	4	-45	-26	-13	-4	1	3	13	9	6	4	2	0
0.5a	-8	-3	2	5	7	8	-41	-22	-9	-1	4	5	12	8	5	3	1	0
0.4a	-7	-1	4	8	10	11	-36	-17	-5	2	6	7	12	6	3	1	0	0
0.3a	-6	1	6	10	12	12	-28	-11	-2	3	6	7	10	4	1	1	1	0
0.2a	-3	2	6	8	10	10	-17	-6	0	3	4	5	8	1	2	2	1	0
0.1a	-1	2	3	2	1	1	-6	-2	0	1	1	1	5	1	3	2	1	0
BOT.	0	0	-7	-13	-17	-19	0	0	-1	-3	-3	-4	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-9	0	0	0	0	0
0.9a	-11	0	3	3	3	3
0.8a	-10	1	5	5	5	4
0.7a	-9	3	7	6	4	4
0.6a	-8	4	6	3	1	0
0.5a	-7	3	2	-3	-7	-9
0.4a	-6	0	-6	-15	-20	-22
0.3a	-4	-6	-20	-33	-40	-42
0.2a	-3	-18	-41	-58	-67	-70
0.1a	-1	-37	-71	-93	-103	-106
BOT.	0	-66	-112	-137	-149	-152

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-43	0	16	16	14	13
0.9a	-57	0	15	15	13	11
0.8a	-49	1	14	14	11	10
0.7a	-44	3	13	12	9	8
0.6a	-39	3	11	9	7	6
0.5a	-34	4	8	6	3	2
0.4a	-29	3	5	2	-1	-2
0.3a	-22	2	0	-4	-6	-7
0.2a	-14	-2	-6	-10	-13	-13
0.1a	-5	-7	-14	-18	-20	-21
BOT.	0	-13	-22	-27	-30	-30

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	10	21	18	12	6	0
0.9a	11	20	18	12	6	0
0.8a	11	20	18	12	6	0
0.7a	11	21	18	12	6	0
0.6a	12	21	18	12	5	0
0.5a	12	22	18	11	5	0
0.4a	13	22	17	10	4	0
0.3a	12	20	14	8	4	0
0.2a	10	17	11	6	3	0
0.1a	7	10	6	3	1	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-9	0	0	0	0	0
0.9a	-11	-10	-8	-7	-6	-6
0.8a	-10	-9	-9	-8	-8	-8
0.7a	-9	-8	-8	-8	-7	-7
0.6a	-8	-7	-6	-6	-6	-6
0.5a	-7	-6	-5	-4	-4	-4
0.4a	-6	-4	-3	-2	-1	-1
0.3a	-4	-2	0	1	2	2
0.2a	-3	0	2	4	5	5
0.1a	-1	2	4	6	6	7
BOT.	0	3	4	4	3	3

M_y Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-43	-55	-50	-46	-44	-43
0.9a	-57	-50	-45	-42	-40	-40
0.8a	-49	-45	-41	-37	-36	-35
0.7a	-44	-39	-35	-32	-30	-30
0.6a	-39	-34	-29	-26	-24	-24
0.5a	-34	-28	-23	-20	-18	-17
0.4a	-29	-22	-17	-14	-12	-11
0.3a	-22	-15	-11	-8	-6	-5
0.2a	-14	-8	-5	-3	-1	-1
0.1a	-5	-2	-1	0	1	1
BOT.	0	1	1	1	1	1

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	10	11	7	4	2	0
0.9a	11	8	6	4	2	0
0.8a	11	8	6	4	2	0
0.7a	11	9	7	5	2	0
0.6a	12	10	7	5	3	0
0.5a	12	10	8	5	3	0
0.4a	13	10	7	5	2	0
0.3a	12	9	6	4	2	0
0.2a	10	7	4	3	1	0
0.1a	7	3	2	1	0	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 2.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-11	0	0	0	0	0
0.9a	-16	-2	2	4	4	5
0.8a	-14	-3	4	7	8	8
0.7a	-13	-1	6	9	10	10
0.6a	-12	0	7	9	9	9
0.5a	-10	1	6	6	5	4
0.4a	-9	1	2	-2	-5	-7
0.3a	-6	-2	-7	-16	-22	-24
0.2a	-4	-8	-23	-37	-46	-49
0.1a	-1	-19	-46	-67	-80	-84
BOT.	0	-38	-80	-109	-124	-129

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-55	-20	9	20	23	24
0.9a	-78	-18	9	19	21	22
0.8a	-71	-15	9	18	19	19
0.7a	-65	-12	9	16	17	17
0.6a	-59	-9	9	14	14	14
0.5a	-52	-6	8	10	10	10
0.4a	-43	-4	6	6	5	5
0.3a	-32	-2	2	1	0	-1
0.2a	-18	-2	-2	-5	-7	-8
0.1a	-6	-4	-9	-13	-15	-16
BOT.	0	-8	-16	-22	-25	-26

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	1	16	17	13	7	0
0.9a	5	14	17	13	7	0
0.8a	5	14	17	13	7	0
0.7a	4	15	17	14	7	0
0.6a	4	16	18	14	7	0
0.5a	4	17	18	14	7	0
0.4a	4	18	18	13	6	0
0.3a	3	18	17	11	6	0
0.2a	2	15	14	9	4	0
0.1a	1	10	8	5	2	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-11	0	0	0	0	0
0.9a	-16	-5	0	3	4	5
0.8a	-14	-5	2	6	9	10
0.7a	-13	-4	4	10	13	14
0.6a	-12	-1	7	12	15	16
0.5a	-10	0	8	13	15	16
0.4a	-9	2	8	11	12	12
0.3a	-6	1	4	3	2	2
0.2a	-4	-1	-4	-10	-15	-16
0.1a	-1	-6	-20	-32	-41	-43
BOT.	0	-17	-44	-65	-78	-82

M_y Coefficient

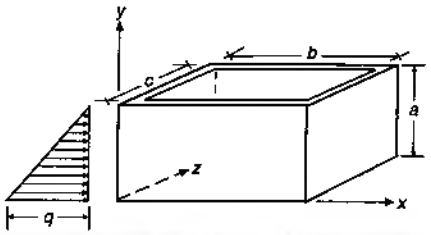
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-55	-34	-3	15	24	27
0.9a	-78	-31	-2	15	23	26
0.8a	-71	-28	-1	15	22	24
0.7a	-65	-24	1	14	20	22
0.6a	-59	-20	2	13	18	20
0.5a	-52	-15	3	12	16	17
0.4a	-43	-10	4	9	12	12
0.3a	-32	-6	3	6	7	7
0.2a	-18	-3	1	1	0	0
0.1a	-6	-2	-3	-6	-7	-8
BOT.	0	-3	-9	-13	-16	-16

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	1	4	8	7	4	0
0.9a	5	3	7	7	4	0
0.8a	5	3	7	7	4	0
0.7a	4	4	8	8	5	0
0.6a	4	5	9	9	5	0
0.5a	4	7	11	10	6	0
0.4a	4	8	12	10	6	0
0.3a	3	10	13	10	6	0
0.2a	2	10	12	9	5	0
0.1a	1	8	8	6	3	0
BOT.	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 1.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-9	0	0	0	0	0	-44	-15	11	20	23	23	6	17	17	13	7	0
0.9a	-13	-2	2	4	4	5	-66	-13	11	19	21	21	8	15	17	13	7	0
0.8a	-12	-2	4	7	8	8	-61	-11	11	18	19	19	8	15	17	13	7	0
0.7a	-11	0	6	9	10	10	-57	-9	10	16	17	16	8	16	17	13	7	0
0.6a	-11	1	7	9	9	8	-53	-6	10	13	14	13	8	17	18	14	7	0
0.5a	-10	1	6	5	4	3	-48	-4	8	10	10	9	7	18	18	13	7	0
0.4a	-8	0	1	-3	-7	-8	-41	-2	6	6	5	4	7	19	18	13	6	0
0.3a	-6	-3	-9	-17	-23	-26	-31	-1	2	1	-1	-1	6	18	17	11	5	0
0.2a	-4	-9	-25	-39	-48	-51	-18	-2	-3	-6	-8	-8	4	16	13	9	4	0
0.1a	-1	-21	-49	-70	-82	-86	-6	-4	-9	-13	-16	-17	3	11	8	5	2	0
BOT.	0	-41	-84	-112	-126	-131	0	-8	-17	-22	-25	-26	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-9	0	0	0	0	0	-44	-35	-11	5	14	17	6	3	0	1	1	0
0.9a	-13	-5	-1	1	2	2	-66	-32	-10	6	14	17	8	4	1	1	1	0
0.8a	-12	-6	-1	3	5	6	-61	-30	-8	7	15	17	8	4	1	1	1	0
0.7a	-11	-4	2	6	9	10	-57	-26	-5	8	15	17	8	4	0	1	1	0
0.6a	-11	-3	4	10	13	14	-53	-22	-3	9	15	17	8	2	1	2	2	0
0.5a	-10	-1	7	12	15	16	-48	-18	-1	9	14	15	7	1	3	4	3	0
0.4a	-8	1	8	13	15	16	-41	-13	1	8	12	13	7	2	5	5	3	0
0.3a	-6	2	7	10	11	11	-31	-8	2	6	8	9	6	4	7	7	4	0
0.2a	-4	1	3	2	1	0	-18	-4	1	3	4	4	4	6	8	7	4	0
0.1a	-1	-2	-7	-14	-18	-20	-6	-2	-1	-2	-3	-3	3	5	6	5	3	0
BOT.	0	-8	-25	-39	-48	-51	0	-2	-5	-8	-10	-10	0	0	0	0	0	0

$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 1.0

Long Side

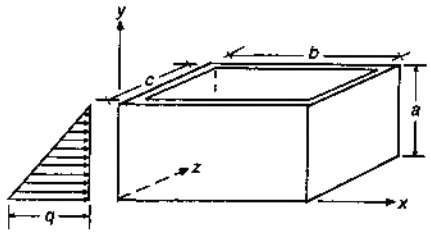
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-7	0	0	0	0	0	-34	-9	13	21	22	22	9	18	17	13	7	0
0.9a	-11	-1	2	4	4	4	-53	-8	13	19	20	20	11	17	17	13	7	0
0.8a	-10	0	5	7	8	8	-49	-6	12	18	18	18	11	17	17	13	7	0
0.7a	-9	1	7	9	9	9	-46	-4	12	16	16	16	12	17	18	13	7	0
0.6a	-9	2	7	9	8	8	-44	-3	11	13	13	13	12	18	18	13	7	0
0.5a	-8	2	5	5	3	2	-41	-1	9	10	9	9	11	19	19	13	7	0
0.4a	-7	0	0	-4	-8	-9	-36	0	6	6	4	4	11	20	18	12	6	0
0.3a	-6	-4	-10	-19	-25	-27	-28	0	2	0	-1	-2	10	19	16	11	5	0
0.2a	-3	-11	-27	-41	-50	-53	-17	-1	-3	-6	-8	-9	8	17	13	8	4	0
0.1a	-1	-25	-53	-73	-84	-88	-6	-4	-10	-14	-16	-17	4	11	8	5	2	0
BOT.	0	-46	-89	-115	-129	-133	0	-9	-18	-23	-26	-27	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-7	0	0	0	0	0	-34	-38	-24	-14	-8	-6	9	9	5	3	2	0
0.9a	-11	-6	-4	-2	-2	-2	-53	-35	-22	-12	-6	-4	11	9	6	4	2	0
0.8a	-10	-7	-4	-2	-1	-1	-49	-32	-19	-9	-4	-2	11	9	7	4	2	0
0.7a	-9	-6	-3	-1	1	1	-46	-29	-16	-6	-1	1	12	9	7	4	2	0
0.6a	-9	-5	-1	2	4	5	-44	-25	-12	-3	2	4	12	9	6	4	2	0
0.5a	-8	-3	2	5	7	8	-41	-21	-8	0	5	6	11	8	5	3	1	0
0.4a	-7	-1	4	8	10	11	-36	-17	-5	2	6	7	11	6	3	1	0	0
0.3a	-6	1	6	9	11	12	-28	-11	-2	3	6	7	10	3	0	1	1	0
0.2a	-3	2	6	8	9	9	-17	-6	0	3	4	5	8	1	2	2	1	0
0.1a	-1	2	2	1	1	0	-6	-2	0	1	1	1	4	1	3	3	1	0
BOT.	0	-1	-7	-14	-18	-20	0	0	-1	-3	-4	-4	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 0.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-7	0	0	0	0	0	-37	-7	14	21	22	22	9	18	18	13	7	0
0.9a	-11	-1	2	4	4	4	-54	-6	13	19	20	20	10	17	17	13	7	0
0.8a	-9	0	5	7	8	8	-47	-5	13	18	18	18	10	17	17	13	7	0
0.7a	-8	2	7	9	9	9	-42	-3	12	16	16	16	10	18	18	13	7	0
0.6a	-8	3	8	9	8	8	-38	-1	11	13	13	12	11	19	18	13	7	0
0.5a	-7	3	6	5	3	2	-34	0	9	10	9	9	12	20	19	13	6	0
0.4a	-6	1	0	-4	-8	-10	-29	1	6	6	4	4	12	20	18	12	6	0
0.3a	-4	-3	-11	-19	-26	-28	-22	1	2	0	-1	-2	12	19	16	11	5	0
0.2a	-3	-12	-28	-42	-51	-54	-14	-1	-3	-6	-8	-9	10	17	13	8	4	0
0.1a	-1	-26	-54	-74	-85	-89	-5	-5	-10	-14	-17	-17	6	11	8	5	2	0
BOT.	0	-49	-90	-116	-130	-134	0	-10	-18	-23	-26	-27	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-7	0	0	0	0	0	-37	-51	-47	-44	-42	-41	9	10	7	4	2	0
0.9a	-11	-9	-8	-7	-6	-6	-54	-47	-43	-40	-38	-37	10	8	6	4	2	0
0.8a	-9	-9	-8	-8	-8	-8	-47	-42	-39	-36	-34	-33	10	8	6	4	2	0
0.7a	-8	-8	-8	-7	-7	-7	-42	-38	-34	-31	-29	-28	10	8	6	4	2	0
0.6a	-8	-7	-6	-6	-6	-6	-38	-33	-28	-25	-23	-23	11	9	7	5	2	0
0.5a	-7	-6	-5	-4	-4	-3	-34	-27	-23	-19	-17	-16	12	9	7	5	2	0
0.4a	-6	-4	-3	-2	-1	-1	-29	-22	-16	-13	-11	-10	12	9	7	5	2	0
0.3a	-4	-2	0	1	2	2	-22	-15	-10	-7	-5	-5	12	8	6	4	2	0
0.2a	-3	0	2	4	5	5	-14	-8	-5	-2	-1	-1	10	6	4	3	1	0
0.1a	-1	2	4	5	6	6	-5	-2	-1	0	1	1	6	3	2	1	0	0
BOT.	0	3	4	3	3	3	0	1	1	1	1	1	0	0	0	0	0	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.5

Long Side

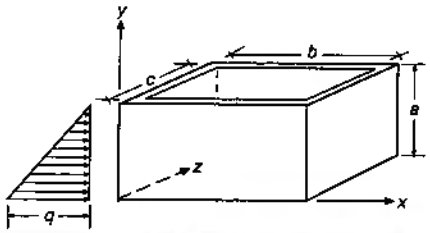
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-6	0	0	0	0	0	-30	-21	4	18	26	28	1	8	9	8	4	0
0.9a	-11	-3	1	3	4	5	-54	-19	4	18	24	26	4	7	8	7	4	0
0.8a	-11	-3	3	7	9	10	-53	-17	5	17	23	25	4	7	8	7	4	0
0.7a	-10	-2	5	10	13	13	-51	-15	5	16	21	23	4	7	9	8	5	0
0.6a	-10	0	7	12	15	16	-49	-13	6	15	19	20	4	9	11	9	5	0
0.5a	-9	1	8	12	14	15	-46	-10	6	13	16	16	4	10	12	10	6	0
0.4a	-8	1	6	9	9	9	-40	-7	6	10	11	12	4	12	14	11	6	0
0.3a	-6	0	2	0	-1	-2	-31	-4	4	6	6	6	3	13	14	11	5	0
0.2a	-4	-3	-8	-15	-20	-21	-19	-3	0	0	-1	-1	3	13	12	9	5	0
0.1a	-1	-10	-25	-38	-47	-50	-6	-2	-4	-7	-8	-9	2	9	8	6	3	0
BOT.	0	-22	-52	-73	-86	-90	0	-4	-10	-15	-17	-18	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-6	0	0	0	0	0	-30	-28	-7	8	16	19	1	1	1	2	1	0
0.9a	-11	-4	-1	1	2	3	-54	-26	-6	8	16	19	4	2	0	1	1	0
0.8a	-11	-5	0	4	6	6	-53	-24	-4	9	16	19	4	2	0	1	1	0
0.7a	-10	-4	2	7	9	10	-51	-22	-2	10	16	18	4	1	1	2	1	0
0.6a	-10	-2	5	10	13	14	-49	-19	-1	10	16	18	4	0	2	3	2	0
0.5a	-9	-1	7	12	15	16	-46	-16	1	10	15	16	4	1	4	5	3	0
0.4a	-8	1	7	12	14	15	-40	-12	2	9	12	13	4	4	7	6	4	0
0.3a	-6	1	6	8	9	10	-31	-8	2	7	8	9	3	6	8	7	4	0
0.2a	-4	1	1	0	-2	-2	-19	-4	1	3	3	3	3	7	9	7	4	0
0.1a	-1	-3	-9	-16	-21	-23	-6	-2	-1	-2	-3	-3	2	6	7	5	3	0
BOT.	0	-10	-29	-43	-53	-56	0	-2	-6	-9	-11	-11	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.0

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-4	0	0	0	0	0	-22	-13	8	20	27	29	5	10	10	8	4	0
0.9a	-8	-2	1	3	5	5	-42	-12	8	19	25	27	7	9	10	8	4	0
0.8a	-8	-1	4	7	9	10	-41	-11	8	19	24	25	7	9	10	8	5	0
0.7a	-8	0	6	10	13	13	-41	-10	8	18	22	23	8	10	11	9	5	0
0.6a	-8	1	8	12	14	15	-41	-8	8	16	19	20	8	11	12	10	5	0
0.5a	-8	1	8	12	13	14	-39	-6	8	14	16	16	8	12	13	11	6	0
0.4a	-7	1	6	8	8	8	-35	-4	7	10	11	11	8	14	14	11	6	0
0.3a	-6	-1	0	-2	-4	-5	-28	-3	4	6	5	5	7	15	15	11	5	0
0.2a	-4	-5	-11	-18	-23	-24	-18	-2	0	0	-1	-2	6	14	13	9	5	0
0.1a	-1	-13	-29	-43	-51	-54	-6	-3	-5	-8	-9	-10	3	10	8	6	3	0
BOT.	0	-27	-57	-79	-91	-95	0	-5	-11	-16	-18	-19	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-4	0	0	0	0	0	-22	-29	-18	-9	-4	-2	5	7	4	2	1	0
0.9a	-8	-5	-3	-2	-1	-1	-42	-27	-16	-7	-2	0	7	7	5	3	2	0
0.8a	-8	-6	-3	-2	-1	0	-41	-26	-14	-5	0	2	7	7	5	4	2	0
0.7a	-8	-5	-2	0	1	2	-41	-24	-11	-3	2	4	8	7	5	3	2	0
0.6a	-8	-4	0	3	4	5	-41	-22	-9	0	5	6	8	7	5	3	1	0
0.5a	-8	-3	2	5	7	8	-39	-19	-6	2	7	8	8	6	3	2	1	0
0.4a	-7	-1	4	8	10	11	-35	-15	-3	4	7	9	8	4	1	0	0	0
0.3a	-6	0	5	9	11	11	-28	-11	-1	4	7	8	7	2	1	2	1	0
0.2a	-4	1	5	7	8	8	-18	-6	0	3	5	5	6	1	3	3	2	0
0.1a	-1	1	1	-1	-2	-2	-6	-2	0	1	1	1	3	2	4	3	2	0
BOT.	0	-2	-10	-17	-22	-23	0	0	-2	-3	-4	-5	0	0	0	0	0	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 0.5

Long Side

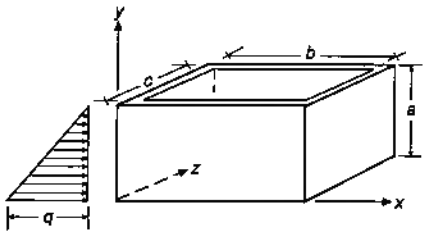
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-5	0	0	0	0	0	-24	-11	9	21	27	29	5	10	11	9	5	0
0.9a	-8	-1	2	4	5	5	-41	-10	9	20	26	27	6	9	10	8	5	0
0.8a	-8	-1	4	7	9	10	-38	-9	9	19	24	25	7	10	10	9	5	0
0.7a	-7	1	7	11	13	14	-36	-7	10	18	22	23	7	10	11	9	5	0
0.6a	-7	2	9	13	15	15	-34	-5	10	16	19	20	8	12	12	10	5	0
0.5a	-6	3	9	12	13	14	-31	-3	9	14	16	16	9	13	14	11	6	0
0.4a	-5	2	6	7	7	7	-27	-2	7	10	11	11	10	15	15	11	6	0
0.3a	-4	0	0	-2	-4	-5	-22	-1	5	5	5	5	10	16	15	11	5	0
0.2a	-3	-5	-12	-19	-24	-26	-14	-1	0	-1	-2	-2	9	15	13	9	4	0
0.1a	-1	-14	-31	-44	-53	-56	-5	-3	-5	-8	-10	-10	6	10	8	6	3	0
BOT.	0	-31	-61	-81	-93	-97	0	-6	-12	-16	-19	-19	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-5	0	0	0	0	0	-24	-39	-36	-34	-32	-32	5	8	5	3	2	0
0.9a	-8	-7	-6	-5	-5	-4	-41	-36	-33	-31	-29	-29	6	5	4	3	2	0
0.8a	-8	-7	-7	-6	-6	-6	-38	-34	-30	-28	-26	-26	7	5	4	3	2	0
0.7a	-7	-7	-6	-6	-6	-6	-36	-31	-27	-24	-23	-22	7	6	5	3	2	0
0.6a	-7	-6	-6	-5	-5	-5	-34	-28	-23	-20	-18	-18	8	7	5	4	2	0
0.5a	-6	-5	-4	-4	-3	-3	-31	-24	-19	-16	-13	-13	9	7	6	4	2	0
0.4a	-5	-4	-3	-2	-1	-1	-27	-20	-14	-11	-8	-8	10	8	6	4	2	0
0.3a	-4	-2	-1	1	1	2	-22	-14	-9	-6	-4	-3	10	7	5	3	2	0
0.2a	-3	0	2	3	4	5	-14	-8	-4	-2	0	0	9	5	3	2	1	0
0.1a	-1	2	4	5	5	6	-5	-2	-1	1	1	1	6	3	1	0	0	0
BOT.	0	3	3	2	1	1	0	1	1	0	0	0	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 1.5, $\frac{c}{a}$ = 1.0

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-2	0	0	0	0	0	-12	-12	4	15	22	24	2	4	4	4	2	0
0.9a	-6	-2	1	2	3	3	-31	-11	4	15	21	23	3	3	3	3	2	0
0.8a	-7	-2	2	5	7	7	-33	-11	5	15	20	22	4	3	3	3	2	0
0.7a	-7	-1	4	8	10	11	-35	-11	5	15	20	21	4	3	4	4	2	0
0.6a	-7	0	6	11	13	14	-36	-10	6	14	19	20	4	5	5	5	3	0
0.5a	-7	0	7	12	14	15	-36	-9	6	13	16	17	5	7	7	6	3	0
0.4a	-7	1	7	10	12	13	-33	-7	6	11	13	14	5	8	9	8	4	0
0.3a	-5	0	4	5	6	6	-27	-5	4	7	8	9	4	10	11	8	4	0
0.2a	-4	-2	-3	-5	-7	-8	-18	-3	2	3	2	2	4	11	11	8	4	0
0.1a	-1	-7	-16	-24	-30	-32	-6	-2	-2	-4	-5	-5	2	8	8	5	3	0
BOT.	0	-16	-38	-54	-64	-67	0	-3	-8	-11	-13	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-2	0	0	0	0	0	-12	-20	-11	-3	1	3	2	4	3	2	1	0
0.9a	-6	-3	-2	-1	-1	0	-31	-19	-10	-2	2	4	3	4	4	2	1	0
0.8a	-7	-4	-2	0	0	1	-33	-19	-8	-1	4	6	4	4	4	3	1	0
0.7a	-7	-4	-1	1	2	3	-35	-19	-7	1	6	8	4	4	4	2	1	0
0.6a	-7	-3	0	3	5	6	-36	-18	-5	3	8	9	4	4	3	2	1	0
0.5a	-7	-2	2	6	8	8	-36	-16	-3	5	9	10	5	3	2	1	0	0
0.4a	-7	-1	4	7	10	10	-33	-13	-1	5	9	10	5	2	0	1	1	0
0.3a	-5	0	5	8	10	10	-27	-10	0	5	8	8	4	0	3	3	2	0
0.2a	-4	1	4	5	6	6	-18	-5	1	4	5	5	4	2	4	4	2	0
0.1a	-1	0	-1	-3	-5	-5	-6	-2	0	0	0	0	2	3	4	4	2	0
BOT.	0	-4	-13	-21	-26	-28	0	-1	-3	-4	-5	-6	0	0	0	0	0	0

$\frac{b}{a}$ = 1.5, $\frac{c}{a}$ = 0.5

Long Side

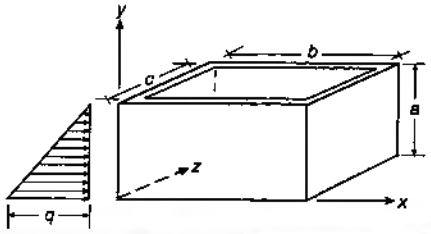
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-3	0	0	0	0	0	-13	-9	6	17	23	25	2	4	5	4	2	0
0.9a	-6	-1	1	3	3	4	-28	-8	7	17	22	24	3	4	4	4	2	0
0.8a	-6	-1	3	6	7	8	-28	-8	7	17	22	23	3	4	4	4	2	0
0.7a	-6	0	5	9	11	12	-28	-7	8	16	21	22	4	5	5	4	2	0
0.6a	-6	1	7	12	14	15	-28	-6	8	16	19	20	5	6	6	5	3	0
0.5a	-5	2	8	13	15	16	-27	-4	8	14	17	18	6	8	8	7	4	0
0.4a	-5	2	8	11	12	13	-25	-3	7	11	13	14	7	10	10	8	4	0
0.3a	-4	1	4	5	5	5	-21	-2	5	8	8	8	8	12	11	9	4	0
0.2a	-3	-2	-4	-7	-9	-10	-14	-1	2	2	2	2	7	12	11	8	4	0
0.1a	-1	-8	-18	-27	-32	-34	-5	-2	-3	-4	-5	-6	5	9	8	5	3	0
BOT.	0	-21	-43	-59	-68	-71	0	-4	-9	-12	-14	-14	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-3	0	0	0	0	0	-13	-26	-24	-23	-22	-22	2	5	3	2	1	0
0.9a	-6	-5	-4	-3	-3	-3	-28	-25	-23	-21	-20	-20	3	3	3	2	1	0
0.8a	-6	-5	-5	-4	-4	-4	-28	-25	-22	-19	-18	-18	3	3	3	2	1	0
0.7a	-6	-5	-5	-5	-4	-4	-28	-24	-20	-17	-16	-15	4	4	3	2	1	0
0.6a	-6	-5	-4	-4	-4	-4	-28	-22	-18	-15	-13	-12	5	4	4	3	1	0
0.5a	-5	-5	-4	-3	-3	-3	-27	-20	-15	-11	-9	-8	6	5	4	3	1	0
0.4a	-5	-4	-3	-2	-1	-1	-25	-17	-12	-8	-5	-5	7	6	4	3	1	0
0.3a	-4	-2	-1	1	1	2	-21	-13	-8	-4	-2	-1	8	5	4	2	1	0
0.2a	-3	-1	1	3	4	4	-14	-8	-4	-1	1	1	7	4	2	1	1	0
0.1a	-1	1	3	4	4	5	-5	-2	-1	1	1	1	5	2	1	0	0	0
BOT.	0	2	1	0	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-1	0	0	0	0	0	-3	-4	3	9	13	14	0	0	0	0	0	0
0.9a	-3	-1	0	1	1	1	-13	-4	4	9	13	14	0	1	0	0	0	0
0.8a	-3	-1	1	2	3	3	-15	-4	4	10	14	15	0	1	1	0	0	0
0.7a	-3	0	2	4	6	6	-17	-5	4	11	14	16	1	0	0	0	0	0
0.6a	-4	0	4	7	8	9	-19	-5	5	11	15	16	1	1	1	1	0	0
0.5a	-4	1	5	8	10	11	-21	-5	5	11	14	15	2	2	2	2	1	0
0.4a	-4	1	5	9	11	11	-21	-4	5	10	13	14	3	4	4	3	2	0
0.3a	-4	1	5	7	9	9	-19	-4	4	8	10	10	4	6	6	5	3	0
0.2a	-3	0	1	2	2	2	-14	-2	3	4	5	5	4	7	7	6	3	0
0.1a	-1	-3	-7	-10	-13	-14	-6	-1	0	-1	-1	-1	3	6	6	4	2	0
BOT.	0	-10	-23	-33	-39	-41	0	-2	-5	-7	-8	-8	0	0	0	0	0	0

Short Side

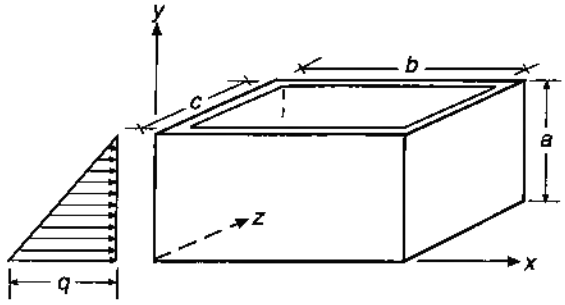
	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-1	0	0	0	0	0	-3	-11	-10	-10	-9	-9	0	2	1	1	0	0
0.9a	-3	-2	-2	-1	-1	-1	-13	-11	-10	-9	-8	-8	0	1	1	1	0	0
0.8a	-3	-3	-2	-2	-2	-2	-15	-12	-10	-8	-7	-7	0	1	1	1	1	0
0.7a	-3	-3	-2	-2	-2	-2	-17	-13	-10	-7	-6	-6	1	1	1	1	1	0
0.6a	-4	-3	-3	-2	-2	-2	-19	-14	-9	-6	-5	-4	1	2	2	1	1	0
0.5a	-4	-3	-2	-2	-1	-1	-21	-14	-8	-5	-3	-2	2	2	2	1	1	0
0.4a	-4	-3	-2	-1	0	0	-21	-13	-7	-3	-1	0	3	3	2	1	1	0
0.3a	-4	-2	-1	1	1	2	-19	-10	-5	-1	1	2	4	3	2	1	0	0
0.2a	-3	-1	1	2	3	3	-14	-7	-2	1	2	3	4	2	1	0	0	0
0.1a	-1	1	2	2	3	3	-6	-2	0	1	1	2	3	0	1	1	1	0
BOT.	0	1	-1	-3	-5	-5	0	0	0	-1	-1	-1	0	0	0	0	0	0

Hinged Top
Fixed Base

CASE 4

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
4.0	3.0	0	1.20	2.00	2.30	2.30	2.30
4.0	2.0	0	1.20	2.00	2.30	2.30	2.30
4.0	1.5	0	1.20	2.00	2.30	2.30	2.30
4.0	1.0	0	1.20	2.00	2.30	2.30	2.30
4.0	0.5	0	1.30	2.10	2.30	2.30	2.30
3.0	2.0	0	0.80	1.70	2.10	2.30	2.30
3.0	1.5	0	0.80	1.70	2.10	2.30	2.30
3.0	1.0	0	0.90	1.70	2.10	2.30	2.30
3.0	0.5	0	1.00	1.80	2.20	2.30	2.30
2.0	1.5	0	0.50	1.20	1.70	1.90	2.00
2.0	1.0	0	0.50	1.20	1.70	2.00	2.10
2.0	0.5	0	0.60	1.30	1.80	2.00	2.10
1.5	1.0	0	0.30	0.80	1.20	1.50	1.60
1.5	0.5	0	0.40	1.00	1.40	1.60	1.70
1.0	0.5	0	0.20	0.50	0.70	0.90	0.90

Short Side - Along Midheight ($y = a/2$)

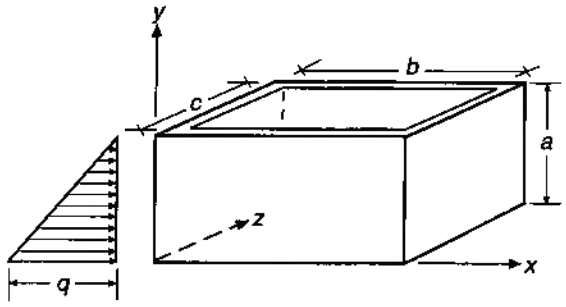
b/a	z / c/a	END	0.1c / 0.9c	0.2c / 0.8c	0.3c / 0.7c	0.4c / 0.6c	0.5c
4.0	3.0	0	0.80	1.70	2.10	2.30	2.30
4.0	2.0	0	0.50	1.10	1.70	1.90	2.00
4.0	1.5	0	0.30	0.80	1.20	1.50	1.60
4.0	1.0	0	0.10	0.30	0.50	0.60	0.70
4.0	0.5	0	-0.10	-0.10	-0.10	-0.10	-0.10
3.0	2.0	0	0.50	1.10	1.70	1.90	2.00
3.0	1.5	0	0.30	0.80	1.20	1.50	1.60
3.0	1.0	0	0.10	0.30	0.50	0.60	0.70
3.0	0.5	0	-0.10	-0.10	-0.10	-0.10	-0.10
2.0	1.5	0	0.30	0.80	1.20	1.50	1.60
2.0	1.0	0	0.10	0.30	0.50	0.60	0.70
2.0	0.5	0	-0.10	-0.10	-0.10	-0.10	-0.10
1.5	1.0	0	0.10	0.30	0.50	0.60	0.70
1.5	0.5	0	-0.10	-0.10	-0.10	-0.10	-0.10
1.0	0.5	0	0.00	-0.10	-0.10	-0.10	-0.10

Hinged Top
Fixed Base

CASE 4

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	0.30	0.90	1.50	2.00	2.30	2.40	2.10	1.50	0.80	0
4.0	2.0	0	0.30	0.90	1.50	2.00	2.30	2.40	2.10	1.50	0.80	0
4.0	1.5	0	0.30	0.90	1.50	2.00	2.30	2.40	2.10	1.50	0.80	0
4.0	1.0	0	0.30	0.90	1.50	2.00	2.30	2.40	2.10	1.50	0.80	0
4.0	0.5	0	0.30	0.90	1.50	2.00	2.30	2.40	2.10	1.50	0.80	0
3.0	2.0	0	0.30	0.90	1.50	2.00	2.30	2.30	2.00	1.50	0.80	0
3.0	1.5	0	0.30	0.90	1.50	2.00	2.30	2.30	2.00	1.50	0.80	0
3.0	1.0	0	0.30	0.90	1.50	2.00	2.30	2.30	2.00	1.50	0.80	0
3.0	0.5	0	0.30	0.90	1.50	2.00	2.30	2.30	2.00	1.50	0.80	0
2.0	1.5	0	0.20	0.80	1.40	1.80	2.00	2.00	1.80	1.30	0.70	0
2.0	1.0	0	0.30	0.80	1.40	1.80	2.10	2.00	1.80	1.30	0.70	0
2.0	0.5	0	0.30	0.80	1.40	1.90	2.10	2.10	1.80	1.30	0.70	0
1.5	1.0	0	0.20	0.60	1.10	1.40	1.60	1.60	1.40	1.00	0.50	0
1.5	0.5	0	0.20	0.70	1.20	1.50	1.70	1.70	1.40	1.10	0.60	0
1.0	0.5	0	0.10	0.40	0.70	0.80	0.90	0.90	0.70	0.50	0.30	0

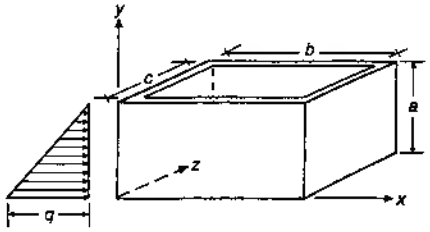
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	0.30	0.90	1.50	2.00	2.30	2.30	2.00	1.50	0.80	0
4.0	2.0	0	0.20	0.80	1.40	1.80	2.00	2.00	1.80	1.30	0.70	0
4.0	1.5	0	0.20	0.60	1.10	1.40	1.60	1.50	1.30	1.00	0.50	0
4.0	1.0	0	0.10	0.30	0.50	0.60	0.70	0.60	0.50	0.40	0.20	0
4.0	0.5	0	0.00	0.00	0.00	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0
3.0	2.0	0	0.20	0.80	1.40	1.80	2.00	2.00	1.80	1.30	0.70	0
3.0	1.5	0	0.20	0.60	1.10	1.40	1.60	1.50	1.30	1.00	0.50	0
3.0	1.0	0	0.10	0.30	0.50	0.60	0.70	0.60	0.50	0.40	0.20	0
3.0	0.5	0	0.00	0.00	0.00	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0
2.0	1.5	0	0.20	0.60	1.10	1.40	1.60	1.50	1.30	1.00	0.50	0
2.0	1.0	0	0.10	0.30	0.50	0.60	0.70	0.60	0.50	0.40	0.20	0
2.0	0.5	0	0.00	0.00	0.00	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0
1.5	1.0	0	0.10	0.30	0.50	0.60	0.70	0.60	0.50	0.40	0.20	0
1.5	0.5	0	0.00	0.00	0.00	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0
1.0	0.5	0	0.00	0.00	0.00	0.00	-0.10	-0.10	-0.10	-0.10	0.00	0

CASE 4

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	9	4	1	0	0
0.9a	-2	4	8	9	10	10	-11	2	3	2	2	2	1	8	3	1	0	0
0.8a	-4	8	15	18	19	19	-21	4	5	4	4	4	1	7	3	1	0	0
0.7a	-6	11	21	25	25	25	-29	6	7	6	5	5	1	5	2	0	0	0
0.6a	-7	14	25	29	29	29	-35	7	9	7	6	6	0	2	0	0	0	0
0.5a	-7	15	26	29	29	29	-37	8	9	7	6	6	0	2	1	0	0	0
0.4a	-7	14	22	24	24	24	-35	7	7	6	5	5	0	4	2	1	0	0
0.3a	-6	10	13	13	13	13	-28	6	5	3	3	3	1	7	3	1	0	0
0.2a	-4	1	-3	-5	-5	-5	-18	2	1	-1	-1	-1	1	7	2	1	0	0
0.1a	-1	-15	-27	-31	-31	-31	-6	-2	-5	-6	-6	-6	1	5	2	0	0	0
BOT.	0	-41	-61	-66	-67	-67	0	-8	-12	-13	-13	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	10	6	3	1	0
0.9a	-2	3	7	9	9	10	-11	1	3	3	2	2	1	9	6	3	1	0
0.8a	-4	5	13	16	18	18	-21	2	6	5	4	4	1	8	5	2	1	0
0.7a	-6	7	18	23	25	25	-29	3	8	7	6	6	1	5	3	1	0	0
0.6a	-7	9	21	26	28	29	-35	3	9	8	7	7	0	2	1	0	0	0
0.5a	-7	10	22	27	29	29	-37	4	9	8	7	7	0	1	1	1	0	0
0.4a	-7	10	19	23	24	24	-35	4	8	7	6	5	0	5	3	2	1	0
0.3a	-6	7	12	13	13	13	-28	4	6	4	3	3	1	7	5	2	1	0
0.2a	-4	1	-1	-4	-5	-5	-18	2	2	0	-1	-1	1	8	5	2	1	0
0.1a	-1	-11	-23	-28	-31	-31	-6	-1	-4	-5	-6	-6	1	6	3	1	0	0
BOT.	0	-31	-54	-63	-66	-66	0	-6	-11	-13	-13	-13	0	0	0	0	0	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

Long Side

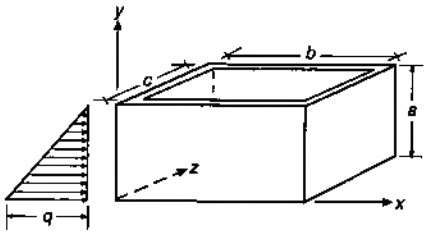
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	9	4	1	0	0
0.9a	-2	4	8	9	10	10	-11	2	3	2	2	2	1	8	3	1	0	0
0.8a	-4	8	15	18	19	19	-21	4	5	4	4	4	1	7	3	1	0	0
0.7a	-6	11	21	25	25	25	-29	6	7	6	5	5	1	5	2	0	0	0
0.6a	-7	14	25	29	29	29	-34	7	9	7	6	6	0	2	0	0	0	0
0.5a	-7	15	26	29	29	29	-37	8	9	7	6	6	0	2	1	0	0	0
0.4a	-7	14	22	24	24	24	-35	7	7	6	5	5	0	4	2	1	0	0
0.3a	-6	10	13	13	13	13	-28	6	5	3	3	3	1	7	3	1	0	0
0.2a	-4	1	-3	-5	-5	-5	-18	2	1	-1	-1	-1	1	7	2	1	0	0
0.1a	-1	-15	-27	-31	-31	-31	-6	-2	-5	-6	-6	-6	1	5	2	0	0	0
BOT.	0	-41	-61	-66	-67	-67	0	-8	-12	-13	-13	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	9	9	6	3	0
0.9a	-2	1	4	6	8	8	-11	-1	2	3	3	3	1	9	8	6	3	0
0.8a	-4	2	8	12	15	16	-21	-3	4	6	6	6	1	7	7	5	2	0
0.7a	-6	3	11	17	21	22	-29	-3	6	8	8	8	1	5	5	3	1	0
0.6a	-7	4	14	21	24	25	-34	-3	7	10	10	9	0	2	2	1	0	0
0.5a	-7	5	15	22	25	26	-37	-3	8	10	10	9	0	1	1	1	1	0
0.4a	-7	5	14	19	22	22	-35	-2	7	9	8	8	0	4	4	3	2	0
0.3a	-6	4	10	12	13	13	-28	-1	6	6	5	5	1	7	7	4	2	0
0.2a	-4	1	1	-1	-2	-3	-18	0	3	2	1	1	1	8	7	4	2	0
0.1a	-1	-6	-15	-22	-26	-27	-6	-1	-2	-4	-5	-5	1	7	5	3	1	0
BOT.	0	-19	-41	-54	-60	-62	0	-4	-8	-11	-12	-12	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 1.5

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	9	4	1	0	0
0.9a	-2	4	8	9	10	10	-11	2	3	2	2	2	1	8	3	1	0	0
0.8a	-4	8	15	18	19	19	-20	4	5	4	4	4	1	7	3	1	0	0
0.7a	-6	12	21	25	25	25	-28	6	7	6	5	5	1	5	2	0	0	0
0.6a	-7	14	25	29	29	29	-34	7	9	7	6	6	0	2	0	0	0	0
0.5a	-7	15	26	29	29	29	-36	8	9	7	6	6	0	2	1	0	0	0
0.4a	-7	14	22	24	24	24	-34	7	7	6	5	5	0	4	2	1	0	0
0.3a	-6	10	13	13	13	13	-28	6	5	3	3	3	1	7	3	1	0	0
0.2a	-4	1	-3	-5	-5	-5	-18	3	1	-1	-1	-1	1	7	2	1	0	0
0.1a	-1	-15	-27	-31	-31	-31	-6	-2	-5	-6	-6	-6	1	5	2	0	0	0
BOT.	0	-41	-61	-66	-67	-67	0	-8	-12	-13	-13	-13	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	1	7	9	7	4	0
0.9a	-2	0	2	4	5	6	-11	-3	1	3	4	4	1	7	8	6	3	0
0.8a	-4	0	5	8	10	11	-20	-5	2	6	7	7	1	6	7	5	3	0
0.7a	-6	1	7	12	15	16	-28	-7	3	8	10	10	1	5	5	4	2	0
0.6a	-7	1	9	14	18	19	-34	-8	4	10	11	12	0	2	2	1	1	0
0.5a	-7	1	10	16	19	21	-36	-8	5	10	12	12	0	0	1	1	1	0
0.4a	-7	2	10	15	18	19	-34	-6	5	9	10	11	0	3	4	3	2	0
0.3a	-6	2	7	11	12	13	-28	-4	4	7	8	8	1	6	7	5	3	0
0.2a	-4	0	2	1	1	0	-18	-2	2	3	3	3	1	7	8	6	3	0
0.1a	-1	-4	-10	-16	-20	-21	-6	-1	-1	-2	-3	-3	1	6	6	4	2	0
BOT.	0	-12	-31	-44	-51	-53	0	-2	-6	-9	-10	-11	0	0	0	0	0	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 1.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	9	3	1	0	0
0.9a	-2	4	8	9	10	10	-9	2	3	2	2	2	2	8	3	1	0	0
0.8a	-4	9	16	18	19	19	-18	4	5	4	4	4	2	7	3	1	0	0
0.7a	-5	12	22	25	25	26	-25	6	7	6	5	5	1	4	2	0	0	0
0.6a	-6	15	25	29	29	29	-30	7	9	7	6	6	0	2	0	0	0	0
0.5a	-6	16	26	29	29	29	-32	8	9	7	6	6	1	1	1	0	0	0
0.4a	-6	14	22	24	24	24	-31	8	7	6	5	5	1	4	2	1	0	0
0.3a	-5	10	13	13	13	13	-26	6	5	3	3	3	2	6	2	1	0	0
0.2a	-4	1	-3	-5	-5	-5	-18	3	1	-1	-1	-1	2	7	2	1	0	0
0.1a	-1	-16	-27	-31	-31	-31	-6	-2	-5	-6	-6	-6	1	5	2	0	0	0
BOT.	0	-42	-62	-66	-67	-67	0	-8	-12	-13	-13	-13	0	0	0	0	0	0

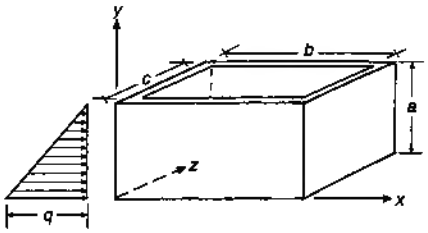
Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	3	5	4	3	0
0.9a	-2	-1	0	1	2	2	-9	-4	0	2	3	3	2	3	5	4	2	0
0.8a	-4	-2	0	2	3	4	-18	-7	-1	4	6	6	2	3	4	4	2	0
0.7a	-5	-2	1	3	5	6	-25	-10	-1	5	8	9	1	3	3	3	2	0
0.6a	-6	-2	2	5	7	8	-30	-12	0	6	10	11	0	2	2	2	1	0
0.5a	-6	-2	3	7	9	10	-32	-12	0	7	11	12	1	1	0	0	0	0
0.4a	-6	-1	4	8	10	11	-31	-11	1	7	10	11	1	1	2	2	1	0
0.3a	-5	0	4	7	9	10	-26	-8	1	6	9	9	2	3	4	4	2	0
0.2a	-4	0	2	4	4	4	-18	-5	1	4	5	5	2	4	6	5	3	0
0.1a	-1	-1	-3	-6	-8	-9	-6	-2	0	0	0	0	1	4	5	4	2	0
BOT.	0	-5	-16	-25	-31	-33	0	-1	-3	-5	-6	-7	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-1	5	8	10	10
0.8a	-2	10	16	18	19
0.7a	-3	14	22	25	25
0.6a	-4	16	26	29	29
0.5a	-4	17	26	29	29
0.4a	-4	16	22	24	24
0.3a	-4	10	13	13	13
0.2a	-3	0	-3	-5	-5
0.1a	-1	-17	-28	-31	-31
BOT.	0	-45	-62	-66	-67

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-6	3	3	2	2
0.8a	-12	5	5	4	4
0.7a	-17	7	7	6	5
0.6a	-20	8	8	7	6
0.5a	-22	9	8	7	6
0.4a	-22	8	7	6	5
0.3a	-20	6	5	3	3
0.2a	-14	3	0	-1	-1
0.1a	-6	-3	-5	-6	-6
BOT.	0	-9	-12	-13	-13

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
6	8	3	1	0	0
6	8	3	1	0	0
5	6	2	1	0	0
3	4	1	0	0	0
1	2	0	0	0	0
1	1	1	0	0	0
3	4	2	0	0	0
4	6	2	1	0	0
5	7	2	0	0	0
4	5	1	0	0	0
0	0	0	0	0	0

Short Side

M_x Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0
0.9a	-1	-1	-1	-1	-1
0.8a	-2	-2	-2	-2	-2
0.7a	-3	-3	-3	-3	-3
0.6a	-4	-4	-3	-3	-3
0.5a	-4	-4	-3	-3	-2
0.4a	-4	-3	-2	-2	-1
0.3a	-4	-2	-1	0	1
0.2a	-3	-1	1	2	3
0.1a	-1	1	2	2	3
BOT.	0	1	-1	-3	-4

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0
0.9a	-6	-4	-3	-2	-1
0.8a	-12	-8	-5	-4	-2
0.7a	-17	-11	-7	-5	-3
0.6a	-20	-14	-8	-5	-3
0.5a	-22	-14	-8	-4	-2
0.4a	-22	-14	-7	-3	0
0.3a	-20	-11	-5	-1	1
0.2a	-14	-7	-2	0	2
0.1a	-6	-2	0	1	1
BOT.	0	0	0	-1	-1

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
6	3	2	1	0	0
6	3	2	1	0	0
5	2	1	1	0	0
3	1	1	0	0	0
1	0	0	0	0	0
1	1	1	1	0	0
3	2	2	1	1	0
4	3	2	1	0	0
5	2	1	0	0	0
4	1	1	1	1	0
0	0	0	0	0	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 2.0$

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-2	3	7	9	9
0.8a	-4	5	13	16	18
0.7a	-6	7	18	23	25
0.6a	-7	9	21	26	28
0.5a	-7	10	22	27	29
0.4a	-7	10	19	23	24
0.3a	-6	7	12	13	13
0.2a	-4	1	-1	-4	-5
0.1a	-1	-11	-23	-28	-31
BOT.	0	-31	-54	-63	-66

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-11	1	3	3	2
0.8a	-21	2	6	5	4
0.7a	-29	3	8	7	6
0.6a	-35	3	9	8	7
0.5a	-37	4	9	8	7
0.4a	-35	4	8	7	6
0.3a	-29	4	6	4	3
0.2a	-18	2	2	0	-1
0.1a	-6	-1	-4	-5	-6
BOT.	0	-6	-11	-13	-13

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
1	10	6	3	1	0
1	9	6	3	1	0
1	8	5	2	1	0
0	5	3	1	0	0
0	2	1	0	0	0
0	1	1	1	0	0
0	5	3	2	1	0
0	7	4	2	1	0
1	8	5	2	1	0
1	6	3	1	0	0
0	0	0	0	0	0

Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0
0.9a	-2	1	4	6	8
0.8a	-4	2	8	12	15
0.7a	-6	3	11	17	21
0.6a	-7	4	14	21	24
0.5a	-7	5	15	22	25
0.4a	-7	5	14	19	22
0.3a	-6	4	10	12	13
0.2a	-4	1	1	-1	-2
0.1a	-1	-6	-15	-22	-26
BOT.	0	-19	-41	-54	-60

M_y Coefficient

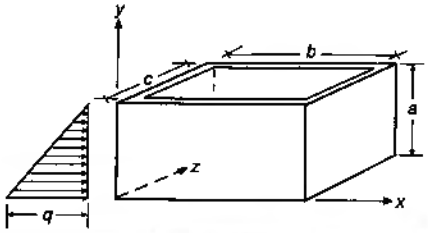
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0
0.9a	-11	-1	2	3	3
0.8a	-21	-3	4	6	6
0.7a	-29	-3	6	8	8
0.6a	-35	-3	7	10	10
0.5a	-37	-3	8	10	10
0.4a	-35	-2	7	9	8
0.3a	-29	-1	6	6	5
0.2a	-18	0	3	2	1
0.1a	-6	-1	-2	-4	-5
BOT.	0	-4	-8	-11	-12

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
1	9	9	6	3	0
1	9	8	6	3	0
1	7	7	5	2	0
0	5	5	3	1	0
0	2	2	1	0	0
0	1	1	1	1	0
0	4	4	3	2	0
0	7	7	4	2	0
1	8	7	4	2	0
1	7	5	3	1	0
0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	3	7	9	9	10
0.8a	-4	5	13	16	18	18
0.7a	-6	8	18	23	25	25
0.6a	-7	9	21	26	28	29
0.5a	-7	10	22	27	29	29
0.4a	-7	10	19	23	24	24
0.3a	-6	7	12	13	13	13
0.2a	-4	1	-1	-4	-5	-5
0.1a	-1	-11	-23	-28	-31	-31
BOT.	0	-31	-54	-63	-66	-66

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-11	1	3	3	2	2
-20	2	6	5	4	4
-28	3	8	7	6	6
-34	3	9	8	7	7
-36	4	9	8	7	7
-34	4	8	7	6	5
-28	4	6	4	3	3
-18	2	2	0	-1	-1
-6	-1	-4	-5	-6	-6
0	-6	-11	-13	-13	-13

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
1	10	6	3	1	0
1	9	6	3	1	0
1	8	5	2	1	0
0	5	3	1	0	0
0	2	1	0	0	0
0	1	1	1	0	0
0	5	3	1	1	0
1	7	4	2	1	0
1	8	4	2	1	0
1	6	3	1	0	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-2	0	2	4	5	6
0.8a	-4	0	5	8	10	11
0.7a	-6	1	7	12	15	16
0.6a	-7	1	9	14	18	19
0.5a	-7	1	10	16	19	21
0.4a	-7	2	10	15	18	19
0.3a	-6	2	7	11	12	13
0.2a	-4	0	2	1	1	0
0.1a	-1	-4	-10	-16	-20	-21
BOT.	0	-12	-31	-44	-51	-53

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-11	-3	1	3	4	4
-20	-5	2	6	7	7
-28	-7	3	8	10	10
-34	-8	4	10	11	12
-36	-8	5	10	12	12
-34	-6	5	9	10	11
-28	-4	4	7	8	8
-18	-2	2	3	3	3
-6	-1	-1	-2	-3	-3
0	-2	-6	-9	-10	-11

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
1	7	9	7	4	0
1	7	8	6	3	0
1	6	7	5	3	0
0	5	5	4	2	0
0	2	2	1	1	0
0	0	1	1	1	0
0	3	4	3	2	0
1	6	7	5	3	0
1	7	8	6	3	0
1	6	6	4	2	0
0	0	0	0	0	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	3	7	9	9	10
0.8a	-4	6	13	17	18	18
0.7a	-5	8	18	23	25	25
0.6a	-6	10	21	27	29	29
0.5a	-6	11	22	27	29	29
0.4a	-6	10	20	23	24	24
0.3a	-5	8	12	13	13	13
0.2a	-4	1	-1	-4	-5	-5
0.1a	-1	-11	-23	-29	-31	-31
BOT.	0	-33	-55	-63	-66	-66

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-9	1	3	3	2	2
-18	2	6	5	4	4
-25	3	8	7	6	6
-30	4	9	8	7	7
-32	5	9	8	7	6
-31	5	8	7	6	5
-27	4	6	4	3	3
-18	2	2	0	-1	-1
-6	-1	-4	-5	-6	-6
0	-7	-11	-13	-13	-13

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
2	10	6	3	1	0
2	9	6	2	1	0
2	8	5	2	1	0
1	5	3	1	0	0
0	2	1	0	0	0
1	1	1	1	0	0
1	5	3	1	0	0
2	7	4	2	1	0
2	8	4	2	1	0
1	6	3	1	0	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-2	-1	0	1	2	2
0.8a	-4	-2	0	2	3	4
0.7a	-5	-2	1	3	5	6
0.6a	-6	-2	2	5	7	8
0.5a	-6	-2	3	6	9	10
0.4a	-6	-1	4	8	10	11
0.3a	-5	0	4	7	9	10
0.2a	-4	0	2	4	4	4
0.1a	-1	-1	-3	-6	-8	-9
BOT.	0	-5	-16	-25	-31	-33

M_y Coefficient

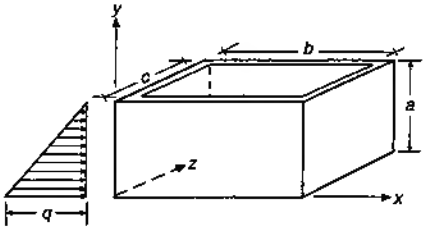
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-9	-4	0	2	3	3
-18	-7	-1	4	6	6
-25	-10	-1	5	8	9
-30	-12	0	6	10	11
-32	-12	0	7	11	12
-31	-11	1	7	10	11
-27	-8	1	6	9	9
-18	-5	1	4	5	5
-6	-2	0	0	0	0
0	-1	-3	-5	-6	-7

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
2	3	5	4	3	0
2	3	5	4	2	0
2	3	4	4	2	0
1	3	3	3	2	0
0	2	2	2	1	0
1	1	0	0	0	0
1	1	2	2	1	0
2	3	4	4	2	0
2	4	6	5	3	0
1	4	5	4	2	0
0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-1	4	7	9	10	10
0.8a	-2	7	14	17	18	18
0.7a	-3	10	19	23	25	25
0.6a	-4	12	22	27	29	29
0.5a	-4	13	23	27	29	29
0.4a	-4	12	20	23	24	24
0.3a	-4	8	12	13	13	13
0.2a	-3	1	-2	-4	-5	-5
0.1a	-1	-13	-24	-29	-31	-31
BOT.	0	-36	-57	-64	-66	-67

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	2	3	3	2	2
0.8a	-12	3	6	5	4	4
0.7a	-17	5	8	7	6	6
0.6a	-20	6	9	8	7	6
0.5a	-22	7	9	8	7	6
0.4a	-22	6	8	7	6	5
0.3a	-20	5	6	4	3	3
0.2a	-14	3	1	0	-1	-1
0.1a	-6	-2	-4	-6	-6	-6
BOT.	0	-7	-11	-13	-13	-13

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	6	9	5	2	1	0
0.9a	5	9	5	2	1	0
0.8a	5	7	4	2	1	0
0.7a	3	5	3	1	0	0
0.6a	1	2	1	0	0	0
0.5a	1	1	1	1	0	0
0.4a	3	5	3	1	0	0
0.3a	4	7	4	2	0	0
0.2a	5	8	4	1	0	0
0.1a	4	6	3	1	0	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-1	-1	-1	-1	-1	-1
0.8a	-2	-2	-2	-2	-2	-2
0.7a	-3	-3	-3	-3	-3	-3
0.6a	-4	-4	-3	-3	-3	-3
0.5a	-4	-4	-3	-3	-2	-2
0.4a	-4	-3	-2	-2	-1	-1
0.3a	-4	-2	-1	0	1	1
0.2a	-3	-1	1	2	3	3
0.1a	-1	1	2	2	3	3
BOT.	0	1	-1	-3	-4	-5

M_y Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-6	-4	-3	-2	-1	-1
0.8a	-12	-8	-5	-4	-2	-2
0.7a	-17	-11	-7	-5	-3	-2
0.6a	-20	-14	-8	-5	-3	-2
0.5a	-22	-14	-8	-4	-2	-1
0.4a	-22	-14	-7	-3	0	0
0.3a	-20	-11	-5	-1	1	2
0.2a	-14	-7	-2	0	2	3
0.1a	-6	-2	0	1	1	2
BOT.	0	0	0	-1	-1	-1

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	6	3	2	1	0	0
0.9a	5	3	2	1	0	0
0.8a	5	2	1	1	0	0
0.7a	3	1	1	0	0	0
0.6a	1	0	0	0	0	0
0.5a	1	1	1	1	0	0
0.4a	3	2	2	1	1	0
0.3a	4	3	2	1	0	0
0.2a	5	2	1	0	0	0
0.1a	4	1	1	1	1	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	1	4	6	8	8
0.8a	-4	2	8	12	15	16
0.7a	-6	3	11	17	21	22
0.6a	-7	4	14	21	24	25
0.5a	-7	5	15	22	25	26
0.4a	-7	5	14	19	22	23
0.3a	-6	4	10	12	13	13
0.2a	-4	1	1	-1	-2	-3
0.1a	-1	-6	-15	-22	-26	-27
BOT.	0	-19	-41	-54	-60	-62

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-11	-1	2	3	3	3
0.8a	-20	-2	4	6	6	6
0.7a	-28	-3	6	8	8	8
0.6a	-34	-3	7	10	10	9
0.5a	-36	-3	8	10	10	9
0.4a	-34	-2	7	9	8	8
0.3a	-28	-1	6	6	5	5
0.2a	-18	0	3	2	1	1
0.1a	-6	-1	-2	-4	-5	-5
BOT.	0	-4	-8	-11	-12	-12

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	1	9	9	6	3	0
0.9a	1	9	8	5	3	0
0.8a	1	7	7	4	2	0
0.7a	0	5	5	3	1	0
0.6a	0	2	2	1	0	0
0.5a	0	1	1	1	1	0
0.4a	0	4	4	3	1	0
0.3a	0	7	7	4	2	0
0.2a	1	8	7	4	2	0
0.1a	1	7	5	3	1	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-2	0	2	4	5	6
0.8a	-4	0	5	8	10	11
0.7a	-6	1	7	12	15	16
0.6a	-7	1	9	14	18	19
0.5a	-7	1	10	16	19	21
0.4a	-7	2	10	15	18	19
0.3a	-6	2	7	11	12	13
0.2a	-4	0	2	1	1	0
0.1a	-1	-4	-10	-16	-20	-21
BOT.	0	-12	-31	-44	-51	-53

M_y Coefficient

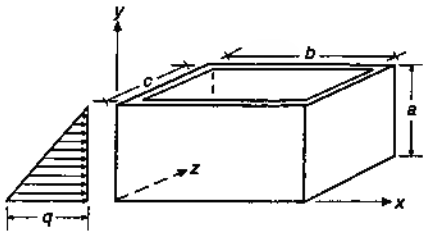
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-11	-3	1	3	4	4
0.8a	-20	-5	2	6	7	7
0.7a	-28	-7	3	8	10	10
0.6a	-34	-8	4	10	11	12
0.5a	-36	-8	5	10	12	12
0.4a	-34	-6	5	9	10	11
0.3a	-28	-4	4	7	8	8
0.2a	-18	-2	2	3	3	3
0.1a	-6	-1	-1	-2	-3	-3
BOT.	0	-2	-6	-9	-10	-11

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	1	7	9	7	4	0
0.9a	1	7	8	6	3	0
0.8a	1	6	7	5	3	0
0.7a	0	5	5	4	2	0
0.6a	0	2	2	1	1	0
0.5a	0	0	1	1	1	0
0.4a	0	3	4	3	2	0
0.3a	0	6	7	5	3	0
0.2a	1	7	8	6	3	0
0.1a	1	6	6	4	2	0
BOT.	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.0

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	9	8	6	3	0
0.9a	-2	1	4	7	8	8	-9	-1	2	3	3	3	2	9	8	5	2	0
0.8a	-4	3	8	13	15	16	-18	-2	4	6	6	6	2	8	7	4	2	0
0.7a	-5	4	12	18	21	22	-25	-2	6	8	8	8	1	5	4	3	1	0
0.6a	-6	5	15	21	25	26	-30	-2	8	10	9	9	0	2	2	1	0	0
0.5a	-6	5	16	22	25	26	-32	-1	8	10	10	9	1	1	1	1	1	0
0.4a	-6	5	14	20	22	23	-31	-1	8	9	8	8	1	4	4	3	1	0
0.3a	-5	4	10	12	13	13	-27	0	6	6	5	5	2	7	6	4	2	0
0.2a	-4	1	1	-1	-2	-3	-18	0	3	2	1	1	2	8	7	4	2	0
0.1a	-1	-6	-16	-23	-27	-28	-6	-1	-2	-4	-5	-5	1	7	5	3	1	0
BOT.	0	-21	-42	-55	-61	-63	0	-4	-8	-11	-12	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	4	3	0
0.9a	-2	-1	0	1	2	2	-9	-4	0	2	3	3	2	3	5	4	2	0
0.8a	-4	-2	0	2	3	4	-18	-7	-1	4	6	6	2	3	4	4	2	0
0.7a	-5	-2	1	3	5	6	-25	-10	-1	5	8	9	1	3	3	3	2	0
0.6a	-6	-2	2	5	7	8	-30	-12	0	6	10	11	0	2	2	2	1	0
0.5a	-6	-2	3	7	9	10	-32	-12	0	7	11	12	1	1	0	0	0	0
0.4a	-6	-1	4	8	10	11	-31	-11	1	7	10	11	1	1	2	2	1	0
0.3a	-5	0	4	7	9	10	-27	-8	1	6	9	9	2	3	4	4	2	0
0.2a	-4	0	2	4	4	4	-18	-5	1	4	5	5	2	4	6	5	3	0
0.1a	-1	-1	-3	-6	-8	-9	-6	-2	0	0	0	0	1	4	5	4	2	0
BOT.	0	-5	-16	-25	-31	-33	0	-1	-3	-5	-6	-7	0	0	0	0	0	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 0.5

Long Side

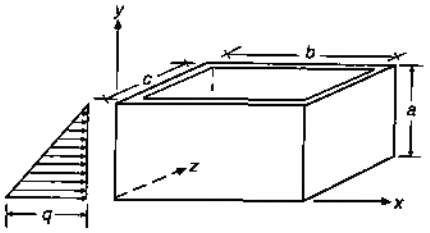
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	10	8	5	2	0
0.9a	-1	2	5	7	8	8	-6	0	3	3	3	3	5	9	8	5	2	0
0.8a	-2	4	10	13	16	16	-12	1	5	6	6	6	4	8	6	4	2	0
0.7a	-3	6	13	19	22	22	-17	1	7	8	8	8	3	6	4	2	1	0
0.6a	-4	7	16	22	25	26	-20	1	8	10	9	9	1	2	2	1	0	0
0.5a	-4	8	17	23	26	27	-22	2	9	10	9	9	1	1	1	1	1	0
0.4a	-4	7	16	20	22	23	-22	2	8	9	8	8	3	4	4	3	1	0
0.3a	-4	5	10	13	13	13	-20	2	6	6	5	5	4	7	6	4	2	0
0.2a	-3	1	0	-1	-3	-3	-14	1	3	2	1	0	5	9	7	4	2	0
0.1a	-1	-8	-17	-24	-27	-28	-6	-1	-3	-4	-5	-5	3	7	5	3	1	0
BOT.	0	-25	-45	-57	-62	-63	0	-5	-9	-11	-12	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	3	2	1	0	0
0.9a	-1	-1	-1	-1	-1	-1	-6	-4	-3	-2	-1	-1	5	3	2	1	0	0
0.8a	-2	-2	-2	-2	-2	-2	-12	-8	-5	-4	-2	-2	4	2	1	1	0	0
0.7a	-3	-3	-3	-3	-3	-3	-17	-11	-7	-5	-3	-2	3	1	1	0	0	0
0.6a	-4	-4	-3	-3	-3	-3	-20	-14	-8	-5	-3	-2	1	0	0	0	0	0
0.5a	-4	-4	-3	-3	-2	-2	-22	-14	-8	-4	-2	-1	1	1	1	1	0	0
0.4a	-4	-3	-2	-2	-1	-1	-22	-14	-7	-3	0	0	3	2	2	1	1	0
0.3a	-4	-2	-1	0	1	1	-20	-11	-5	-1	1	2	4	3	2	1	0	0
0.2a	-3	-1	1	2	3	3	-14	-7	-2	0	2	3	5	2	1	0	0	0
0.1a	-1	1	2	2	3	3	-6	-2	0	1	1	2	3	1	1	1	1	0
BOT.	0	1	-1	-3	-4	-5	0	0	0	-1	-1	-1	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 0.5

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-1	4	7	9	10	10
0.8a	-2	7	14	17	18	18
0.7a	-3	10	19	23	25	25
0.6a	-4	12	22	27	29	29
0.5a	-4	13	23	27	29	29
0.4a	-4	12	20	23	24	24
0.3a	-4	8	12	13	13	13
0.2a	-3	1	-2	-4	-5	-5
0.1a	-1	-13	-24	-29	-31	-31
BOT.	0	-36	-57	-64	-66	-67

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-6	2	3	3	2	2
-12	3	6	5	4	4
-17	5	8	7	6	6
-20	6	9	8	7	6
-22	7	9	8	7	6
-22	6	8	7	6	5
-20	5	6	4	3	3
-14	3	1	0	-1	-1
-6	-2	-4	-6	-6	-6
0	-7	-11	-13	-13	-13

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
6	9	5	2	1	0
5	9	5	2	1	0
5	7	4	2	1	0
3	5	3	1	0	0
1	2	1	0	0	0
1	1	1	1	0	0
3	5	3	1	0	0
4	7	4	2	0	0
5	8	4	1	0	0
4	6	3	1	0	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-1	-1	-1	-1	-1	-1
0.8a	-2	-2	-2	-2	-2	-2
0.7a	-3	-3	-3	-3	-3	-3
0.6a	-4	-4	-3	-3	-3	-3
0.5a	-4	-4	-3	-3	-2	-2
0.4a	-4	-3	-2	-2	-1	-1
0.3a	-4	-2	-1	0	1	1
0.2a	-3	-1	1	2	3	3
0.1a	-1	1	2	2	3	3
BOT.	0	1	-1	-3	-4	-5

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-6	-4	-3	-2	-1	-1
-12	-8	-5	-4	-2	-2
-17	-11	-7	-5	-3	-2
-20	-14	-8	-5	-3	-2
-22	-14	-8	-4	-2	-1
-22	-14	-7	-3	0	0
-20	-11	-5	-1	1	2
-14	-7	-2	0	2	3
-6	-2	0	1	1	2
0	0	0	-1	-1	-1

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
6	3	2	1	0	0
5	3	2	1	0	0
5	2	1	1	0	0
3	1	1	0	0	0
1	0	0	0	0	0
1	1	1	1	0	0
3	2	2	1	1	0
4	3	2	1	0	0
5	2	1	0	0	0
4	1	1	1	1	0
0	0	0	0	0	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.5

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	1	4	6	8	8
0.8a	-4	2	8	12	15	16
0.7a	-6	3	11	17	21	22
0.6a	-7	4	14	21	24	25
0.5a	-7	5	15	22	25	26
0.4a	-7	5	14	19	22	23
0.3a	-6	4	10	12	13	13
0.2a	-4	1	1	-1	-2	-3
0.1a	-1	-6	-15	-22	-26	-27
BOT.	0	-19	-41	-54	-60	-62

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-11	-1	2	3	3	3
-20	-2	4	6	6	6
-28	-3	6	8	8	8
-34	-3	7	10	10	9
-36	-3	8	10	10	9
-34	-2	7	9	8	8
-28	-1	6	6	5	5
-18	0	3	2	1	1
-6	-1	-2	-4	-5	-5
0	-4	-8	-11	-12	-12

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
1	9	9	6	3	0
1	9	8	5	3	0
1	7	7	4	2	0
0	5	5	3	1	0
0	2	2	1	0	0
0	1	1	1	1	0
0	4	4	3	1	0
0	7	7	4	2	0
1	8	7	4	2	0
1	7	5	3	1	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-2	0	2	4	5	6
0.8a	-4	0	5	8	10	11
0.7a	-6	1	7	12	15	16
0.6a	-7	1	9	14	18	19
0.5a	-7	1	10	16	19	21
0.4a	-7	2	10	15	18	19
0.3a	-6	2	7	11	12	13
0.2a	-4	0	2	1	1	0
0.1a	-1	-4	-10	-16	-20	-21
BOT.	0	-12	-31	-44	-51	-53

M_y Coefficient

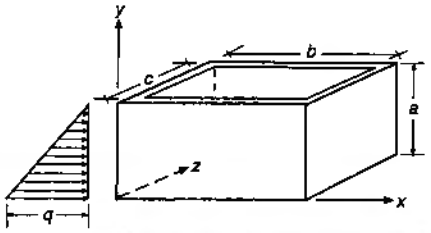
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-11	-3	1	3	4	4
-20	-5	2	6	7	7
-28	-7	3	8	10	10
-34	-8	4	10	11	12
-36	-8	5	10	12	12
-34	-6	5	9	10	11
-28	-4	4	7	8	8
-18	-2	2	3	3	3
-6	-1	-1	-2	-3	-3
0	-2	-6	-9	-10	-11

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
1	7	9	7	4	0
1	7	8	6	3	0
1	6	7	5	3	0
0	5	5	4	2	0
0	2	2	1	1	0
0	0	1	1	1	0
0	3	4	3	2	0
0	6	7	5	3	0
1	7	8	6	3	0
1	6	6	4	2	0
0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 2.0, \frac{c}{a} = 1.0$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	9	8	6	3	0
0.9a	-2	1	4	7	8	8	-9	-1	2	3	3	3	2	9	8	5	2	0
0.8a	-4	3	8	13	15	16	-18	-2	4	6	6	6	2	8	7	4	2	0
0.7a	-5	4	12	18	21	22	-25	-2	6	8	8	8	1	5	4	3	1	0
0.6a	-6	5	15	21	25	26	-30	-2	8	10	9	9	0	2	2	1	0	0
0.5a	-6	5	16	22	25	26	-32	-1	8	10	10	9	1	1	1	1	1	0
0.4a	-6	5	14	20	22	23	-31	-1	8	9	8	8	1	4	4	3	1	0
0.3a	-5	4	10	12	13	13	-27	0	6	6	5	5	2	7	6	4	2	0
0.2a	-4	1	1	-1	-2	-3	-18	0	3	2	1	1	2	8	7	4	2	0
0.1a	-1	-6	-16	-23	-27	-28	-6	-1	-2	-4	-5	-5	1	7	5	3	1	0
BOT.	0	-21	-42	-55	-61	-63	0	-4	-8	-11	-12	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	4	3	0
0.9a	-2	-1	0	1	2	2	-9	-4	0	2	3	3	2	3	5	4	2	0
0.8a	-4	-2	0	2	3	4	-18	-7	-1	4	6	6	2	3	4	4	2	0
0.7a	-5	-2	1	3	5	6	-25	-10	-1	5	8	9	1	3	3	3	2	0
0.6a	-6	-2	2	5	7	8	-30	-12	0	6	10	11	0	2	2	2	1	0
0.5a	-6	-2	3	7	9	10	-32	-12	0	7	11	12	1	1	0	0	0	0
0.4a	-6	-1	4	8	10	11	-31	-11	1	7	10	11	1	1	2	2	1	0
0.3a	-5	0	4	7	9	10	-27	-8	1	6	9	9	2	3	4	4	2	0
0.2a	-4	0	2	4	4	4	-18	-5	1	4	5	5	2	4	6	5	3	0
0.1a	-1	-1	-3	-6	-8	-9	-6	-2	0	0	0	0	1	4	5	4	2	0
BOT.	0	-5	-16	-25	-31	-33	0	-1	-3	-5	-6	-7	0	0	0	0	0	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 0.5$

Long Side

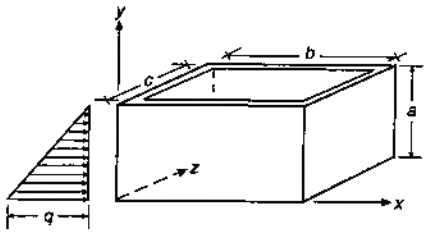
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	10	8	5	2	0
0.9a	-1	2	5	7	8	8	-6	0	3	3	3	3	5	9	8	5	2	0
0.8a	-2	4	10	13	16	16	-12	1	5	6	6	6	4	8	6	4	2	0
0.7a	-3	6	13	19	22	22	-17	1	7	8	8	8	3	6	4	2	1	0
0.6a	-4	7	16	22	25	26	-20	1	8	10	9	9	1	2	2	1	0	0
0.5a	-4	8	17	23	26	27	-22	2	9	10	9	9	1	1	1	1	1	0
0.4a	-4	7	16	20	22	23	-22	2	8	9	8	8	3	4	4	3	1	0
0.3a	-4	5	10	13	13	13	-20	2	6	6	5	5	4	7	6	4	2	0
0.2a	-3	1	0	-1	-3	-3	-14	1	3	2	1	0	5	9	7	4	2	0
0.1a	-1	-8	-17	-24	-27	-28	-6	-1	-3	-4	-5	-5	3	7	5	3	1	0
BOT.	0	-25	-45	-57	-62	-63	0	-5	-9	-11	-12	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	3	2	1	0	0
0.9a	-1	-1	-1	-1	-1	-1	-6	-4	-3	-2	-1	-1	5	3	2	1	0	0
0.8a	-2	-2	-2	-2	-2	-2	-12	-8	-5	-4	-2	-2	4	2	1	1	0	0
0.7a	-3	-3	-3	-3	-3	-3	-17	-11	-7	-5	-3	-2	3	1	1	0	0	0
0.6a	-4	-4	-3	-3	-3	-3	-20	-14	-8	-5	-3	-2	1	0	0	0	0	0
0.5a	-4	-4	-3	-3	-2	-2	-22	-14	-8	-4	-2	-1	1	1	1	1	0	0
0.4a	-4	-3	-2	-2	-1	-1	-22	-14	-7	-3	0	0	3	2	2	1	1	0
0.3a	-4	-2	-1	0	1	1	-20	-11	-5	-1	1	2	4	3	2	1	0	0
0.2a	-3	-1	1	2	3	3	-14	-7	-2	0	2	3	5	2	1	0	0	0
0.1a	-1	1	2	2	3	3	-6	-2	0	1	1	2	3	1	1	1	1	0
BOT.	0	1	-1	-3	-4	-5	0	0	0	-1	-1	-1	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.5, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-2	1	3	4	6	6
0.8a	-3	1	5	9	11	12
0.7a	-5	2	8	12	15	16
0.6a	-6	2	9	15	19	20
0.5a	-6	2	11	17	20	21
0.4a	-6	3	10	15	18	19
0.3a	-5	2	8	11	12	13
0.2a	-4	0	2	1	0	0
0.1a	-1	-4	-11	-16	-20	-22
BOT.	0	-14	-32	-45	-52	-54

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-9	-2	1	3	4	4
0.8a	-17	-4	3	6	7	7
0.7a	-24	-6	4	8	10	10
0.6a	-29	-6	5	10	11	12
0.5a	-32	-6	6	10	12	12
0.4a	-31	-5	6	9	10	11
0.3a	-26	-3	5	7	7	7
0.2a	-18	-2	3	3	3	3
0.1a	-6	-1	-1	-2	-3	-3
BOT.	0	-3	-6	-9	-10	-11

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	2	8	8	6	3	0
0.9a	2	8	8	6	3	0
0.8a	1	7	7	5	3	0
0.7a	1	5	5	3	2	0
0.6a	0	2	2	1	1	0
0.5a	0	0	1	1	1	0
0.4a	1	3	4	3	2	0
0.3a	1	6	7	5	2	0
0.2a	1	8	8	5	3	0
0.1a	1	7	6	4	2	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-2	-1	0	1	2	2
0.8a	-3	-1	1	2	3	4
0.7a	-5	-2	1	4	5	6
0.6a	-6	-2	2	5	7	8
0.5a	-6	-2	3	7	9	10
0.4a	-6	-1	4	8	10	11
0.3a	-5	0	4	7	9	10
0.2a	-4	0	2	4	4	4
0.1a	-1	-1	-3	-6	-8	-9
BOT.	0	-5	-16	-26	-31	-33

M_y Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-9	-4	0	2	3	3
0.8a	-17	-7	0	4	6	7
0.7a	-24	-10	0	5	8	9
0.6a	-29	-11	0	7	10	11
0.5a	-32	-12	0	7	11	12
0.4a	-31	-11	1	7	11	11
0.3a	-26	-8	2	6	9	9
0.2a	-18	-5	1	4	5	5
0.1a	-6	-2	0	0	0	0
BOT.	0	-1	-3	-5	-6	-7

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	2	3	5	4	3	0
0.9a	2	3	5	4	2	0
0.8a	1	3	4	4	2	0
0.7a	1	3	3	3	2	0
0.6a	0	2	2	2	1	0
0.5a	0	1	0	0	0	0
0.4a	1	1	2	2	1	0
0.3a	1	3	4	4	2	0
0.2a	1	4	6	5	3	0
0.1a	1	4	5	4	2	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 1.5, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-1	1	3	5	6	6
0.8a	-2	2	7	10	12	13
0.7a	-3	3	9	14	17	18
0.6a	-4	4	12	17	20	21
0.5a	-4	5	13	18	21	22
0.4a	-4	5	12	17	19	20
0.3a	-4	3	9	11	13	13
0.2a	-3	0	1	1	0	-1
0.1a	-1	-6	-12	-18	-22	-23
BOT.	0	-18	-36	-48	-54	-56

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	-1	2	3	4	4
0.8a	-11	-1	4	6	7	7
0.7a	-16	-2	6	9	10	10
0.6a	-20	-2	7	10	11	11
0.5a	-22	-1	7	11	11	12
0.4a	-22	-1	7	10	10	10
0.3a	-20	0	6	7	7	7
0.2a	-14	0	3	3	3	2
0.1a	-6	-1	-1	-3	-4	-4
BOT.	0	-4	-7	-10	-11	-11

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	5	9	9	6	3	0
0.9a	5	9	8	6	3	0
0.8a	4	7	7	5	2	0
0.7a	3	5	5	3	2	0
0.6a	1	3	2	1	1	0
0.5a	1	1	1	1	1	0
0.4a	3	4	4	3	2	0
0.3a	4	7	7	5	2	0
0.2a	4	8	7	5	2	0
0.1a	3	7	6	4	2	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-1	-1	-1	-1	-1	-1
0.8a	-2	-2	-2	-2	-2	-2
0.7a	-3	-3	-3	-3	-3	-2
0.6a	-4	-4	-3	-3	-3	-3
0.5a	-4	-4	-3	-3	-2	-2
0.4a	-4	-3	-2	-2	-1	-1
0.3a	-4	-2	-1	0	1	1
0.2a	-3	-1	1	2	3	3
0.1a	-1	1	2	2	3	3
BOT.	0	1	-1	-3	-4	-5

M_y Coefficient

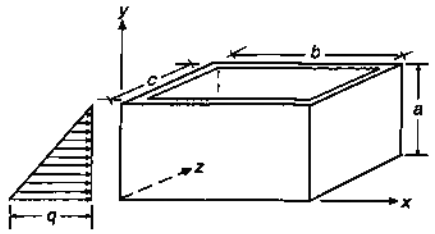
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-6	-4	-3	-2	-1	-1
0.8a	-11	-8	-5	-3	-2	-2
0.7a	-16	-11	-7	-4	-3	-2
0.6a	-20	-13	-8	-5	-3	-2
0.5a	-22	-14	-8	-4	-2	-1
0.4a	-22	-13	-7	-3	0	1
0.3a	-20	-11	-5	-1	1	2
0.2a	-14	-7	-2	0	2	3
0.1a	-6	-2	0	1	1	2
BOT.	0	0	0	-1	-1	-1

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	5	3	2	1	0	0
0.9a	5	3	2	1	0	0
0.8a	4	2	1	1	0	0
0.7a	3	1	1	0	0	0
0.6a	1	0	0	0	0	0
0.5a	1	1	1	1	0	0
0.4a	3	2	2	1	1	0
0.3a	4	3	2	1	0	0
0.2a	4	2	1	0	0	0
0.1a	3	1	1	1	1	0
BOT.	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	6	6	5	3	0
0.9a	-1	0	1	2	3	3	-5	-1	1	3	4	4	4	6	6	5	2	0
0.8a	-2	1	3	4	6	6	-9	-2	2	5	7	7	3	5	5	4	2	0
0.7a	-3	1	4	7	8	9	-13	-3	3	7	9	10	2	4	4	3	2	0
0.6a	-3	1	5	8	10	11	-17	-4	4	9	11	12	1	2	2	2	1	0
0.5a	-4	1	6	10	12	13	-19	-4	5	10	12	13	0	0	0	0	0	0
0.4a	-4	2	6	10	12	13	-20	-4	5	9	11	12	2	2	2	2	1	0
0.3a	-4	1	5	8	10	11	-18	-3	4	8	9	9	3	5	5	4	2	0
0.2a	-3	0	2	3	3	3	-14	-2	3	4	5	5	3	6	6	5	3	0
0.1a	-1	-3	-6	-9	-11	-12	-6	-1	0	0	-1	-1	3	6	6	4	2	0
BOT.	0	-10	-22	-31	-37	-39	0	-2	-4	-6	-7	-8	0	0	0	0	0	0

Short Side

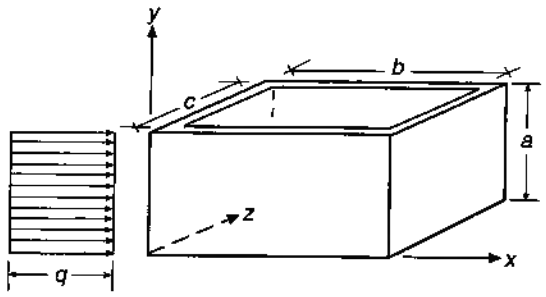
	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	2	1	1	0	0
0.9a	-1	-1	-1	-1	-1	-1	-5	-3	-2	-1	-1	-1	4	2	1	0	0	0
0.8a	-2	-2	-1	-1	-1	-1	-9	-6	-4	-2	-1	-1	3	2	1	0	0	0
0.7a	-3	-2	-2	-2	-2	-2	-13	-9	-5	-3	-1	-1	2	1	0	0	0	0
0.6a	-3	-3	-2	-2	-2	-2	-17	-11	-6	-3	-1	0	1	0	0	0	0	0
0.5a	-4	-3	-2	-2	-1	-1	-19	-12	-6	-2	0	1	0	1	1	1	0	0
0.4a	-4	-3	-2	-1	0	0	-20	-12	-5	-1	1	2	2	2	1	1	0	0
0.3a	-4	-2	-1	0	1	1	-18	-10	-4	0	2	3	3	2	1	1	0	0
0.2a	-3	-1	1	2	3	3	-14	-6	-2	1	3	3	3	1	0	0	0	0
0.1a	-1	0	1	2	2	2	-6	-2	0	1	1	2	3	0	1	1	1	0
BOT.	0	0	-2	-4	-6	-6	0	0	0	-1	-1	-1	0	0	0	0	0	0

Hinged Top
Hinged Base

CASE 5

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
4.0	3.0	0	4.60	9.30	11.60	12.40	12.70
4.0	2.0	0	4.70	9.30	11.60	12.50	12.70
4.0	1.5	0	4.80	9.40	11.60	12.50	12.70
4.0	1.0	0	5.20	9.60	11.70	12.50	12.70
4.0	0.5	0	5.60	9.90	11.80	12.50	12.70
3.0	2.0	0	3.20	7.30	10.00	11.30	11.70
3.0	1.5	0	3.30	7.40	10.00	11.30	11.70
3.0	1.0	0	3.70	7.70	10.20	11.40	11.80
3.0	0.5	0	4.10	8.00	10.40	11.60	11.90
2.0	1.5	0	1.70	4.40	6.70	8.10	8.50
2.0	1.0	0	2.10	4.80	7.00	8.40	8.80
2.0	0.5	0	2.50	5.30	7.40	8.70	9.10
1.5	1.0	0	1.20	2.90	4.40	5.40	5.70
1.5	0.5	0	1.60	3.40	5.00	5.90	6.30
1.0	0.5	0	0.60	1.40	2.00	2.50	2.60

Short Side - Along Midheight ($y = a/2$)

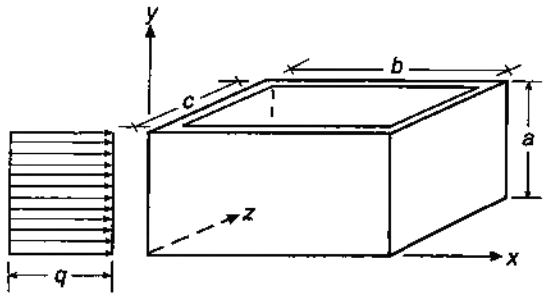
b/a	z / c/a	END	0.1c / 0.9c	0.2c / 0.8c	0.3c / 0.7c	0.4c / 0.6c	0.5c
4.0	3.0	0	3.10	7.20	9.90	11.30	11.70
4.0	2.0	0	1.50	4.20	6.50	7.90	8.40
4.0	1.5	0	0.70	2.30	3.80	4.80	5.10
4.0	1.0	0	-0.10	0.30	0.70	1.10	1.20
4.0	0.5	0	-0.40	-0.60	-0.70	-0.80	-0.80
3.0	2.0	0	1.50	4.20	6.50	7.90	8.40
3.0	1.5	0	0.70	2.30	3.80	4.80	5.10
3.0	1.0	0	-0.10	0.30	0.70	1.10	1.20
3.0	0.5	0	-0.40	-0.60	-0.70	-0.80	-0.80
2.0	1.5	0	0.70	2.30	3.80	4.80	5.20
2.0	1.0	0	-0.10	0.30	0.80	1.10	1.20
2.0	0.5	0	-0.30	-0.60	-0.70	-0.70	-0.80
1.5	1.0	0	0.00	0.50	0.90	1.30	1.40
1.5	0.5	0	-0.30	-0.50	-0.60	-0.60	-0.70
1.0	0.5	0	-0.20	-0.30	-0.30	-0.30	-0.30

CASE 5

Hinged Top
Hinged Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	4.00	7.50	10.30	12.10	12.70	12.10	10.30	7.50	4.00	0
4.0	2.0	0	4.00	7.50	10.30	12.10	12.70	12.10	10.30	7.50	4.00	0
4.0	1.5	0	4.00	7.50	10.30	12.10	12.70	12.10	10.30	7.50	4.00	0
4.0	1.0	0	4.00	7.50	10.30	12.10	12.70	12.10	10.30	7.50	4.00	0
4.0	0.5	0	4.00	7.60	10.40	12.10	12.70	12.10	10.40	7.60	4.00	0
3.0	2.0	0	3.70	7.00	9.50	11.10	11.70	11.10	9.50	7.00	3.70	0
3.0	1.5	0	3.70	7.00	9.50	11.20	11.70	11.20	9.50	7.00	3.70	0
3.0	1.0	0	3.70	7.00	9.60	11.20	11.80	11.20	9.60	7.00	3.70	0
3.0	0.5	0	3.70	7.10	9.70	11.40	11.90	11.40	9.70	7.10	3.70	0
2.0	1.5	0	2.70	5.10	7.00	8.10	8.50	8.10	7.00	5.10	2.70	0
2.0	1.0	0	2.80	5.30	7.20	8.40	8.80	8.40	7.20	5.30	2.80	0
2.0	0.5	0	2.90	5.50	7.50	8.70	9.10	8.70	7.50	5.50	2.90	0
1.5	1.0	0	1.80	3.40	4.70	5.50	5.70	5.50	4.70	3.40	1.80	0
1.5	0.5	0	2.00	3.80	5.10	6.00	6.30	6.00	5.10	3.80	2.00	0
1.0	0.5	0	0.90	1.60	2.20	2.50	2.60	2.50	2.20	1.60	0.90	0

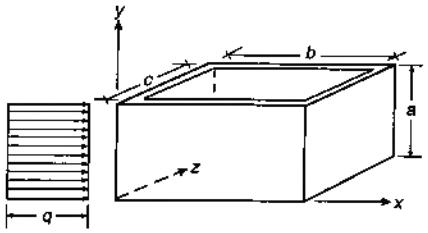
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	3.70	6.90	9.50	11.10	11.70	11.10	9.50	6.90	3.70	0
4.0	2.0	0	2.70	5.00	6.90	8.00	8.40	8.00	6.90	5.00	2.70	0
4.0	1.5	0	1.60	3.10	4.20	4.90	5.10	4.90	4.20	3.10	1.60	0
4.0	1.0	0	0.40	0.80	1.00	1.10	1.20	1.10	1.00	0.80	0.40	0
4.0	0.5	0	-0.20	-0.40	-0.60	-0.80	-0.80	-0.80	-0.60	-0.40	-0.20	0
3.0	2.0	0	2.70	5.00	6.90	8.00	8.40	8.00	6.90	5.00	2.70	0
3.0	1.5	0	1.60	3.10	4.20	4.90	5.10	4.90	4.20	3.10	1.60	0
3.0	1.0	0	0.40	0.80	1.00	1.10	1.20	1.10	1.00	0.80	0.40	0
3.0	0.5	0	-0.20	-0.40	-0.60	-0.80	-0.80	-0.80	-0.60	-0.40	-0.20	0
2.0	1.5	0	1.70	3.10	4.20	4.90	5.20	4.90	4.20	3.10	1.70	0
2.0	1.0	0	0.40	0.80	1.10	1.20	1.20	1.20	1.10	0.80	0.40	0
2.0	0.5	0	-0.20	-0.40	-0.60	-0.70	-0.80	-0.70	-0.60	-0.40	-0.20	0
1.5	1.0	0	0.50	0.90	1.20	1.40	1.40	1.40	1.20	0.90	0.50	0
1.5	0.5	0	-0.20	-0.40	-0.50	-0.60	-0.70	-0.60	-0.50	-0.40	-0.20	0
1.0	0.5	0	-0.10	-0.20	-0.30	-0.30	-0.30	-0.30	-0.30	-0.20	-0.10	0

CASE 5

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	37	21	9	3	0
0.9a	-9	20	35	41	43	44	-45	7	12	11	10	10	3	35	20	8	3	0
0.8a	-16	32	60	73	77	78	-80	12	21	19	18	17	2	30	17	7	2	0
0.7a	-21	39	78	95	101	103	-105	15	28	25	23	22	2	22	12	5	2	0
0.6a	-24	43	88	108	115	117	-120	17	32	29	27	26	1	11	7	3	1	0
0.5a	-25	45	91	112	120	122	-125	18	34	31	28	27	0	0	0	0	0	0
0.4a	-24	43	88	108	115	117	-120	17	32	29	27	26	1	11	7	3	1	0
0.3a	-21	39	78	95	101	103	-105	15	28	25	23	22	2	22	12	5	2	0
0.2a	-16	32	60	73	77	78	-80	12	21	19	18	17	2	30	17	7	2	0
0.1a	-9	20	35	41	43	44	-45	7	12	11	10	10	3	35	20	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	37	21	9	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	38	30	17	7	0
0.9a	-9	14	28	36	40	41	-45	2	11	12	11	11	3	36	28	16	7	0
0.8a	-16	21	48	64	71	73	-80	3	20	21	20	19	2	30	24	14	6	0
0.7a	-21	25	62	83	93	96	-105	3	26	28	27	26	2	22	17	10	4	0
0.6a	-24	27	69	94	106	109	-120	3	30	32	31	30	1	12	9	5	2	0
0.5a	-25	28	72	98	110	114	-125	3	31	34	32	31	0	0	0	0	0	0
0.4a	-24	27	69	94	106	109	-120	3	30	32	31	30	1	12	9	5	2	0
0.3a	-21	25	62	83	93	96	-105	3	26	28	27	26	2	22	17	10	4	0
0.2a	-16	21	48	64	71	73	-80	3	20	21	20	19	2	30	24	14	6	0
0.1a	-9	14	28	36	40	41	-45	2	11	12	11	11	3	36	28	16	7	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	38	30	17	7	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

Long Side

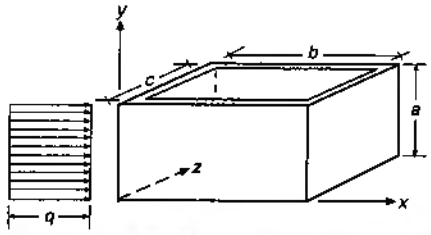
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	5	37	20	9	3	0
0.9a	-9	20	35	41	44	44	-44	7	12	11	10	10	4	35	20	8	3	0
0.8a	-16	32	60	73	77	78	-78	12	21	19	18	17	3	30	17	7	2	0
0.7a	-20	40	78	95	101	103	-102	16	28	25	23	22	2	22	12	5	2	0
0.6a	-23	44	88	108	115	117	-117	18	32	29	27	26	1	11	7	3	1	0
0.5a	-24	45	92	112	120	122	-122	18	34	30	28	27	0	0	0	0	0	0
0.4a	-23	44	88	108	115	117	-117	18	32	29	27	26	1	11	7	3	1	0
0.3a	-20	40	78	95	101	103	-102	16	28	25	23	22	2	22	12	5	2	0
0.2a	-16	32	60	73	77	78	-78	12	21	19	18	17	3	30	17	7	2	0
0.1a	-9	20	35	41	44	44	-44	7	12	11	10	10	4	35	20	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	5	37	20	9	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	5	33	34	24	12	0
0.9a	-9	7	19	26	31	32	-44	-5	8	12	13	13	4	31	32	23	12	0
0.8a	-16	9	30	45	53	56	-78	-11	13	22	24	24	3	26	27	19	10	0
0.7a	-20	9	37	57	68	72	-102	-16	17	29	32	33	2	18	19	14	7	0
0.6a	-23	9	40	63	77	81	-117	-20	19	33	37	38	1	9	10	8	4	0
0.5a	-24	9	41	65	80	84	-122	-21	20	35	39	39	0	0	0	0	0	0
0.4a	-23	9	40	63	77	81	-117	-20	19	33	37	38	1	9	10	8	4	0
0.3a	-20	9	37	57	68	72	-102	-16	17	29	32	33	2	18	19	14	7	0
0.2a	-16	9	30	45	53	56	-78	-11	13	22	24	24	3	26	27	19	10	0
0.1a	-9	7	19	26	31	32	-44	-5	8	12	13	13	4	31	32	23	12	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	5	33	34	24	12	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	8	37	20	8	3	0
0.9a	-8	20	35	41	44	44	-42	7	12	11	10	10	7	35	19	8	3	0
0.8a	-15	33	61	73	77	78	-74	13	21	19	18	17	5	30	16	7	2	0
0.7a	-19	41	79	95	101	103	-96	17	28	25	23	22	4	21	12	5	2	0
0.6a	-22	45	89	108	116	117	-110	19	32	29	27	26	2	11	6	3	1	0
0.5a	-23	47	92	113	120	122	-114	19	34	30	28	27	0	0	0	0	0	0
0.4a	-22	45	89	108	116	117	-110	19	32	29	27	26	2	11	6	3	1	0
0.3a	-19	41	79	95	101	103	-96	17	28	25	23	22	4	21	12	5	2	0
0.2a	-15	33	61	73	77	78	-74	13	21	19	18	17	5	30	16	7	2	0
0.1a	-8	20	35	41	44	44	-42	7	12	11	10	10	7	35	19	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	8	37	20	8	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	8	24	28	22	12	0
0.9a	-8	3	12	18	22	23	-42	-9	4	11	13	14	7	22	27	21	11	0
0.8a	-15	2	17	29	36	38	-74	-19	7	19	24	25	5	18	22	18	10	0
0.7a	-19	0	20	35	44	47	-96	-27	8	25	32	34	4	12	16	13	7	0
0.6a	-22	-1	20	38	48	52	-110	-32	8	28	37	39	2	6	8	7	4	0
0.5a	-23	-1	21	38	50	53	-114	-34	9	29	38	41	0	0	0	0	0	0
0.4a	-22	-1	20	38	48	52	-110	-32	8	28	37	39	2	6	8	7	4	0
0.3a	-19	0	20	35	44	47	-96	-27	8	25	32	34	4	12	16	13	7	0
0.2a	-15	2	17	29	36	38	-74	-19	7	19	24	25	5	18	22	18	10	0
0.1a	-8	3	12	18	22	23	-42	-9	4	11	13	14	7	22	27	21	11	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	8	24	28	22	12	0

$\frac{b}{a} = 4.0, \frac{c}{a} = 1.0$

Long Side

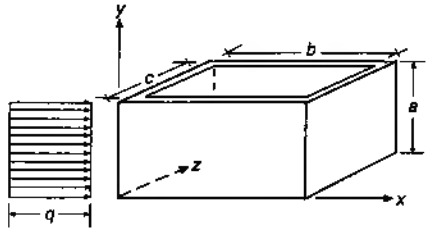
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	15	36	19	8	3	0
0.9a	-7	21	36	41	44	44	-36	8	12	11	10	10	14	34	18	8	3	0
0.8a	-12	35	62	73	77	78	-62	15	21	19	17	17	11	29	16	6	2	0
0.7a	-16	44	80	96	101	103	-81	19	28	25	23	22	8	21	11	5	2	0
0.6a	-18	49	91	109	116	117	-92	21	32	29	26	26	4	11	6	3	1	0
0.5a	-19	50	94	114	121	122	-95	22	34	30	27	27	0	0	0	0	0	0
0.4a	-18	49	91	109	116	117	-92	21	32	29	26	26	4	11	6	3	1	0
0.3a	-16	44	80	96	101	103	-81	19	28	25	23	22	8	21	11	5	2	0
0.2a	-12	35	62	73	77	78	-62	15	21	19	17	17	11	29	16	6	2	0
0.1a	-7	21	36	41	44	44	-36	8	12	11	10	10	14	34	18	8	3	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	15	36	19	8	3	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	15	7	13	12	7	0
0.9a	-7	-1	4	7	9	10	-36	-13	-1	6	9	10	14	6	12	11	6	0
0.8a	-12	-5	3	9	13	14	-62	-25	-3	9	16	18	11	4	9	9	5	0
0.7a	-16	-8	1	8	13	14	-81	-35	-6	11	20	23	8	2	6	6	4	0
0.6a	-18	-10	0	7	12	14	-92	-41	-8	12	23	26	4	1	3	3	2	0
0.5a	-19	-10	-1	7	12	14	-95	-43	-9	13	24	27	0	0	0	0	0	0
0.4a	-18	-10	0	7	12	14	-92	-41	-8	12	23	26	4	1	3	3	2	0
0.3a	-16	-8	1	8	13	14	-81	-35	-6	11	20	23	8	2	6	6	4	0
0.2a	-12	-5	3	9	13	14	-62	-25	-3	9	16	18	11	4	9	9	5	0
0.1a	-7	-1	4	7	9	10	-36	-13	-1	6	9	10	14	6	12	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	15	7	13	12	7	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	24	35	18	7	2	0
0.9a	-6	23	36	42	44	44	-28	9	12	10	10	9	23	34	17	7	2	0
0.8a	-9	38	63	74	78	79	-47	17	21	19	17	17	19	28	15	6	2	0
0.7a	-12	48	82	97	102	103	-60	22	28	25	23	22	14	21	11	4	1	0
0.6a	-14	54	93	110	116	118	-68	25	32	29	26	25	7	11	6	2	1	0
0.5a	-14	55	97	115	121	123	-70	26	33	30	27	27	0	0	0	0	0	0
0.4a	-14	54	93	110	116	118	-68	25	32	29	26	25	7	11	6	2	1	0
0.3a	-12	48	82	97	102	103	-60	22	28	25	23	22	14	21	11	4	1	0
0.2a	-9	38	63	74	78	79	-47	17	21	19	17	17	19	28	15	6	2	0
0.1a	-6	23	36	42	44	44	-28	9	12	10	10	9	23	34	17	7	2	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	24	35	18	7	2	0

Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	24	13	7	4	2	0
0.9a	-6	-4	-3	-2	-1	-1	-28	-17	-11	-7	-5	-4	23	13	8	4	2	0
0.8a	-9	-8	-7	-6	-5	-5	-47	-32	-22	-14	-10	-9	19	12	8	4	2	0
0.7a	-12	-11	-10	-10	-9	-9	-60	-43	-30	-21	-16	-14	14	9	6	4	2	0
0.6a	-14	-13	-13	-12	-12	-12	-68	-49	-35	-26	-20	-18	7	5	3	2	1	0
0.5a	-14	-14	-13	-13	-13	-13	-70	-52	-37	-27	-21	-19	0	0	0	0	0	0
0.4a	-14	-13	-13	-12	-12	-12	-68	-49	-35	-26	-20	-18	7	5	3	2	1	0
0.3a	-12	-11	-10	-10	-9	-9	-60	-43	-30	-21	-16	-14	14	9	6	4	2	0
0.2a	-9	-8	-7	-6	-5	-5	-47	-32	-22	-14	-10	-9	19	12	8	4	2	0
0.1a	-6	-4	-3	-2	-1	-1	-28	-17	-11	-7	-5	-4	23	13	8	4	2	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	24	13	7	4	2	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 2.0$

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	38	29	16	7	0
0.9a	-9	14	29	37	40	41	-44	3	11	12	11	11	3	36	27	15	6	0
0.8a	-16	22	49	64	71	73	-78	4	20	21	20	19	3	31	23	13	5	0
0.7a	-20	26	62	83	93	96	-102	4	26	28	27	26	2	22	17	9	4	0
0.6a	-23	28	70	94	106	109	-117	3	30	32	31	30	1	12	9	5	2	0
0.5a	-24	28	72	98	110	114	-122	3	31	34	32	31	0	0	0	0	0	0
0.4a	-23	28	70	94	106	109	-117	3	30	32	31	30	1	12	9	5	2	0
0.3a	-20	26	62	83	93	96	-102	4	26	28	27	26	2	22	17	9	4	0
0.2a	-16	22	49	64	71	73	-78	4	20	21	20	19	3	31	23	13	5	0
0.1a	-9	14	29	37	40	41	-44	3	11	12	11	11	3	36	27	15	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	38	29	16	7	0

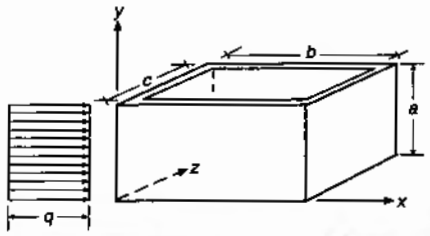
Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	4	33	34	24	12	0
0.9a	-9	7	19	26	31	32	-44	-5	8	12	13	13	3	31	32	23	12	0
0.8a	-16	9	30	45	53	56	-78	-11	13	22	24	24	3	26	27	19	10	0
0.7a	-20	9	37	57	68	72	-102	-16	17	29	32	33	2	18	19	14	7	0
0.6a	-23	9	40	63	77	81	-117	-20	19	33	37	38	1	9	10	8	4	0
0.5a	-24	9	41	65	80	84	-122	-21	20	35	39	39	0	0	0	0	0	0
0.4a	-23	9	40	63	77	81	-117	-20	19	33	37	38	1	9	10	8	4	0
0.3a	-20	9	37	57	68	72	-102	-16	17	29	32	33	2	18	19	14	7	0
0.2a	-16	9	30	45	53	56	-78	-11	13	22	24	24	3	26	27	19	10	0
0.1a	-9	7	19	26	31	32	-44	-5	8	12	13	13	3	31	32	23	12	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	4	33	34	24	12	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	38	28	16	7	0
0.9a	-8	15	29	37	40	42	-42	3	11	12	11	11	6	36	27	15	6	0
0.8a	-15	23	49	64	71	73	-74	5	20	21	20	19	5	31	23	13	5	0
0.7a	-19	27	63	83	93	96	-96	5	26	28	26	26	3	22	17	9	4	0
0.6a	-22	29	71	95	106	109	-110	5	30	32	30	30	2	12	9	5	2	0
0.5a	-23	30	73	98	110	114	-114	5	32	34	32	31	0	0	0	0	0	0
0.4a	-22	29	71	95	106	109	-110	5	30	32	30	30	2	12	9	5	2	0
0.3a	-19	27	63	83	93	96	-96	5	26	28	26	26	3	22	17	9	4	0
0.2a	-15	23	49	64	71	73	-74	5	20	21	20	19	5	31	23	13	5	0
0.1a	-8	15	29	37	40	42	-42	3	11	12	11	11	6	36	27	15	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	38	28	16	7	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	24	28	22	12	0
0.9a	-8	3	12	18	22	23	-42	-9	4	11	13	14	6	22	27	21	11	0
0.8a	-15	2	17	29	36	38	-74	-19	7	19	24	25	5	18	22	18	10	0
0.7a	-19	0	20	35	44	47	-96	-27	8	25	32	34	3	12	16	13	7	0
0.6a	-22	-1	20	38	48	52	-110	-32	9	28	37	39	2	6	8	7	4	0
0.5a	-23	-1	21	38	50	53	-114	-34	9	29	38	41	0	0	0	0	0	0
0.4a	-22	-1	20	38	48	52	-110	-32	9	28	37	39	2	6	8	7	4	0
0.3a	-19	0	20	35	44	47	-96	-27	8	25	32	34	3	12	16	13	7	0
0.2a	-15	2	17	29	36	38	-74	-19	7	19	24	25	5	18	22	18	10	0
0.1a	-8	3	12	18	22	23	-42	-9	4	11	13	14	6	22	27	21	11	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	24	28	22	12	0

M_y Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	7	24	28	22	12	0
0.9a	-8	3	12	18	22	23	-42	-9	4	11	13	14	6	22	27	21	11	0
0.8a	-15	2	17	29	36	38	-74	-19	7	19	24	25	5	18	22	18	10	0
0.7a	-19	0	20	35	44	47	-96	-27	8	25	32	34	3	12	16	13	7	0
0.6a	-22	-1	20	38	48	52	-110	-32	9	28	37	39	2	6	8	7	4	0
0.5a	-23	-1	21	38	50	53	-114	-34	9	29	38	41	0	0	0	0	0	0
0.4a	-22	-1	20	38	48	52	-110	-32	9	28	37	39	2	6	8	7	4	0
0.3a	-19	0	20	35	44	47	-96	-27	8	25	32	34	3	12	16	13	7	0
0.2a	-15	2	17	29	36	38	-74	-19	7	19	24	25	5	18	22	18	10	0
0.1a	-8	3	12	18	22	23	-42	-9	4	11	13	14	6	22	27	21	11	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	7	24	28	22	12	0

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	7	38	28	16	7	0
0.9a	6	36	27	15	6	0
0.8a	5	31	23	13	5	0
0.7a	3	22	17	9	4	0
0.6a	2	12	9	5	2	0
0.5a	0	0	0	0	0	0
0.4a	2	12	9	5	2	0
0.3a	3	22	17	9	4	0
0.2a	5	31	23	13	5	0
0.1a	6	36	27	15	6	0
BOT.	7	38	28	16	7	0

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	7	24	28	22	12	0
0.9a	6	22	27	21	11	0
0.8a	5	18	22	18	10	0
0.7a	3	12	16	13	7	0
0.6a	2	6	8	7	4	0
0.5a	0	0	0	0	0	0
0.4a	2	6	8	7	4	0
0.3a	3	12	16	13	7	0
0.2a	5	18	22	18	10	0
0.1a	6	22	27	21	11	0
BOT.	7	24	28	22	12	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	14	39	27	15	6	0
0.9a	-7	16	30	37	41	42	-36	5	11	12	11	11	13	37	26	14	6	0
0.8a	-12	25	51	65	72	74	-62	7	20	21	20	19	11	31	22	12	5	0
0.7a	-16	31	65	85	94	97	-81	9	27	28	26	25	8	22	16	9	4	0
0.6a	-18	33	73	96	107	110	-92	10	31	32	30	29	4	12	9	5	2	0
0.5a	-19	34	76	100	111	115	-95	10	32	34	31	30	0	0	0	0	0	0
0.4a	-18	33	73	96	107	110	-92	10	31	32	30	29	4	12	9	5	2	0
0.3a	-16	31	65	85	94	97	-81	9	27	28	26	25	8	22	16	9	4	0
0.2a	-12	25	51	65	72	74	-62	7	20	21	20	19	11	31	22	12	5	0
0.1a	-7	16	30	37	41	42	-36	5	11	12	11	11	13	37	26	14	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	14	39	27	15	6	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	14	7	13	12	7	0
0.9a	-7	-1	4	7	9	10	-36	-13	-1	6	9	10	13	6	12	11	6	0
0.8a	-12	-5	3	9	13	14	-62	-25	-3	9	16	18	11	4	9	9	5	0
0.7a	-16	-8	1	8	13	15	-81	-35	-6	11	20	23	8	2	6	6	4	0
0.6a	-18	-9	0	7	12	14	-92	-41	-8	12	23	26	4	1	3	3	2	0
0.5a	-19	-10	-1	7	12	14	-95	-43	-9	13	24	27	0	0	0	0	0	0
0.4a	-18	-9	0	7	12	14	-92	-41	-8	12	23	26	4	1	3	3	2	0
0.3a	-16	-8	1	8	13	15	-81	-35	-6	11	20	23	8	2	6	6	4	0
0.2a	-12	-5	3	9	13	14	-62	-25	-3	9	16	18	11	4	9	9	5	0
0.1a	-7	-1	4	7	9	10	-36	-13	-1	6	9	10	13	6	12	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	14	7	13	12	7	0

M_y Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	14	7	13	12	7	0
0.9a	-7	-1	4	7	9	10	-36	-13	-1	6	9	10	13	6	12	11	6	0
0.8a	-12	-5	3	9	13	14	-62	-25	-3	9	16	18	11	4	9	9	5	0
0.7a	-16	-8	1	8	13	15	-81	-35	-6	11	20	23	8	2	6	6	4	0
0.6a	-18	-9	0	7	12	14	-92	-41	-8	12	23	26	4	1	3	3	2	0
0.5a	-19	-10	-1	7	12	14	-95	-43	-9	13	24	27	0	0	0	0	0	0
0.4a	-18	-9	0	7	12	14	-92	-41	-8	12	23	26	4	1	3	3	2	0
0.3a	-16	-8	1	8	13	15	-81	-35	-6	11	20	23	8	2	6	6	4	0
0.2a	-12	-5	3	9	13	14	-62	-25	-3	9	16	18	11	4	9	9	5	0
0.1a	-7	-1	4	7	9	10	-36	-13	-1	6	9	10	13	6	12	11	6	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	14	7	13	12	7	0

M_{xy} Coefficient

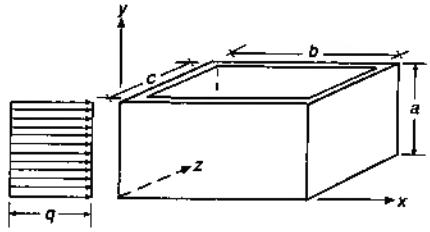
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	14	39	27	15	6	0
0.9a	13	37	26	14	6	0
0.8a	11	31	22	12	5	0
0.7a	8	22	16	9	4	0
0.6a	4	12	9	5	2	0
0.5a	0	0	0	0	0	0
0.4a	4	12	9	5	2	0
0.3a	8	22	16	9	4	0
0.2a	11	31	22	12	5	0
0.1a	13	37	26	14	6	0
BOT.	14	39	27	15	6	0

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	14	7	13	12	7	0
0.9a	13	6	12	11	6	0
0.8a	11	4	9	9	5	0
0.7a	8	2	6	6	4	0
0.6a	4	1	3	3	2	0
0.5a	0	0	0	0	0	0
0.4a	4	1	3	3	2	0
0.3a	8	2	6	6	4	0
0.2a	11	4	9	9	5	0
0.1a	13	6	12	11	6	0
BOT.	14	7	13	12	7	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 0.5

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-6	18	31	38	41	42
0.8a	-9	29	53	66	73	74
0.7a	-12	35	68	86	95	97
0.6a	-14	39	77	98	108	111
0.5a	-14	40	80	102	113	116
0.4a	-14	39	77	98	108	111
0.3a	-12	35	68	86	95	97
0.2a	-9	29	53	66	73	74
0.1a	-6	18	31	38	41	42
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-28	7	12	12	11	11
0.8a	-47	11	21	21	20	19
0.7a	-60	14	28	28	26	25
0.6a	-68	15	32	32	30	29
0.5a	-70	16	33	33	31	30
0.4a	-68	15	32	32	30	29
0.3a	-60	14	28	28	26	25
0.2a	-47	11	21	21	20	19
0.1a	-28	7	12	12	11	11
BOT.	0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
24	39	26	14	6	0
22	37	25	13	5	0
19	31	21	11	5	0
13	22	15	8	3	0
7	12	8	4	2	0
0	0	0	0	0	0
7	12	8	4	2	0
13	22	15	8	3	0
19	31	21	11	5	0
22	37	25	13	5	0
24	39	26	14	6	0

Short Side

M_x Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-6	-4	-3	-2	-1	-1
0.8a	-9	-8	-7	-6	-5	-5
0.7a	-12	-11	-10	-10	-9	-9
0.6a	-14	-13	-13	-12	-12	-12
0.5a	-14	-14	-13	-13	-13	-13
0.4a	-14	-13	-13	-12	-12	-12
0.3a	-12	-11	-10	-10	-9	-9
0.2a	-9	-8	-7	-6	-5	-5
0.1a	-6	-4	-3	-2	-1	-1
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-28	-17	-11	-7	-5	-4
0.8a	-47	-32	-21	-14	-10	-9
0.7a	-60	-43	-30	-21	-16	-14
0.6a	-68	-49	-35	-26	-20	-18
0.5a	-70	-51	-37	-27	-21	-19
0.4a	-68	-49	-35	-26	-20	-18
0.3a	-60	-43	-30	-21	-16	-14
0.2a	-47	-32	-21	-14	-10	-9
0.1a	-28	-17	-11	-7	-5	-4
BOT.	0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
24	13	7	4	2	0
22	13	8	4	2	0
19	12	8	4	2	0
13	9	6	4	2	0
7	5	3	2	1	0
0	0	0	0	0	0
7	5	3	2	1	0
13	9	6	4	2	0
19	12	8	4	2	0
22	13	8	4	2	0
24	13	7	4	2	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.5

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-8	8	19	27	31	33
0.8a	-14	10	31	46	54	57
0.7a	-19	11	38	58	69	73
0.6a	-21	11	42	65	78	82
0.5a	-22	11	43	67	81	85
0.4a	-21	11	42	65	78	82
0.3a	-19	11	38	58	69	73
0.2a	-14	10	31	46	54	57
0.1a	-8	8	19	27	31	33
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-41	-4	8	12	13	13
0.8a	-72	-8	14	22	24	24
0.7a	-94	-13	18	29	32	33
0.6a	-107	-16	21	33	37	38
0.5a	-112	-17	22	35	39	39
0.4a	-107	-16	21	33	37	38
0.3a	-94	-13	18	29	32	33
0.2a	-72	-8	14	22	24	24
0.1a	-41	-4	8	12	13	13
BOT.	0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
5	34	33	23	11	0
4	32	31	22	11	0
3	27	27	19	9	0
2	19	19	14	7	0
1	10	10	7	4	0
0	0	0	0	0	0
1	10	10	7	4	0
2	19	19	14	7	0
3	27	27	19	9	0
4	32	31	22	11	0
5	34	33	23	11	0

Short Side

M_x Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-8	3	12	18	22	23
0.8a	-14	2	18	29	36	38
0.7a	-19	1	20	35	44	47
0.6a	-21	0	21	38	49	52
0.5a	-22	-1	21	39	50	54
0.4a	-21	0	21	38	49	52
0.3a	-19	1	20	35	44	47
0.2a	-14	2	18	29	36	38
0.1a	-8	3	12	18	22	23
BOT.	0	0	0	0	0	0

M_y Coefficient

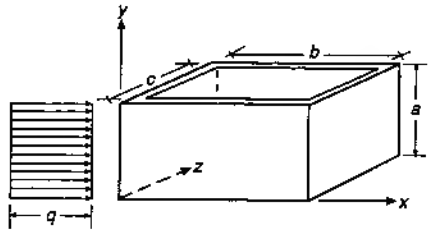
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-41	-9	4	11	13	14
0.8a	-72	-18	7	19	24	25
0.7a	-94	-26	9	25	32	34
0.6a	-107	-31	9	28	37	39
0.5a	-112	-33	9	30	38	41
0.4a	-107	-31	9	28	37	39
0.3a	-94	-26	9	25	32	34
0.2a	-72	-18	7	19	24	25
0.1a	-41	-9	4	11	13	14
BOT.	0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
5	25	28	22	12	0
4	23	27	21	11	0
3	18	22	18	10	0
2	13	16	13	7	0
1	6	8	7	4	0
0	0	0	0	0	0
1	6	8	7	4	0
2	13	16	13	7	0
3	18	22	18	10	0
4	23	27	21	11	0
5	25	28	22	12	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.0

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-7	9	21	28	32	34
0.8a	-12	13	34	48	56	58
0.7a	-16	15	42	61	71	75
0.6a	-18	16	46	68	81	85
0.5a	-19	16	47	70	84	88
0.4a	-18	16	46	68	81	85
0.3a	-16	15	42	61	71	75
0.2a	-12	13	34	48	56	58
0.1a	-7	9	21	28	32	34
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-35	-1	9	12	13	13
0.8a	-61	-4	16	22	24	24
0.7a	-79	-7	20	29	32	32
0.6a	-89	-9	23	34	37	37
0.5a	-93	-9	24	35	38	39
0.4a	-89	-9	23	34	37	37
0.3a	-79	-7	20	29	32	32
0.2a	-61	-4	16	22	24	24
0.1a	-35	-1	9	12	13	13
BOT.	0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
12	36	33	22	11	0
11	34	31	21	10	0
10	28	26	18	9	0
7	20	19	13	7	0
4	10	10	7	3	0
0	0	0	0	0	0
4	10	10	7	3	0
7	20	19	13	7	0
10	28	26	18	9	0
11	34	31	21	10	0
12	36	33	22	11	0

Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-7	-1	4	8	10	10
0.8a	-12	-4	3	9	13	14
0.7a	-16	-7	2	9	14	15
0.6a	-18	-9	0	8	13	15
0.5a	-19	-10	0	8	13	14
0.4a	-18	-9	0	8	13	15
0.3a	-16	-7	2	9	14	15
0.2a	-12	-4	3	9	13	14
0.1a	-7	-1	4	8	10	10
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-35	-12	-1	6	9	10
0.8a	-61	-24	-3	10	16	18
0.7a	-79	-34	-5	12	21	24
0.6a	-89	-40	-7	13	23	27
0.5a	-93	-41	-8	13	24	28
0.4a	-89	-40	-7	13	23	27
0.3a	-79	-34	-5	12	21	24
0.2a	-61	-24	-3	10	16	18
0.1a	-35	-12	-1	6	9	10
BOT.	0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
12	8	13	12	7	0
11	6	12	11	6	0
10	4	9	9	5	0
7	2	6	6	4	0
4	1	3	3	2	0
0	0	0	0	0	0
4	1	3	3	2	0
7	2	6	6	4	0
10	4	9	9	5	0
11	6	12	11	6	0
12	8	13	12	7	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 0.5

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-5	11	22	29	33	34
0.8a	-9	17	37	50	58	60
0.7a	-12	20	46	64	74	77
0.6a	-13	21	51	72	84	88
0.5a	-14	22	53	74	87	91
0.4a	-13	21	51	72	84	88
0.3a	-12	20	46	64	74	77
0.2a	-9	17	37	50	58	60
0.1a	-5	11	22	29	33	34
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-27	2	10	12	13	13
0.8a	-46	2	18	23	24	24
0.7a	-59	1	23	30	32	32
0.6a	-66	1	26	35	36	37
0.5a	-68	0	28	36	38	38
0.4a	-66	1	26	35	36	37
0.3a	-59	1	23	30	32	32
0.2a	-46	2	18	23	24	24
0.1a	-27	2	10	12	13	13
BOT.	0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
22	38	32	21	10	0
21	36	31	20	10	0
18	30	26	17	8	0
13	21	19	13	6	0
7	11	10	7	3	0
0	0	0	0	0	0
7	11	10	7	3	0
13	21	19	13	6	0
18	30	26	17	8	0
21	36	31	20	10	0
22	38	32	21	10	0

Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-5	-4	-2	-1	-1	0
0.8a	-9	-8	-7	-5	-5	-4
0.7a	-12	-11	-10	-9	-9	-8
0.6a	-13	-13	-12	-12	-11	-11
0.5a	-14	-13	-13	-12	-12	-12
0.4a	-13	-13	-12	-12	-11	-11
0.3a	-12	-11	-10	-9	-9	-8
0.2a	-9	-8	-7	-5	-5	-4
0.1a	-5	-4	-2	-1	-1	0
BOT.	0	0	0	0	0	0

M_y Coefficient

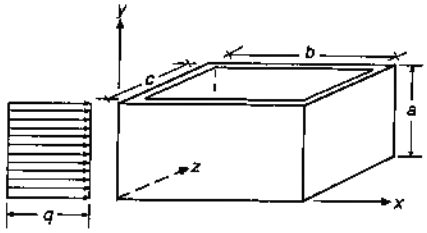
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-27	-17	-10	-6	-4	-4
0.8a	-46	-31	-21	-14	-10	-8
0.7a	-59	-41	-29	-20	-15	-13
0.6a	-66	-48	-34	-24	-19	-17
0.5a	-68	-50	-36	-26	-20	-18
0.4a	-66	-48	-34	-24	-19	-17
0.3a	-59	-41	-29	-20	-15	-13
0.2a	-46	-31	-21	-14	-10	-8
0.1a	-27	-17	-10	-6	-4	-4
BOT.	0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
22	12	7	4	2	0
21	12	7	4	2	0
18	12	7	4	2	0
13	9	6	3	2	0
7	5	3	2	1	0
0	0	0	0	0	0
7	5	3	2	1	0
13	9	6	3	2	0
18	12	7	4	2	0
21	12	7	4	2	0
22	12	7	4	2	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.5, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	5	14	20	23	25
0.8a	-11	6	21	32	39	41
0.7a	-15	6	25	40	49	52
0.6a	-17	6	27	44	54	57
0.5a	-17	6	28	45	56	59
0.4a	-17	6	27	44	54	57
0.3a	-15	6	25	40	49	52
0.2a	-11	6	21	32	39	41
0.1a	-7	5	14	20	23	25
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-33	-5	6	11	13	14
-57	-11	11	20	25	26
-74	-16	13	27	33	34
-83	-19	15	31	38	40
-87	-20	15	32	39	41
-83	-19	15	31	38	40
-74	-16	13	27	33	34
-57	-11	11	20	25	26
-33	-5	6	11	13	14
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
9	29	29	22	11	0
8	27	28	21	11	0
7	22	23	17	9	0
5	15	16	13	7	0
3	8	9	7	4	0
0	0	0	0	0	0
3	8	9	7	4	0
5	15	16	13	7	0
7	22	23	17	9	0
8	27	28	21	11	0
9	29	29	22	11	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-7	-1	5	8	10	11
0.8a	-11	-3	5	11	14	16
0.7a	-15	-6	3	10	15	17
0.6a	-17	-7	2	10	15	17
0.5a	-17	-8	2	9	15	16
0.4a	-17	-7	2	10	15	17
0.3a	-15	-6	3	10	15	17
0.2a	-11	-3	5	11	14	16
0.1a	-7	-1	5	8	10	11
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-33	-11	0	6	9	10
-57	-22	-1	11	17	19
-74	-30	-3	13	22	24
-83	-36	-5	14	25	28
-87	-37	-5	15	26	29
-83	-36	-5	14	25	28
-74	-30	-3	13	22	24
-57	-22	-1	11	17	19
-33	-11	0	6	9	10
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
9	9	14	12	7	0
8	8	13	11	7	0
7	5	10	9	5	0
5	3	7	6	4	0
3	1	3	3	2	0
0	0	0	0	0	0
3	1	3	3	2	0
5	3	7	6	4	0
7	5	10	9	5	0
8	8	13	11	7	0
9	9	14	12	7	0

$\frac{b}{a} = 1.5, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-5	7	16	22	25	26
0.8a	-9	10	25	36	42	44
0.7a	-11	11	30	45	53	56
0.6a	-12	12	33	49	59	62
0.5a	-12	12	34	51	61	64
0.4a	-12	12	33	49	59	62
0.3a	-11	11	30	45	53	56
0.2a	-9	10	25	36	42	44
0.1a	-5	7	16	22	25	26
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-25	-1	8	12	14	14
-43	-3	14	22	25	26
-54	-5	18	29	33	35
-60	-7	20	33	38	40
-62	-8	21	34	40	42
-60	-7	20	33	38	40
-54	-5	18	29	33	35
-43	-3	14	22	25	26
-25	-1	8	12	14	14
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
19	33	30	22	11	0
18	31	29	21	10	0
15	25	24	17	9	0
11	18	17	13	6	0
6	9	9	7	3	0
0	0	0	0	0	0
6	9	9	7	3	0
11	18	17	13	6	0
15	25	24	17	9	0
18	31	29	21	10	0
19	33	30	22	11	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-5	-3	-2	-1	0	0
0.8a	-9	-7	-6	-4	-4	-3
0.7a	-11	-10	-9	-8	-7	-7
0.6a	-12	-11	-11	-10	-10	-9
0.5a	-12	-12	-11	-11	-10	-10
0.4a	-12	-11	-11	-10	-10	-9
0.3a	-11	-10	-9	-8	-7	-7
0.2a	-9	-7	-6	-4	-4	-3
0.1a	-5	-3	-2	-1	0	0
BOT.	0	0	0	0	0	0

M_y Coefficient

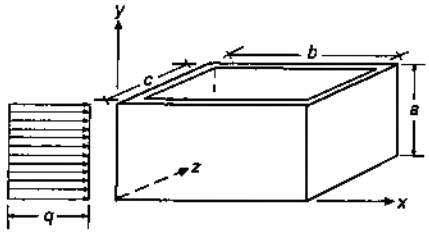
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-25	-15	-9	-5	-3	-2
-43	-28	-18	-11	-8	-6
-54	-37	-25	-17	-12	-10
-60	-43	-30	-21	-15	-13
-62	-45	-31	-22	-16	-14
-60	-43	-30	-21	-15	-13
-54	-37	-25	-17	-12	-10
-43	-28	-18	-11	-8	-6
-25	-15	-9	-5	-3	-2
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
19	10	5	3	1	0
18	11	6	3	1	0
15	10	6	3	2	0
11	8	5	3	1	0
6	4	3	2	1	0
0	0	0	0	0	0
6	4	3	2	1	0
11	8	5	3	1	0
15	10	6	3	2	0
18	11	6	3	1	0
19	10	5	3	1	0

Hinged Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	12	21	20	15	8	0
0.9a	-4	3	8	12	14	15	-20	-3	5	10	12	13	11	19	18	14	7	0
0.8a	-7	3	12	18	22	23	-33	-6	9	17	21	23	9	15	15	11	6	0
0.7a	-8	3	13	21	25	27	-41	-9	10	22	28	30	7	10	10	8	4	0
0.6a	-9	3	13	22	27	29	-45	-11	11	25	32	34	4	5	5	4	2	0
0.5a	-9	3	13	22	27	29	-46	-11	12	26	33	36	0	0	0	0	0	0
0.4a	-9	3	13	22	27	29	-45	-11	11	25	32	34	4	5	5	4	2	0
0.3a	-8	3	13	21	25	27	-41	-9	10	22	28	30	7	10	10	8	4	0
0.2a	-7	3	12	18	22	23	-33	-6	9	17	21	23	9	15	15	11	6	0
0.1a	-4	3	8	12	14	15	-20	-3	5	10	12	13	11	19	18	14	7	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	12	21	20	15	8	0

Short Side

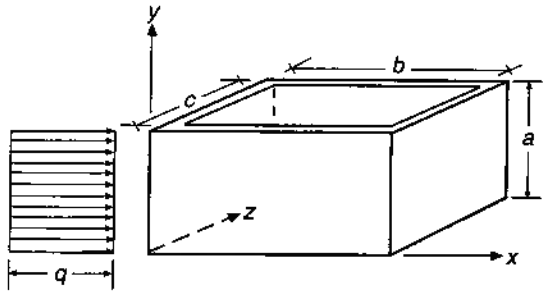
	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	12	5	2	0	0	0
0.9a	-4	-2	-1	1	1	2	-20	-11	-5	-2	0	1	11	6	2	1	0	0
0.8a	-7	-5	-3	-2	-1	-1	-33	-20	-11	-5	-2	-1	9	6	3	1	1	0
0.7a	-8	-7	-5	-4	-3	-3	-41	-26	-16	-8	-4	-3	7	4	3	2	1	0
0.6a	-9	-8	-6	-5	-5	-5	-45	-30	-18	-10	-6	-4	4	2	2	1	0	0
0.5a	-9	-8	-7	-6	-5	-5	-46	-31	-19	-11	-6	-5	0	0	0	0	0	0
0.4a	-9	-8	-6	-5	-5	-5	-45	-30	-18	-10	-6	-4	4	2	2	1	0	0
0.3a	-8	-7	-5	-4	-3	-3	-41	-26	-16	-8	-4	-3	7	4	3	2	1	0
0.2a	-7	-5	-3	-2	-1	-1	-33	-20	-11	-5	-2	-1	9	6	3	1	1	0
0.1a	-4	-2	-1	1	1	2	-20	-11	-5	-2	0	1	11	6	2	1	0	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	12	5	2	0	0	0

CASE 6

Free Top
Hinged Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
4.0	3.0	0	40.50	99.80	151.50	185.10	196.60
4.0	2.0	0	50.60	113.90	167.20	201.40	213.10
4.0	1.5	0	54.60	119.60	173.50	207.90	219.60
4.0	1.0	0	56.30	121.80	176.00	210.50	222.20
4.0	0.5	0	51.50	115.10	168.50	202.70	214.30
3.0	2.0	0	20.80	49.20	74.40	91.10	96.90
3.0	1.5	0	24.40	54.60	80.60	97.70	103.60
3.0	1.0	0	26.40	57.60	84.20	101.40	107.40
3.0	0.5	0	24.40	54.60	80.60	97.70	103.60
2.0	1.5	0	6.10	14.70	22.60	27.90	29.80
2.0	1.0	0	8.10	17.90	26.50	32.20	34.20
2.0	0.5	0	8.10	17.80	26.40	32.10	34.10
1.5	1.0	0	3.00	6.80	10.20	12.50	13.30
1.5	0.5	0	3.50	7.60	11.20	13.60	14.50
1.0	0.5	0	0.90	2.00	3.00	3.60	3.80

Short Side - Along Midheight ($y = a/2$)

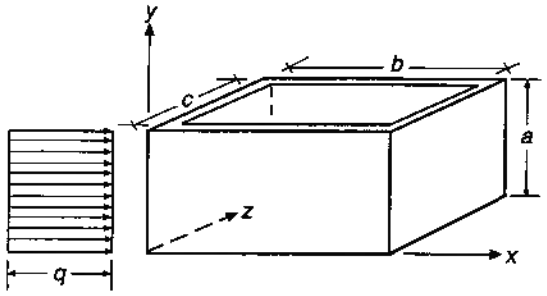
b/a	z / c/a	END	0.1c / 0.9c	0.2c / 0.8c	0.3c / 0.7c	0.4c / 0.6c	0.5c
4.0	3.0	0	3.70	23.30	44.30	59.00	64.30
4.0	2.0	0	-9.10	-10.20	-8.10	-5.80	-4.80
4.0	1.5	0	-10.50	-16.00	-18.60	-19.60	-19.90
4.0	1.0	0	-8.40	-14.20	-18.00	-20.10	-20.80
4.0	0.5	0	-3.60	-6.40	-8.30	-9.50	-9.80
3.0	2.0	0	-2.80	0.20	4.70	8.30	9.60
3.0	1.5	0	-5.60	-7.70	-8.20	-8.00	-7.80
3.0	1.0	0	-5.30	-8.80	-11.00	-12.20	-12.60
3.0	0.5	0	-2.40	-4.30	-5.60	-6.40	-6.60
2.0	1.5	0	-0.90	0.30	2.00	3.40	3.90
2.0	1.0	0	-2.30	-3.60	-4.20	-4.50	-4.60
2.0	0.5	0	-1.30	-2.30	-3.00	-3.40	-3.50
1.5	1.0	0	-0.90	-1.10	-1.00	-0.09	-0.80
1.5	0.5	0	-0.80	-1.30	-1.70	-1.90	-2.00
1.0	0.5	0	-0.30	-0.50	-0.60	-0.70	-0.70

CASE 6

Free Top
Hinged Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	40.40	80.50	119.90	158.70	196.60	233.80	270.20	306.20	341.90	377.80
4.0	2.0	0	43.70	87.10	129.80	171.80	213.10	253.50	293.20	332.50	371.30	410.30
4.0	1.5	0	45.00	89.70	133.80	177.10	219.60	261.30	302.30	342.80	383.10	423.40
4.0	1.0	0	45.60	90.80	135.40	179.20	222.20	264.50	306.00	346.90	387.80	428.80
4.0	0.5	0	44.00	87.60	130.60	172.90	214.30	255.00	295.00	334.40	373.80	412.80
3.0	2.0	0	20.30	40.30	59.80	78.70	96.90	114.40	131.40	148.00	164.40	181.00
3.0	1.5	0	21.70	43.00	63.90	84.10	103.60	122.50	140.70	158.60	176.20	194.10
3.0	1.0	0	22.40	44.60	66.20	87.20	107.40	127.00	146.00	164.50	182.90	201.40
3.0	0.5	0	21.70	43.00	63.90	84.10	103.60	122.40	140.60	158.50	176.10	193.90
2.0	1.5	0	6.60	13.00	19.00	24.60	29.80	34.60	39.00	43.20	47.30	51.50
2.0	1.0	0	7.50	14.80	21.70	28.20	34.20	39.70	44.90	49.90	54.80	59.80
2.0	0.5	0	7.50	14.80	21.60	28.10	34.10	39.60	44.70	49.70	54.50	59.40
1.5	1.0	0	3.10	6.10	8.80	11.20	13.30	15.20	16.80	18.30	19.80	21.40
1.5	0.5	0	3.40	6.60	9.50	12.10	14.50	16.50	18.30	20.00	21.60	23.30
1.0	0.5	0	1.00	1.90	2.70	3.30	3.80	4.20	4.50	4.80	5.10	5.40

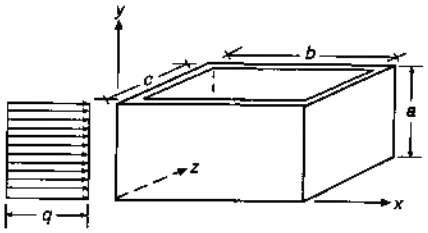
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	13.70	27.10	40.10	52.50	64.30	75.50	86.20	96.60	106.90	117.20
4.0	2.0	0	-0.50	-1.20	-2.10	-3.40	-4.80	-6.50	-8.40	-10.40	-12.30	-14.30
4.0	1.5	0	-3.80	-7.60	-11.60	-15.70	-19.90	-24.00	-28.10	-32.20	-36.20	-40.30
4.0	1.0	0	-4.10	-8.30	-12.50	-16.70	-20.80	-24.80	-28.50	-32.20	-35.80	-39.50
4.0	0.5	0	-2.00	-4.00	-6.00	-7.90	-9.80	-11.70	-13.40	-15.00	-16.60	-18.60
3.0	2.0	0	2.40	4.70	6.70	8.30	9.60	10.60	11.40	12.00	12.60	13.20
3.0	1.5	0	-1.30	-2.70	-4.20	-6.00	-7.80	-9.80	-11.80	-13.80	-15.80	-17.80
3.0	1.0	0	-2.40	-4.90	-7.50	-10.10	-12.60	-15.10	-17.40	-19.70	-21.90	-24.20
3.0	0.5	0	-1.30	-2.70	-4.10	-5.40	-6.60	-7.80	-9.00	-10.00	-11.00	-12.30
2.0	1.5	0	1.20	2.20	3.00	3.50	3.90	4.10	4.10	4.10	4.10	4.10
2.0	1.0	0	-0.80	-1.60	-2.50	-3.50	-4.60	-5.60	-6.50	-7.50	-8.40	-9.30
2.0	0.5	0	-0.70	-1.40	-2.20	-2.80	-3.50	-4.10	-4.60	-5.10	-5.60	-6.20
1.5	1.0	0	0.00	-0.10	-0.20	-0.50	-0.80	-1.20	-1.60	-1.90	-2.30	-2.60
1.5	0.5	0	-0.40	-0.80	-1.30	-1.70	-2.00	-2.30	-2.60	-2.90	-3.10	-3.40
1.0	0.5	0	-0.10	-0.30	-0.40	-0.60	-0.70	-0.80	-0.90	-1.00	-1.10	-1.20

CASE 6

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-134	0	0	0	0	0
0.9a	-165	-18	15	30	37	39
0.8a	-142	-27	27	53	65	69
0.7a	-122	-26	37	70	86	90
0.6a	-105	-19	45	81	98	103
0.5a	-89	-10	50	86	103	108
0.4a	-73	-2	52	84	100	105
0.3a	-56	5	49	75	88	92
0.2a	-39	9	40	59	68	71
0.1a	-20	8	24	34	39	40
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-668	-175	96	211	258	270
-827	-163	90	198	241	252
-707	-150	84	183	222	232
-609	-135	78	167	201	210
-523	-118	71	149	179	187
-443	-99	63	129	154	161
-363	-79	53	107	128	133
-282	-58	42	83	99	103
-195	-37	30	58	68	71
-102	-18	16	30	35	36
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
34	214	212	159	83	0
70	204	208	157	82	0
70	203	207	158	83	0
69	205	210	159	83	0
68	210	214	162	85	0
68	215	220	166	86	0
68	220	226	169	88	0
69	225	231	172	89	0
69	230	235	175	90	0
70	233	237	176	91	0
71	234	238	177	91	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-134	0	0	0	0	0
0.9a	-165	-34	1	18	26	29
0.8a	-142	-49	3	31	46	51
0.7a	-122	-49	8	42	61	67
0.6a	-105	-41	14	51	71	77
0.5a	-89	-30	20	55	75	82
0.4a	-73	-19	25	56	74	80
0.3a	-56	-9	27	53	67	72
0.2a	-39	-2	25	43	53	56
0.1a	-20	2	16	26	31	33
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-668	-291	-15	125	191	210
-827	-271	-14	117	179	197
-707	-249	-12	109	166	183
-609	-225	-9	101	152	167
-523	-197	-6	91	136	149
-443	-166	-3	80	119	130
-363	-133	-1	68	99	108
-282	-99	1	54	78	84
-195	-65	3	38	54	58
-102	-32	2	20	28	30
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
34	72	100	85	48	0
70	61	94	81	46	0
70	61	93	81	46	0
69	63	95	83	47	0
68	66	100	87	49	0
68	68	105	91	52	0
68	72	111	96	54	0
69	76	116	100	56	0
69	80	120	103	58	0
70	83	123	105	59	0
71	84	124	106	59	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-105	0	0	0	0	0
0.9a	-135	-11	18	32	38	40
0.8a	-116	-15	33	56	67	70
0.7a	-100	-12	44	74	88	92
0.6a	-86	-6	53	86	101	105
0.5a	-74	2	58	90	106	110
0.4a	-61	8	59	88	102	106
0.3a	-48	13	54	79	90	94
0.2a	-33	15	44	61	69	72
0.1a	-17	11	26	35	39	41
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-527	-113	123	223	263	274
-672	-105	115	208	246	256
-578	-96	107	193	226	235
-500	-86	98	175	205	213
-432	-75	89	156	182	189
-368	-62	78	135	157	163
-304	-49	66	112	130	135
-238	-35	52	87	101	104
-166	-22	37	60	69	72
-87	-10	19	31	36	37
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
101	235	222	164	85	0
124	227	218	162	84	0
124	226	218	162	84	0
124	228	221	164	85	0
124	233	225	167	86	0
125	238	230	170	88	0
126	244	235	173	89	0
127	249	240	176	90	0
128	254	244	178	91	0
129	258	247	180	92	0
131	259	247	180	92	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-105	0	0	0	0	0
0.9a	-135	-47	-16	-1	6	9
0.8a	-116	-62	-23	-1	12	16
0.7a	-100	-59	-23	2	17	22
0.6a	-86	-50	-18	7	22	28
0.5a	-74	-40	-11	13	27	32
0.4a	-61	-30	-3	18	31	35
0.3a	-48	-19	4	21	31	35
0.2a	-33	-10	8	20	28	30
0.1a	-17	-3	7	14	18	19
BOT.	0	0	0	0	0	0

M_y Coefficient

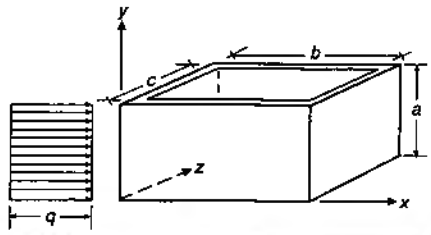
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-527	-349	-138	-14	52	73
-672	-322	-129	-12	50	69
-578	-296	-117	-10	48	66
-500	-267	-105	-6	46	63
-432	-233	-91	-3	44	59
-368	-196	-75	0	41	53
-304	-158	-59	3	36	46
-238	-118	-42	4	30	38
-166	-78	-27	5	22	27
-87	-38	-13	3	12	14
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
101	34	3	12	9	0
124	42	5	8	7	0
124	40	7	6	6	0
124	40	5	8	7	0
124	41	2	10	9	0
125	41	1	14	11	0
126	39	4	17	13	0
127	37	7	20	14	0
128	33	11	22	16	0
129	30	13	24	17	0
131	29	14	25	17	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-96	0	0	0	0	0	-478	-88	134	228	266	276	126	244	226	165	85	0
0.9a	-123	-8	20	32	38	40	-615	-82	125	213	248	257	144	236	223	164	85	0
0.8a	-105	-10	35	58	68	71	-527	-75	116	197	228	237	144	235	222	164	85	0
0.7a	-91	-7	47	76	89	93	-455	-67	107	179	207	214	144	238	225	166	86	0
0.6a	-79	0	56	87	102	106	-393	-58	96	159	184	190	145	242	229	169	87	0
0.5a	-67	7	61	92	107	111	-335	-47	84	138	158	164	147	248	234	172	88	0
0.4a	-55	13	62	90	103	107	-277	-36	71	114	131	135	149	254	239	175	90	0
0.3a	-43	17	57	80	91	94	-216	-25	56	89	101	105	151	259	244	177	91	0
0.2a	-30	17	46	62	70	72	-151	-15	39	61	70	72	153	264	248	180	92	0
0.1a	-16	12	27	36	40	41	-80	-7	21	32	36	37	154	267	250	181	92	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	156	269	251	182	93	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-96	0	0	0	0	0	-478	-394	-230	-129	-73	-55	126	77	36	17	7	0
0.9a	-123	-57	-28	-15	-9	-7	-615	-362	-214	-120	-67	-50	144	80	44	22	9	0
0.8a	-105	-70	-42	-24	-15	-12	-527	-332	-196	-109	-60	-44	144	77	45	24	10	0
0.7a	-91	-66	-43	-26	-16	-12	-455	-297	-176	-96	-51	-36	144	79	44	23	10	0
0.6a	-79	-57	-38	-23	-13	-10	-393	-258	-153	-82	-42	-29	145	82	44	22	9	0
0.5a	-67	-47	-30	-16	-7	-4	-335	-218	-128	-67	-33	-22	147	84	44	21	8	0
0.4a	-55	-36	-20	-8	0	2	-277	-175	-102	-52	-24	-15	149	85	44	20	7	0
0.3a	-43	-26	-11	-1	6	8	-216	-132	-75	-37	-16	-9	151	84	42	19	7	0
0.2a	-30	-15	-3	5	10	11	-151	-88	-49	-23	-9	-4	153	82	40	17	6	0
0.1a	-16	-6	1	6	8	9	-80	-43	-24	-11	-4	-1	154	80	38	16	5	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	156	78	38	15	5	0

$\frac{b}{a} = 4.0, \frac{c}{a} = 1.0$

Long Side

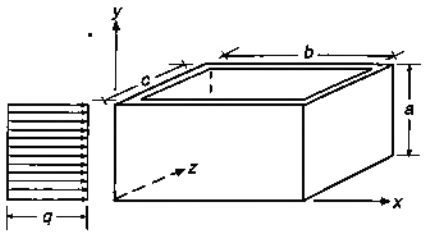
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-92	0	0	0	0	0	-461	-78	138	230	267	276	135	248	228	166	86	0
0.9a	-120	-7	20	33	38	40	-598	-73	129	215	249	258	149	240	225	165	85	0
0.8a	-102	-8	36	58	68	71	-509	-66	120	198	229	237	149	239	224	165	86	0
0.7a	-87	-4	49	77	89	93	-436	-59	110	180	208	215	150	242	227	167	86	0
0.6a	-75	3	58	88	103	107	-373	-50	99	161	184	191	152	247	231	169	87	0
0.5a	-63	10	63	93	107	111	-315	-41	87	139	159	164	155	252	236	172	89	0
0.4a	-52	16	63	91	104	107	-260	-31	73	115	131	136	158	257	241	175	90	0
0.3a	-40	20	58	81	91	95	-202	-21	57	90	102	105	162	263	245	178	91	0
0.2a	-28	19	47	63	70	73	-141	-13	40	62	70	72	164	268	249	180	92	0
0.1a	-15	13	28	36	40	41	-75	-5	21	32	36	37	166	271	251	181	93	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	168	272	252	182	93	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-92	0	0	0	0	0	-461	-479	-368	-298	-259	-246	135	106	63	37	17	0
0.9a	-120	-76	-49	-36	-30	-29	-598	-437	-341	-278	-242	-230	149	100	67	41	20	0
0.8a	-102	-83	-67	-55	-48	-46	-509	-398	-312	-255	-222	-211	149	95	65	41	20	0
0.7a	-87	-76	-67	-59	-54	-53	-436	-352	-280	-229	-199	-189	150	99	67	42	20	0
0.6a	-75	-66	-60	-55	-51	-50	-373	-303	-244	-200	-174	-165	152	105	70	43	21	0
0.5a	-63	-56	-50	-46	-43	-42	-315	-255	-205	-168	-146	-139	155	109	74	46	22	0
0.4a	-52	-45	-39	-34	-32	-31	-260	-206	-164	-134	-117	-111	158	113	77	47	23	0
0.3a	-40	-33	-27	-22	-20	-19	-202	-156	-123	-100	-86	-82	162	114	78	48	23	0
0.2a	-28	-21	-15	-11	-9	-8	-141	-105	-81	-65	-56	-53	164	114	77	48	23	0
0.1a	-15	-10	-5	-3	-1	-1	-75	-52	-40	-32	-27	-26	166	113	76	47	23	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	168	112	75	46	22	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 0.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-101	0	0	0	0	0	-504	-108	125	224	264	274	112	237	223	164	85	0
0.9a	-135	-10	19	32	38	40	-675	-101	117	209	246	256	123	229	219	163	84	0
0.8a	-114	-14	34	57	67	70	-572	-92	109	193	227	236	122	228	219	163	85	0
0.7a	-98	-11	45	75	88	92	-488	-82	100	176	206	213	123	231	222	165	85	0
0.6a	-83	-3	54	86	101	106	-417	-71	90	157	183	189	125	235	226	167	87	0
0.5a	-70	5	59	91	106	110	-351	-58	79	136	158	163	127	241	231	170	88	0
0.4a	-57	11	60	89	103	107	-287	-45	67	113	130	135	130	246	236	173	89	0
0.3a	-44	16	56	79	90	94	-222	-32	53	88	101	104	133	251	241	176	90	0
0.2a	-31	17	45	61	70	72	-154	-20	37	60	69	72	136	256	245	178	91	0
0.1a	-16	12	27	35	40	41	-81	-9	19	31	36	37	138	259	247	180	92	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	140	260	248	180	92	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-101	0	0	0	0	0	-504	-656	-605	-570	-550	-543	112	126	79	48	23	0
0.9a	-135	-115	-94	-80	-73	-70	-675	-600	-553	-525	-509	-504	123	87	66	43	22	0
0.8a	-114	-109	-105	-101	-98	-97	-572	-536	-504	-481	-467	-463	122	84	59	38	19	0
0.7a	-98	-96	-95	-95	-95	-95	-488	-467	-447	-431	-421	-418	123	89	63	41	20	0
0.6a	-83	-82	-82	-83	-83	-83	-417	-401	-387	-375	-368	-366	125	94	68	45	22	0
0.5a	-70	-69	-69	-69	-69	-69	-351	-337	-325	-316	-310	-308	127	97	72	48	24	0
0.4a	-57	-56	-55	-55	-54	-54	-287	-273	-262	-254	-249	-248	130	100	75	50	25	0
0.3a	-44	-43	-42	-41	-40	-40	-222	-209	-198	-191	-187	-185	133	102	76	51	26	0
0.2a	-31	-29	-27	-26	-25	-25	-154	-141	-133	-127	-124	-122	136	104	77	51	26	0
0.1a	-16	-14	-13	-11	-11	-10	-81	-72	-66	-63	-61	-60	138	104	76	50	25	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	140	103	75	50	25	0

$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 2.0

Long Side

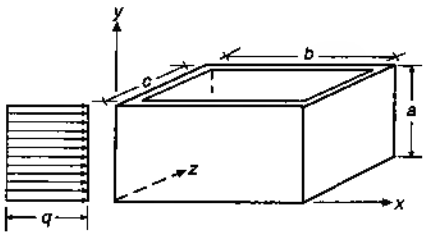
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-74	0	0	0	0	0	-369	-130	69	172	220	235	38	130	130	99	52	0
0.9a	-100	-14	11	24	31	33	-502	-121	65	161	206	220	60	122	125	97	51	0
0.8a	-88	-19	20	43	54	58	-438	-111	61	150	191	203	60	121	124	97	51	0
0.7a	-77	-17	28	56	71	76	-386	-100	57	137	174	185	60	124	127	98	52	0
0.6a	-68	-11	35	66	82	87	-339	-88	52	123	156	165	61	127	131	102	54	0
0.5a	-59	-4	41	70	87	92	-294	-73	47	107	135	143	62	132	137	105	56	0
0.4a	-49	2	43	70	85	89	-246	-58	41	90	112	119	62	137	143	109	58	0
0.3a	-39	7	41	63	76	80	-195	-42	33	70	87	92	63	143	148	113	59	0
0.2a	-28	9	35	50	59	62	-138	-27	24	49	60	64	64	148	152	116	61	0
0.1a	-15	8	21	30	34	36	-73	-13	13	26	31	33	65	152	155	118	62	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	66	154	156	118	62	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-74	0	0	0	0	0	-369	-241	-68	36	92	109	38	1	24	25	15	0
0.9a	-100	-32	-7	5	12	14	-502	-223	-63	34	87	103	60	6	17	20	13	0
0.8a	-88	-42	-10	10	21	24	-438	-206	-57	34	82	97	60	5	16	20	13	0
0.7a	-77	-40	-8	15	28	33	-386	-186	-50	33	77	91	60	4	17	21	13	0
0.6a	-68	-33	-3	20	34	39	-339	-163	-42	32	71	83	61	4	20	24	15	0
0.5a	-59	-26	3	25	39	43	-294	-138	-34	30	64	74	62	2	24	27	17	0
0.4a	-49	-18	9	29	41	45	-246	-112	-25	27	55	63	62	1	28	31	19	0
0.3a	-39	-11	13	30	40	43	-195	-84	-17	23	44	51	63	4	33	34	21	0
0.2a	-28	-4	14	26	33	36	-138	-55	-10	17	31	36	64	8	36	37	22	0
0.1a	-15	0	10	17	21	22	-73	-27	-4	10	17	19	65	12	39	39	23	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	66	14	40	40	24	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-64	0	0	0	0	0	-319	-97	87	182	227	240	65	141	136	102	54	0
0.9a	-88	-10	13	25	31	33	-440	-90	81	170	212	224	82	133	132	100	53	0
0.8a	-77	-13	24	45	56	59	-384	-83	76	158	196	207	82	133	131	100	53	0
0.7a	-68	-10	33	60	73	78	-338	-75	71	144	179	189	82	135	134	102	54	0
0.6a	-60	-4	40	69	85	89	-298	-65	64	130	160	168	84	139	138	105	55	0
0.5a	-52	2	45	74	89	94	-259	-54	57	113	138	146	85	144	143	109	57	0
0.4a	-44	7	47	73	87	91	-218	-42	49	94	115	121	87	150	149	112	59	0
0.3a	-35	11	45	66	78	81	-173	-30	39	74	90	94	89	156	154	116	61	0
0.2a	-25	12	37	52	60	63	-123	-19	28	51	62	65	90	162	158	119	62	0
0.1a	-13	9	23	31	35	36	-66	-8	15	27	32	33	92	166	161	121	63	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	92	167	162	121	63	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-64	0	0	0	0	0	-319	-266	-136	-54	-8	7	65	39	13	3	0	0
0.9a	-88	-39	-17	-6	-1	0	-440	-245	-127	-50	-7	7	82	43	20	8	2	0
0.8a	-77	-48	-24	-10	-2	1	-384	-226	-116	-44	-4	9	82	41	21	9	3	0
0.7a	-68	-44	-24	-9	0	3	-338	-204	-104	-38	0	12	82	41	20	8	3	0
0.6a	-60	-39	-20	-6	4	7	-298	-179	-90	-31	3	14	84	43	19	7	2	0
0.5a	-52	-32	-14	0	8	11	-259	-152	-75	-23	6	15	85	43	18	5	1	0
0.4a	-44	-24	-8	5	13	16	-218	-124	-59	-16	7	15	87	42	16	3	1	0
0.3a	-35	-17	-2	10	17	19	-173	-94	-43	-10	8	14	89	40	13	1	2	0
0.2a	-25	-9	3	12	17	19	-123	-62	-27	-5	7	11	90	38	10	2	3	0
0.1a	-13	-3	5	9	12	13	-66	-31	-13	-2	5	7	92	35	7	3	4	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	92	33	6	4	4	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

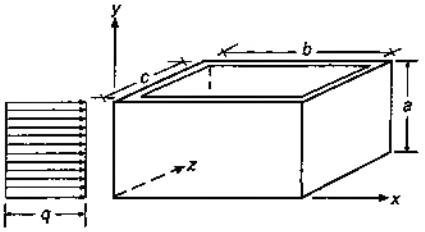
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-59	0	0	0	0	0	-294	-79	97	187	230	243	78	147	139	104	54	0
0.9a	-82	-8	14	26	32	34	-410	-74	91	175	215	227	91	140	135	102	54	0
0.8a	-71	-10	26	46	57	60	-355	-67	85	163	199	210	91	140	135	102	54	0
0.7a	-62	-5	36	61	75	79	-310	-60	78	149	181	191	92	142	138	104	55	0
0.6a	-54	1	44	71	86	91	-271	-51	71	133	162	170	95	146	142	107	56	0
0.5a	-47	7	49	76	91	95	-234	-42	63	116	140	147	98	152	147	111	58	0
0.4a	-39	12	50	75	88	93	-196	-32	54	97	117	122	101	157	153	114	60	0
0.3a	-31	14	47	68	79	82	-156	-22	43	76	91	95	104	163	158	118	61	0
0.2a	-22	15	39	53	61	64	-111	-13	31	53	63	65	106	169	162	120	62	0
0.1a	-12	11	23	31	35	37	-60	-6	16	27	32	34	108	173	165	122	63	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	109	175	166	123	64	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-59	0	0	0	0	0	-294	-319	-236	-182	-152	-142	78	66	38	22	10	0
0.9a	-82	-51	-31	-22	-18	-17	-410	-292	-219	-170	-142	-133	91	62	42	25	12	0
0.8a	-71	-56	-43	-34	-29	-27	-355	-268	-201	-155	-129	-121	91	59	41	25	12	0
0.7a	-62	-52	-43	-37	-32	-31	-310	-239	-181	-139	-115	-107	92	62	42	26	12	0
0.6a	-54	-46	-39	-34	-30	-29	-271	-209	-158	-121	-99	-92	95	66	44	27	13	0
0.5a	-47	-39	-32	-27	-24	-23	-234	-177	-133	-101	-82	-76	98	69	46	28	13	0
0.4a	-39	-31	-25	-20	-16	-15	-196	-145	-107	-80	-64	-59	101	71	47	28	13	0
0.3a	-31	-23	-16	-11	-8	-7	-156	-111	-79	-59	-47	-43	104	71	47	28	13	0
0.2a	-22	-15	-8	-4	-1	0	-111	-75	-52	-38	-30	-27	106	71	45	27	12	0
0.1a	-12	-6	-2	1	3	3	-60	-37	-25	-18	-14	-13	108	69	44	25	12	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	109	68	43	25	12	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-63	0	0	0	0	0	-314	-99	87	182	227	240	66	141	136	102	54	0
0.9a	-91	-11	13	25	32	33	-453	-91	81	170	212	224	77	133	132	100	53	0
0.8a	-78	-13	24	45	56	59	-388	-83	76	158	196	207	76	133	131	100	53	0
0.7a	-67	-9	34	60	74	78	-336	-74	71	144	179	189	77	136	134	102	54	0
0.6a	-58	-2	41	70	85	90	-291	-64	64	129	160	168	80	140	138	105	55	0
0.5a	-50	4	46	74	89	94	-249	-53	57	113	138	146	83	145	144	109	57	0
0.4a	-41	10	48	73	87	92	-207	-40	49	94	115	121	86	150	149	112	59	0
0.3a	-33	13	46	66	78	81	-163	-29	39	74	89	94	90	156	154	116	60	0
0.2a	-23	14	38	53	61	63	-115	-17	28	51	62	65	93	161	158	118	62	0
0.1a	-12	10	23	31	35	36	-61	-8	15	27	32	33	95	165	161	120	63	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	96	167	162	121	63	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-63	0	0	0	0	0	-314	-435	-401	-377	-363	-358	66	82	51	31	15	0
0.9a	-91	-76	-62	-53	-47	-46	-453	-401	-368	-348	-337	-333	77	56	42	28	14	0
0.8a	-78	-74	-70	-67	-65	-64	-388	-361	-337	-320	-310	-306	76	53	38	24	12	0
0.7a	-67	-66	-65	-64	-64	-64	-336	-318	-301	-288	-280	-277	77	57	41	26	13	0
0.6a	-58	-57	-57	-57	-57	-57	-291	-276	-262	-252	-246	-244	80	61	45	29	15	0
0.5a	-50	-49	-48	-48	-48	-48	-249	-234	-222	-213	-208	-206	83	64	48	32	16	0
0.4a	-41	-40	-39	-39	-38	-38	-207	-192	-181	-172	-168	-166	86	67	50	33	17	0
0.3a	-33	-31	-30	-29	-28	-28	-163	-148	-137	-130	-125	-124	90	69	52	34	17	0
0.2a	-23	-21	-20	-18	-17	-17	-115	-101	-92	-86	-83	-82	93	71	52	34	17	0
0.1a	-12	-10	-9	-8	-7	-7	-61	-52	-46	-43	-41	-40	95	71	51	34	17	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	96	70	51	33	17	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-35	0	0	0	0	0	-177	-92	30	106	147	160	11	49	52	41	22	0
0.9a	-54	-12	5	14	19	20	-272	-86	29	100	139	151	24	43	47	38	21	0
0.8a	-49	-15	10	25	33	36	-245	-80	28	94	130	141	24	44	46	37	20	0
0.7a	-45	-12	15	33	44	48	-224	-73	27	87	120	130	25	45	48	39	21	0
0.6a	-41	-8	19	40	52	56	-204	-65	25	80	109	118	25	48	52	42	23	0
0.5a	-36	-4	23	44	56	60	-182	-56	24	71	96	103	26	52	57	46	25	0
0.4a	-32	-1	26	45	56	60	-158	-45	22	61	81	87	27	57	62	49	27	0
0.3a	-26	3	26	43	52	55	-129	-34	19	49	64	69	28	62	67	53	29	0
0.2a	-19	5	23	35	42	44	-94	-22	14	34	45	48	29	68	72	56	30	0
0.1a	-10	5	15	22	25	26	-51	-10	8	18	23	25	30	72	75	58	31	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	30	74	76	59	32	0

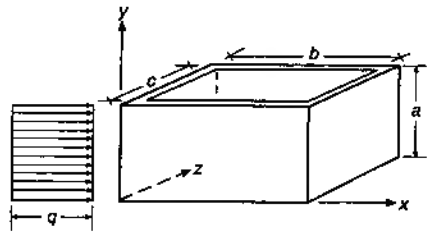
Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-35	0	0	0	0	0	-177	-143	-45	18	55	66	11	3	9	10	6	0
0.9a	-54	-21	-5	2	6	7	-272	-132	-42	18	52	63	24	7	4	7	5	0
0.8a	-49	-25	-7	5	11	13	-245	-124	-38	19	51	61	24	6	3	6	4	0
0.7a	-45	-24	-6	8	16	18	-224	-114	-33	19	49	58	25	5	4	6	5	0
0.6a	-41	-20	-2	11	20	23	-204	-102	-28	20	46	55	25	5	6	8	6	0
0.5a	-36	-16	1	15	24	27	-182	-88	-22	20	43	50	26	3	8	11	7	0
0.4a	-32	-12	5	19	27	29	-158	-72	-16	19	38	44	27	1	12	14	9	0
0.3a	-26	-8	8	20	27	30	-129	-55	-11	17	31	36	28	2	16	17	10	0
0.2a	-19	-3	10	19	24	26	-94	-37	-5	13	23	26	29	6	20	20	12	0
0.1a	-10	0	8	13	16	17	-51	-18	-2	8	13	14	30	9	23	22	13	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	30	11	24	23	13	0

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 2.0, \frac{c}{a} = 1.0$

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-29	0	0	0	0	0
0.9a	-46	-8	7	16	21	22
0.8a	-41	-9	14	28	36	39
0.7a	-37	-6	20	38	48	51
0.6a	-34	-2	25	45	56	60
0.5a	-30	2	29	49	60	64
0.4a	-27	5	31	49	60	64
0.3a	-22	7	30	46	55	58
0.2a	-16	8	26	38	44	47
0.1a	-9	6	17	23	26	28
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-147	-62	51	121	159	171
-229	-58	48	114	150	161
-206	-53	46	107	140	150
-187	-49	43	99	129	138
-170	-43	40	90	117	125
-152	-36	37	80	103	110
-133	-29	32	68	86	92
-109	-21	27	54	68	73
-80	-13	20	38	48	51
-44	-6	11	20	25	26
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
28	59	58	45	24	0
38	54	54	42	22	0
38	54	53	42	22	0
39	56	55	43	23	0
41	59	59	46	25	0
43	63	64	50	27	0
45	68	69	54	29	0
48	74	74	57	30	0
50	80	79	60	32	0
51	85	83	63	33	0
52	86	84	63	33	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-29	0	0	0	0	0
0.9a	-46	-26	-14	-9	-6	-5
0.8a	-41	-30	-20	-13	-10	-8
0.7a	-37	-28	-20	-14	-10	-9
0.6a	-34	-25	-18	-12	-9	-7
0.5a	-30	-22	-15	-9	-5	-4
0.4a	-27	-18	-10	-4	-1	1
0.3a	-22	-13	-6	0	4	5
0.2a	-16	-8	-1	4	7	8
0.1a	-9	-3	2	5	7	7
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-147	-164	-108	-70	-48	-40
-229	-151	-100	-65	-44	-37
-206	-141	-92	-59	-39	-32
-187	-129	-83	-52	-33	-27
-170	-115	-73	-44	-27	-21
-152	-101	-62	-35	-20	-15
-133	-84	-50	-27	-13	-9
-109	-66	-37	-18	-8	-4
-80	-45	-24	-11	-3	-1
-44	-23	-11	-4	-1	0
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
28	27	14	7	3	0
38	26	17	10	4	0
38	25	17	10	5	0
39	26	17	10	5	0
41	28	18	10	5	0
43	29	18	10	5	0
45	29	18	9	4	0
48	29	16	8	3	0
50	28	14	6	2	0
51	26	12	5	1	0
52	24	11	4	1	0

Short Side

$\frac{b}{a} = 2.0, \frac{c}{a} = 0.5$

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-29	0	0	0	0	0
0.9a	-48	-9	7	16	21	22
0.8a	-42	-9	14	28	36	39
0.7a	-38	-6	20	38	48	52
0.6a	-33	-1	26	45	56	60
0.5a	-30	3	30	49	61	64
0.4a	-25	6	32	50	61	64
0.3a	-20	8	31	47	56	59
0.2a	-15	9	27	38	45	47
0.1a	-8	7	17	23	27	28
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-147	-65	50	121	159	171
-238	-60	48	114	150	161
-210	-55	45	107	140	150
-188	-49	43	99	129	138
-167	-43	40	90	116	125
-148	-35	37	80	102	109
-126	-28	33	68	86	92
-102	-20	27	54	68	72
-74	-12	20	38	47	50
-41	-5	11	20	25	26
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
27	58	58	45	24	0
35	53	54	42	23	0
34	53	53	42	22	0
35	55	55	43	23	0
38	58	59	46	25	0
41	63	64	50	27	0
44	68	69	53	28	0
48	74	74	57	30	0
51	80	79	60	32	0
53	84	82	62	33	0
54	86	83	63	33	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-29	0	0	0	0	0
0.9a	-48	-39	-31	-26	-23	-22
0.8a	-42	-39	-36	-34	-33	-32
0.7a	-38	-36	-35	-34	-33	-33
0.6a	-33	-32	-31	-31	-30	-30
0.5a	-30	-28	-27	-27	-26	-26
0.4a	-25	-24	-23	-22	-22	-21
0.3a	-20	-19	-18	-17	-16	-16
0.2a	-15	-13	-11	-10	-9	-9
0.1a	-8	-6	-5	-4	-3	-3
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-147	-223	-204	-190	-181	-179
-238	-208	-188	-176	-169	-167
-210	-191	-175	-163	-156	-154
-188	-172	-158	-149	-142	-140
-167	-153	-140	-131	-126	-124
-148	-133	-121	-112	-107	-106
-126	-111	-100	-92	-87	-85
-102	-88	-77	-69	-65	-63
-74	-61	-52	-46	-42	-41
-41	-32	-26	-22	-20	-20
0	0	0	0	0	0

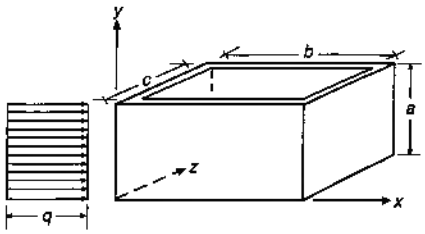
M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
27	40	25	15	7	0
35	26	20	14	7	0
34	25	18	12	6	0
35	27	19	13	6	0
38	29	22	14	7	0
41	32	24	16	8	0
44	35	26	17	9	0
48	37	27	18	9	0
51	38	28	18	9	0
53	38	27	17	9	0
54	38	26	17	8	0

Short Side

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 1.5, $\frac{c}{a}$ = 1.0

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-18	0	0	0	0	0
0.9a	-30	-8	3	9	12	13
0.8a	-28	-8	7	16	22	24
0.7a	-26	-6	10	22	29	31
0.6a	-24	-4	13	26	34	37
0.5a	-22	-2	16	30	38	41
0.4a	-20	0	18	31	39	42
0.3a	-17	2	18	30	37	40
0.2a	-13	3	17	26	31	33
0.1a	-7	4	12	17	20	21
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-89	-50	26	76	105	114
-149	-46	25	72	99	108
-138	-44	24	69	94	102
-130	-41	23	65	88	96
-122	-37	22	60	81	88
-112	-33	20	54	73	79
-101	-28	19	47	62	67
-85	-21	16	38	50	54
-64	-14	13	28	36	38
-36	-6	7	15	19	20
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
9	25	26	21	11	0
16	21	22	18	10	0
16	21	22	17	9	0
16	23	23	18	10	0
17	25	25	20	11	0
19	28	29	23	13	0
20	32	33	27	14	0
22	37	38	30	16	0
23	41	43	33	18	0
24	46	46	36	19	0
25	47	47	36	19	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-18	0	0	0	0	0
0.9a	-30	-16	-7	-3	0	0
0.8a	-28	-18	-9	-4	-1	0
0.7a	-26	-17	-9	-4	0	1
0.6a	-24	-15	-8	-2	2	3
0.5a	-22	-14	-6	0	4	6
0.4a	-20	-11	-3	3	7	9
0.3a	-17	-8	0	6	10	11
0.2a	-13	-5	3	8	11	12
0.1a	-7	-1	4	7	9	9
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-89	-95	-50	-18	0	6
-149	-88	-46	-17	1	7
-138	-84	-43	-14	3	8
-130	-78	-39	-11	5	10
-122	-72	-34	-8	7	12
-112	-64	-29	-5	9	13
-101	-55	-23	-2	10	14
-85	-44	-16	1	10	13
-64	-30	-10	2	9	11
-36	-15	-4	2	5	7
0	0	0	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
9	10	3	0	0	0
16	10	6	3	1	0
16	10	6	4	2	0
16	10	6	3	2	0
17	11	6	3	1	0
19	11	6	2	1	0
20	11	4	1	0	0
22	9	2	1	1	0
23	7	1	3	2	0
24	5	3	5	3	0
25	4	4	6	4	0

Short Side

$\frac{b}{a}$ = 1.5, $\frac{c}{a}$ = 0.5

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-16	0	0	0	0	0
0.9a	-28	-7	4	10	13	14
0.8a	-26	-6	8	18	23	25
0.7a	-24	-4	12	24	31	33
0.6a	-22	-1	16	29	37	40
0.5a	-20	2	19	32	41	43
0.4a	-17	4	21	34	42	44
0.3a	-14	5	21	33	40	42
0.2a	-11	6	19	28	33	35
0.1a	-6	5	13	18	20	21
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-82	-41	33	83	111	120
-142	-38	32	79	105	114
-129	-35	31	74	99	107
-118	-32	30	70	93	100
-109	-29	28	65	85	92
-98	-24	26	58	76	82
-87	-20	24	51	65	70
-72	-14	20	41	52	56
-54	-9	15	30	37	39
-31	-4	9	16	20	21
0	0	0	0	0	0

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
13	28	28	22	12	0
17	24	24	19	10	0
17	24	24	19	10	0
18	25	25	20	11	0
20	27	28	22	12	0
22	31	32	25	13	0
25	36	36	28	15	0
28	41	41	32	17	0
31	46	45	35	18	0
33	50	49	37	19	0
34	52	50	38	20	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-16	0	0	0	0	0
0.9a	-28	-23	-18	-14	-12	-12
0.8a	-26	-23	-21	-19	-18	-18
0.7a	-24	-22	-20	-19	-19	-19
0.6a	-22	-20	-19	-18	-18	-18
0.5a	-20	-18	-17	-16	-16	-16
0.4a	-17	-16	-15	-14	-13	-13
0.3a	-14	-13	-11	-10	-9	-9
0.2a	-11	-9	-7	-6	-5	-5
0.1a	-6	-4	-3	-1	-1	0
BOT.	0	0	0	0	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-82	-129	-115	-105	-99	-97
-142	-121	-107	-98	-92	-91
-129	-113	-100	-91	-86	-84
-118	-104	-92	-84	-79	-77
-109	-94	-83	-75	-70	-68
-98	-84	-73	-65	-60	-58
-87	-72	-61	-53	-48	-47
-72	-58	-47	-40	-36	-35
-54	-41	-32	-26	-23	-22
-31	-22	-16	-13	-11	-10
0	0	0	0	0	0

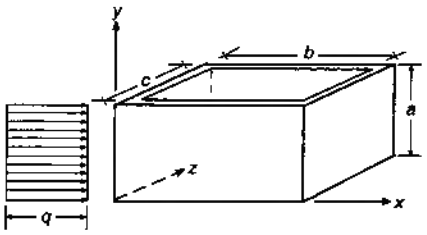
M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
13	21	13	8	4	0
17	13	11	7	4	0
17	12	9	6	3	0
18	14	10	7	3	0
20	15	12	8	4	0
22	18	13	9	4	0
25	20	15	10	5	0
28	22	16	10	5	0
31	23	16	10	5	0
33	23	15	9	5	0
34	22	15	9	4	0

Short Side

Free Top
Hinged Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-7	0	0	0	0	0	-36	-19	17	42	57	62	4	9	9	7	4	0
0.9a	-13	-4	1	4	6	7	-64	-18	17	41	55	60	5	6	6	5	3	0
0.8a	-12	-4	3	8	10	11	-61	-17	16	39	53	57	5	6	6	4	2	0
0.7a	-12	-2	5	10	14	15	-58	-16	16	38	51	55	5	6	6	5	3	0
0.6a	-11	-1	7	13	16	18	-56	-15	15	36	48	52	6	7	7	6	3	0
0.5a	-11	0	8	15	19	20	-54	-14	14	33	44	48	7	9	9	7	4	0
0.4a	-10	0	9	16	20	22	-50	-13	13	30	40	43	9	12	12	9	5	0
0.3a	-9	1	10	17	20	22	-44	-10	12	25	33	35	11	15	15	12	6	0
0.2a	-7	2	10	15	19	20	-35	-7	9	19	24	26	13	19	19	15	8	0
0.1a	-4	2	7	11	13	13	-21	-3	6	11	13	14	14	22	22	17	9	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	15	24	23	17	9	0

Short Side

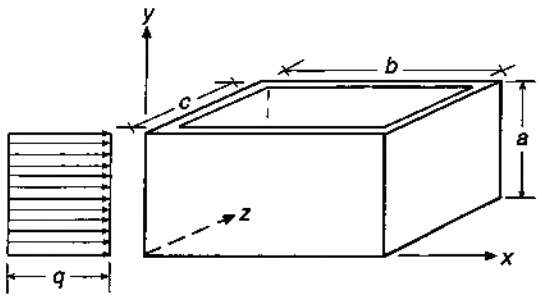
	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-7	0	0	0	0	0	-36	-53	-43	-35	-31	-29	4	7	4	2	1	0
0.9a	-13	-9	-6	-5	-4	-3	-64	-50	-40	-33	-29	-28	5	4	3	2	1	0
0.8a	-12	-10	-8	-6	-6	-5	-61	-48	-38	-31	-27	-26	5	4	3	2	1	0
0.7a	-12	-10	-8	-7	-6	-6	-58	-46	-36	-29	-25	-23	5	4	3	2	1	0
0.6a	-11	-9	-8	-7	-6	-6	-56	-44	-34	-26	-22	-21	6	5	4	3	1	0
0.5a	-11	-9	-7	-6	-6	-6	-54	-40	-30	-23	-19	-17	7	6	5	3	2	0
0.4a	-10	-8	-7	-5	-5	-4	-50	-36	-26	-19	-15	-13	9	7	5	3	2	0
0.3a	-9	-7	-5	-4	-3	-3	-44	-30	-21	-14	-10	-9	11	8	6	4	2	0
0.2a	-7	-5	-3	-2	-1	0	-35	-23	-14	-9	-5	-4	13	9	6	3	2	0
0.1a	-4	-2	-1	1	2	2	-21	-12	-7	-4	-2	-1	14	8	5	2	1	0
BOT.	0	0	0	0	0	0	0	0	0	0	0	0	15	8	4	2	1	0

CASE 7

Free Top
Fixed Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b	0.2b	0.3b	0.4b	0.5b
			0.9b	0.8b	0.7b	0.6b	
4.0	3.0	0	8.20	20.50	29.50	34.40	35.90
4.0	2.0	0	9.20	21.40	30.10	34.80	36.30
4.0	1.5	0	10.20	22.30	30.80	35.30	36.70
4.0	1.0	0	11.30	23.40	31.50	35.80	37.20
4.0	0.5	0	11.60	23.60	31.60	35.90	37.30
3.0	2.0	0	5.60	14.40	21.70	26.20	27.70
3.0	1.5	0	6.60	15.50	22.70	27.10	28.50
3.0	1.0	0	7.70	16.70	23.80	28.00	29.40
3.0	0.5	0	8.00	17.00	24.00	28.20	29.60
2.0	1.5	0	2.70	7.00	10.90	13.50	14.40
2.0	1.0	0	3.70	8.30	12.40	15.00	15.90
2.0	0.5	0	4.10	8.80	12.90	15.60	16.50
1.5	1.0	0	1.70	4.10	6.20	7.60	8.10
1.5	0.5	0	2.20	4.70	7.00	8.50	9.00
1.0	0.5	0	0.70	1.60	2.30	2.80	3.00

Short Side - Along Midheight ($y = a/2$)

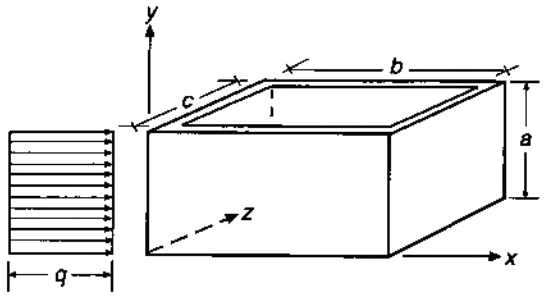
b/a	z / c/a	END	0.1c	0.2c	0.3c	0.4c	0.5c
			0.9c	0.8c	0.7c	0.6c	
4.0	3.0	0	4.60	13.10	20.50	25.20	26.80
4.0	2.0	0	1.10	4.50	8.10	10.60	11.50
4.0	1.5	0	-0.40	0.60	1.90	3.00	3.30
4.0	1.0	0	-1.20	-1.80	-2.00	-2.00	-2.00
4.0	0.5	0	-0.80	-1.40	-1.90	-2.10	-2.20
3.0	2.0	0	1.30	4.80	8.40	11.00	11.90
3.0	1.5	0	-0.30	0.80	2.20	3.30	3.70
3.0	1.0	0	-1.10	-1.60	-1.80	-1.80	-1.80
3.0	0.5	0	-0.80	-1.40	-1.80	-2.00	-2.10
2.0	1.5	0	0.30	1.70	3.40	4.50	5.00
2.0	1.0	0	-0.80	-1.00	-0.90	-0.80	-0.80
2.0	0.5	0	-0.60	-1.10	-1.40	-1.60	-1.70
1.5	1.0	0	-0.30	-0.20	0.10	0.30	0.40
1.5	0.5	0	-0.50	-0.80	-1.00	-1.10	-1.20
1.0	0.5	0	-0.20	-0.40	-0.40	-0.50	-0.50

Free Top
Fixed Base

CASE 7

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	2.00	7.40	15.30	25.00	35.90	47.70	59.80	72.10	84.50	96.80
4.0	2.0	0	2.00	7.40	15.40	25.20	36.30	48.20	60.50	73.00	85.50	98.10
4.0	1.5	0	2.00	7.50	15.60	25.50	36.70	48.70	61.20	73.90	86.60	99.40
4.0	1.0	0	2.10	7.60	15.70	25.80	37.20	49.40	62.00	74.90	87.80	100.80
4.0	0.5	0	2.10	7.60	15.80	25.80	37.30	49.50	62.20	75.10	88.00	101.00
3.0	2.0	0	1.60	5.90	12.10	19.50	27.70	36.30	45.10	53.90	62.60	71.40
3.0	1.5	0	1.70	6.10	12.40	20.10	28.50	37.40	46.50	55.60	64.70	73.80
3.0	1.0	0	1.70	6.20	12.80	20.70	29.40	38.70	48.10	57.50	67.00	76.40
3.0	0.5	0	1.70	6.30	12.80	20.80	29.60	38.90	48.40	57.90	67.40	77.00
2.0	1.5	0	1.00	3.40	6.70	10.50	14.40	18.30	22.20	25.90	29.50	33.20
2.0	1.0	0	1.10	3.70	7.30	11.50	15.90	20.40	24.70	29.00	33.10	37.30
2.0	0.5	0	1.10	3.80	7.60	11.90	16.50	21.10	25.60	30.00	34.30	38.70
1.5	1.0	0	0.60	2.10	4.00	6.10	8.10	10.00	11.80	13.50	15.10	16.70
1.5	0.5	0	0.70	2.30	4.40	6.70	9.00	11.10	13.20	15.10	16.90	18.80
1.0	0.5	0	0.30	0.90	1.70	2.40	3.00	3.50	3.90	4.30	4.70	5.00

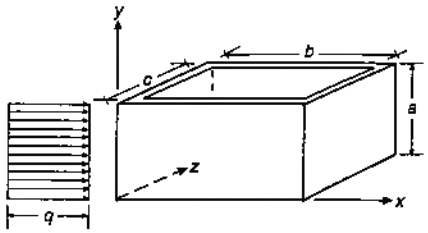
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	1.60	5.70	11.70	18.90	26.80	35.00	43.40	51.80	60.10	68.50
4.0	2.0	0	0.80	2.80	5.50	8.50	11.50	14.50	17.30	20.00	22.60	25.30
4.0	1.5	0	0.30	1.10	1.90	2.70	3.30	3.80	4.10	4.30	4.40	4.60
4.0	1.0	0	0.00	-0.20	-0.60	-1.30	-2.00	-2.90	-3.90	-4.80	-5.80	-6.70
4.0	0.5	0	-0.10	-0.50	-1.00	-1.50	-2.20	-2.90	-3.50	-4.20	-4.80	-5.50
3.0	2.0	0	0.80	2.90	5.60	8.70	11.90	14.90	17.90	20.70	23.40	26.20
3.0	1.5	0	0.40	1.20	2.10	2.90	3.70	4.20	4.60	4.90	5.20	5.50
3.0	1.0	0	0.00	-0.20	-0.50	-1.10	-1.80	-2.60	-3.50	-4.30	-5.20	-6.00
3.0	0.5	0	-0.10	-0.50	-0.90	-1.50	-2.10	-2.70	-3.30	-3.90	-4.50	-5.10
2.0	1.5	0	0.40	1.40	2.60	3.90	5.00	5.90	6.80	7.50	8.20	8.90
2.0	1.0	0	0.00	0.00	-0.10	-0.40	-0.80	-1.30	-1.80	-2.40	-2.90	-3.40
2.0	0.5	0	-0.10	-0.40	-0.70	-1.20	-1.70	-2.10	-2.60	-3.00	-3.40	-3.90
1.5	1.0	0	0.10	0.30	0.40	0.50	0.40	0.20	0.00	-0.20	-0.50	-0.70
1.5	0.5	0	-0.10	-0.30	-0.50	-0.80	-1.20	-1.50	-1.80	-2.10	-2.30	-2.60
1.0	0.5	0	0.00	-0.10	-0.20	-0.40	-0.50	-0.60	-0.70	-0.80	-0.90	-1.00

CASE 7

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-68	0	0	0	0	0
0.9a	-75	-6	7	9	8	7
0.8a	-61	-9	7	8	5	4
0.7a	-49	-11	1	-2	-8	-11
0.6a	-39	-13	-11	-21	-31	-36
0.5a	-30	-18	-30	-50	-66	-72
0.4a	-21	-26	-56	-89	-112	-120
0.3a	-13	-38	-91	-139	-169	-179
0.2a	-6	-55	-137	-202	-239	-251
0.1a	-1	-78	-194	-277	-322	-336
BOT.	0	-108	-265	-367	-418	-433

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-338	-41	51	64	58	54
-373	-38	47	58	51	48
-303	-34	41	50	43	40
-247	-29	35	40	33	30
-197	-24	27	28	21	18
-150	-20	17	15	7	4
-105	-17	5	0	-9	-12
-64	-14	-7	-17	-26	-29
-28	-14	-22	-35	-44	-47
-5	-16	-37	-54	-63	-66
0	-22	-53	-73	-84	-87

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
4	83	74	50	24	0
10	79	74	50	24	0
9	79	74	50	24	0
8	79	73	50	24	0
8	79	72	48	23	0
7	76	69	45	21	0
6	71	64	41	19	0
5	62	55	34	15	0
4	49	42	25	11	0
2	29	24	14	6	0
0	0	0	0	0	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-68	0	0	0	0	0
0.9a	-75	-12	5	11	13	14
0.8a	-61	-16	6	15	18	18
0.7a	-49	-15	4	12	13	13
0.6a	-39	-14	-1	1	-1	-3
0.5a	-30	-13	-12	-18	-26	-29
0.4a	-21	-16	-28	-46	-60	-66
0.3a	-13	-22	-52	-84	-107	-115
0.2a	-6	-32	-84	-134	-167	-178
0.1a	-1	-45	-126	-197	-241	-256
BOT.	0	-61	-180	-275	-331	-349

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-338	-88	31	74	87	89
-373	-80	28	68	79	81
-303	-71	26	60	69	71
-247	-62	22	51	57	58
-197	-51	18	40	44	44
-150	-40	12	27	28	28
-105	-30	5	13	11	10
-64	-21	-3	-3	-7	-9
-28	-15	-13	-20	-26	-29
-5	-11	-24	-37	-46	-49
0	-12	-36	-55	-66	-70

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
4	67	71	54	28	0
10	62	68	53	28	0
9	62	68	53	29	0
8	62	69	53	29	0
8	62	69	53	28	0
7	61	68	52	27	0
6	57	64	48	25	0
5	51	57	42	22	0
4	41	45	32	16	0
2	25	27	19	9	0
0	0	0	0	0	0

Short Side

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-56	0	0	0	0	0
0.9a	-65	-4	7	8	7	7
0.8a	-53	-7	7	7	4	3
0.7a	-44	-9	1	-3	-9	-12
0.6a	-36	-13	-12	-23	-33	-37
0.5a	-28	-18	-31	-52	-68	-74
0.4a	-20	-28	-59	-92	-114	-122
0.3a	-13	-42	-96	-143	-172	-182
0.2a	-6	-61	-143	-207	-243	-254
0.1a	-1	-87	-202	-283	-326	-339
BOT.	0	-120	-276	-374	-422	-437

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-281	-28	53	63	56	52
-323	-26	49	57	50	46
-267	-23	43	49	42	38
-221	-20	36	39	32	28
-180	-17	28	27	20	16
-140	-14	17	14	6	3
-100	-13	5	-1	-10	-13
-63	-12	-8	-18	-27	-30
-29	-14	-23	-36	-45	-48
-5	-18	-39	-55	-64	-67
0	-24	-55	-75	-84	-87

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
15	84	73	49	23	0
25	81	73	49	24	0
24	80	73	49	23	0
23	80	72	48	23	0
21	80	71	47	22	0
19	77	68	44	20	0
17	72	63	39	18	0
14	63	54	33	15	0
10	50	41	24	11	0
5	30	23	13	6	0
0	0	0	0	0	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-56	0	0	0	0	0
0.9a	-65	-18	0	9	14	15
0.8a	-53	-21	2	15	23	25
0.7a	-44	-17	4	18	26	29
0.6a	-36	-12	6	18	24	26
0.5a	-28	-7	5	13	17	18
0.4a	-20	-5	1	2	1	1
0.3a	-13	-5	-8	-16	-23	-25
0.2a	-6	-8	-24	-44	-58	-64
0.1a	-1	-14	-47	-83	-108	-117
BOT.	0	-19	-79	-137	-175	-188

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-281	-126	-7	58	90	100
-323	-115	-6	54	83	92
-267	-102	-5	49	75	83
-221	-88	-3	44	66	73
-180	-72	-2	37	56	61
-140	-55	-1	29	43	47
-100	-40	-1	20	29	32
-63	-26	-2	10	14	15
-29	-14	-5	-2	-2	-3
-5	-7	-9	-15	-19	-21
0	-4	-16	-27	-35	-38

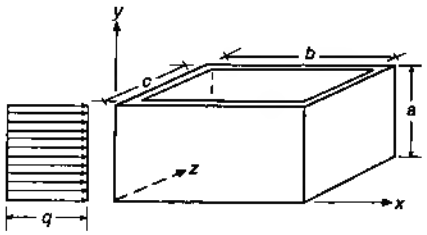
M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
15	28	39	33	18	0
25	23	35	31	18	0
24	24	35	31	18	0
23	25	37	32	18	0
21	26	39	34	19	0
19	27	40	35	20	0
17	27	40	35	20	0
14	27	38	32	18	0
10	23	32	27	15	0
5	15	20	17	9	0
0	0	0	0	0	0

Short Side

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-47	0	0	0	0	0
0.9a	-55	-2	7	8	7	6
0.8a	-46	-4	8	7	3	2
0.7a	-38	-7	1	-4	-10	-13
0.6a	-32	-11	-12	-24	-35	-39
0.5a	-25	-18	-33	-54	-70	-76
0.4a	-18	-30	-62	-95	-117	-125
0.3a	-12	-46	-101	-147	-176	-185
0.2a	-6	-68	-150	-212	-247	-258
0.1a	-1	-97	-211	-289	-330	-343
BOT.	0	-134	-287	-381	-427	-440

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-235	-14	56	62	54	50
-276	-13	51	56	48	44
-230	-11	45	48	40	36
-192	-10	38	38	30	26
-158	-9	29	26	18	15
-125	-8	18	13	5	1
-92	-8	5	-3	-11	-14
-59	-10	-9	-19	-28	-31
-28	-14	-24	-37	-46	-49
-6	-19	-41	-56	-65	-68
0	-27	-57	-76	-85	-88

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
31	85	72	48	23	0
38	82	72	48	23	0
37	82	72	48	23	0
36	82	71	47	22	0
36	82	70	45	21	0
34	82	70	45	21	0
32	79	67	42	19	0
28	74	61	38	17	0
23	65	52	31	14	0
17	51	40	23	10	0
9	30	23	13	5	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-47	0	0	0	0	0
0.9a	-55	-21	-5	4	8	9
0.8a	-46	-23	-5	7	14	16
0.7a	-38	-18	-1	11	19	21
0.6a	-32	-12	3	15	22	24
0.5a	-25	-6	7	17	23	25
0.4a	-18	-2	9	16	20	21
0.3a	-12	1	8	10	11	11
0.2a	-6	2	2	-2	-6	-7
0.1a	-1	1	-9	-23	-34	-38
BOT.	0	0	-27	-57	-78	-86

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-235	-139	-39	22	54	65
-276	-125	-35	21	51	61
-230	-111	-30	20	48	57
-192	-95	-25	20	44	52
-158	-78	-19	19	40	46
-125	-60	-13	17	34	39
-92	-42	-8	14	26	30
-59	-27	-4	10	17	19
-28	-14	-2	4	7	8
-6	-4	-2	-3	-4	-5
0	0	-5	-11	-16	-17

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
31	1	12	13	8	0
38	5	8	10	6	0
37	4	8	10	6	0
36	3	9	11	7	0
34	2	11	13	8	0
32	0	14	15	9	0
28	3	16	17	10	0
23	6	17	17	10	0
17	7	16	16	9	0
9	6	12	11	6	0
0	0	0	0	0	0

$\frac{b}{a} = 4.0, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-39	0	0	0	0	0
0.9a	-45	0	8	8	6	6
0.8a	-38	-1	8	6	3	1
0.7a	-31	-4	1	-5	-12	-15
0.6a	-26	-9	-13	-26	-37	-41
0.5a	-21	-18	-35	-57	-73	-78
0.4a	-15	-31	-65	-99	-120	-127
0.3a	-10	-49	-106	-152	-179	-188
0.2a	-5	-75	-157	-217	-251	-261
0.1a	-1	-108	-221	-296	-335	-346
BOT.	0	-151	-300	-388	-431	-444

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-194	1	59	61	52	47
-227	1	54	55	46	42
-188	1	48	47	38	34
-157	1	40	37	28	25
-129	0	30	25	17	13
-103	-1	18	12	3	0
-76	-4	5	-4	-12	-15
-50	-8	-9	-21	-29	-32
-25	-13	-26	-39	-47	-49
-6	-21	-43	-58	-66	-69
0	-30	-60	-78	-86	-89

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
45	87	71	46	22	0
50	85	71	46	22	0
50	84	71	46	22	0
49	84	70	45	21	0
48	84	69	44	20	0
46	81	65	41	19	0
42	75	60	36	16	0
36	66	51	30	13	0
27	51	38	22	9	0
15	31	22	12	5	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-39	0	0	0	0	0
0.9a	-45	-26	-14	-7	-4	-3
0.8a	-38	-26	-16	-9	-5	-3
0.7a	-31	-21	-12	-6	-2	0
0.6a	-26	-15	-7	-1	3	5
0.5a	-21	-9	-1	6	10	11
0.4a	-15	-3	6	12	16	17
0.3a	-10	2	11	17	20	21
0.2a	-5	7	14	19	22	22
0.1a	-1	10	15	17	17	17
BOT.	0	13	13	8	3	2

M_y Coefficient

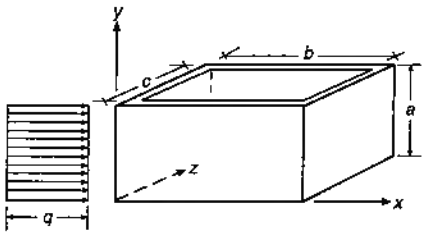
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-194	-156	-90	-48	-25	-17
-227	-139	-81	-43	-22	-15
-188	-122	-71	-37	-17	-11
-157	-103	-60	-30	-12	-6
-129	-84	-47	-22	-6	-1
-103	-64	-35	-14	-1	3
-76	-46	-23	-7	3	6
-50	-28	-12	-1	5	8
-25	-14	-4	2	6	7
-6	-3	1	3	4	4
0	3	3	2	1	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
45	27	12	6	2	0
50	27	16	8	4	0
50	27	16	9	4	0
49	28	16	8	4	0
48	28	15	8	3	0
46	26	14	6	2	0
42	22	11	5	1	0
36	17	7	2	0	0
27	11	4	0	1	0
15	5	0	2	1	0
0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-38	0	0	0	0	0
0.9a	-45	0	8	8	6	6
0.8a	-36	0	8	6	2	1
0.7a	-30	-3	2	-5	-12	-15
0.6a	-24	-8	-13	-26	-37	-41
0.5a	-18	-17	-35	-57	-73	-79
0.4a	-13	-30	-66	-99	-121	-128
0.3a	-8	-49	-107	-153	-180	-189
0.2a	-4	-76	-158	-218	-251	-262
0.1a	-1	-111	-223	-297	-335	-347
BOT.	0	-156	-302	-390	-432	-445

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-191	4	60	61	51	47
-225	4	55	55	46	42
-182	4	48	47	38	34
-149	3	40	37	28	24
-119	2	30	25	16	13
-92	1	18	11	3	0
-66	-2	5	-4	-12	-15
-42	-7	-10	-21	-29	-32
-20	-13	-26	-39	-47	-50
-4	-21	-43	-58	-66	-69
0	-31	-60	-78	-86	-89

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
47	88	71	46	22	0
49	85	71	46	22	0
49	85	71	46	22	0
49	85	70	45	21	0
48	84	69	43	20	0
47	81	65	40	18	0
44	75	59	36	16	0
39	66	50	30	13	0
31	51	38	22	9	0
18	30	21	12	5	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-38	0	0	0	0	0
0.9a	-45	-37	-30	-25	-22	-22
0.8a	-36	-33	-31	-29	-28	-28
0.7a	-30	-27	-26	-25	-25	-24
0.6a	-24	-21	-20	-19	-18	-18
0.5a	-18	-15	-13	-12	-11	-10
0.4a	-13	-10	-7	-5	-3	-3
0.3a	-8	-4	0	2	4	4
0.2a	-4	2	6	9	11	12
0.1a	-1	7	12	16	19	20
BOT.	0	12	21	26	29	30

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-191	-215	-186	-167	-156	-152
-225	-191	-166	-151	-142	-139
-182	-163	-146	-133	-126	-123
-149	-135	-123	-113	-108	-106
-119	-108	-99	-92	-87	-86
-92	-83	-75	-69	-66	-65
-66	-58	-52	-48	-46	-45
-42	-36	-32	-29	-27	-26
-20	-17	-15	-13	-11	-11
-4	-4	-2	-1	0	0
0	2	4	5	6	6

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
47	43	26	16	7	0
49	33	23	15	8	0
49	33	23	14	7	0
49	35	25	16	8	0
48	36	26	17	8	0
47	35	25	17	8	0
44	33	24	16	8	0
39	29	21	14	7	0
31	22	16	11	5	0
18	14	10	6	3	0
0	0	0	0	0	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 2.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-52	0	0	0	0	0
0.9a	-62	-9	6	11	13	13
0.8a	-52	-12	7	15	17	17
0.7a	-43	-12	5	11	11	11
0.6a	-35	-12	-2	-1	-4	-5
0.5a	-28	-14	-14	-22	-29	-33
0.4a	-20	-18	-32	-51	-66	-71
0.3a	-13	-26	-58	-91	-114	-122
0.2a	-6	-38	-93	-143	-175	-186
0.1a	-1	-55	-138	-208	-250	-264
BOT.	0	-75	-196	-288	-342	-359

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-259	-65	39	75	85	87
-311	-60	35	69	77	78
-258	-53	32	61	67	68
-215	-46	27	51	56	56
-176	-38	22	39	42	42
-138	-31	15	26	27	26
-100	-23	7	12	9	8
-63	-18	-3	-4	-9	-11
-29	-14	-14	-22	-28	-31
-6	-13	-26	-40	-48	-51
0	-15	-39	-58	-68	-72

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
6	72	70	52	27	0
19	67	68	51	26	0
18	67	68	51	27	0
18	68	69	52	27	0
17	68	69	51	26	0
15	66	68	50	25	0
13	62	64	46	23	0
11	56	56	40	20	0
8	44	44	31	15	0
4	27	26	18	8	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-52	0	0	0	0	0
0.9a	-62	-17	1	10	14	15
0.8a	-52	-20	2	16	23	25
0.7a	-43	-16	4	18	26	28
0.6a	-35	-12	6	18	24	26
0.5a	-28	-8	5	12	16	17
0.4a	-20	-5	0	1	0	0
0.3a	-13	-6	-10	-18	-24	-27
0.2a	-6	-9	-26	-46	-61	-66
0.1a	-1	-15	-49	-85	-111	-120
BOT.	0	-21	-82	-140	-179	-192

M_y Coefficient

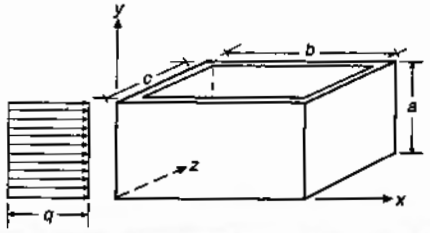
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-259	-120	-4	60	91	100
-311	-109	-3	55	84	92
-258	-98	-2	50	76	84
-215	-84	-1	45	67	73
-176	-69	0	38	56	61
-138	-53	0	30	43	47
-100	-38	0	20	29	32
-63	-25	-1	10	14	15
-29	-14	-5	-2	-3	-3
-6	-7	-10	-15	-19	-21
0	-4	-16	-28	-36	-38

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
6	30	40	33	19	0
19	25	36	31	18	0
18	25	36	31	18	0
18	26	38	33	19	0
17	27	40	34	19	0
15	29	41	35	20	0
13	29	41	35	20	0
11	28	38	33	18	0
8	24	32	27	15	0
4	16	21	17	9	0
0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-43	0	0	0	0	0
0.9a	-53	-6	7	11	13	13
0.8a	-44	-9	8	15	16	16
0.7a	-37	-10	5	10	10	9
0.6a	-31	-11	-2	-3	-6	-8
0.5a	-25	-14	-16	-24	-32	-36
0.4a	-18	-20	-35	-55	-70	-75
0.3a	-12	-30	-63	-96	-119	-127
0.2a	-6	-44	-100	-150	-181	-192
0.1a	-1	-63	-148	-217	-258	-272
BOT.	0	-88	-210	-299	-350	-366

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-214	-46	45	76	84	85
-264	-43	41	69	76	76
-222	-38	37	61	66	66
-187	-33	31	51	54	54
-156	-28	25	39	40	40
-124	-23	17	26	25	24
-92	-18	8	11	8	6
-59	-14	-3	-6	-10	-13
-29	-13	-15	-23	-30	-32
-6	-14	-28	-41	-50	-53
0	-18	-42	-60	-70	-73

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
23	75	70	51	26	0
33	71	69	51	26	0
32	71	69	51	26	0
31	71	69	51	26	0
30	71	69	50	26	0
28	70	68	49	25	0
25	66	64	45	22	0
21	58	56	39	19	0
15	47	44	30	14	0
8	28	26	17	8	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-43	0	0	0	0	0
0.9a	-53	-20	-4	4	8	9
0.8a	-44	-22	-4	8	14	16
0.7a	-37	-17	-1	12	19	21
0.6a	-31	-12	4	15	22	24
0.5a	-25	-7	7	17	22	24
0.4a	-18	-2	9	15	19	20
0.3a	-12	1	7	9	10	10
0.2a	-6	1	1	-4	-8	-10
0.1a	-1	0	-11	-26	-37	-41
BOT.	0	-2	-30	-61	-82	-90

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-214	-132	-35	24	56	66
-264	-119	-31	23	53	62
-222	-106	-27	23	50	58
-187	-91	-22	22	46	53
-156	-75	-17	20	41	47
-124	-58	-11	18	34	40
-92	-41	-7	15	27	30
-59	-26	-4	10	17	20
-29	-14	-2	4	7	7
-6	-4	-3	-4	-5	-5
0	0	-6	-12	-16	-18

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
23	1	13	13	8	0
33	3	9	11	7	0
32	2	9	10	7	0
31	1	10	12	7	0
30	0	13	14	9	0
28	2	15	16	10	0
25	5	17	17	10	0
21	8	18	18	11	0
15	9	17	16	9	0
8	7	12	11	6	0
0	0	0	0	0	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-35	0	0	0	0	0
0.9a	-43	-3	8	11	12	13
0.8a	-36	-5	10	14	15	15
0.7a	-30	-6	7	9	8	8
0.6a	-25	-8	-2	-4	-9	-10
0.5a	-20	-12	-17	-27	-36	-39
0.4a	-15	-20	-39	-59	-74	-80
0.3a	-10	-33	-69	-102	-125	-133
0.2a	-5	-50	-108	-158	-189	-199
0.1a	-1	-74	-160	-227	-267	-279
BOT.	0	-105	-226	-311	-360	-375

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-175	-26	52	77	82	82
-216	-23	48	70	74	74
-181	-21	42	61	64	64
-152	-18	36	51	52	52
-127	-15	29	39	39	38
-102	-13	20	25	23	22
-76	-11	9	10	6	4
-50	-10	-3	-7	-12	-14
-26	-12	-16	-25	-32	-34
-6	-15	-30	-44	-52	-54
0	-21	-45	-62	-72	-75

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
39	79	71	51	26	0
45	75	70	50	26	0
45	75	70	50	26	0
45	75	70	50	26	0
44	75	70	50	25	0
42	74	68	48	24	0
39	69	63	44	22	0
33	62	55	38	18	0
25	49	43	29	14	0
14	30	25	16	8	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-35	0	0	0	0	0
0.9a	-43	-25	-13	-6	-3	-2
0.8a	-36	-25	-15	-8	-4	-3
0.7a	-30	-20	-12	-5	-1	0
0.6a	-25	-15	-6	0	4	5
0.5a	-20	-9	-1	6	10	11
0.4a	-15	-4	5	12	15	17
0.3a	-10	2	10	16	19	20
0.2a	-5	6	13	18	20	21
0.1a	-1	9	14	15	15	15
BOT.	0	12	10	5	0	-2

M_y Coefficient

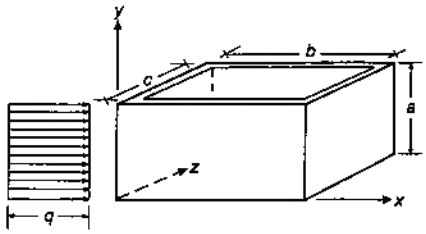
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-175	-147	-84	-44	-21	-13
-216	-132	-76	-39	-18	-11
-181	-117	-67	-33	-14	-7
-152	-99	-56	-26	-9	-3
-127	-81	-44	-19	-4	1
-102	-62	-33	-12	1	5
-76	-45	-21	-5	4	7
-50	-28	-12	0	6	8
-26	-14	-4	3	6	7
-6	-3	1	3	4	4
0	2	2	1	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
39	25	11	5	2	0
45	25	14	7	3	0
45	25	14	8	3	0
45	26	14	7	3	0
44	25	14	7	3	0
42	24	12	6	2	0
39	20	10	4	1	0
33	16	6	2	0	0
25	10	3	1	1	0
14	5	0	2	1	0
0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-34	0	0	0	0	0
0.9a	-43	-3	8	11	12	13
0.8a	-35	-4	10	15	15	15
0.7a	-29	-4	7	9	8	7
0.6a	-23	-6	-1	-4	-9	-11
0.5a	-18	-11	-16	-27	-37	-40
0.4a	-13	-19	-39	-60	-75	-81
0.3a	-8	-32	-69	-104	-126	-134
0.2a	-4	-51	-110	-159	-190	-201
0.1a	-1	-77	-163	-229	-268	-281
BOT.	0	-111	-230	-314	-362	-377

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-171	-22	54	77	81	81
-213	-20	49	70	74	73
-174	-17	44	61	64	63
-143	-14	37	51	52	51
-116	-12	29	39	38	37
-90	-10	20	25	23	21
-65	-8	9	10	6	4
-42	-9	-3	-7	-13	-15
-20	-11	-16	-25	-32	-34
-5	-15	-31	-44	-52	-55
0	-22	-46	-63	-72	-75

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
41	79	71	51	26	0
45	76	70	50	26	0
44	76	70	50	26	0
45	77	71	50	25	0
45	76	70	50	25	0
44	74	68	48	24	0
42	70	63	44	21	0
37	62	55	37	18	0
29	49	43	28	14	0
18	30	25	16	8	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-34	0	0	0	0	0
0.9a	-43	-35	-28	-24	-21	-20
0.8a	-35	-32	-30	-28	-27	-26
0.7a	-29	-26	-25	-24	-23	-23
0.6a	-23	-21	-19	-18	-17	-17
0.5a	-18	-15	-13	-12	-11	-10
0.4a	-13	-10	-7	-5	-4	-3
0.3a	-8	-4	-1	2	3	4
0.2a	-4	1	6	9	10	11
0.1a	-1	6	12	16	18	19
BOT.	0	12	20	25	28	29

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-171	-202	-175	-157	-147	-143
-213	-180	-157	-142	-134	-131
-174	-155	-138	-126	-119	-116
-143	-129	-117	-107	-102	-100
-116	-104	-94	-87	-83	-81
-90	-80	-72	-66	-63	-62
-65	-57	-51	-46	-43	-43
-42	-36	-31	-28	-26	-25
-20	-17	-14	-12	-11	-10
-5	-4	-2	-1	0	0
0	2	4	5	6	6

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
41	40	24	15	7	0
45	30	22	14	7	0
44	31	21	13	7	0
45	32	23	15	7	0
45	33	24	16	8	0
44	33	24	16	8	0
42	31	23	15	7	0
37	27	20	13	6	0
29	22	15	10	5	0
18	13	9	6	3	0
0	0	0	0	0	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-33	0	0	0	0	0
0.9a	-45	-10	4	11	15	16
0.8a	-38	-12	6	17	23	25
0.7a	-33	-10	8	19	25	27
0.6a	-28	-8	7	16	21	23
0.5a	-23	-7	3	8	10	11
0.4a	-18	-8	-5	-7	-9	-10
0.3a	-12	-11	-19	-30	-38	-41
0.2a	-6	-18	-40	-63	-79	-85
0.1a	-1	-28	-70	-108	-135	-144
BOT.	0	-41	-110	-170	-208	-221

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-164	-73	20	71	96	103
-223	-66	19	65	88	95
-192	-60	17	59	80	86
-166	-53	16	52	69	74
-142	-44	13	44	57	61
-116	-35	10	34	44	46
-88	-26	7	22	28	30
-59	-18	2	9	12	12
-30	-12	-5	-5	-6	-7
-7	-8	-13	-19	-24	-26
0	-8	-22	-34	-42	-44

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
5	43	45	35	19	0
16	38	42	33	18	0
16	39	42	34	18	0
15	40	44	35	19	0
15	41	45	36	20	0
14	42	47	37	20	0
13	42	46	36	19	0
11	39	43	34	18	0
9	33	36	27	14	0
5	21	22	17	9	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-33	0	0	0	0	0
0.9a	-45	-16	-2	5	9	10
0.8a	-38	-18	-1	10	16	18
0.7a	-33	-14	1	13	20	22
0.6a	-28	-10	4	15	22	24
0.5a	-23	-7	6	16	21	23
0.4a	-18	-4	6	12	16	17
0.3a	-12	-2	3	4	4	4
0.2a	-6	-2	-5	-11	-17	-18
0.1a	-1	-5	-20	-37	-49	-54
BOT.	0	-9	-42	-76	-98	-106

M_y Coefficient

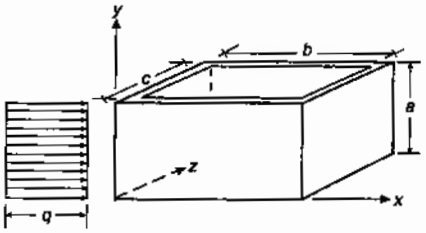
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-164	-105	-18	35	64	73
-223	-95	-16	33	60	69
-192	-86	-14	31	56	64
-166	-75	-11	29	51	58
-142	-63	-8	26	45	51
-116	-49	-5	23	37	42
-88	-36	-3	18	28	32
-59	-24	-1	11	18	19
-30	-13	-2	4	6	6
-7	-5	-4	-6	-7	-8
0	-2	-8	-15	-20	-21

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
5	9	17	16	9	0
16	5	13	13	8	0
16	6	13	13	8	0
15	7	15	14	9	0
15	8	17	16	10	0
14	10	19	18	11	0
13	12	21	20	12	0
11	14	22	20	12	0
9	13	20	18	10	0
5	10	14	12	7	0
0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.0

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-26	0	0	0	0	0
0.9a	-35	-6	6	12	15	16
0.8a	-30	-7	9	19	24	25
0.7a	-27	-5	10	20	26	27
0.6a	-23	-5	9	16	20	22
0.5a	-19	-5	3	7	8	8
0.4a	-15	-8	-8	-11	-14	-15
0.3a	-10	-14	-24	-36	-46	-49
0.2a	-5	-23	-49	-73	-90	-96
0.1a	-1	-37	-83	-123	-149	-158
BOT.	0	-55	-129	-189	-226	-238

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-128	-45	35	78	99	106
-176	-42	32	72	91	97
-152	-38	29	65	82	87
-133	-33	26	57	71	75
-114	-28	22	47	58	61
-95	-22	17	36	44	46
-74	-17	11	23	28	29
-51	-13	4	9	10	10
-27	-10	-5	-6	-8	-9
-7	-9	-15	-22	-27	-29
0	-11	-26	-38	-45	-48

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
22	50	49	37	19	0
29	46	46	35	19	0
29	46	46	36	19	0
30	48	48	37	20	0
30	49	49	38	20	0
29	50	50	38	20	0
28	49	49	38	20	0
24	45	45	34	18	0
19	38	37	28	14	0
11	24	23	17	9	0
0	0	0	0	0	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-26	0	0	0	0	0
0.9a	-35	-19	-9	-4	-1	0
0.8a	-30	-20	-11	-5	-1	0
0.7a	-27	-17	-9	-2	2	3
0.6a	-23	-13	-5	1	5	7
0.5a	-19	-9	0	6	10	11
0.4a	-15	-4	4	10	14	15
0.3a	-10	0	8	13	16	17
0.2a	-5	4	9	13	14	15
0.1a	-1	6	8	7	6	5
BOT.	0	7	1	-7	-14	-17

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-128	-114	-60	-24	-4	3
-176	-103	-54	-21	-2	4
-152	-93	-48	-17	0	6
-133	-81	-41	-13	3	9
-114	-68	-33	-8	6	11
-95	-54	-24	-4	8	12
-74	-40	-16	0	9	12
-51	-26	-9	3	9	11
-27	-13	-3	3	7	8
-7	-3	0	2	3	3
0	1	0	-1	-3	-3

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
22	16	6	2	0	0
29	17	9	4	2	0
29	16	9	5	2	0
30	17	9	4	2	0
30	17	8	3	1	0
29	15	7	2	0	0
28	13	4	0	1	0
24	9	1	2	2	0
19	5	1	3	2	0
11	1	3	4	2	0
0	0	0	0	0	0

Short Side

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 0.5

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	-24	0	0	0	0	0
0.9a	-33	-5	7	13	16	17
0.8a	-28	-5	10	20	24	26
0.7a	-24	-3	12	21	26	27
0.6a	-20	-2	10	17	20	21
0.5a	-16	-3	4	7	7	7
0.4a	-12	-6	-7	-11	-15	-17
0.3a	-8	-13	-25	-39	-48	-52
0.2a	-4	-24	-51	-77	-94	-100
0.1a	-1	-41	-88	-128	-154	-163
BOT.	0	-64	-137	-196	-232	-245

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
-120	-38	40	81	100	106
-167	-34	37	74	92	97
-140	-30	33	67	83	87
-119	-26	30	58	71	75
-99	-21	25	48	58	61
-80	-16	19	36	44	45
-61	-12	12	23	27	28
-40	-9	4	9	9	9
-21	-8	-5	-7	-9	-10
-5	-9	-16	-23	-28	-30
0	-13	-27	-39	-46	-49

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
26	52	50	38	20	0
31	48	48	36	19	0
31	49	48	37	19	0
32	50	49	38	20	0
33	51	51	39	20	0
33	52	51	39	21	0
33	51	50	38	20	0
30	48	46	34	18	0
25	39	37	28	14	0
15	25	23	17	8	0
0	0	0	0	0	0

Long Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	-24	0	0	0	0	0
0.9a	-33	-27	-22	-18	-16	-15
0.8a	-28	-25	-23	-22	-20	-20
0.7a	-24	-22	-20	-19	-19	-19
0.6a	-20	-18	-16	-15	-15	-14
0.5a	-16	-14	-12	-10	-10	-9
0.4a	-12	-9	-7	-5	-4	-4
0.3a	-8	-4	-1	1	2	3
0.2a	-4	1	4	7	9	9
0.1a	-1	5	10	13	15	16
BOT.	0	10	16	20	22	22

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
-120	-155	-134	-119	-111	-108
-167	-140	-121	-109	-102	-99
-140	-123	-108	-97	-91	-89
-119	-104	-93	-84	-78	-77
-99	-87	-76	-69	-64	-63
-80	-69	-59	-53	-49	-48
-61	-50	-43	-37	-34	-33
-40	-33	-27	-23	-20	-19
-21	-16	-13	-10	-8	-8
-5	-4	-2	-1	0	1
0	2	3	4	4	4

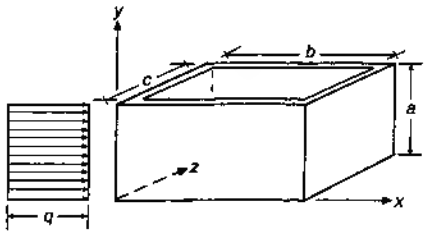
M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
26	29	18	11	5	0
31	22	16	10	5	0
31	22	15	10	5	0
32	24	17	11	5	0
33	25	18	12	6	0
33	25	18	12	6	0
33	25	18	12	6	0
30	22	16	10	5	0
25	18	12	8	4	0
15	11	7	5	2	0
0	0	0	0	0	0

Short Side

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 1.5, $\frac{c}{a}$ = 1.0

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-18	0	0	0	0	0	-89	-45	20	61	83	90	9	26	27	21	11	0
0.9a	-27	-7	3	9	12	13	-135	-42	18	56	77	84	15	23	24	19	10	0
0.8a	-24	-7	6	15	20	21	-121	-39	17	52	71	77	15	23	24	19	10	0
0.7a	-22	-5	8	18	24	26	-110	-35	16	47	63	69	16	25	26	20	11	0
0.6a	-20	-4	9	18	24	25	-98	-30	14	41	55	59	16	26	28	22	12	0
0.5a	-17	-3	8	15	19	21	-85	-25	12	33	44	47	16	28	30	24	13	0
0.4a	-14	-4	3	7	9	9	-68	-19	9	24	32	34	16	30	31	25	13	0
0.3a	-10	-6	-5	-7	-9	-10	-49	-14	5	14	18	19	14	29	31	24	13	0
0.2a	-5	-10	-20	-30	-37	-40	-27	-9	-1	2	3	3	11	26	27	21	11	0
0.1a	-1	-18	-42	-64	-78	-84	-7	-6	-7	-10	-13	-14	7	17	18	14	7	0
BOT.	0	-30	-75	-113	-138	-146	0	-6	-15	-23	-28	-29	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-18	0	0	0	0	0	-89	-81	-35	-3	15	21	9	7	0	2	1	0
0.9a	-27	-14	-5	-1	1	2	-135	-74	-31	-2	15	20	15	8	3	1	0	0
0.8a	-24	-14	-6	-1	3	4	-121	-68	-28	0	15	21	15	8	4	1	0	0
0.7a	-22	-13	-5	1	5	6	-110	-61	-24	2	16	21	16	8	3	1	0	0
0.6a	-20	-10	-2	4	8	9	-98	-53	-19	4	17	21	16	7	2	0	1	0
0.5a	-17	-7	1	7	11	12	-85	-43	-14	6	17	20	16	6	1	2	1	0
0.4a	-14	-4	4	9	13	14	-68	-33	-9	7	15	18	16	4	2	3	2	0
0.3a	-10	-1	5	10	12	13	-49	-22	-5	6	12	14	14	2	4	5	3	0
0.2a	-5	1	5	7	8	8	-27	-12	-2	4	7	8	11	1	6	6	4	0
0.1a	-1	2	1	-2	-5	-6	-7	-4	-1	1	1	1	7	2	6	5	3	0
BOT.	0	1	-10	-22	-30	-33	0	0	-2	-4	-6	-7	0	0	0	0	0	0

$\frac{b}{a}$ = 1.5, $\frac{c}{a}$ = 0.5

Long Side

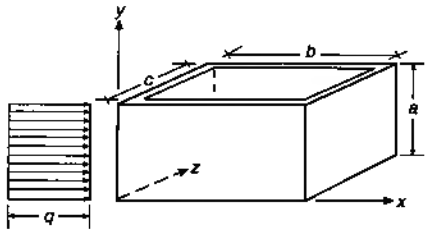
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	-16	0	0	0	0	0	-78	-33	29	68	88	95	15	30	30	23	12	0
0.9a	-24	-5	5	10	13	14	-119	-29	27	63	82	88	19	27	27	21	11	0
0.8a	-21	-4	8	17	21	23	-104	-26	26	58	75	80	19	27	27	21	11	0
0.7a	-18	-2	11	20	25	27	-92	-23	23	52	67	72	20	29	29	22	12	0
0.6a	-16	0	12	20	25	27	-80	-19	21	45	57	61	21	31	31	24	13	0
0.5a	-13	0	10	16	20	21	-67	-15	17	36	46	49	23	33	33	26	14	0
0.4a	-11	-2	4	7	8	8	-53	-11	13	26	32	34	23	34	34	26	14	0
0.3a	-8	-5	-6	-9	-12	-13	-38	-8	7	15	18	19	22	34	33	25	13	0
0.2a	-4	-12	-23	-34	-43	-45	-21	-6	0	2	2	2	19	30	29	22	11	0
0.1a	-1	-23	-49	-72	-87	-92	-6	-6	-8	-12	-14	-15	12	20	19	14	7	0
BOT.	0	-40	-87	-125	-150	-158	0	-8	-17	-25	-30	-32	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	-16	0	0	0	0	0	-78	-108	-92	-80	-74	-72	15	19	11	7	3	0
0.9a	-24	-19	-15	-12	-10	-10	-119	-98	-83	-74	-68	-66	19	14	10	7	3	0
0.8a	-21	-18	-16	-15	-14	-14	-104	-88	-76	-66	-61	-59	19	14	10	6	3	0
0.7a	-18	-16	-15	-14	-13	-13	-92	-78	-66	-58	-53	-51	20	15	11	7	3	0
0.6a	-16	-14	-13	-12	-11	-11	-80	-66	-56	-48	-44	-42	21	16	12	8	4	0
0.5a	-13	-11	-10	-8	-8	-7	-67	-54	-45	-38	-34	-32	23	17	13	8	4	0
0.4a	-11	-8	-6	-4	-3	-3	-53	-42	-33	-27	-23	-22	23	17	12	8	4	0
0.3a	-8	-4	-2	0	1	2	-38	-28	-21	-16	-13	-12	22	16	11	7	3	0
0.2a	-4	0	3	5	7	7	-21	-15	-10	-7	-5	-4	19	13	9	5	3	0
0.1a	-1	4	7	10	11	12	-6	-4	-2	0	1	1	12	8	5	3	1	0
BOT.	0	8	12	13	14	14	0	2	2	3	3	3	0	0	0	0	0	0

Free Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	-7	0	0	0	0	0	-37	-19	16	40	54	58	5	10	10	8	4	0
0.9a	-12	-4	2	5	7	7	-62	-17	15	38	51	55	6	8	8	6	3	0
0.8a	-11	-3	4	9	11	12	-57	-16	15	36	48	52	6	8	8	6	3	0
0.7a	-11	-2	6	11	14	16	-54	-15	14	33	45	48	7	9	8	7	4	0
0.6a	-10	-1	7	13	16	17	-50	-14	13	31	41	44	8	10	10	8	4	0
0.5a	-9	0	7	13	16	17	-46	-12	11	27	35	38	9	12	12	10	5	0
0.4a	-8	0	6	11	14	15	-39	-10	10	21	28	30	11	14	14	11	6	0
0.3a	-6	-1	3	6	7	8	-31	-7	7	15	19	20	11	16	16	13	7	0
0.2a	-4	-3	-4	-5	-6	-7	-20	-5	3	7	9	9	10	16	16	12	7	0
0.1a	-1	-8	-17	-25	-30	-32	-7	-3	-2	-2	-3	-3	7	12	12	9	5	0
BOT.	0	-17	-40	-59	-71	-75	0	-3	-8	-12	-14	-15	0	0	0	0	0	0

Short Side

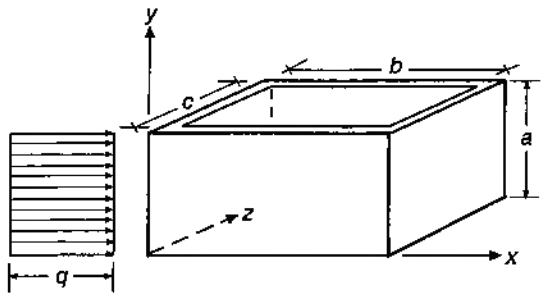
	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	-7	0	0	0	0	0	-37	-51	-40	-32	-27	-25	5	7	4	2	1	0
0.9a	-12	-9	-6	-4	-4	-3	-62	-47	-37	-29	-25	-23	6	5	4	2	1	0
0.8a	-11	-9	-7	-6	-5	-5	-57	-44	-34	-27	-22	-21	6	5	3	2	1	0
0.7a	-11	-9	-7	-6	-5	-5	-54	-41	-31	-24	-19	-18	7	5	4	3	1	0
0.6a	-10	-8	-7	-6	-5	-5	-50	-37	-27	-20	-16	-14	8	6	5	3	2	0
0.5a	-9	-7	-6	-4	-4	-3	-46	-33	-23	-16	-12	-10	9	7	5	3	2	0
0.4a	-8	-6	-4	-2	-1	-1	-39	-27	-17	-11	-7	-6	11	8	5	3	2	0
0.3a	-6	-4	-1	0	1	2	-31	-20	-12	-6	-3	-2	11	8	5	3	1	0
0.2a	-4	-1	1	3	4	5	-20	-11	-6	-2	0	1	10	6	3	2	1	0
0.1a	-1	2	4	5	6	6	-7	-4	-1	1	1	2	7	3	1	0	0	0
BOT.	0	4	4	3	2	1	0	1	1	1	0	0	0	0	0	0	0	0

Hinged Top
Fixed Base

CASE 8

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midheight ($y = a/2$)

b/a	x / c/a	END	0.1b / 0.9b	0.2b / 0.8b	0.3b / 0.7b	0.4b / 0.6b	0.5b
4.0	3.0	0	2.50	4.40	5.10	5.20	5.20
4.0	2.0	0	2.50	4.40	5.10	5.20	5.20
4.0	1.5	0	2.50	4.40	5.10	5.20	5.20
4.0	1.0	0	2.60	4.50	5.10	5.20	5.20
4.0	0.5	0	2.90	4.60	5.10	5.20	5.20
3.0	2.0	0	1.80	3.70	4.70	5.00	5.10
3.0	1.5	0	1.80	3.70	4.70	5.00	5.10
3.0	1.0	0	1.90	3.80	4.70	5.10	5.10
3.0	0.5	0	2.20	4.00	4.80	5.10	5.20
2.0	1.5	0	1.00	2.50	3.70	4.30	4.50
2.0	1.0	0	1.10	2.60	3.70	4.30	4.50
2.0	0.5	0	1.40	2.90	3.90	4.50	4.60
1.5	1.0	0	0.70	1.80	2.70	3.30	3.50
1.5	0.5	0	1.00	2.10	3.00	3.50	3.70
1.0	0.5	0	0.50	1.00	1.50	1.80	2.00

Short Side - Along Midheight ($y = a/2$)

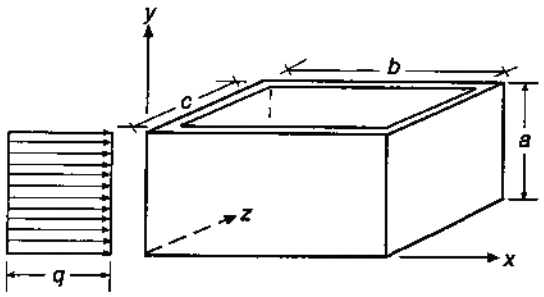
b/a	z / c/a	END	0.1c / 0.9c	0.2c / 0.8c	0.3c / 0.7c	0.4c / 0.6c	0.5c
4.0	3.0	0	1.80	3.70	4.70	5.00	5.10
4.0	2.0	0	1.00	2.50	3.60	4.30	4.50
4.0	1.5	0	0.60	1.60	2.60	3.20	3.40
4.0	1.0	0	0.10	0.50	1.00	1.30	1.40
4.0	0.5	0	-0.20	-0.20	-0.30	-0.30	-0.30
3.0	2.0	0	1.00	2.50	3.60	4.30	4.50
3.0	1.5	0	0.60	1.60	2.60	3.20	3.40
3.0	1.0	0	0.10	0.50	1.00	1.30	1.40
3.0	0.5	0	-0.20	-0.20	-0.30	-0.30	-0.30
2.0	1.5	0	0.60	1.60	2.60	3.20	3.40
2.0	1.0	0	0.10	0.50	1.00	1.30	1.40
2.0	0.5	0	-0.20	-0.20	-0.30	-0.30	-0.30
1.5	1.0	0	0.10	0.60	1.00	1.30	1.40
1.5	0.5	0	-0.20	-0.20	-0.30	-0.30	-0.30
1.0	0.5	0	-0.10	-0.20	-0.20	-0.20	-0.20

CASE 8

Hinged Top
Fixed Base

$$\text{Deflection} = \frac{C_d q a^4}{1000 D}$$

$$D = \frac{Et^3}{12(1-\mu^2)}$$



Deflection Coefficients, C_d

Long Side - Along Midspan ($x = b/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	0.50	1.70	3.20	4.40	5.20	5.40	4.90	3.70	2.00	0
4.0	2.0	0	0.50	1.70	3.20	4.40	5.20	5.40	4.90	3.70	2.00	0
4.0	1.5	0	0.50	1.70	3.20	4.40	5.20	5.40	4.90	3.70	2.00	0
4.0	1.0	0	0.50	1.70	3.20	4.40	5.20	5.40	4.90	3.70	2.00	0
4.0	0.5	0	0.50	1.70	3.20	4.40	5.20	5.40	4.90	3.70	2.00	0
3.0	2.0	0	0.50	1.70	3.10	4.30	5.10	5.30	4.80	3.70	2.00	0
3.0	1.5	0	0.50	1.70	3.10	4.30	5.10	5.30	4.80	3.70	2.00	0
3.0	1.0	0	0.50	1.70	3.10	4.40	5.10	5.30	4.80	3.70	2.00	0
3.0	0.5	0	0.50	1.70	3.10	4.40	5.20	5.30	4.80	3.70	2.00	0
2.0	1.5	0	0.50	1.50	2.80	3.80	4.50	4.60	4.20	3.20	1.70	0
2.0	1.0	0	0.50	1.60	2.80	3.90	4.50	4.70	4.20	3.20	1.70	0
2.0	0.5	0	0.50	1.60	2.80	3.90	4.60	4.80	4.30	3.30	1.80	0
1.5	1.0	0	0.40	1.20	2.20	3.00	3.50	3.60	3.20	2.50	1.30	0
1.5	0.5	0	0.40	1.30	2.30	3.20	3.70	3.80	3.50	2.60	1.40	0
1.0	0.5	0	0.20	0.80	1.30	1.70	2.00	2.00	1.80	1.40	0.70	0

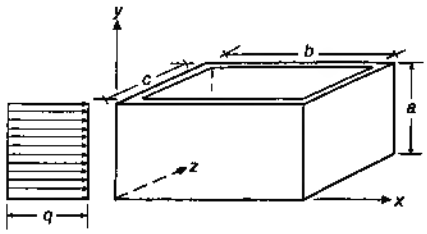
Short Side - Along Midspan ($z = c/2$)

b/a	y / c/a	0	0.1a	0.2a	0.3a	0.4a	0.5a	0.6a	0.7a	0.8a	0.9a	1.0a
4.0	3.0	0	0.50	1.70	3.10	4.30	5.10	5.30	4.80	3.70	2.00	0
4.0	2.0	0	0.50	1.50	2.80	3.80	4.50	4.60	4.20	3.20	1.70	0
4.0	1.5	0	0.40	1.20	2.10	2.90	3.40	3.50	3.10	2.40	1.30	0
4.0	1.0	0	0.20	0.60	1.00	1.20	1.40	1.40	1.30	1.00	0.50	0
4.0	0.5	0	0.00	-0.10	-0.20	-0.20	-0.30	-0.30	-0.30	-0.20	-0.10	0
3.0	2.0	0	0.50	1.50	2.80	3.80	4.50	4.60	4.20	3.20	1.70	0
3.0	1.5	0	0.40	1.20	2.10	2.90	3.40	3.50	3.10	2.40	1.30	0
3.0	1.0	0	0.20	0.60	1.00	1.20	1.40	1.40	1.30	1.00	0.50	0
3.0	0.5	0	0.00	-0.10	-0.20	-0.20	-0.30	-0.30	-0.30	-0.20	-0.10	0
2.0	1.5	0	0.40	1.20	2.10	2.90	3.40	3.50	3.10	2.40	1.30	0
2.0	1.0	0	0.20	0.60	1.00	1.20	1.40	1.40	1.30	1.00	0.50	0
2.0	0.5	0	0.00	-0.10	-0.20	-0.20	-0.30	-0.30	-0.30	-0.20	-0.10	0
1.5	1.0	0	0.20	0.60	1.00	1.30	1.40	1.40	1.30	1.00	0.50	0
1.5	0.5	0	0.00	-0.10	-0.10	-0.20	-0.30	-0.30	-0.30	-0.20	-0.10	0
1.0	0.5	0	0.00	0.00	-0.10	-0.10	-0.20	-0.20	-0.20	-0.10	0.00	0

CASE 8

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 3.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	22	8	2	0	0
0.9a	-7	18	28	32	32	32	-35	7	9	7	7	7	2	20	8	2	0	0
0.8a	-12	28	47	53	55	55	-60	13	15	13	11	11	1	16	6	2	0	0
0.7a	-15	33	58	66	67	67	-75	16	19	16	14	14	1	10	4	1	0	0
0.6a	-16	34	60	68	70	70	-81	17	20	16	15	14	0	2	1	0	0	0
0.5a	-16	31	55	61	62	63	-78	16	19	15	13	13	0	5	2	1	0	0
0.4a	-14	24	41	44	45	45	-68	13	15	11	9	9	1	11	5	1	0	0
0.3a	-10	12	18	18	18	18	-50	9	8	5	4	4	1	15	6	1	0	0
0.2a	-6	-6	-14	-19	-20	-20	-29	3	0	-3	-4	-4	2	15	6	1	0	0
0.1a	-2	-32	-57	-65	-67	-67	-8	-5	-11	-13	-13	-13	1	11	4	1	0	0
BOT.	0	-70	-112	-123	-125	-125	0	-14	-22	-25	-25	-25	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	25	15	7	2	0
0.9a	-7	13	24	30	32	32	-35	4	9	8	7	7	2	23	14	6	2	0
0.8a	-12	20	40	50	53	54	-60	7	16	14	13	12	1	18	11	5	2	0
0.7a	-15	23	49	61	65	67	-75	8	20	18	16	15	1	11	7	3	1	0
0.6a	-16	23	50	63	68	69	-81	8	21	19	17	16	0	2	1	0	0	0
0.5a	-16	21	46	57	61	62	-78	8	20	18	15	14	0	5	4	2	1	0
0.4a	-14	16	35	42	44	45	-68	7	17	14	11	10	1	12	8	4	1	0
0.3a	-10	9	16	18	18	18	-50	5	10	7	5	5	1	16	10	4	1	0
0.2a	-6	-4	-10	-16	-18	-19	-29	1	2	-1	-3	-3	2	17	10	4	1	0
0.1a	-2	-22	-48	-61	-65	-67	-8	-4	-8	-12	-13	-13	1	13	7	3	1	0
BOT.	0	-51	-98	-117	-123	-124	0	-10	-20	-23	-25	-25	0	0	0	0	0	0

$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 2.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	22	8	2	0	0
0.9a	-7	18	28	32	32	32	-35	7	9	7	7	7	2	20	8	2	0	0
0.8a	-12	28	47	53	55	55	-59	13	15	13	11	11	2	16	6	2	0	0
0.7a	-15	33	58	66	67	67	-75	16	19	16	14	14	1	10	4	1	0	0
0.6a	-16	34	60	68	70	70	-81	17	20	16	15	14	0	2	1	0	0	0
0.5a	-16	31	55	61	62	63	-78	16	19	15	13	13	1	5	2	1	0	0
0.4a	-14	24	41	44	45	45	-68	13	15	11	9	9	1	11	5	1	0	0
0.3a	-10	12	18	18	18	18	-50	9	8	5	4	4	1	15	6	1	0	0
0.2a	-6	-6	-14	-19	-20	-20	-29	3	0	-3	-4	-4	2	15	6	1	0	0
0.1a	-2	-32	-57	-65	-67	-67	-8	-5	-11	-13	-13	-13	1	11	4	1	0	0
BOT.	0	-70	-112	-123	-125	-125	0	-14	-22	-25	-25	-25	0	0	0	0	0	0

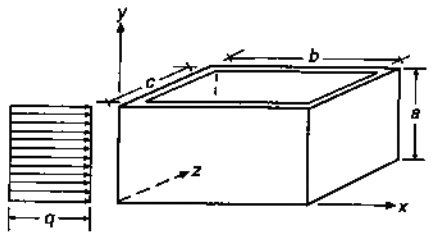
Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	24	22	14	7	0
0.9a	-7	7	18	24	27	28	-35	-1	7	9	9	9	2	22	20	13	6	0
0.8a	-12	10	28	40	46	48	-59	-3	13	16	17	16	2	17	16	10	5	0
0.7a	-15	10	33	48	56	58	-75	-6	16	21	21	21	1	10	10	6	3	0
0.6a	-16	10	34	50	58	61	-81	-7	17	23	23	22	0	2	2	1	1	0
0.5a	-16	9	31	45	53	55	-78	-7	16	21	21	21	1	5	5	3	2	0
0.4a	-14	7	24	35	40	42	-68	-6	14	18	17	16	1	11	11	7	4	0
0.3a	-10	4	12	17	18	19	-50	-4	9	11	10	9	1	15	15	10	5	0
0.2a	-6	-2	-5	-10	-13	-14	-29	-3	3	2	1	0	2	16	15	10	4	0
0.1a	-2	-13	-32	-47	-55	-58	-8	-3	-5	-8	-10	-11	1	12	11	7	3	0
BOT.	0	-29	-70	-97	-111	-115	0	-6	-14	-19	-22	-23	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 4.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	18	28	32	32	32
0.8a	-12	28	48	53	55	55
0.7a	-15	34	58	66	67	67
0.6a	-16	34	60	68	70	70
0.5a	-15	31	55	61	62	63
0.4a	-13	24	41	44	45	45
0.3a	-10	12	18	18	18	18
0.2a	-6	-6	-14	-19	-20	-20
0.1a	-2	-32	-58	-66	-67	-67
BOT.	0	-70	-113	-123	-125	-125

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-34	7	9	7	7	7
-58	13	15	13	11	11
-73	16	19	16	14	14
-79	17	20	16	15	14
-77	16	19	15	13	13
-67	14	15	11	9	9
-50	9	8	5	4	4
-29	3	0	-3	-4	-4
-8	-5	-11	-13	-13	-13
0	-14	-23	-25	-25	-25

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
4	22	8	2	0	0
3	20	8	2	0	0
2	16	6	2	0	0
1	10	4	1	0	0
0	2	1	0	0	0
1	5	2	1	0	0
1	11	5	1	0	0
2	15	6	1	0	0
2	15	5	1	0	0
1	11	4	1	0	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-7	4	12	18	22	23
0.8a	-12	4	19	29	35	37
0.7a	-15	4	21	34	42	45
0.6a	-16	3	21	35	44	47
0.5a	-15	2	20	33	41	43
0.4a	-13	2	16	26	32	34
0.3a	-10	1	9	14	17	18
0.2a	-6	-2	-2	-4	-6	-7
0.1a	-2	-8	-21	-33	-41	-44
BOT.	0	-17	-49	-75	-90	-94

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-34	-5	5	9	11	11
-58	-11	9	16	19	20
-73	-15	10	21	24	25
-79	-18	11	22	26	27
-77	-17	10	22	25	26
-67	-15	9	18	21	22
-50	-11	6	12	14	14
-29	-7	2	5	5	4
-8	-4	-3	-5	-6	-7
0	-3	-10	-15	-18	-19

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
4	21	22	16	9	0
3	19	20	15	8	0
2	14	16	12	6	0
1	8	10	7	4	0
0	2	2	2	1	0
1	4	5	4	2	0
1	9	11	8	4	0
2	13	15	11	6	0
2	14	16	12	6	0
1	11	12	8	4	0
0	0	0	0	0	0

$\frac{b}{a} = 4.0, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	19	29	32	32	32
0.8a	-10	30	48	53	55	55
0.7a	-13	35	58	66	67	67
0.6a	-14	36	61	68	70	70
0.5a	-14	33	55	61	62	63
0.4a	-12	25	41	45	45	45
0.3a	-9	13	18	18	18	18
0.2a	-5	-6	-15	-19	-20	-20
0.1a	-2	-33	-58	-66	-67	-67
BOT.	0	-73	-113	-123	-125	-125

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-30	8	9	7	7	7
-52	13	15	12	11	11
-65	16	19	15	14	14
-70	18	20	16	15	14
-69	17	19	15	13	13
-60	14	15	11	9	9
-46	10	8	5	4	4
-27	3	0	-3	-4	-4
-8	-5	-11	-13	-13	-13
0	-15	-23	-25	-25	-25

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
7	21	8	2	0	0
6	20	8	2	0	0
4	15	6	1	0	0
2	9	3	1	0	0
0	2	1	0	0	0
2	5	2	1	0	0
3	11	4	1	0	0
4	14	6	1	0	0
4	15	5	1	0	0
3	10	3	1	0	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-6	0	5	9	11	12
0.8a	-10	-2	6	13	16	18
0.7a	-13	-4	6	13	18	20
0.6a	-14	-4	5	13	18	20
0.5a	-14	-4	5	13	18	19
0.4a	-12	-3	5	12	16	17
0.3a	-9	-2	4	9	11	12
0.2a	-5	-1	1	2	2	2
0.1a	-2	-2	-7	-12	-15	-17
BOT.	0	-6	-22	-37	-48	-51

M_y Coefficient

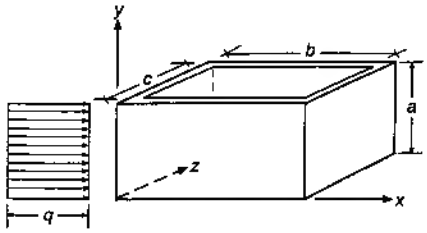
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-30	-9	1	7	10	10
-52	-18	1	12	17	18
-65	-24	0	14	21	23
-70	-27	0	15	23	26
-69	-26	0	15	23	25
-60	-23	0	14	20	22
-46	-17	1	10	15	17
-27	-10	0	6	8	9
-8	-4	-1	-1	-1	-1
0	-1	-4	-7	-10	-10

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
7	11	14	12	7	0
6	10	13	11	6	0
4	7	10	9	5	0
2	4	6	5	3	0
0	1	2	2	1	0
2	1	2	2	1	0
3	4	6	5	3	0
4	6	9	8	4	0
4	7	10	9	5	0
3	6	9	7	4	0
0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 4.0, $\frac{c}{a}$ = 0.5

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b				0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	15	20	7	2	0	0
0.9a	-4	20	29	32	32	32	-22	8	8	7	7	7	14	19	7	2	0	0
0.8a	-7	32	49	54	55	55	-37	14	15	12	11	11	11	15	5	1	0	0
0.7a	-9	38	60	66	67	68	-45	18	18	15	14	14	6	9	3	1	0	0
0.6a	-10	39	62	69	70	70	-48	20	20	16	14	14	1	2	0	0	0	0
0.5a	-9	36	56	61	62	63	-47	19	18	14	13	13	3	5	2	1	0	0
0.4a	-8	28	42	45	45	45	-42	16	14	11	9	9	7	10	4	1	0	0
0.3a	-7	14	18	18	18	18	-33	10	8	5	4	4	10	14	5	1	0	0
0.2a	-4	-7	-15	-19	-20	-20	-20	3	-1	-3	-4	-4	10	14	5	1	0	0
0.1a	-1	-37	-59	-66	-67	-68	-7	-6	-11	-13	-13	-13	7	10	3	1	0	0
BOT.	0	-79	-115	-124	-125	-125	0	-16	-23	-25	-25	-25	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c				0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	15	6	2	1	0	0
0.9a	-4	-3	-1	0	1	1	-22	-12	-6	-3	0	0	14	6	3	1	0	0
0.8a	-7	-6	-4	-3	-2	-2	-37	-23	-13	-6	-2	-1	11	6	3	1	1	0
0.7a	-9	-8	-7	-6	-5	-5	-45	-29	-17	-9	-4	-3	6	4	2	1	1	0
0.6a	-10	-9	-8	-7	-6	-6	-48	-32	-19	-11	-5	-4	1	1	1	0	0	0
0.5a	-9	-8	-7	-6	-6	-5	-47	-31	-19	-10	-5	-4	3	2	1	1	0	0
0.4a	-8	-7	-5	-4	-4	-3	-42	-27	-16	-8	-3	-2	7	4	3	1	1	0
0.3a	-7	-4	-3	-1	0	0	-33	-20	-11	-5	-1	0	10	6	3	2	1	0
0.2a	-4	-1	1	2	3	3	-20	-12	-6	-1	1	2	10	5	2	1	0	0
0.1a	-1	1	3	4	5	5	-7	-4	-1	1	2	2	7	3	1	0	0	0
BOT.	0	3	3	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0

$\frac{b}{a}$ = 3.0, $\frac{c}{a}$ = 2.0

Long Side

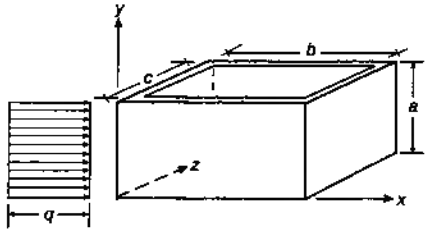
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b				0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	24	15	6	2	0
0.9a	-7	13	24	30	32	32	-35	4	9	8	7	7	2	23	14	6	2	0
0.8a	-12	20	40	50	53	54	-60	7	16	14	13	12	1	18	11	5	1	0
0.7a	-15	23	49	61	65	67	-75	8	20	18	16	15	1	11	6	3	1	0
0.6a	-16	23	50	63	68	69	-81	8	21	19	17	16	0	2	1	0	0	0
0.5a	-16	21	46	57	61	62	-78	8	20	18	15	14	0	5	4	2	1	0
0.4a	-14	16	35	42	44	45	-68	7	17	14	11	10	1	12	8	3	1	0
0.3a	-10	9	16	18	18	18	-50	5	10	7	5	5	1	16	10	4	1	0
0.2a	-6	-4	-10	-16	-18	-19	-29	1	2	-1	-3	-3	1	17	10	4	1	0
0.1a	-2	-22	-48	-61	-65	-67	-8	-4	-8	-12	-13	-13	1	12	7	3	1	0
BOT.	0	-51	-98	-117	-123	-124	0	-10	-20	-23	-25	-25	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c				0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	2	24	22	14	7	0
0.9a	-7	7	18	24	27	28	-35	-1	7	9	9	9	2	22	20	13	6	0
0.8a	-12	10	28	40	46	48	-60	-3	13	16	17	16	1	17	16	10	5	0
0.7a	-15	10	33	48	56	58	-75	-6	16	21	21	21	1	10	10	6	3	0
0.6a	-16	10	34	50	58	61	-81	-7	17	23	23	22	0	2	2	1	1	0
0.5a	-16	9	31	45	53	55	-78	-7	16	21	21	21	0	5	5	3	2	0
0.4a	-14	7	24	35	40	42	-68	-6	14	18	17	16	1	11	11	7	4	0
0.3a	-10	4	12	17	18	19	-50	-4	9	11	10	9	1	15	15	10	5	0
0.2a	-6	-2	-5	-10	-13	-14	-29	-3	3	2	1	0	1	16	15	10	4	0
0.1a	-2	-13	-32	-47	-55	-58	-8	-3	-5	-8	-10	-11	1	12	11	7	3	0
BOT.	0	-29	-70	-97	-111	-115	0	-6	-14	-19	-22	-23	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 1.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	24	15	6	2	0
0.9a	-7	13	25	30	32	32	-34	5	9	8	7	7	2	23	14	6	2	0
0.8a	-12	20	40	50	53	54	-58	7	16	14	13	12	2	18	11	5	1	0
0.7a	-15	23	49	61	65	67	-73	8	20	18	16	15	1	11	6	3	1	0
0.6a	-16	23	51	63	68	69	-80	9	21	19	17	16	0	2	1	0	0	0
0.5a	-15	21	46	57	61	62	-77	8	20	18	15	14	1	5	4	2	1	0
0.4a	-13	17	35	42	44	45	-67	7	17	14	11	10	1	12	8	3	1	0
0.3a	-10	9	16	18	18	18	-50	5	10	7	5	4	2	16	10	4	1	0
0.2a	-6	-4	-10	-16	-18	-19	-29	1	2	-1	-3	-3	2	17	10	4	1	0
0.1a	-2	-23	-48	-61	-65	-67	-8	-4	-8	-12	-13	-13	1	12	7	3	1	0
BOT.	0	-51	-98	-117	-123	-124	0	-10	-20	-23	-25	-25	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	3	21	22	16	9	0
0.9a	-7	4	12	18	22	23	-34	-5	5	9	11	11	2	19	20	15	8	0
0.8a	-12	4	19	29	35	37	-58	-11	9	16	19	20	2	14	16	12	6	0
0.7a	-15	4	21	34	42	45	-73	-15	10	21	24	25	1	8	10	7	4	0
0.6a	-16	3	21	35	44	47	-80	-18	11	22	26	27	0	2	2	2	1	0
0.5a	-15	2	20	33	41	43	-77	-18	10	22	25	26	1	4	5	4	2	0
0.4a	-13	2	16	26	32	34	-67	-15	9	18	21	22	1	9	11	8	4	0
0.3a	-10	1	9	14	17	18	-50	-11	6	12	14	14	2	13	15	11	6	0
0.2a	-6	-2	-2	-4	-6	-7	-29	-7	2	5	5	4	2	14	16	12	6	0
0.1a	-2	-8	-21	-33	-41	-44	-8	-4	-3	-5	-6	-7	1	11	12	8	4	0
BOT.	0	-17	-49	-75	-90	-94	0	-3	-10	-15	-18	-19	0	0	0	0	0	0

$\frac{b}{a} = 3.0, \frac{c}{a} = 1.0$

Long Side

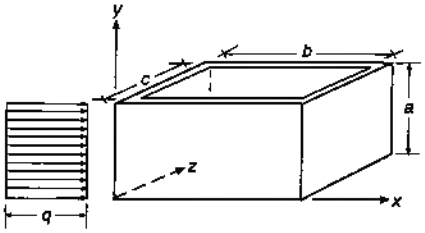
	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	24	14	6	2	0
0.9a	-6	14	25	30	32	32	-31	5	9	8	7	7	5	22	13	6	2	0
0.8a	-10	21	41	50	53	54	-52	8	16	14	13	12	4	17	10	4	1	0
0.7a	-13	25	50	61	66	67	-65	10	20	18	16	15	2	10	6	2	1	0
0.6a	-14	25	52	64	68	69	-71	10	21	19	16	16	0	2	1	0	0	0
0.5a	-14	23	47	58	61	62	-69	10	20	18	15	14	2	5	4	2	1	0
0.4a	-12	18	35	42	45	45	-60	8	17	14	11	10	3	12	7	3	1	0
0.3a	-9	9	17	18	18	18	-46	6	10	7	5	4	4	16	10	4	1	0
0.2a	-5	-4	-11	-16	-19	-19	-27	2	2	-1	-3	-3	4	17	9	4	1	0
0.1a	-2	-24	-49	-61	-66	-67	-8	-4	-9	-12	-13	-13	3	12	6	2	1	0
BOT.	0	-54	-99	-117	-123	-125	0	-11	-20	-23	-25	-25	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0	0	0	0	0	0	0	6	11	14	12	7	0
0.9a	-6	0	5	9	11	12	-31	-9	1	7	10	10	5	10	13	11	6	0
0.8a	-10	-2	6	13	16	18	-52	-18	1	11	17	18	4	7	10	9	5	0
0.7a	-13	-4	6	13	18	20	-65	-24	0	14	21	23	2	4	6	5	3	0
0.6a	-14	-4	5	13	18	20	-71	-27	0	15	23	26	0	1	2	2	1	0
0.5a	-14	-4	5	13	18	19	-69	-26	0	15	23	25	2	1	2	2	1	0
0.4a	-12	-3	5	12	16	17	-60	-23	0	14	20	22	3	4	6	5	3	0
0.3a	-9	-2	4	9	11	12	-46	-17	1	10	15	17	4	6	9	8	4	0
0.2a	-5	-1	1	2	2	2	-27	-10	0	6	8	9	4	7	10	9	5	0
0.1a	-2	-2	-7	-12	-15	-17	-8	-4	-1	-1	-1	-1	3	6	9	7	4	0
BOT.	0	-6	-22	-37	-48	-51	0	-1	-4	-7	-10	-10	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 3.0, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-4	16	26	30	32
0.8a	-7	25	43	51	54
0.7a	-9	29	52	62	66
0.6a	-10	29	54	65	68
0.5a	-9	27	49	58	61
0.4a	-8	21	37	43	45
0.3a	-7	11	17	18	18
0.2a	-4	-5	-12	-17	-19
0.1a	-1	-28	-51	-62	-66
BOT.	0	-62	-103	-119	-124

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0
0.9a	-22	7	9	8	7
0.8a	-37	11	16	14	12
0.7a	-45	14	20	18	15
0.6a	-48	14	22	19	16
0.5a	-47	14	20	17	15
0.4a	-42	12	16	13	11
0.3a	-33	8	10	7	5
0.2a	-20	3	1	-2	-3
0.1a	-7	-4	-9	-12	-13
BOT.	0	-12	-21	-24	-25

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	15	24	13	5	2	0
0.9a	13	22	12	5	2	0
0.8a	10	17	9	4	1	0
0.7a	6	10	6	2	1	0
0.6a	1	2	1	0	0	0
0.5a	3	5	3	2	1	0
0.4a	7	12	7	3	1	0
0.3a	10	16	9	4	1	0
0.2a	10	16	9	3	1	0
0.1a	7	12	6	2	1	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-4	-3	-1	0	1	1
0.8a	-7	-6	-4	-3	-2	-2
0.7a	-9	-8	-7	-6	-5	-5
0.6a	-10	-9	-8	-7	-6	-6
0.5a	-9	-8	-7	-6	-6	-5
0.4a	-8	-7	-5	-4	-4	-3
0.3a	-7	-4	-3	-1	0	0
0.2a	-4	-1	1	2	3	3
0.1a	-1	1	3	4	5	5
BOT.	0	3	3	2	0	0

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-22	-12	-6	-3	0	0
0.8a	-37	-23	-13	-6	-2	-1
0.7a	-45	-29	-17	-9	-4	-3
0.6a	-48	-32	-19	-11	-6	-4
0.5a	-47	-31	-19	-10	-5	-4
0.4a	-42	-27	-16	-8	-4	-2
0.3a	-33	-20	-11	-5	-1	0
0.2a	-20	-12	-6	-1	1	2
0.1a	-7	-4	-1	1	2	2
BOT.	0	1	1	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	15	6	2	1	0	0
0.9a	13	6	3	1	0	0
0.8a	10	6	3	1	1	0
0.7a	6	4	2	1	1	0
0.6a	1	1	1	0	0	0
0.5a	3	2	1	1	0	0
0.4a	7	4	3	1	1	0
0.3a	10	6	3	2	1	0
0.2a	10	5	2	1	0	0
0.1a	7	3	1	0	0	0
BOT.	0	0	0	0	0	0

$\frac{b}{a} = 2.0, \frac{c}{a} = 1.5$

Long Side

M_x Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-7	8	18	24	27	28
0.8a	-12	10	28	40	46	48
0.7a	-15	11	33	48	56	58
0.6a	-16	10	34	50	58	61
0.5a	-15	9	31	46	53	55
0.4a	-13	7	24	35	40	42
0.3a	-10	4	13	17	18	19
0.2a	-6	-3	-5	-10	-13	-14
0.1a	-2	-13	-32	-47	-56	-58
BOT.	0	-29	-70	-97	-111	-115

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-34	-1	8	9	9	9
0.8a	-58	-3	13	16	17	16
0.7a	-73	-5	16	21	21	21
0.6a	-79	-7	17	23	22	22
0.5a	-77	-7	17	21	21	21
0.4a	-67	-6	14	18	17	16
0.3a	-50	-4	9	11	10	9
0.2a	-29	-3	3	2	1	0
0.1a	-8	-3	-5	-8	-10	-11
BOT.	0	-6	-14	-19	-22	-23

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
TOP	2	24	21	14	6	0
0.9a	2	22	20	13	6	0
0.8a	1	17	16	10	5	0
0.7a	1	10	9	6	3	0
0.6a	0	2	2	1	1	0
0.5a	0	5	5	3	2	0
0.4a	1	11	11	7	3	0
0.3a	1	16	15	9	4	0
0.2a	1	17	15	9	4	0
0.1a	1	13	11	6	3	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-7	4	12	18	22	23
0.8a	-12	4	19	29	35	37
0.7a	-15	4	21	34	42	45
0.6a	-16	3	21	35	44	47
0.5a	-15	2	20	33	41	43
0.4a	-13	2	16	26	32	34
0.3a	-10	1	9	14	17	18
0.2a	-6	-2	-2	-4	-6	-7
0.1a	-2	-8	-21	-33	-41	-44
BOT.	0	-17	-49	-75	-90	-94

M_y Coefficient

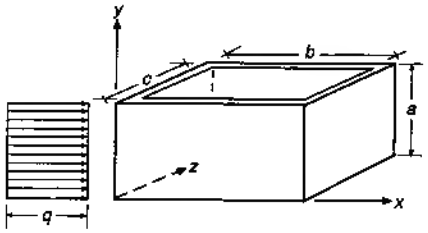
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-34	-5	5	9	11	11
0.8a	-58	-11	9	16	19	20
0.7a	-73	-15	10	21	24	25
0.6a	-79	-18	11	22	26	27
0.5a	-77	-17	10	22	25	26
0.4a	-67	-15	9	18	21	22
0.3a	-50	-11	6	12	14	14
0.2a	-29	-7	2	5	5	4
0.1a	-8	-4	-3	-5	-6	-7
BOT.	0	-3	-10	-15	-18	-19

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
TOP	2	21	22	16	9	0
0.9a	2	19	20	15	8	0
0.8a	1	14	16	12	6	0
0.7a	1	8	10	7	4	0
0.6a	0	2	2	2	1	0
0.5a	0	4	5	4	2	0
0.4a	1	9	11	8	4	0
0.3a	1	13	15	11	6	0
0.2a	1	14	16	12	6	0
0.1a	1	11	12	8	4	0
BOT.	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 1.0

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	8	18	25	28	29
0.8a	-10	12	29	40	46	48
0.7a	-13	13	35	49	57	59
0.6a	-14	12	36	51	59	62
0.5a	-14	11	32	46	54	56
0.4a	-12	9	25	35	40	42
0.3a	-9	4	13	17	18	19
0.2a	-5	-3	-6	-10	-13	-14
0.1a	-2	-14	-33	-48	-56	-59
BOT.	0	-32	-73	-99	-112	-115

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-31	0	8	9	9	9
0.8a	-52	-1	13	16	16	16
0.7a	-65	-3	17	21	21	20
0.6a	-70	-4	18	23	22	22
0.5a	-69	-4	17	21	21	20
0.4a	-60	-3	15	17	17	16
0.3a	-46	-2	10	11	10	9
0.2a	-27	-2	3	2	1	0
0.1a	-8	-3	-5	-8	-10	-11
BOT.	0	-6	-15	-20	-22	-23

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	6	25	21	13	6	0
0.9a	5	23	19	12	6	0
0.8a	4	17	15	10	4	0
0.7a	2	10	9	6	3	0
0.6a	0	2	2	1	1	0
0.5a	1	5	5	3	2	0
0.4a	3	12	11	7	3	0
0.3a	4	16	14	9	4	0
0.2a	3	17	15	9	4	0
0.1a	2	13	10	6	3	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-6	0	5	9	11	12
0.8a	-10	-2	6	13	16	18
0.7a	-13	-4	6	13	18	20
0.6a	-14	-4	5	13	18	20
0.5a	-14	-4	5	13	18	19
0.4a	-12	-3	5	12	16	17
0.3a	-9	-2	4	9	11	12
0.2a	-5	-1	1	2	2	2
0.1a	-2	-2	-7	-12	-15	-17
BOT.	0	-6	-22	-37	-48	-51

M_y Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-31	-9	1	7	10	10
0.8a	-52	-18	1	12	17	18
0.7a	-65	-24	0	14	21	23
0.6a	-70	-27	0	15	23	26
0.5a	-69	-26	0	15	23	25
0.4a	-60	-23	0	14	20	22
0.3a	-46	-17	1	10	15	17
0.2a	-27	-10	0	6	8	9
0.1a	-8	-4	-1	-1	-1	-1
BOT.	0	-1	-4	-7	-10	-10

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	6	11	14	12	7	0
0.9a	5	10	13	11	6	0
0.8a	4	7	10	9	5	0
0.7a	2	4	6	5	3	0
0.6a	0	1	2	2	1	0
0.5a	1	1	2	2	1	0
0.4a	3	4	6	5	3	0
0.3a	4	6	9	8	4	0
0.2a	3	7	10	9	5	0
0.1a	2	6	9	7	4	0
BOT.	0	0	0	0	0	0

$\frac{b}{a}$ = 2.0, $\frac{c}{a}$ = 0.5

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-4	10	20	25	28	29
0.8a	-7	15	32	42	48	49
0.7a	-9	17	38	51	58	60
0.6a	-10	17	39	53	61	63
0.5a	-9	16	36	49	55	57
0.4a	-8	12	28	37	41	42
0.3a	-7	6	14	17	18	19
0.2a	-4	-3	-7	-11	-14	-15
0.1a	-1	-17	-37	-50	-58	-60
BOT.	0	-40	-79	-102	-114	-117

M_y Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-22	3	9	9	9	9
0.8a	-37	4	15	16	16	16
0.7a	-45	4	19	21	20	20
0.6a	-48	4	20	23	22	21
0.5a	-47	4	19	21	20	19
0.4a	-42	3	16	17	16	15
0.3a	-33	2	11	11	9	8
0.2a	-20	0	3	2	0	-1
0.1a	-7	-3	-6	-9	-11	-11
BOT.	0	-8	-16	-20	-23	-23

M_{xy} Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	14	26	20	12	5	0
0.9a	13	24	18	11	5	0
0.8a	10	18	15	9	4	0
0.7a	6	11	9	5	2	0
0.6a	1	2	2	1	0	0
0.5a	3	5	5	3	1	0
0.4a	7	12	10	6	3	0
0.3a	10	17	14	8	4	0
0.2a	10	18	14	8	4	0
0.1a	7	13	10	5	2	0
BOT.	0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-4	-3	-1	0	1	1
0.8a	-7	-6	-4	-3	-2	-2
0.7a	-9	-8	-7	-6	-5	-5
0.6a	-10	-9	-8	-7	-6	-6
0.5a	-9	-8	-7	-6	-6	-5
0.4a	-8	-7	-5	-4	-4	-3
0.3a	-7	-4	-3	-1	0	0
0.2a	-4	-1	1	2	3	3
0.1a	-1	1	3	4	5	5
BOT.	0	3	3	2	0	0

M_y Coefficient

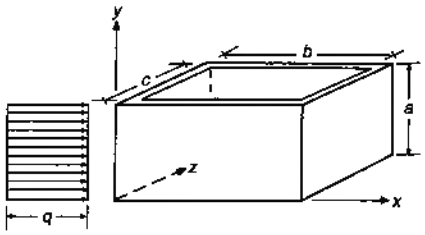
	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-22	-12	-6	-3	0	0
0.8a	-37	-23	-13	-6	-2	-1
0.7a	-45	-29	-17	-9	-4	-3
0.6a	-48	-32	-19	-11	-5	-4
0.5a	-47	-31	-19	-10	-5	-4
0.4a	-42	-27	-16	-8	-4	-2
0.3a	-33	-20	-11	-5	-1	0
0.2a	-20	-12	-6	-1	1	2
0.1a	-7	-4	-1	1	2	2
BOT.	0	1	1	0	0	0

M_{yz} Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	14	6	2	1	0	0
0.9a	13	6	3	1	0	0
0.8a	10	6	3	1	1	0
0.7a	6	4	2	1	1	0
0.6a	1	1	1	0	0	0
0.5a	3	2	1	1	0	0
0.4a	7	4	3	1	1	0
0.3a	10	6	3	2	1	0
0.2a	10	5	2	1	0	0
0.1a	7	3	1	0	0	0
BOT.	0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.5, \frac{c}{a} = 1.0$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-6	5	13	19	22	23
0.8a	-10	6	20	30	36	38
0.7a	-13	6	23	36	44	46
0.6a	-14	5	24	37	45	48
0.5a	-14	5	22	34	42	44
0.4a	-12	4	17	27	33	35
0.3a	-9	2	10	15	17	18
0.2a	-5	-2	-3	-5	-7	-8
0.1a	-2	-9	-22	-34	-42	-45
BOT.	0	-20	-53	-77	-92	-96

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-30	-4	6	9	11	11
-51	-8	10	17	19	19
-64	-11	12	21	24	25
-69	-13	12	23	26	27
-68	-13	12	22	25	26
-59	-11	10	18	21	21
-45	-8	7	13	14	14
-27	-5	3	5	4	4
-8	-3	-3	-5	-7	-7
0	-4	-11	-15	-18	-19

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
5	22	22	16	8	0
4	20	20	15	7	0
3	15	16	12	6	0
2	9	10	7	4	0
0	2	2	2	1	0
1	4	5	3	2	0
2	10	11	8	4	0
3	14	15	11	6	0
3	15	15	11	6	0
2	12	11	8	4	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-6	0	6	9	12	12
0.8a	-10	-2	6	13	17	18
0.7a	-13	-3	6	14	18	20
0.6a	-14	-4	6	13	19	20
0.5a	-14	-4	5	13	18	20
0.4a	-12	-3	5	12	16	17
0.3a	-9	-2	4	9	12	12
0.2a	-5	-1	1	2	2	2
0.1a	-2	-3	-7	-12	-16	-17
BOT.	0	-6	-22	-38	-48	-52

M_y Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-30	-9	1	7	10	10
-51	-17	1	12	17	18
-64	-23	1	14	21	24
-69	-26	0	16	24	26
-68	-26	0	15	23	26
-59	-22	1	14	20	22
-45	-16	1	10	15	17
-27	-10	0	6	8	9
-8	-4	-1	-1	-1	-1
0	-1	-4	-8	-10	-10

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
5	11	15	12	7	0
4	10	13	11	6	0
3	7	10	9	5	0
2	4	6	5	3	0
0	1	2	2	1	0
1	1	2	2	1	0
2	4	6	5	3	0
3	6	9	8	4	0
3	8	10	9	5	0
2	7	9	7	4	0
0	0	0	0	0	0

$\frac{b}{a} = 1.5, \frac{c}{a} = 0.5$

Long Side

M_x Coefficient

	CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
TOP	0	0	0	0	0	0
0.9a	-4	7	15	20	23	24
0.8a	-7	10	23	33	39	40
0.7a	-9	11	27	40	47	49
0.6a	-9	11	28	41	49	51
0.5a	-9	10	26	38	45	47
0.4a	-8	8	21	30	35	36
0.3a	-6	4	11	16	18	18
0.2a	-4	-2	-4	-6	-8	-9
0.1a	-1	-12	-26	-38	-46	-48
BOT.	0	-28	-61	-84	-97	-101

M_y Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
0	0	0	0	0	0
-22	0	7	10	11	11
-36	-1	12	17	19	19
-44	-3	15	22	24	24
-47	-3	16	24	26	26
-46	-4	16	23	25	25
-41	-3	13	19	20	21
-32	-2	9	13	13	13
-20	-2	4	4	4	3
-7	-3	-4	-6	-7	-8
0	-6	-12	-17	-19	-20

M_{xy} Coefficient

CORNER	0.1b	0.2b	0.3b	0.4b	0.5b
	0.9b	0.8b	0.7b	0.6b	
13	24	22	15	7	0
12	22	20	14	7	0
10	17	16	11	5	0
6	10	9	7	3	0
1	2	2	2	1	0
3	5	5	3	2	0
7	11	11	8	4	0
9	16	15	10	5	0
9	17	15	11	5	0
7	13	11	7	4	0
0	0	0	0	0	0

Short Side

M_z Coefficient

	CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
		0.9c	0.8c	0.7c	0.6c	
TOP	0	0	0	0	0	0
0.9a	-4	-3	-1	0	1	1
0.8a	-7	-6	-4	-3	-2	-2
0.7a	-9	-8	-6	-5	-5	-4
0.6a	-9	-8	-7	-6	-6	-6
0.5a	-9	-8	-7	-6	-5	-5
0.4a	-8	-7	-5	-4	-3	-3
0.3a	-6	-4	-3	-1	0	0
0.2a	-4	-1	1	2	3	3
0.1a	-1	1	3	4	5	5
BOT.	0	3	3	1	0	0

M_y Coefficient

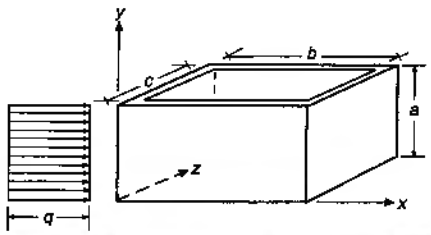
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
0	0	0	0	0	0
-22	-12	-6	-2	0	0
-36	-22	-12	-6	-2	-1
-44	-28	-17	-9	-4	-2
-47	-31	-19	-10	-5	-3
-46	-30	-18	-10	-5	-3
-41	-26	-15	-8	-3	-2
-32	-20	-11	-4	-1	0
-20	-12	-5	-1	1	2
-7	-4	-1	1	2	2
0	1	1	0	0	0

M_{yz} Coefficient

CORNER	0.1c	0.2c	0.3c	0.4c	0.5c
	0.9c	0.8c	0.7c	0.6c	
13	6	2	0	0	0
12	6	3	1	0	0
10	6	3	1	0	0
6	4	2	1	0	0
1	1	1	0	0	0
3	2	1	1	0	0
7	4	3	1	1	0
9	5	3	1	1	0
9	5	2	1	0	0
7	3	1	0	0	0
0	0	0	0	0	0

Hinged Top
Fixed Base

Moment = Coef. × $qa^2/1000$



$\frac{b}{a} = 1.0, \frac{c}{a} = 0.5$

Long Side

	M_x Coefficient						M_y Coefficient						M_{xy} Coefficient					
CORNER	0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b		0.1b	0.2b	0.3b	0.4b	0.5b	
	0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b			0.9b	0.8b	0.7b	0.6b		
TOP	0	0	0	0	0	0	0	0	0	0	0	0	10	18	17	13	7	0
0.9a	-4	3	8	12	14	15	-19	-3	5	9	11	11	9	16	16	12	6	0
0.8a	-6	3	12	18	22	23	-31	-6	8	15	19	20	7	12	12	9	5	0
0.7a	-8	3	13	21	25	27	-38	-8	9	19	24	26	4	7	7	6	3	0
0.6a	-8	3	13	21	26	28	-40	-9	10	21	26	28	1	2	2	2	1	0
0.5a	-8	3	13	20	25	26	-40	-9	10	20	26	28	2	3	3	2	1	0
0.4a	-7	2	11	17	21	22	-36	-8	9	18	23	24	5	7	8	6	3	0
0.3a	-6	1	7	11	14	14	-29	-6	6	13	16	17	7	11	11	9	5	0
0.2a	-4	-1	0	0	0	0	-19	-4	3	7	8	8	7	12	12	9	5	0
0.1a	-1	-6	-12	-19	-23	-24	-7	-3	-1	-1	-2	-2	5	10	10	7	4	0
BOT.	0	-15	-35	-51	-61	-64	0	-3	-7	-10	-12	-13	0	0	0	0	0	0

Short Side

	M_z Coefficient						M_y Coefficient						M_{yz} Coefficient					
CORNER	0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c		0.1c	0.2c	0.3c	0.4c	0.5c	
	0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c			0.9c	0.8c	0.7c	0.6c		
TOP	0	0	0	0	0	0	0	0	0	0	0	0	10	3	0	1	1	0
0.9a	-4	-2	0	1	2	2	-19	-10	-4	-1	1	2	9	4	1	0	0	0
0.8a	-6	-4	-3	-1	0	0	-31	-18	-9	-3	0	2	7	4	2	1	0	0
0.7a	-8	-6	-4	-3	-3	-2	-38	-23	-12	-5	-1	1	4	3	1	1	0	0
0.6a	-8	-7	-5	-4	-4	-3	-40	-25	-14	-6	-1	0	1	1	0	0	0	0
0.5a	-8	-6	-5	-4	-3	-3	-40	-25	-14	-6	-1	0	2	1	1	0	0	0
0.4a	-7	-6	-4	-3	-2	-2	-36	-22	-12	-4	0	1	5	3	2	1	0	0
0.3a	-6	-4	-2	0	0	1	-29	-17	-8	-2	1	2	7	4	2	1	0	0
0.2a	-4	-1	1	2	3	3	-19	-10	-4	0	2	3	7	3	1	0	0	0
0.1a	-1	1	2	3	4	4	-7	-3	-1	1	2	2	5	1	0	1	1	0
BOT.	0	2	1	-1	-3	-4	0	0	0	0	-1	-1	0	0	0	0	0	0

4 Multicell Tanks

For functional purposes, rectangular tanks very often have interior walls that divide the tank cells. These multicell tanks do not readily lend themselves to an accurate mathematical analysis. The first edition of this publication, completed in the 1940s, presented an approximate method for analysis of multicell tanks which was considered as a guide to engineering judgment. This same method is presented in this chapter.

Because a rotation of one corner has comparatively little effect on moments at adjacent corners in a tank with wall panels supported on three or four sides, moments in the walls of a multicell tank are essentially the same as in single-cell tanks—except at corners where more than two walls intersect. Moment coefficients presented in Chapter 3, designated as *L* coefficients, apply to outer or L-shaped corners of multicell tanks (see Fig. 4-1(a)) as well as to interior sections in all walls. Moment coefficients for sections at corners where more than two panels intersect depend on the loading condition producing maximum moment and on the number of intersecting walls.

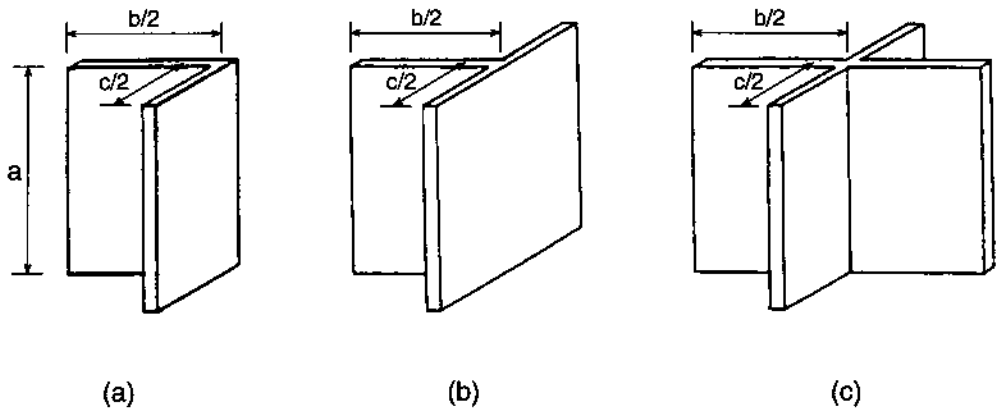


Figure 4-1 Wall Intersections in Multicell Tanks

Analysis of T-shaped Walls

In Fig. 4-1(b), three walls form a T-shaped unit. If the continuous wall, or top of the T, is part of the long sides of two adjacent rectangular cells, the moment in the continuous wall at the intersection is maximum when both cells are filled. The intersection is then fixed and moment coefficients, designated as *F* coefficients, can be taken from Chapter 2, depending on edge conditions at top and bottom. If the continuous wall is part of the short sides of two adjacent rectangular cells, moment at one side of the intersection is maximum, when the cell on that side is filled while the other cell is empty. Likewise, the end moment in the center wall is maximum when only one cell is filled. For this loading condition the magnitude of moment will be somewhere between the *L* coefficients and the *F* coefficients. If the unloaded third wall is assumed to have infinite stiffness, the corner is fixed and the *F* coefficients apply. The intermediate value representing more nearly the true condition can be obtained by the formula:

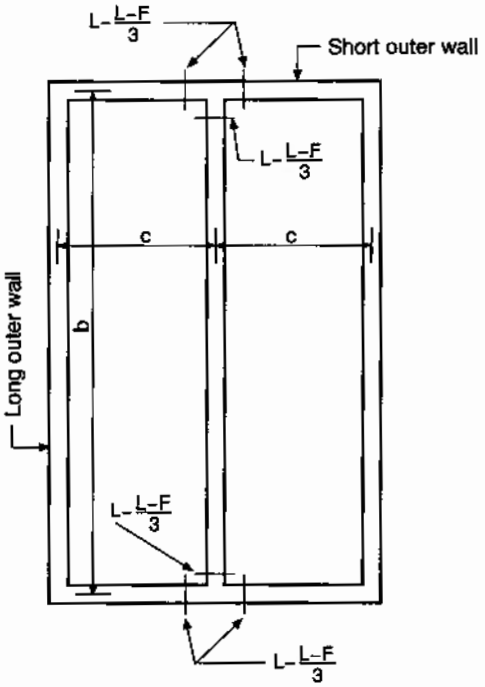
$$\text{End moments} = L - \frac{n}{n+2}(L - F)$$

in which n denotes number of adjacent unloaded walls. This formula checks for n equal to zero and infinity. In an L-shaped unit n equals 0 and the end moments equal $L - 0(L - F) = L$. Inserting n equal to infinity will give $n/(n + 2) = 1$ and the end moments equal $L - 1(L - F) = F$, which also checks.

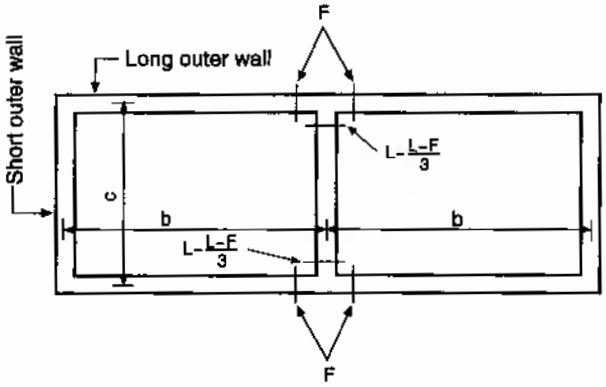
Analysis of Cross-shaped Walls

In Figure 4-1(c), two continuous walls form a cross. If intersecting walls are the walls of square cells, moments at the intersection are maximum when any two cells are full, and the F coefficients from Chapter 2 apply because there is no rotation of the joint. If the cells are rectangular, moments in the longer of the intersecting walls will be maximum when two cells on the same side of the wall under consideration are filled, and again the F coefficients apply. Maximum moments in the shorter wall adjacent to the intersection occur when diagonally opposite cells are filled, and for this condition the L coefficients apply.

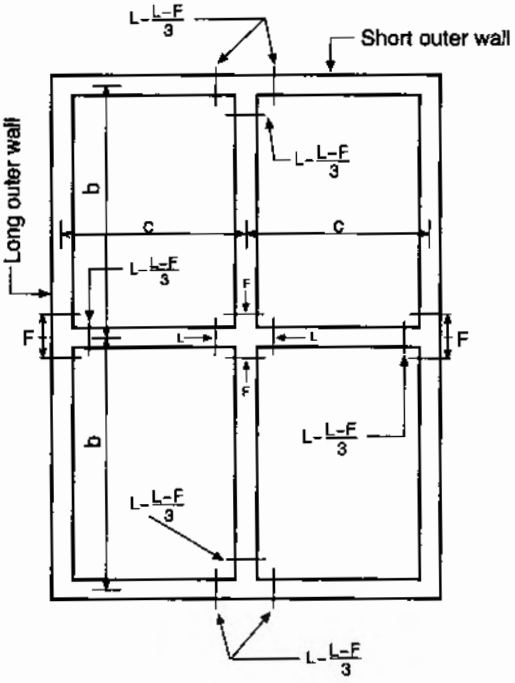
Figure 4-2 shows moment coefficients at wall intersections in two- and four-cell tanks. Where coefficients are not shown, L coefficients of Chapter 3 apply.



(a) Two Cell Tank - Long Interior Wall



(b) Two Cell Tank - Short Interior Wall

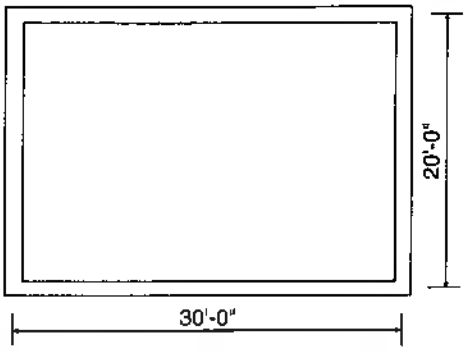


(c) Four Cell Tank

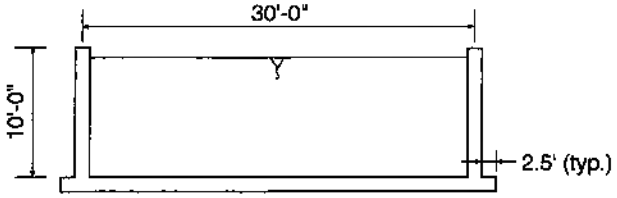
Figure 4-2 Summary of Moment Coefficients for Multicell Tanks

5 Examples

Example 1 — Rectangular Tank Design



Plan View of Tank



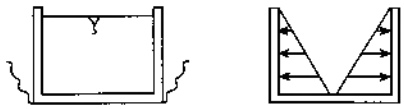
Elevation View of Tank

Design Information:

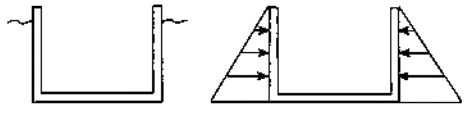
Weight of water = 70 lb/ft^3
Weight of moist soil = 100 lb/ft^{3*}
Active pressure coefficient of soil $k_a = 0.3$
f'_c = 4000 psi
f_y = 60,000 psi
Height of soil against wall = 5 ft (Note that the full tank height of 10 ft is conservatively used)
Slab has 2.5 ft projection beyond wall
Tank will be considered fixed at the base and free at the top for this example
Wall thickness = 18 in.
**External soil pressures can vary significantly depending on the type of soil and the presence of water. If the designer is unsure of the appropriate value to use, a geotechnical engineer should be consulted.*

I. Determine Loading Conditions

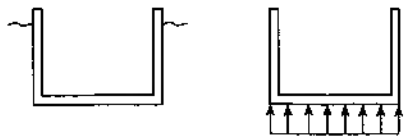
Loading Condition No. 1
Leakage test prior to backfilling



Loading Condition No. 2
Empty tank with backfill present



Loading Condition No. 3
Buoyancy Forces



II. Design of Walls for Loading Condition No. 1

This loading condition represents the situation where the tank is full and the external resistance of the soil is ignored. As discussed in Chapter 1, according to ACI-350, resistance provided by the soil is not to be taken into account. This loading condition also occurs when the tank is leak-tested prior to backfilling.

Water pressure $q = k_a wa = 1 \times 70 \times 10 = 700$ lb/ft^2 (triangular distribution)

Ratio of length/height = b/a = 30/10 = 3.0 for long side
Ratio of width/height = c/a = 20/10 = 2.0 for short side

(a) Design for shear forces

Shear forces must be considered at various locations along the edges of the tank walls. The following are the shear coefficients (C_s) for Case 3 for b/a = 3 and c/a = 2 (page 2-17):

For b/a = 3 (long wall),

Bottom edge - midpoint = 0.50
Side edge - maximum = 0.37
Side edge - midpoint = 0.24

For b/a = 2 (short wall),

Bottom edge - midpoint = 0.45
Side edge - maximum = 0.27
Side edge - midpoint = 0.26

(1) Check shear at bottom of the wall

Based on the above, the long wall should be designed for a maximum shear coefficient (C_s) of 0.50 while the short wall should be designed for a maximum shear coefficient (C_s) of 0.45. Since the same thickness will be used for the long and short walls, the shear force will be determined based on the maximum shear coefficient of 0.50 as follows:

$$V = C_s \times q \times a$$
$$= 0.50 \times 700 \times 10$$
$$= 3500 \text{ lbs}$$

Shear could be checked at distance d rather than at the base, but shear is not critical for this calculation. (Note that sanitary coefficient of 1.3 does not apply, see Chapter 1).

$$V_u = 1.7 \times V$$
$$= 1.7 \times 3500 = 5950 \text{ lbs}$$

Since the tensile force from the adjacent wall is small the allowable shear is given by:

$$V_c = 2\sqrt{f'_c}bd$$

where d = thickness - cover - $d_b/2$
= 18 - 2 - 5/16 = 15.7 in.

$$V_c = 2\sqrt{4000} \times 12 \times 15.7 = 23{,}831 \text{ lbs}$$

$$\phi V_c = 0.85 \times 23{,}831 = 20{,}256 \text{ lbs} > 5950 \text{ lbs} \quad \text{O.K.}$$

(2) Check shear at side edge of long wall

$$V = C_s \times q \times a$$
$$= 0.37 \times 700 \times 10 = 2590 \text{ lbs}$$

$$V_u = 1.7 \times V$$
$$= 1.7 \times 2590 = 4403 \text{ lbs}$$

Since the long wall is subject to a simultaneous tensile force due to shear in the short side wall, the allowable shear is given by 11.3.2.3 of ACI 318-95:

$$V_c = 2(1 + N_u/500\,A_g)\,\sqrt{f'_c}\,bd \qquad \textit{Eq. (11-8)}$$

where N_u = tension in long wall due to shear in the short wall.

Shear in short side wall:

$$V = C_s \times q \times a$$
$$= 0.27 \times 700 \times 10 = 1890 \text{ lbs}$$
$$N_u = -1.7 \times 1890 = -3213 \text{ lbs}$$
$$A_g = 18 \times 12 = 216 \text{ in.}^2$$
$$V_c = 2\left(1 + \frac{-3213}{500 \times 216}\right)\sqrt{f'_c}\,bd$$
$$= 1.94\sqrt{4000} \times 12 \times 15.7 = 23{,}116 \text{ lbs}$$
$$\phi V_c = 0.85 \times 23{,}116 = 19{,}649 \text{ lbs} > 4403 \text{ lbs} \quad \text{O.K.}$$

(b) Design for vertical bending moments (determine vertical steel).

The vertical bending moment is determined as follows:

$$M_x = M_x \text{ Coef.} \times qa^2/1000$$
$$= M_x \text{ Coef.} \times 700 \times (10)^2/1000$$
$$= M_x \text{ Coef.} \times 70 \text{ ft-lbs}$$
$$= M_x \text{ Coef.} \times 0.84 \text{ in.-kips}$$

For sanitary structures:

$$M_u = \text{sanitary coefficient} \times 1.7 \times M$$
$$M_{ux} = 1.3 \times 1.7 \times 0.84 \times M_x \text{ Coef.}$$
$$= 1.86 \times M_x \text{ Coef.}$$

The values for the ultimate moments are shown in Table 5-1. The coefficients are taken from Case 3 of "Tank Analysis Results" on page 3-29.

Table 5-1 Design for Vertical Bending Moments M_{ux} (in.-kips)

	0.1b & 0.9b		0.3b & 0.7b		0.5b	
	Coef.	M_{ux}	Coef.	M_{ux}	Coef.	M_{ux}
Top	0	0	0	0	0	0
0.9*a*	-2	-3.7	4	7.4	5	9.3
0.8*a*	-3	-5.6	7	13.0	8	14.9
0.7*a*	-1	-1.9	9	16.7	10	18.6*
0.6*a*	0	0	9	16.7	9	16.7
0.5*a*	1	1.9	6	11.2	4	7.4
0.4*a*	1	1.9	-2	-3.7	-7	-13.0
0.3*a*	-2	-3.7	-16	-29.8	-24	-44.6
0.2*a*	-8	-14.9	-37	-68.8	-49	-91.1
0.1*a*	-19	-35.3	-67	-124.6	-84	-156.2
Bottom	-38	-70.7	-109	-202.7	-129	-239.9*

*Moments controlling design

The required reinforcing for the interior face of the wall with M_{ux} = -239.9 in.-kips is determined as follows:

Assuming No. 5 bars with 2 in. cover:

d = thickness - cover - $d_b/2$
= 18 - 2 - 5/16
= 15.7 in.

$$\frac{M_u}{\phi f'_c b d^2} = \frac{239.9}{0.9 \times 4 \times 12 \times 15.7^2} = 0.0225$$

From Appendix A:

$\omega = 0.023$

$$A_s = \omega b d \, f'_c / f_y$$
$$= 0.023 \times 12 \times 15.7 \times \frac{4}{60} = 0.29 \text{ in.}^2$$

Check minimum steel (10.5 of ACI 318-95):

$$A_{s,min} = \frac{3\sqrt{f'_c}}{f_y} b_w d = \frac{3\sqrt{4000}}{60{,}000} \times 12 \times 15.7 = 0.595 \text{ in.}^2$$

$$= \frac{200 b_w d}{f_y} = \frac{200 \times 12 \times 15.7}{60{,}000} = 0.628 \text{ in.}^2 \text{ (governs)}$$

Use 4/3 of A_s required by analysis = 4/3 × 0.29 = 0.39 in.^{2} (10.5.3 of ACI 318-95)
Provide No. 5 @ 9 in. on inside face (A_s = 0.41 in.^{2})

The maximum positive bending moment in the vertical direction that causes tension on the outside face (18.6 in.-kips) is small and the amount of reinforcement required will be controlled by a different load case.

(c) *Design for horizontal bending moment (determine horizontal steel).*

$$M_y = M_y \text{ Coef.} \times qa^2/1000$$
$$= M_y \text{ Coef.} \times 0.84 \text{ in.-kips}$$

For sanitary structures:

$$M_u = \text{sanitary coefficient} \times 1.7 \times M$$
$$M_{uy} = 1.3 \times 1.7 \times 0.84 \times M_y \text{ Coef.}$$
$$= 1.86 \times M_y \text{ Coef.}$$

The values for the design moments are shown in Table 5-2.

Table 5-2 Design for Horizontal Bending Moments M_{uy} (in.-kips)

		Corner	0.1b 0.9b	0.2b 0.8b	0.3b 0.7b	0.4b 0.6b	0.5b
0.9a	Coef.	-78.0	-18.0	9.0	19.0	21.0	22.0
	M_{uy}	-145.1*	-33.5	16.7	35.3	39.1	40.9*
0.5a	Coef.	-52.0	-6.0	8.0	10.0	10.0	10.0
	M_{uy}	-96.7	-11.2	14.9	18.6	18.6	18.6
Bottom	Coef.	0	-8.0	-16.0	-22.0	-25.0	-26.0
	M_{uy}	0	-14.9	-29.8	-40.9	-46.5	-48.4

**Moments controlling design*

The maximum design bending moment is -145.1 in.-kips. The required reinforcement is determined in the following manner:

$$\frac{M_u}{\phi f_c' b d^2} = \frac{145.1}{0.9 \times 4 \times 12 \times 15.7^2} = 0.0136$$

From Appendix A:

$$\omega = 0.014$$
$$A_s = \omega b d \, f_c'/f_y$$
$$= 0.014 \times 12 \times 15.7 \times \frac{4}{60} = 0.18 \text{ in.}^2$$

Steel required for direct tension in long wall:

Factored tension $N_u = 1.65 \times 3213 = 5301$ lbs per ft width

Steel required $A_s = \dfrac{N_u}{0.9 f_y} = \dfrac{5301}{0.9 \times 60{,}000} = 0.1 \text{ in.}^2$

This direct tension reinforcement is equally distributed on inside and outside faces of the wall.

Total steel required on inside face $= 0.18 + \dfrac{0.1}{2} = 0.23 \text{ in.}^2$

$$A_{s,min} = \frac{200 b_w d}{f_y} = 0.625 \text{ in.}^2 \text{ (governs)}$$

4/3 of A_s required by analysis = 4/3 × 0.23 = 0.31 in.^{2} Provide No. 5 @ 12 in. (A_s = 0.31 in.^{2}) horizontal steel on inside face of the long walls.

The positive moment of 40.9 in.-kips will produce tension near the center of outside face of the wall. The moment is however, very small and other load conditions may govern.

The horizontal and vertical steel for the short walls can be determined in a similar manner.

(d) Check maximum spacing of bars for crack control

The maximum bar spacing must be limited to control flexural cracking (see 10.6 of ACI 318-95). The maximum unfactored bending moment is:

$$M = 239.9/(1.7 \times 1.3) = 108.6 \text{ in.-kips}$$

The stress in the reinforcement is calculated using the working stress method as follows:

$$f_s = \frac{M}{A_s jd}$$

where:

A_s = 0.41 in.^{2}/ft
d = 15.7 in.
n = $29{,}000/57\sqrt{4000} = 8$
ρ = $0.41/(12 \times 15.7) = 0.00218$
k = $\sqrt{2\rho n + (\rho n)^2} - \rho n$
= 0.17
j = $1 - k/3 = 0.94$

Therefore:

$$f_s = \frac{108.6}{0.41 \times 0.94 \times 15.7} = 17.95 \text{ ksi}$$

The maximum spacing to control cracking is:

$$s_{max} = z^3 / (2 \times d_c^2 \times f_s^3)$$

where:

d_c = cover + bar radius
= 2 + 0.313 = 2.313 in.
z = 115 kips/in.
f_s = 17.95 ksi

$$s_{max} = \frac{115^3}{2 \times 2.313^2 \times 17.95^3} = 24.6 \text{ in.} > 9 \text{ in.} \quad \text{O.K.}$$

(e) Shrinkage and temperature reinforcement

Assuming that the walls will be in one pour of 30 ft long, the minimum temperature and shrinkage reinforcement $\frac{A_{st}}{bh} = 0.0033$ (see Fig. 1-2):

Reinforcment at each face:

$$A_{st} = 1/2 \times 0.0033 \times 12 \times 18$$

$$= 0.356 \text{ in.}^2 \text{ (No. 5 @ 10")} < 0.41 \text{ in.}^2 \text{ (No. 5 @ 9 in.) provided} \quad \text{O.K.}$$

(f) Determine splice length

The basic development length, ℓ_d, for a No. 5 bar is calculated using 12.2 of ACI 318-95.

$$\frac{\ell_d}{d_b} = \frac{3}{40}\frac{f_y}{\sqrt{f_c'}}\frac{\alpha\beta\gamma\lambda}{\left[\frac{c + K_{tr}}{d_b}\right]}$$

where

α = 1.0 (no top bar effect)
β = 1.0 (uncoated reinforcement)
γ = 0.8 (No. 6 bars and smaller)
λ = 1.0 (normal weight concrete)
c = 2.31 in.
K_{tr} = 0 (assumed)

$$\frac{c + K_{tr}}{d_b} = \frac{2.31}{0.31} = 7.45 \text{ use } 2.5$$

$$\frac{\ell_d}{d_b} = \frac{3}{40}\frac{60{,}000}{\sqrt{4000}}\frac{1\times1\times0.8\times1}{2.5} = 22.8$$

$$\ell_d = 22.8 \times 0.625 = 14.2 \text{ in.}$$

Length of Class B splice = 1.3 × 14.2 = 18.5 in. (say 20 in.)

II. Design of Walls for Loading Condition No. 2

This loading condition represents the situation where the tank is empty and the external pressure of the soil is present. During construction, backfilling and compaction may exert forces on the structure in considerable excess of the service loading. The designer should consider any unusual loading conditions that may result during construction. The height of the soil will conservatively be considered at the top of the tank.

Soil pressure $q = k_a wa = 0.3 \times 100 \times 10 = 300$ lb/ft^2 (triangular distribution)

Ratio of length/height = b/a = 30/10 = 3.0 for long side
Ratio of width/height = c/a = 20/10 = 2.0 for short side

(a) Design for shear forces

Same shear coefficients (Case 3, page 2-17) as shown earlier for loading condition No. 1 apply here.

(1) Check shear at bottom of tank

Note only shear in the long wall needs to be checked since shear is maximum in this wall.

$$V = C_s \times q \times a$$
$$= 0.50 \times 300 \times 10 = 1500 \text{ lbs}$$

$$V_u = 1.7 \times V$$
$$= 1.7 \times 1500 = 2550 \text{ lbs}$$

Shear capacity of 18 in. thick wall is the same as computed earlier:

$$\phi V_c = \phi 2\sqrt{f'_c}bd = 20{,}256 \text{ lbs} > 2550 \text{ lbs} \quad \text{O.K.}$$

(2) Check shear at side edge of tank

$$V = C_s \times q \times a$$
$$= 0.37 \times 300 \times 10 = 1110 \text{ lbs}$$

$$V_u = 1.7 \times V$$
$$= 1.7 \times 1110 = 1887 \text{ lbs}$$

Since the long wall is subject to a simultaneous tensile force due to shear in the short wall, the allowable shear is given by 11.3.2.3 of ACI 318-95:

$V_c = 2(1 + N_u/500\,A_g)\sqrt{f'_c}\,bd$
N_u = tension in long wall due to shear in short wall

Shear in short wall:

$$V = C_s \times q \times a$$
$$= 0.27 \times 300 \times 10 = 810 \text{ lbs}$$
$$N_u = -1.7 \times 810 = -1377 \text{ lbs}$$
$$A_s = 18 \times 12 = 216 \text{ in.}^2$$
$$V_c = 2\left(1 + \frac{-1377}{500 \times 216}\right)\sqrt{f'_c}bd$$
$$= 1.97\sqrt{4000} \times 12 \times 15.7 = 23{,}473 \text{ lbs}$$
$$\phi V_c = 0.85 \times 23{,}473 = 19{,}952 \text{ lbs} > 1887 \text{ lbs} \quad \text{O.K.}$$

(b) Design for vertical and horizontal bending moments

The vertical bending moment is determined as follows:

$$M_x = M_x \text{ Coef.} \times qa^2/1000$$
$$= M_x \text{ Coef} \times -300 \times (10)^2/1000$$
$$= M_x \text{ Coef.} \times -30 \text{ ft-lbs}$$
$$= M_x \text{ Coef.} \times -0.36 \text{ in.-kips}$$

For sanitary structures:

M_u = sanitary coefficient × 1.7 × M
M_{ux} = 1.3 × 1.7 × -0.36 × M_x Coef.
= -0.80 × M_x Coef.

M_{uy} can be determined in a similar manner. The same coefficients as shown earlier under loading condition 1 (Case 3 of "Tank Analysis Results" on page 3-29) apply. Comparison of the bending moments M_{ux} and M_{uy} with those of loading condition No. 1 indicate that moments in loading condition No. 2 are smaller (0.80 × Coef. compared to 1.86 × Coef.) and that minimum shrinkage and temperature reinforcement criteria will govern. Provide No. 5 @ 10 in. vertical steel and No. 5 @ 12 in. horizontal steel on outside faces of long walls. Note that ACI 350 limits the maximum spacing of bars to 12 in.

(c) Check maximum spacing of bars for crack control

Since the moments in this loading condition are smaller than those of loading condition No. 1, smaller service load stresses would result. This will further relax the spacing requirement for crack control and the spacing provided above should be adequate.

Summary of reinforcement for long walls (see Fig. 5-1):

Inside face - vertical	No. 5 @ 9 in.	
Outside face - vertical	No. 5 @ 10 in.	use No. 5 @ 9 in. for consistency
Inside face - horizontal	No. 5 @ 12 in.	
Outside face - horizontal	No. 5 @ 12 in.	

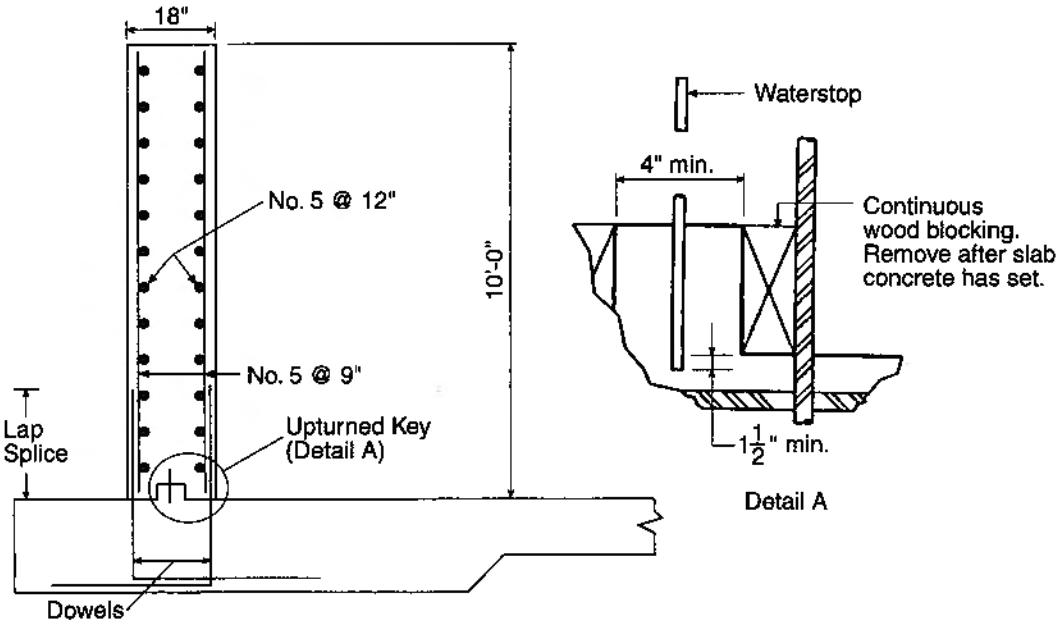


Figure 5-1 Reinforcement Details for Long Walls

III. Design for Uplift under Loading Condition No. 3

Depending on the height of the water table, forces may develop underneath the tank that may be large enough to lift the structure when it is empty. The weight of the slab and walls, as well as the weight of the soil resting on the footing projection, must be capable of resisting the upward force of the water.

Conservatively use soil weight of 70 pcf and concrete weight of 145 pcf. The thicknesses of the top and bottom slabs are assumed to be 12 in. and 24 in., respectively.

Determine weight of tank:

$$\begin{aligned}\text{Walls} &= \text{height} \times \text{length} \times \text{thickness} \times 145 \text{ lbs/ft}^3 \\ &= 10 \times (31.5 + 31.5 + 18.5 + 18.5) \times 1.5 \times 145 \\ &= 217{,}500 \text{ lbs}\end{aligned}$$

$$\begin{aligned}\text{Bottom slab} &= \text{length} \times \text{width} \times \text{thickness} \times 145 \text{ lbs/ft}^3 \\ &= (31.5 + 5) \times (21.5 + 5) \times 2.0 \times 145 = 280{,}503 \text{ lbs}\end{aligned}$$

$$\text{Top slab} = 31.5 \times 21.5 \times 1 \times 145 = 98{,}201 \text{ lbs}$$

$$\text{Weight of tank} = 217{,}500 + 280{,}503 + 98{,}201 = 596{,}204 \text{ lbs}$$

Determine weight of soil (ignore weight of soil wedge):

$$\begin{aligned}\text{Soil on footing overhang} &= \text{soil area} \times \text{height of soil} \times 70 \text{ pcf} \\ &= [(36.5 \times 26.5) - (31.5 \times 21.5)] \times 5.0 \times 70 \\ &= 101{,}500 \text{ lbs}\end{aligned}$$

$$\text{Total resisting load} = 596{,}204 + 101{,}500 = 697{,}704 \text{ lbs}$$

Buoyancy force:

$$\begin{aligned}\text{Area of bottom slab} &= \text{length} \times \text{width} \\ &= (31.5 + 5) \times (21.5 + 5) = 967.25 \text{ ft}^2\end{aligned}$$

$$\begin{aligned}\text{Water pressure} &= \text{water head} \times 70 \\ &= (\text{soil height} + \text{slab thickness}) \times 70 \\ &= (5 + 2) \times 70 = 490 \text{ lbs/ft}^2\end{aligned}$$

$$\begin{aligned}\text{Buoyant force} &= \text{area} \times \text{pressure} \\ &= 967.25 \times 490 \\ &= 473{,}953 \text{ lbs}\end{aligned}$$

$$\text{Safety factor} = \frac{\text{total resisting load}}{\text{buoyant force}}$$

$$= \frac{697.70}{473.95} \cong 1.5 \qquad \text{O.K.}$$

IV. Design of Roof Slab

It is assumed that the tank will have a simply supported roof slab. The thickness of slab is assumed to be 12 in. based on limiting deflection criteria (see Table 9-5(c) of ACI 318-95). The slab will be designed for a live load of 100 psf.

The slab is designed using plate analysis results of Case 10 given in Chapter 2. The design coefficients are based on $b/a = 30/20 = 1.5$.

(a) Design for bending moment

The moment coefficients M_x, M_y and M_{xy} for $b/a = 1.5$ are given on page 2-62. Note that significant twisting is likely at the corners of this slab. As such, twisting moment coefficient M_{xy} need to be included for determining the required reinforcement. The total design moment coefficients M_{tx} and M_{ty} are shown in Tables 5-3 to 5-6. These moment coefficients are derived using the procedure outlined in Chapter 1 (see pages 1-3 and 1-4), in the following manner:

- Where positive moments produce tension (bottom of slab):

$$M_{tx} = M_x + |M_{xy}| > 0 \text{ (see Table 5-3)}$$

$$M_{ty} = M_y + |M_{xy}| > 0 \text{ (see Table 5-4)}$$

Note that M_{xy} coefficients given in Chapter 2 are in absolute values.

- Where negative moments produce tension (near corners):

$$M_{tx} = M_x - |M_{xy}| < 0 \text{ (see Table 5-5)}$$

$$M_{ty} = M_y - |M_{xy}| < 0 \text{ (see Table 5-6)}$$

Table 5-3 Coef. M_{tx} = Coef. M_x + Coef. $|M_{xy}|$ for positive moments along short span

M_{tx}	End	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
Top	49	43	33	22	11	0
0.9a	45	54	52	48	40	31
0.8a	37	54	61	63	60	53
0.7a	26	49	63	70	71	67
0.6a	14	40	59	71	76	76
0.5a	0	28	50	66	75	78*
0.4a	14	40	59	71	76	76
0.3a	26	49	63	70	71	67
0.2a	37	54	61	63	60	53
0.1a	45	54	52	48	40	31
Bottom	49	43	33	22	11	0

**Moment coefficients governing design.*

Table 5-4 Coef. M_{ty} = Coef. M_y + Coef. $|M_{xy}|$ for positive moments along long span

M_{ty}	End	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
Top	49	43	33	22	11	0
0.9a	45	51*	44	35	24	14
0.8a	37	51*	49	44	35	26
0.7a	26	45	50	47	41	35
0.6a	14	37	45	46	43	41
0.5a	0	25	37	41	42	43
0.4a	14	37	45	46	43	41
0.3a	26	45	50	47	41	35
0.2a	37	51*	49	44	35	26
0.1a	45	51*	44	35	24	14
Bottom	49	43	33	22	11	0

**Moment coefficients governing design.*

Table 5-5 Coef. M_{tx} = Coef. M_x - Coef. $|M_{xy}|$ for negative moments along short span (If $M_{tx} > 0$, $M_{tx} = 0$)

M_{tx}	End	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
Top	-49*	-43	-33	-22	-11	0
0.9a	-45	-28	-10	0	0	0
0.8a	-37	-14	0	0	0	0
0.7a	-26	0	0	0	0	0
0.6a	-14	0	0	0	0	0
0.5a	0	0	0	0	0	0
0.4a	-14	0	0	0	0	0
0.3a	-26	0	0	0	0	0
0.2a	-37	-14	0	0	0	0
0.1a	-45	-28	-10	0	0	0
Bottom	-49*	-43	-33	-22	-11	0

**Moment coefficients governing design*

Table 5-6 Coef. M_{ty} = Coef. M_y - Coef. $|M_{xy}|$ for negative moments along long span (If $M_{ty} > 0$, $M_{ty} = 0$)

M_{ty}	End	0.1b	0.2b	0.3b	0.4b	0.5b
		0.9b	0.8b	0.7b	0.6b	
Top	-49*	-43	-33	-22	-11	0
0.9a	-45	-31	-18	-7	0	0
0.8a	-37	-17	-3	0	0	0
0.7a	-26	-3	0	0	0	0
0.6a	-14	0	0	0	0	0
0.5a	0	0	0	0	0	0
0.4a	-14	0	0	0	0	0
0.3a	-26	-3	0	0	0	0
0.2a	-37	-17	-3	0	0	0
0.1a	-45	-31	-18	-7	0	0
Bottom	-49*	-43	-33	-22	-11	0

**Moment coefficients governing design.*

(i) Steel in short direction (along a)

Positive moment at center:

$$M_{tx} = \frac{M_{tx}\ \text{Coef.} \times\ q_u \times a^2}{1000}$$

Maximum design M_{tx} Coef. = 78 (see Table 5-3)

$$q_u = 1.3\ (1.4D + 1.7L)$$
$$= 1.3\ (1.4\times 150 + 1.7\times 100) = 494\ \text{psf}$$

$$M_{tx} = \frac{78 \times 494 \times 20^2}{1000 \times 1000} = 15.4\ \text{ft-kips}$$

For No. 5 bars, assuming 2 in. cover

$$d = 12 - 2 - \frac{0.625}{2} = 9.70\ \text{in.}$$

$$\frac{M_u}{\phi f'_c b d^2} = \frac{15.4 \times 12}{0.9 \times 4 \times 12 \times 9.7^2} = 0.045$$

From Appendix A:

$$\omega = 0.046$$

$$\rho = \frac{\omega f'_c}{f_y} = \frac{0.046 \times 4}{60} = 0.0031$$

(ii) Steel in long direction (along b)

$$d = 12 - 2 - 0.625 - \frac{0.625}{2} = 9.06\ \text{in.}$$

Positive moment (see Table 5-4):

$$M_{ty} = \frac{51 \times 494 \times 20^2}{1000 \times 1000} = 10.0\ \text{ft-kips}$$

$$\rho = 0.0023$$

(iii) Moment near corners (along a and b)

Maximum M_{tx} and M_{ty} Coef. = 49 (see Tables 5-5 and 5-6)

$$M_{tx}, M_{ty} = \frac{49 \times 494 \times 20^2}{1000 \times 1000} = 9.7\ \text{ft-kips}$$

$$\rho = 0.0022$$

(iv) Check minimum steel (10.5 of ACI 318-95)

$$\rho_{min} = \frac{3\sqrt{f'_c}}{f_y} = \frac{3\sqrt{4000}}{60{,}000} = 0.00316$$

$$= \frac{200}{f_y} = \frac{200}{60{,}000} = 0.00333 \quad \text{(governs)}$$

$$A_{s,min} = 0.0033 \times 12 \times 9.7 = 0.38 \text{ in.}^2$$

(v) Shrinkage and temperature reinforcement

For 30 ft span, the minimum shrinkage and temperature reinforcement per ACI 350:

$$\frac{A_{st}}{bh} = 0.0033 \text{ (see Fig. 1-2)}$$

Reinforcement at each face of slab:

$$A_{st} = \frac{1}{2} \times 0.0033 \times 12 \times 12 = 0.24 \text{ in.}^2$$

Minimum steel per 13.3 and 7.12 of ACI 318-95:

$$A_{s,min} = 0.0018bh = 0.0018 \times 12 \times 12 = 0.259 \text{ in.}^2 \text{ (governs)}$$

Check maximum spacing (13.3.2 of ACI 318-95):

$$2h = 2 \times 12 = 24 \text{ in.}$$

Check maximum spacing (7.12.2.2 of ACI 318-95):

5 times thickness of slab = 60 in.

18 in. (governs)

Provide No. 5 @ 12 in. in both directions at the top of the slab. Note that ACI 350 limits the spacing of shrinkage and temperature reinforcement to 12 in.

The summary of reinforcement is given in Table 5-7.

Table 5-7 Summary of Reinforcement

Span	Location	$\rho_{required}$	ρ_{min}	$(4/3)\rho_{req'd}$	A_s (in.^{2})	Spacing of No. 5 bars
Short span	Positive moment (bottom of slab)	0.0031	0.0033	0.0033*	0.38	9
	Moment near corner	0.0022	0.0033	0.0029	0.34	10
Long span	Positive moment (bottom of slab)	0.0023	0.0033	0.0031	0.33	10
	Moment near corner	0.0022	0.0033	0.0029	0.34	10

*(4/3) $\rho_{req'd}$ exceeds ρ_{min} = 0.0033

The reinforcement details for the slab are shown in Fig. 5-2. The reinforcement at the corners is placed over a distance of $\frac{\ell}{5} = \frac{30}{5} = 6$ ft in both the long and short directions (see 13.3.6.3 of ACI 318-95).

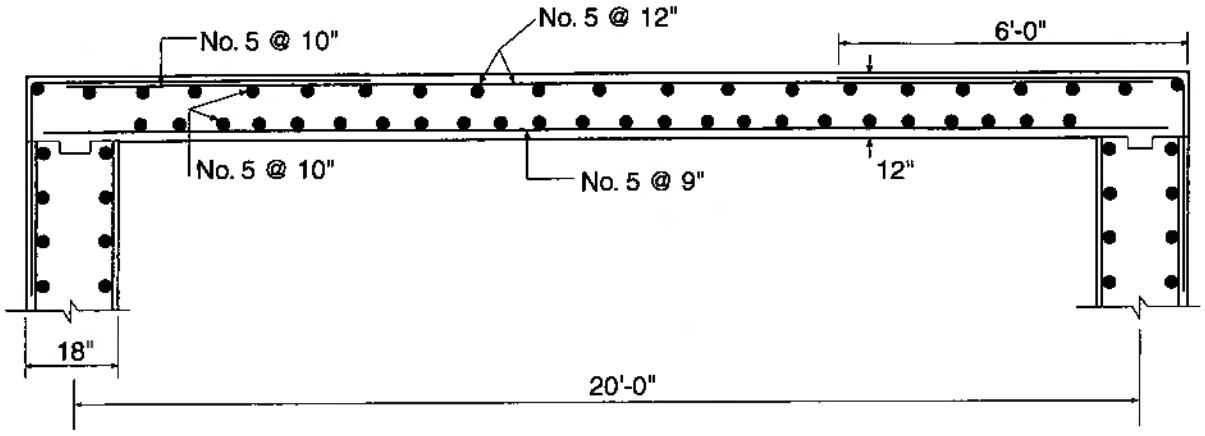


Figure 5-2 Reinforcement Details for Slab

(b) Check for shear

From page 2-59, maximum shear coefficient for $b/a = 1.5$ is 0.42 at the center of the long span edge.

Design shear $V_u = C_s \times q_u \times a$

$q_u = 1.4D + 1.7L$

$= 1.4 \times 150 + 1.7 \times 100 = 380$ psf

$V_u = 0.42 \times 380 \times 20 = 3192$ lbs

Shear capacity $\phi V_c = \phi 2\sqrt{f'_c} b_w d$

$= 0.85 \times 2\sqrt{4000} \times 12 \times 9.7$

$= 12{,}515$ lbs > 3192 lbs O.K.

(c) Check deflection

From page 2-59, the maximum deflection coefficient (C_d) for $b/a = 1.5$ is 7.7 at the center of the plate.

- Service load deflection

  Service load $q = D + L$

  $= 150 + 100 = 250$ psf

  For uncracked section:

$$\text{Deflection} = \frac{C_d\, q\, a^4}{1000 D}$$

where $D = \dfrac{E_c t^3}{12(1-\mu^2)}$

$E_c = 3834$ ksi for 4 ksi concrete

$t = 12$ in.

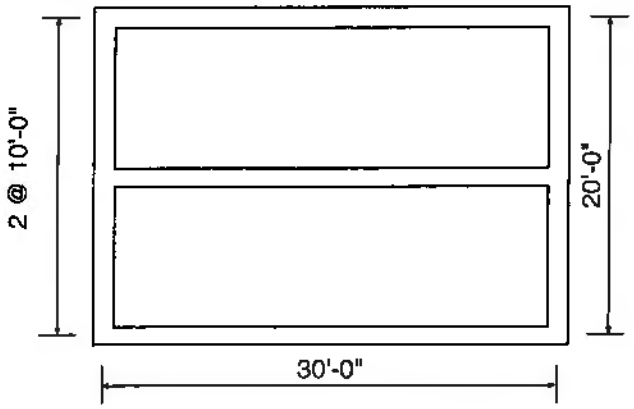
$\mu = 0.2$

$$D = \frac{3834 \times 12^3}{12(1-0.2^2)} = 575{,}100 \text{ in.-kips (47,925 ft-kips)}$$

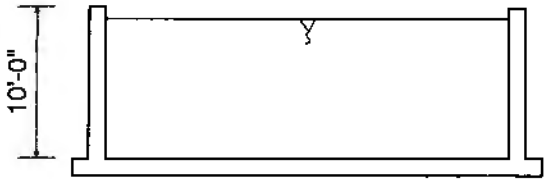
$$\text{Deflection} = \frac{7.7 \times 250 \times 20^4}{1000 \times 47{,}925 \times 1000} \times 12 = 0.08 \text{ in.}$$

If the section is cracked and it is assumed that the cracked moment of inertia is approximately equal to one-half the gross moment of inertia of the plate, the corresponding deflection will approximately double (0.16 in.). The deflection seems to be well within the allowable deflection limits (for example, $\frac{\ell}{180} = 2$ in. for immediate deflection due to live load only; see Table 9-5(b) of ACI 318-95).

Example 2 — Two-Cell Tank (Long Center Wall)



Plan View of Tank



Elevation View of Tank

The two-cell tank shown consists of four L-shaped walls and two T-shaped walls. The tank is subjected to a triangular load. As discussed in Chapter 4, the bending moments in the walls of multicell tanks are approximately the same as in the same size single tank, except at locations where more than two walls intersect. Therefore, the values of bending moment coefficients in single-cell tanks presented in Chapter 3 can be directly used for this design example, except at the T-shaped wall intersections.

Solution outline:

$L - \frac{L-F}{3}$ coefficients are applicable for three intersecting walls of the two T-intersections (see Chapter 4). The coefficients are determined in the following step-wise manner:

I. Determine the bending moment coefficients in the two-cell tank as if it were two independent tanks
II. Determine L and F factors to be used in adjustment of bending moment coefficients at T-shaped wall locations
III. Adjust bending moment coefficients at T-shaped wall locations

I. Determine the bending moment coefficients in the two-cell tank as if it were two independent tanks

The bending moment coefficients are determined using the tables on page 3-30 of Chapter 3. The appropriate coefficients for $b/a = 3$ and $c/a = 1$ are given in Table 5-8 through 5-13.

Table 5-8 Bending Moment Coefficients, (M_X) for Single-Cell Tank—Long Outer Wall

	Corner	0.2b / 0.8b	0.5b
0.9a	-11	2	4
0.8a	-10	5	8
0.5a	-8	5	2
0.2a	-3	-27	-53
Bottom	0	-89	-133

Table 5-9 Bending Moment Coefficients, (M_y) for Single-Cell Tank—Long Outer Wall

	Corner	0.2b / 0.8b	0.5b
0.9a	-53	13	20
0.8a	-49	12	18
0.5a	-41	9	9
0.2a	-17	-3	-9
Bottom	0	-18	-27

Table 5-10 Bending Moment Coefficients, (M_z) for Single-Cell Tank—Short Outer Wall

	Corner w/ outer wall	0.2c / 0.8c	0.5c	Corner w/ center wall
0.9a	-11	-4	-2	*
0.8a	-10	-4	-1	*
0.5a	-8	2	8	*
0.2a	-3	6	9	*
Bottom	0	-7	-20	*

**See Table 5-16(Col. 1)*

Table 5-11 Bending Moment Coefficients, (M_y) for Single-Cell Tank—Short Outer Wall

	Corner w/ outer wall	0.2c / 0.8c	0.5c	Corner w/ center wall
0.9a	-53	-22	-4	*
0.8a	-49	-19	-2	*
0.5a	-41	-8	6	*
0.2a	-17	0	5	*
Bottom	0	-1	-4	*

**See Table 5-16(Col. 2)*

Table 5-12 Bending Moment Coefficients, (M_x) for Single-Cell Tank—Center Wall

	Corner w/ short wall	0.2b / 0.8b	0.5b	Corner w/ short wall
0.9a	*	2	4	*
0.8a	*	5	8	*
0.5a	*	5	2	*
0.2a	*	-27	-53	*
Bottom	*	-89	-133	*

**See Table 5-16(Col. 3)*

Table 5-13 Bending Moment Coefficients, (M_y) for Single-Cell Tank—Center Wall

	Corner w/ short wall	0.2b / 0.8b	0.5b	Corner w/ short wall
0.9a	*	13	20	*
0.8a	*	12	18	*
0.5a	*	9	9	*
0.2a	*	-3	-9	*
Bottom	*	-18	-27	*

*See Table 5-16(Col. 4)

II. Determine L and F factors to be used in adjustment of bending moment coefficients at T-shaped wall locations

The *L* and *F* factors are required to determine the bending moment coefficients, taking into account that the tank is multicell. The *L* factors of short wall for *b/a* = 3 and *c/a* = 1 are taken from page 3-30 of Chapter 3. The *F* factors for *b/a* = 1 are taken from page 2-21 of Chapter 2. The *L* factors of long center wall for *b/a* = 3 and *c/a* = 1 are taken from page 3-30 of Chapter 3. The *F* factors for *b/a* = 3 are taken from page 2-18. Note that coefficients are not needed for the long outer wall since it does not have an intersection with more than two walls. The *L* and *F* factors are given in Table 5-14 and 5-15.

Table 5-14 L and F Coefficients for Short Outer Wall

	$L(M_z)$	$L(M_y)$	$F(M_z)$	$F(M_y)$
0.9a	-11	-53	-4	-18
0.8a	-10	-49	-4	-21
0.5a	-8	-41	-6	-30
0.2a	-3	-17	-3	-17
Bottom	0	0	0	0

Table 5-15 L and F Coefficients for Center Wall

	$L(M_x)$	$L(M_y)$	$F(M_x)$	$F(M_y)$
0.9a	-11	-53	-18	-91
0.8a	-10	-49	-16	-80
0.5a	-8	-41	-11	-55
0.2a	-3	-17	-4	-18
Bottom	-1	0	0	0

III. Adjust bending moment coefficients at T-shaped wall locations

The coefficients for the T-shaped intersection are determined using the *L* and *F* factors given in Table 5-14 and 5-15 in the following equation:

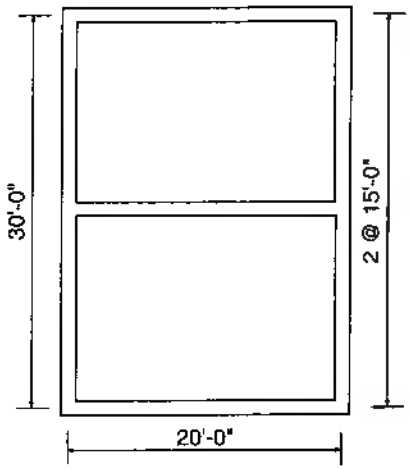
$$\text{Coefficient} = L - (L-F)/3$$

The bending moment coefficients for the T-shaped intersection are presented in Table 5-16.

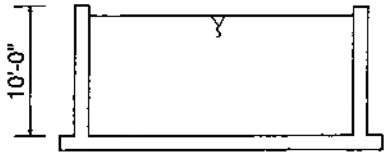
Table 5-16 Bending Moment Coefficients at T-Shaped Wall $\left(M = L - \frac{(L-F)}{3}\right)$

	Col. 1 Short Side M_z	Col. 2 Short Side M_y	Col. 3 Center Wall M_x	Col. 4 Center Wall M_y
0.9a	-9	-41	-13	-66
0.8a	-8	-40	-12	-59
0.5a	-7	-37	-9	-46
0.2a	-3	-17	-3	-17
Bottom	0	0	-1	0

Example 3 — Two-Cell Tank (Short Center Wall)



Plan View of Tank



Elevation View of Tank

The two-cell tank shown consists of four L-shaped walls and two T-shaped walls. The tank is subjected to a triangular load. As discussed in Chapter 4, the bending moments in the walls of multicell tanks are approximately the same as in the same size single tank, except at locations where more than two walls intersect. Therefore, the values of bending moment coefficients in single-cell tanks presented in Chapter 3 can be directly used for this design example, except at the T-shaped wall intersections.

Solution outline:

The F coefficients apply at the T-intersection of the 15 ft long walls and $L - \frac{L-F}{3}$ coefficients apply to the center wall (see Chapter 4). The coefficients are determined in the following step-wise manner.

I. Determine the bending moment coefficients in the two-cell tank as if it were two independent tanks
II. Determine L and F factors to be used in adjustment of bending moment coefficients at T-shaped wall locations
III. Adjust bending moment coefficients at T-shaped wall locations

I. Determine the bending moment coefficients in the two-cell tank as if it were two independent tanks

The bending moment coefficients for $b/a = 2$ and $c/a = 1.5$ are determined using the tables on page 3-31 of Chapter 3. The appropriate coefficients are given in Table 5-17 through 5-22.

Table 5-17 Bending Moment Coefficients, (M_x) for Single-Cell Tank—20' Long Wall

	Corner	$\frac{0.2b}{0.8b}$	0.5b
0.9a	-11	1	5
0.8a	-11	3	10
0.5a	-9	8	15
0.2a	-4	-8	-21
Bottom	0	-52	-90

Table 5-18 Bending Moment Coefficients, (M_y) for Single-Cell Tank—20' Long Wall

	Corner	0.2b / 0.8b	0.5b
0.9a	-54	4	26
0.8a	-53	5	25
0.5a	-46	6	16
0.2a	-19	0	-1
Bottom	0	-10	-18

Table 5-19 Bending Moment Coefficients, (M_z) for Single-Cell Tank—15' Long Wall

	Corner w/ outer wall	0.2b / 0.8b	0.5b	Corner w/ center wall
0.9a	-11	-1	3	*
0.8a	-11	0	6	*
0.5a	-9	7	16	*
0.2a	-4	1	-2	*
Bottom	0	-29	-56	*

**See Table 5-25(Col. 1)*

Table 5-20 Bending Moment Coefficients, (M_y) for Single-Cell Tank—15' Long Wall

	Corner w/ outer wall	0.2b / 0.8b	0.5b	Corner w/ center wall
0.9*a*	-54	-6	19	*
0.8*a*	-53	-4	19	*
0.5*a*	-46	1	16	*
0.2*a*	-19	1	3	*
Bottom	0	-6	-11	*

**See Table 5-25(Col. 2)*

Table 5-21 Bending Moment Coefficients, (M_x) for Single-Cell Tank—Center Wall

	Corner w/ short wall	0.2b / 0.8b	0.5b	Corner w/ short wall
0.9a	*	1	5	*
0.8a	*	3	10	*
0.5a	*	8	15	*
0.2a	*	-8	-21	*
Bottom	*	-52	-90	*

**See Table 5-25(Col. 3)*

Table 5-22 Bending Moment Coefficients, (M_y) for Single-Cell Tank—Center Wall

	Corner w/ short wall	0.2b / 0.8b	0.5b	Corner w/ short wall
0.9a	*	4	26	*
0.8a	*	5	25	*
0.5a	*	6	16	*
0.2a	*	0	-1	*
Bottom	*	-10	-18	*

**See Table 5-25 Col. 4*

The L and F factors are required to determine the bending moment coefficients taking into account that the tank is multicell. The L factors are taken from page 3-31 of Chapter 3. The F factors for $b/a = 2$ and $b/a = 1.5$ are taken from pages 2-19 and 2-20 of Chapter 2, respectively. The L and F factors are given in Table 5-23 and 5-24.

III. Adjust bending moment coefficients at T-shaped wall locations

The coefficients for the T-shaped intersection are determined using the L and F factors given in Table 5-23 and 5-24 in the following equation:

Coefficient = F for Col. 1 and Col. 2
Coefficient = $L - (L\text{-}F)/3$ for Col. 3 and Col. 4

The bending moment coefficients for the T-shaped intersection are presented in Table 5-25.

Table 5-23 L and F Coefficients for 15' Long Wall (b /a = 1.5)

	$L(M_z)$	$L(M_y)$	$F(M_z)$	$F(M_y)$
0.9a	-11	-54	-9	-43
0.8a	-11	-53	-9	-44
0.5a	-9	-46	-9	-43
0.2a	-4	-19	-4	-19
Bottom	0	0	0	0

Table 5-24 L and F Coefficients for Center Wall (b /a = 2.0)

	$L(M_x)$	$L(M_y)$	$F(M_x)$	$F(M_y)$
0.9a	-11	-54	-13	-66
0.8a	-11	-53	-12	-62
0.5a	-9	-46	-10	-50
0.2a	-4	-19	-4	-19
Bottom	0	0	0	0

Table 5-25 Bending Moment Coefficients at T-Shaped Wall

	Col. 1 15' Wall M_z	Col. 2 15' Wall M_y	Col. 3 Center Wall M_x	Col. 4 Center Wall M_y
0.9a	-9	-43	-12	-58
0.8a	-9	-44	-11	-56
0.5a	-9	-43	-9	-47
0.2a	-4	-19	-4	-19
Bottom	0	0	0	0

A Appendix

Design Aid for Bending Moment Reinforcing

Table A-1 Flexural Strength $M_u/\phi f'_c bd^2$ or $M_n/f'_c bd^2$ of Rectangular Sections with Tension Reinforcement only

ω	.000	.001	.002	.003	.004	.005	.006	.007	.008	.009
0.0	0	.0010	.0020	.0030	.0040	.0050	.0060	.0070	.0080	.0090
0.01	.0099	.0109	.0119	.0129	.0139	.0149	.0159	.0168	.0178	.0188
0.02	.0197	.0207	.0217	.0226	.0236	.0246	.0256	.0266	.0275	.0285
0.03	.0295	.0304	.0314	.0324	.0333	.0343	.0352	.0362	.0372	.0381
0.04	.0391	.0400	.0410	.0420	.0429	.0438	.0448	.0457	.0467	.0476
0.05	.0485	.0495	.0504	.0513	.0523	.0532	.0541	.0551	.0560	.0569
0.06	.0579	.0588	.0597	.0607	.0616	.0625	.0634	.0643	.0653	.0662
0.07	.0671	.0680	.0689	.0699	.0708	.0717	.0726	.0735	.0744	.0753
0.08	.0762	.0771	.0780	.0789	.0798	.0807	.0816	.0825	.0834	.0843
0.09	.0852	.0861	.0870	.0879	.0888	.0897	.0906	.0915	.0923	.0932
0.10	.0941	.0950	.0959	.0967	.0976	.0985	.0994	.1002	.1011	.1020
0.11	.1029	.1037	.1046	.1055	.1063	.1072	.1081	.1089	.1098	.1106
0.12	.1115	.1124	.1133	.1141	.1149	.1158	.1166	.1175	.1183	.1192
0.13	.1200	.1209	.1217	.1226	.1234	.1243	.1251	.1259	.1268	.1276
0.14	.1284	.1293	.1301	.1309	.1318	.1326	.1334	.1342	.1351	.1359
0.15	.1367	.1375	.1384	.1392	.1400	.1408	.1416	.1425	.1433	.1441
0.16	.1449	.1457	.1465	.1473	.1481	.1489	.1497	.1506	.1514	.1522
0.17	.1529	.1537	.1545	.1553	.1561	.1569	.1577	.1585	.1593	.1601
0.18	.1609	.1617	.1624	.1632	.1640	.1648	.1656	.1664	.1671	.1679
0.19	.1687	.1695	.1703	.1710	.1718	.1726	.1733	.1741	.1749	.1756
0.20	.1764	.1772	.1779	.1787	.1794	.1802	.1810	.1817	.1825	.1832
0.21	.1840	.1847	.1855	.1862	.1870	.1877	.1885	.1892	.1900	.1907
0.22	.1914	.1922	.1929	.1937	.1944	.1951	.1959	.1966	.1973	.1981
0.23	.1988	.1985	.2002	.2010	.2017	.2024	.2031	.2039	.2046	.2053
0.24	.2060	.2067	.2075	.2082	.2089	.2096	.2103	.2110	.2117	.2124
0.25	.2131	.2138	.2145	.2152	.2159	.2166	.2173	.2180	.2187	.2194
0.26	.2201	.2208	.2215	.2222	.2229	.2236	.2243	.2249	.2256	.2263
0.27	.2270	.2277	.2284	.2290	.2297	.2304	.2311	.2317	.2324	.2331
0.28	.2337	.2344	.2351	.2357	.2364	.2371	.2377	.2384	.2391	.2397
0.29	.2404	.2410	.2417	.2423	.2430	.2437	.2443	.2450	.2456	.2463
0.30	.2469	.2475	.2482	.2488	.2495	.2501	.2508	.2514	.2520	.2527
0.31	.2533	.2539	.2546	.2552	.2558	.2565	.2571	.2577	.2583	.2590
0.32	.2596	.2602	.2608	.2614	.2621	.2627	.2633	.2639	.2645	.2651
0.33	.2657	.2664	.2670	.2676	.2682	.2688	.2694	.2670	.2706	.2712
0.34	.2718	.2724	.2730	.2736	.2742	.2748	.2754	.2760	.2766	.2771
0.35	.2777	.2783	.2789	.2795	.2801	.2807	.2812	.2818	.2824	.2830
0.36	.2835	.2841	.2847	.2853	.2858	.2864	.2870	.2875	.2881	.2887
0.37	.2892	.2898	.2904	.2909	.2915	.2920	.2926	.2931	.2937	.2943
0.38	.2948	.2954	.2959	.2965	.2970	.2975	.2981	.2986	.2992	.2997
0.39	.3003	.3003	.3013	.3019	.3024	.3029	.3035	.3040	.3045	.3051

$M_n/f'_c bd^2 = \omega\ (1\text{-}0.59\omega)$, where $\omega = \rho f_y/f'_c$

Design: Using factored moment M_u, enter table with $M_u/\phi f'_c bd^2$; find ω and compute steel percentage ρ from $\rho = \omega\ f'_c/f_y$.

Investigation: Enter table with ω from $\omega = \rho f_y/f'_c$; find value of $M_n/f'_c bd^2$ and solve for nominal strength M_n.