

An Introduction to Spread Footings and Mat Foundations



This publication provides an introduction to the design of spread footings and mat foundations for buildings and other structures such as towers. When required footings cover more than half the area beneath a structure, it is often desirable to enlarge and combine the footings to cover the entire area. This type of foundation is called a raft or mat foundation and may be cheaper than individual footings because of reduced forming costs and simpler excavation procedures. A mat foundation also may be used to resist hydrostatic pressures or to bridge over small, soft spots in the soil, provided the mat is adequately reinforced.

It becomes a matter of definition as to when the dimensions of a spread footing make the transition into being called a mat. Figure 10-1 illustrates several mat foundations distribute heavy column and wall pressure compared to conventional spread footings. Lecture 16 : Introduction [Section 16.1 : Introduction] required load, then shallow spread footings can be used to transmit the load. Mat or Raft foundations are economic in situations where piles cannot be constructed and spread footings are not practical, such as the case with low-rise, multistory buildings. This publication provides introductory technical guidance for civil engineers, structural engineers, and other professional engineers and construction managers. Createspace Independent Publishing Platform, United States, 2013. Paperback. Book Condition: New. 279 x 216 mm. Language: English . Brand New. Introduction to Foundations Engineering Foundation engineers are called upon to determine the Shallow Foundation Spread Footing Mat Foundation This online engineering PDH course provides an introduction to the design of spread footings and mat foundations for buildings and other structures such as Rectangular Combined Footing: In several instances, the load to be carried by a column and the soil bearing capacity are such that the standard spread footing .. Figure 5.4 Definition of net pressure on soil caused by a mat foundation lines for design and construction of ribbed mat foundations in expansive soils. Methods. (Cont inued .. economy of excavation and construction when the spread footings are large and . the definition of adequate is subjective. A simple Introductory technical guidance for civil, structural and geotechnical engineers and construction managers interested in design and Mat footings are used when the building load is so high, that spread or strip footings The program GEO5 Slab can be used for the design of mat foundations or 6.3 Common types of mat foundations. aka raft foundation. High column load on soft soils. Spread footings cover more than half the building area An Introduction to Spread Footings and Mat Foundations J. Paul Guyer, P.E., R.A. Editor Paul Guyer is a registered civil engineer, mechanical engineer, fire - 3 min - Uploaded by GEO5 English This tutorial shows how to design and optimize spread footing with a variable load and analyze Introduction to Spread Footings and Mat Foundations Course No: G02-008 Credit: 2 PDH J. Paul Guyer, P.E., R.A., Fellow ASCE, Fellow AEI Continuing