the slab may be supported by walls or by reinforced-concrete beams usually cast monolithically with the slab or by structural steel beams or by columns or by the ground slabs are classified into 16 types different types of concrete slabs in construction there are 16 different types of slabs in construction some of them are outdated and, shear strength in one and two way slabs according to the critical shear crack theory a muttoni amp m fernandez ruiz ecole polytechnique lifrale de lausanne lausanne switzerland abstract currently there is no generally accepted theory giving a physical explanation of the shear strength in one and two way slabs 3 waffle slab grid slab it is a type of reinforced concrete slab that contains square grids with deep sides waffle slab construction process includes fixing forms placement of pods on shuttering installation of reinforcement between pods installation of steel mesh on top of pods and pouring of concrete, nptel provides e learning through online web and video courses various streams, detailing and design of one way rcc slab using etabs tutorial duration 18 22 etabs 2016 design of reinforced concrete building 1 2 duration 16 20 cetci civil engineering 29 014 views, condition usually in reinforced concrete buildings to resist against lateral load sometimes a structural members are modified that may be column beam and slab but in this project is more concern about slabs generally there is so many types of slab but here will discuss about two different type of slabs that is flat slab and grid slab, modification in grid slab for utility lens lights to provide diffused daylight through concrete roofs lens lights are used in a concrete roof as roof lights to provide resistance to fire for reasons of security and to reduce sound transmission square or round glass blocks or lenses those are cast into reinforced concrete rib the lens, conclude that concrete required in grid slab is more as compared to flat slab with drop and flat slab without drop ibrahim s vepari and dr h s patel 3 have studied economical aspects of long span slabs between flat slab and grid slab in grid slab as the span range increases the increase in the unit cost is not significant flat slab, theory of reinforced concrete 3 good value for money is perhaps the most important criterion the designer should take into account not only the cost of materials but also the buildability the time required to build the cost of temporary structures the cost of maintenance over a period of time and in some cases the cost of, two way rcc slab designing tool in microsoft excel developed by shankar tayal a 3rd year student of school of infrastructure indian institute of technology bhubaneswar this is a part of his project economic design of two way rcc slabs under prof s c dutta iit bhubaneswar, analysis and design of waffle slab with different boundary conditions analysis of thin rcc slab having shape of an arbitrary quadrilateral has remained an important topic of research as, assumptions of yield line theory the following are the assumptions of the yield line analysis of reinforced concrete slabs at the collapse stage the steel reinforcement will be fully yielded along the yield lines during the collapse the slab is deformed plastically and they gets separated into segments, grid slab or waffle slabs have two major types i e waffle slabs with hidden beams or waffle slabs with solid sections around columns the first waffle slab type with beams behave like solid slab slab with beams between columns and the analysis method could also be similar to that of solid slab, reinforced concrete rc also called reinforced cement concrete or rcc is a composite material in which concrete s relatively low tensile strength and ductility are counteracted by the inclusion of reinforcement having higher tensile strength or ductility the reinforcement is usually though not necessarily steel reinforcing bars and is usually embedded passively in the concrete before the, reinforced concrete slabs at least those designed to span in one direction are no different conceptually from any other beams with the following three caveats first only 3 4 in concrete cover is required see table a 4 9 so that the effective depth d measured to the centerline of the reinforcing steel can generally be taken as the slab thickness minus one inch, analysis and design of flat slab and grid slab and their cost comparison international journal of advanced technology in civil engineering issn 2231 5721 volume 1 issue 2 2012 123 1 2 grid slab grid floor systems consisting of beams spaced at regular intervals in perpendicular directions, monolithic with slab, the applications of the theory in the design of two way slabs 8 19 2 two way slabs on two way slabs subjected mostly to uniformly distributed loads resist them primarily by bending about both the axis however as in the one way slab the depth of the two way slabs should also be checked for the shear stresses to avoid any reinforcement for shear, flat grid waffle slab 1 flat grid or waffle system sinhagad college of architecture this presentation is compiled by akashay gawade mihir yadav shanan jaiswal 2 what is flat grid slab waffle slab system definition a waffle slab is a type of building material that has two directional reinforcement on the outside of the material, bending moments in beams of reinforced concrete buildings was the fem package used since practical use of fem to design structures still demands intensive work to analyze and interpret results analysis using grid analogy which is a common approach often used in commercial software to design reinforced concrete, rcc reinforced cement concrete column is a structural member of rcc frame structured building its a vertical member which transfers loads from slab and beam directly to subsequent soil a, reinforced concrete building with different plan like square hexagonal orthogonal for flat slab grid slab and conventional slab the above analysis done for different story like 10 20 and 30 and also for the different earthquake zone as per the indian standard code of practice is 1893 2002, index terms flat slab grid slab seismic performance axial force storey drift cite salman i khan and ashok r mundhada comparative study of seismic performance of multistoried rcc buildings with flat slab and grid slab a review international journal of structural and civil engineering research vol 4 no 1 pp 75 80 february 2015, a reinforced concrete flat slab also called as beam less slab is a slab supported directly by columns wit hout beams a
considered as monolithically connected to band beams feasibility of structural design of members has been ensured under the provision of is 456 2000 in this paper the optimum

building frame with flat slab and grid slab ravi kumar makode saleem akhtar geeta batham department of civil engineering uit rgpv bhopal 462036, the waffle slab has been

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2000 have been tried to present here the load on slab comprises of dead load floor finish and live load the loads are calculated per unit area, comparative study of rcc and prestressed concrete flat slabs international journal of modern engineering research ijmer analysis and design of flat slab and grid slab and their cost comparison amit a sathawane amp s r karve department of civil 9 dr s r karve amp dr v l shah limit state theory amp design of reinforced, ravi kumar makode et al int journal of engineering research and applications www ijera com issn 2248 9622 vol 4 issue 2 version 1 february 2014 pp 416 420 research article open access dynamic analysis of multistory rcc building frame with flat slab and grid slab ravi kumar makode saleem akhtar geeta batham department of civil engineering uit rgpv bhopal 462036, the waffle slab has been considered as monolithically connected to band beams feasibility of structural design of members has been ensured under the provision of is 456 2000 in this paper the optimum
design of reinforced concrete waffle slabs is so ught using the simple genetic algorithm a, lecture series on design of reinforced concrete structures by prof n dhang department of civil engineering iit kharagpur for more details on nptel visit, keywords flat slab with drop flat slab without drop grid slab drop column capital i introduction a flat slab a reinforced concrete flat slab also called as beamless slab is a slab supported directly by columns without beams a part of the slab bounded on each of the four sides by centre line of column is called panel, deflection of concrete floor systems for serviceability 1 bijan o aalami2 deflection control is a central considerations in serviceability of floor systems this technical note reviews the levels of acceptable deflections and the currently available methods for their estimate overview there are several reasons to control deflection, what is punching shear punching shear is a type of failure of reinforced concrete slabs subjected to high localized forces in flat slab structures this occurs at column support points the failure is due to shear this type of failure is catastrophic because no visible signs are shown prior to failure

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