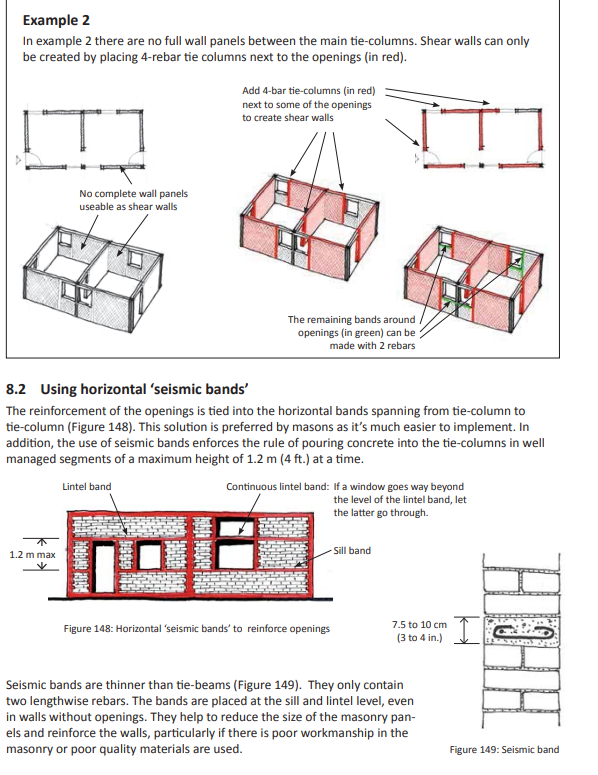
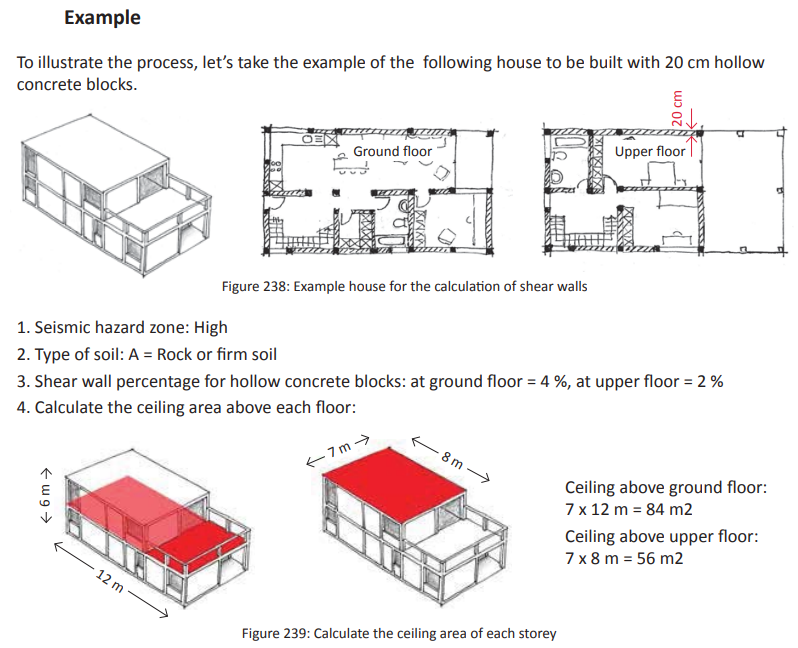
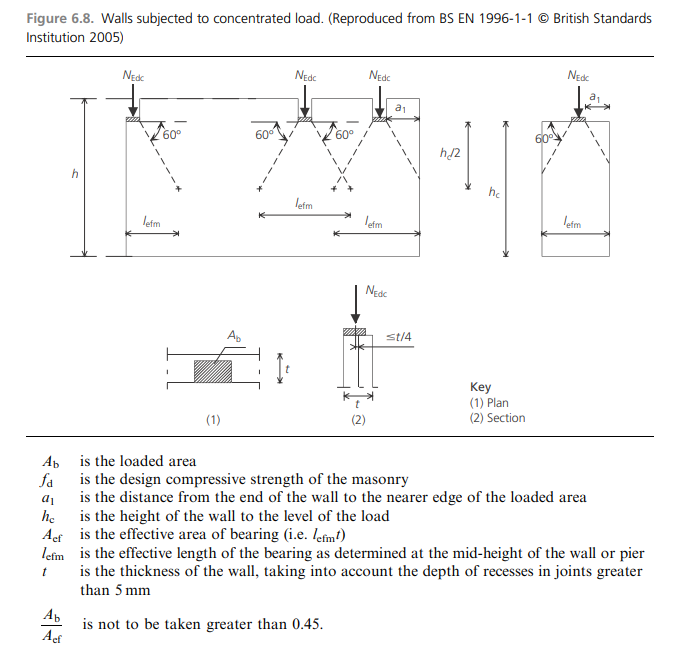
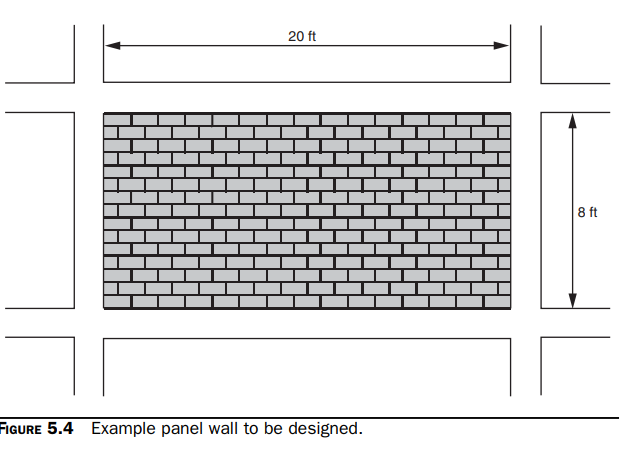
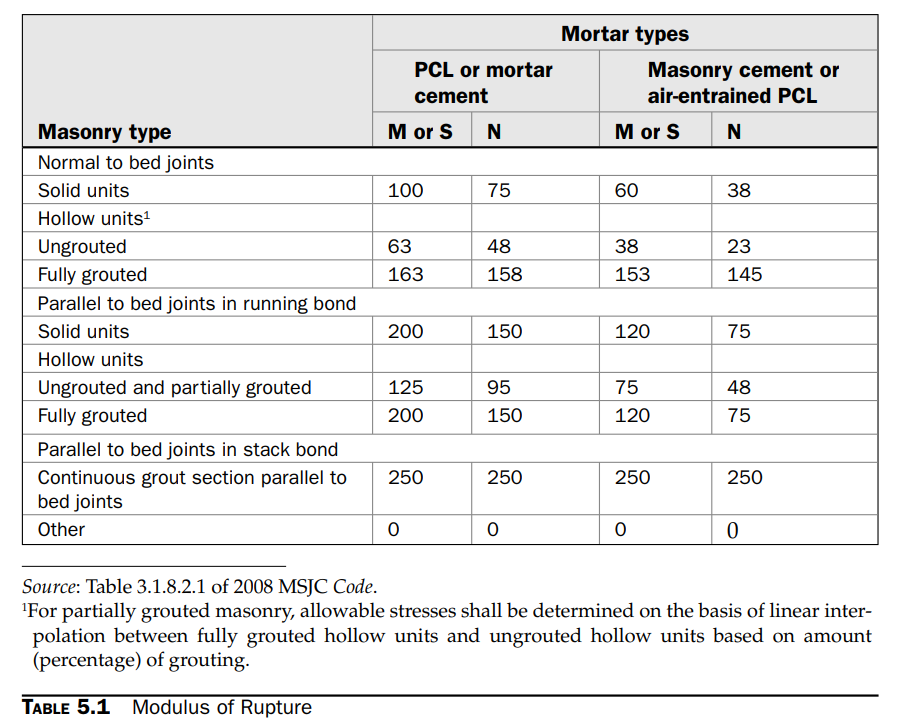
1. What’s burnt clay bricks.
2. Explain using sketches the function of ties in walls.
3. Give three difference between confined and unconfined masonry systems.
4. Explain three main elements of a confined building.
5. What is the purpose of horizontal and vertical ties?
6. Why there is no openings in masonry shear walls.
7. Plot the positions of shear walls in a masonry building.
8. Give size of wall openings.
9. Draw the distributions of openings in a building.
10. What is the net surface of concrete block.
11. Difference between hollow and solid block.
12. Explain a simple quality test for fresh concrete.
13. Write a simple test for the quality of sand.
14. explain a quick test of concrete consistency.
15. Show three types of strip footing in a Sketch.
16. In a simple building show the positions of horizontal and vertical ties.
17. Plot a figure showing the stirrup spacing on vertical ties.
18. Explain the recommenced minimum vertical tie dimensions with 45o stirrups.
19. Show in a figure the spacing of stirrups near vertical ties.
20. What is the minimum dimensions of plinth.
21. Why anchoring rebar is important.
22. Draw a figure showing rebar ends bent outward.
23. What’s the function of spacers.
24. Why masonry units must be staggered.
25. illustrated the following bonds: English bond, staggered bond.
26. demonstrate the details of dowels in : (a) blocks, (b) bricks.
27. Illustrated graphically how mortar and bricks are placed.
28. Write the maximum height of wall constructed in one day.
29. How do you place conduits in a masonry wall.
30. How do you integrate big pipes into walls.
31. What’s meant by seismic bands.
32. Whats the correct way of placing the vertical ties and columns.
33. What are the two conditions for increasing the length of shear walls in the facade.
34. How do you create shear walls for the building shown below.

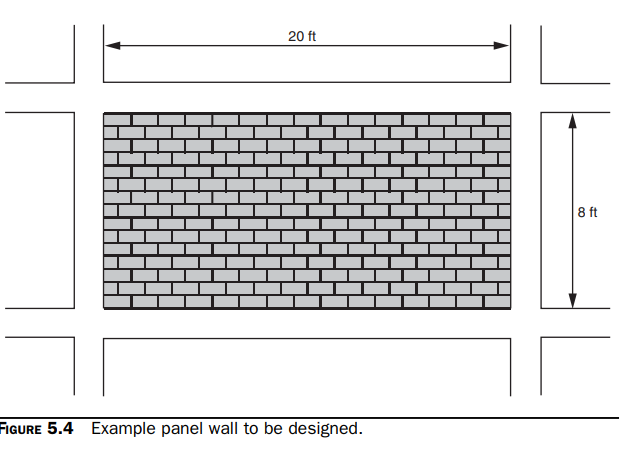


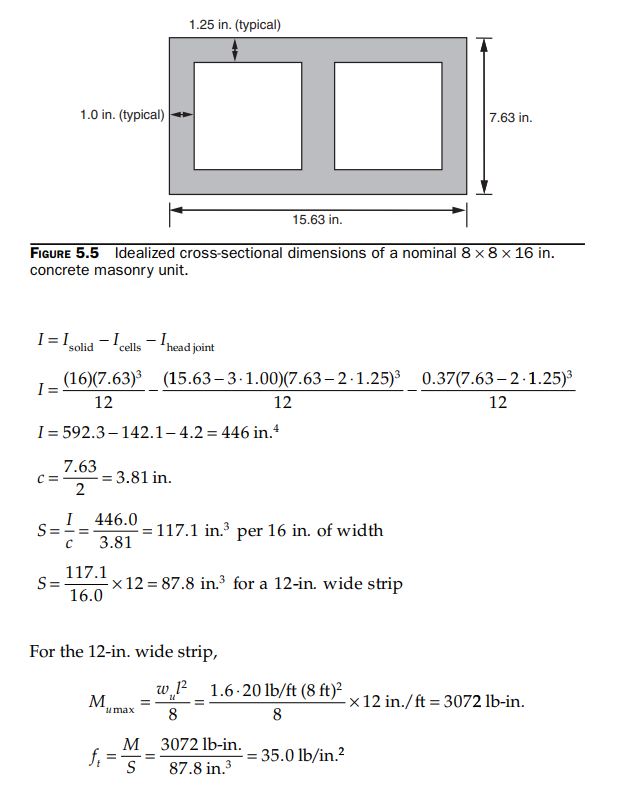
1. What is seismic bands.
2. The difference between seismic bands and tie beams.
3. Show the reinforcement details for a two-way stair case.
4. How do you open up existing corner connections.
5. Sketch the integration of connection bars into new plinth beams.
6. Calculate the ceiling area for each floor for the building shown below, built with 20cm hollow block units. Given that the shear wall percentage for hollow concrete blocks: at ground floor 4%, at upper floor= 2%.
7. Explain situations requiring the common form of loading and calculations checks.
8. Tabulate the indicative design working life.
9. Tabulate the types of action.
10. write the load combinations for a shear wall.
11. Illustrate the wind load check on load bearing wall.
12. Illustrate the load check on internal load bearing wall.
13. demonstrate wind load check on non-load bearing cladding panel.
14. Explain how the characteristic strength of masonry () can be determined.
15. Define masonry unit.
16. List the types of masonry units.
17. How masonry belongs to a group.
18. Sketch a figure showing the extent of relative zones will be affected by macro climate.
19. Draw the effective height of stiffened walls.
20. Show the minimum requirement for assuming support to vertical ages of load bearing walls.
21. How the load is distributed in walls subjected to concentrated loads.
22. For the following wall determine the , given the following details: wall:1by 3m, load 2 ton. Determine the distance from the top of wall to effective length of bearing.



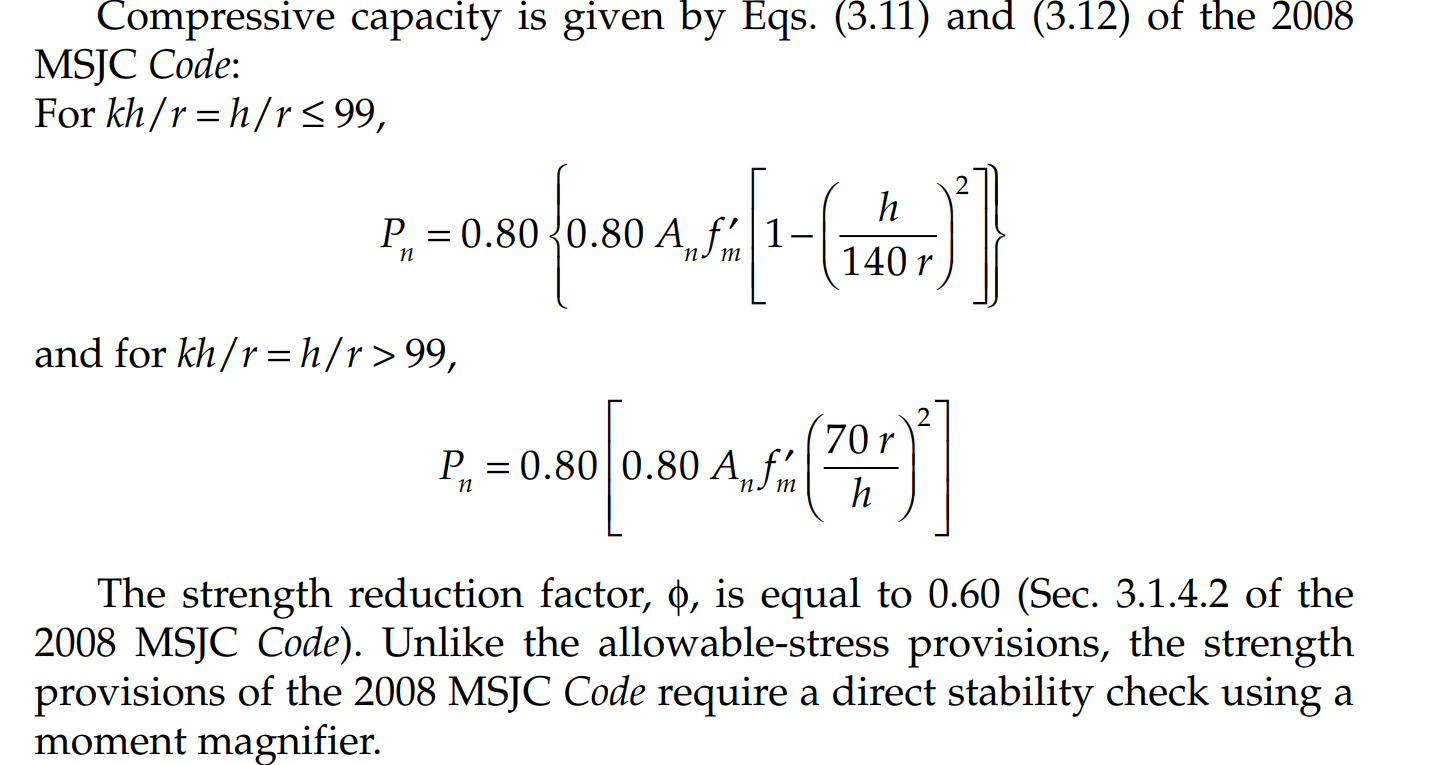
1. Draw basic configurations of a structural reinforced masonry wall.
2. List the fired masonry units.
3. What is masonry accessory materials.
4. Define connectors.
5. Use of a sealant.
6. Explain flashing.
7. Use of coatings.
8. What is the function of moisture barrier.
9. draw the orientations of masonry units in an element.
10. What is the difference between running bond and 1/3 running bond.
11. What is Flemish bond.
12. Describe the type of walls (according to water penetration resistance.
13. Sketch four types of walls.
14. What are the main compounds of cement powder.
15. What is Retentivity.
16. Describe the Manufacturing of Clay Masonry Units.
17. Sketch three typical bed joint reinforcement.
18. Draw typical use of post tensioning tendons in wall.
19. Plot typical veneer ties.
20. Show typical connectors.
21. Describe the types of joints.
22. Sketch the locations of control joints in: CMU, clay Wythe (loose and fixed lintels).
23. Draw details of reinforcement in clay masonry lintel.
24. Sketch a figure showing details of reinforcement in masonry wall made of hollow units.
25. Check the design of (Single-Wythe Panel Wall using Solid Units: 8x8x16in) shown in Figure below, for a wind load w of 20 lb/ft2 , using PCL mortar, Type N, and units with a nominal thickness of 8 in. 

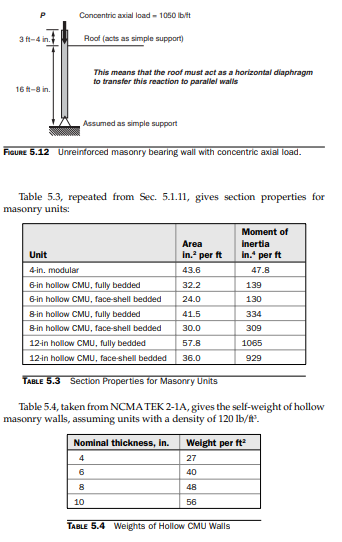


1. Check the design of (Single-Wythe Panel Wall using hollow Units) shown in Figure below for a wind load w of 20 lb/ft2 , using PCL mortar, Type N, and units with a nominal thickness of 8 in. 



1. Unreinforced Bearing Wall with Concentric Axial Load The bearing wall shown in Fig. 5.12 has an unfactored, concentric axial load of 1050 lb/ft. Using hollow concrete masonry units with face-shell bedding, design the wall. the following loading combinations must be checked for strength design: 1. 1.2D +

1.6W + f 1 L + 0.5 (Lr or S or R) 2. 0.9D + 1.6W + 1.6H. 



1. What’s engineering brick.