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Guided By

DR. AMI H. SHAH

SMT. S. R. PATEL ENGINEERING COLLEGE, UNJHA

Project Title

STUDY OF THE USE OF FLY ASH TO PREVENT LIQUEFACTION BY USING SHAKE TABLE

Abstract:

Liquefaction has been a significant earthquake-induced phenomenon which can cause massive damages to our infrastructures, during earthquakes or other rapid loading. In this report new mitigation method was introducing. For prevent liquefaction many methods are use such as avoid liquefaction susceptible soil, improve the soil, providing deep foundation, ground water pumping etc. Various industrial by-products, such as fly ash, ground granulated blast-furnace slag and silica fume, have been used in soil to improve its properties. From above method of prevent liquefaction ,we use improve the soil by adding fly ash in soil. This also enables any environmental issues associated with their disposal. Fly ash is added in soil to prevention of liquefaction effect. Fly ash is available in large quantities and requiring alternative methods of disposal. Saturated soil specimen is prepare in liquefaction box and tested in laboratory by using shake table.fly ash is added in soil for testing at rate of 5,10, 20, 30 and 40 percentage of the soil. We study the effect of earthquake on building by using shake table at same frequency on square footing and raft foundation. By performing the test on mix of soil and fly ash at the rate of 5 %, 10 %, 20 %, 30 % and 40 %,the result is the effect of liquefaction is decrease by adding in soil at 30% for both square footing and raft foundation. Keywords: Liquefaction, mitigation method, fly ash, shake table

Prepared By:

Sr. No.	Student Name	Enrollment No
1	PATEL KRUNAL S	120783106007
2	PATEL DHRUV N	120783106016
3	PARMAR HIREN N	120783106014

