

## **ADVANCED RCC STRUCTURAL DESIGN -1 SEISMIC MANUAL ,ETABS AND FOUNDATION IN SAFE [AT005]**

### **SPECIALITIES IN THIS TRAINING**

- **SP INSTITUTE** Since 2011 owned by **SP STRUCTURES** (Civil & Structural Consultancy), Chennai.
- **SP INSTITUTE** Chief Executive  
Er.P.Sabarinathan (Trainer) Student of **Prof. A.R.Santhakumar IIT(M)**
- **Unlimited Period of Training**
- Experience Certificate
- **Govt. of INDIA New UDAYAM MSME Registration UDAYAM- TN-02-0027071** Certificate
- Placement reference for Students/Engineers
- **SP STRUCTURES** office environment exposure.

### **ETABS**

- Tips to Tricks on Seismic Analysis interpretation based on **SP STRUCTURES** office environment
- Understand the Seismic behaviour of RCC Elements and Structures as per IS 1893 **Manual -Pre Engineered Building World Concept on Wind Load as per IS 875 Part- 3: 2015**
- Handy Exercise on PEB Structural Elements such as Frame, Purlin and Girts

### **SAFE**

- **SP STRUCTURES** office Design Assignments
- In the blink of eye Magical experience will be ensured
- Shortcuts in the Software

### **SOFTWARE LICENSES**

The Latest software owned by **SP INSTITUTE**

- **ETABS**
- **SAFE**

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**MODE OF TRAINING**

- **At Respective Training Center (Offline)**



- **Online**



**INSTRUCTIONS**

- 1.Students/ Engineers must bring their own laptop, pen drive mouse etc.,
- 2.The Internet Speed must be Good



## **ADVANCED RCC STRUCTURAL DESIGN -1 SEISMIC MANUAL ,ETABS AND FOUNDATION IN SAFE [AT005]**

### **SESSIONS**

#### **SEISMIC CALCULATION AS PER IS 1893 Part -1 2016 ON PRACTICAL PROBLEM**

- a. SEISMIC WEIGHT EXCLUSIVELY AS PER IS 1893
- b. SEISMIC ZONE CLASSIFICATION
- c. TIME PERIOD FOR DIFFERENT BUILDING AND ITS HEIGHT
- d. DESIGN BASE SHEAR
- e. DISTRIBUTION OF BASE SHEAR ON EACH FLOOR

#### **ETABS APPLICATION AS PER IS 1893**

- a. TAKE UP EXISTING NON SEISMIC MODEL (**PRACTICAL PROBLEM**)
- b. DIAPHRAGM ASSIGNMENTS
- c. SEISMIC LATERAL LOAD APPLICATION
- d. DESIGN BASE SHEAR COMPARISON ON MANUAL AND ETABS ASSIGNMENT
- e. DRIFT CHECK ON EACH STOREY
- f. BASE REACTIONS
- g. BEHAVIOUR OF STRUCTURE IN ANIMATED VIEW

#### **SAFE AS PER IS 456**

#### **ISOLATED FOOTING, COMBINED FOOTING, COMBINED WITH STRAP**

- a. EXPORT REACTIONS FROM **PRACTICAL** ETABS MODEL TO SAFE
- b. CHECK THE ETABS FORCE IN SAFE
- c. SIZE OF FOOTING ARRIVAL AS PER SBC
- d. DEFINITION OF MATERIAL BOTH CONCRETE AND STEEL
- e. MODELLING ISOLATED FOOTING / IMPORT FROM AUTO CAD
- f. DEFAULT MODEL LOAD APPLICATION AND LOAD COMBINATIONS
- g. FINITE ELEMENT ANALYSIS/ STRIP ANALYSIS METHOD
- h. DESIGN OF MODEL ON FINITE ELEMENT/ STRIP METHOD
- i. SBC CHECK/SHEAR CHECK

#### **PRE ENGINEERING BUILDING WORLD**

- a. WIND LOAD AS PER IS 875 PART -3 LATEST CODE
- b. WIND LOAD APPLICATION ON PEB FRAME, PURLIN, GIRTS AND BRACING

#### **PRACTICAL THUMB RULE FOR SEISMIC STRUCTURAL DESIGN**

#### **DISCUSSIONS ON IS CODES**