MEMORANDUM OF UNDERSTANDING (M.O.U) FOR FAST TRACK TRAINING PROGRAM

This Memorandum of Understanding entered on 31st March 2019 between **College name and address**, which expression shall unless repugnant to the contest means and include its successors and assigns of the ONE PART.

AND

ECONSTRUCT DESIGN & BUILD PVT. LTD.(**EDBPL**) Bangalore, having its office at Venkatdhari Heights, 2nd Floor, Parapanna Agrahara Main Road, Bangalore -560068 which expression shall unless repugnant to the contest means and include its successors and assigns of the OTHER PART.

WHERE AS

EDBPL and College have decided to tie up to execute a training program for Civil Engineering students.

1.1. This MOU shall be effective from _____.

1.2. EDBPL has assigned Shraddha Pingale - Jt. Managing Director as a main focal point of contact and College has identified Mr.Mrs. _____(Dept of Civil Engineering) for all communications going forward.

RESPONSIBILITES OF EDBPL

1. EDBPL shall provide industry experienced trainer for providing such value-added courses in the campus for carrying out the classroom training.
2. EDBPL shall also provide online training or doubt clearing sessions after the classroom training is over as a complimentary training support (handholding support after classroom training)
3. EDBPL shall provide the relevant material to the students required for better understanding of the software / project execution etc.
4. EDBPL shall give all the relevant certificate to all the students who participate in this training program after successful completion of training.
5. EDBPL shall provide the best possible knowledge and skill sets available in the industry along with project-based learning experience.
6. EDBPL shall bear their own travel expenses.

RESPONSIBILITIES OF COLLEGE

1. College will provide all the necessary facilities at the college campus to EDBPL, so that they are able to execute the aforesaid services in efficient manner.
2. Classroom / Auditorium or seminar hall for the students with mic & speaker, white board and projector facility.
3. Infrastructure & Admin support for conducting such courses in the most efficient manner. WIFI if needed.
4. Accommodation for 3 people. (Two guest rooms) within the campus or nearby to the campus.
5. Visa for 3 Trainers to be provided by the college. (For international colleges)

Training program will contain 4 Modules:

Module 1: ETABS offers 3D object-based modelling and visualization tools, fast linear and nonlinear analytical power, comprehensive design capabilities and insightful graphic displays, reports, and schematic drawings that allow users to quickly and easily decipher and understand analysis and design results.

Module 2: SAFE is tool used for designing concrete floor and foundation systems. From framing layout all the way through to detail drawing production, SAFE integrates every aspect of the engineering design process in one easy and intuitive environment.

Module 3: AutoCAD is a 2-D and 3-D computer-aided drafting software application used in architecture, construction, and manufacturing to assist in the preparation of blueprints and other engineering plans.

Module 4: Autodesk Revit Architecture is a Building Information Modelling software for architects, landscape architects, designers and contractors.

The software allows users to design a building and structure and its components in 3D, annotate the model with 2D drafting elements, and access building information from the building model's database.

Type of Projects covered:

1). Residential

2). Commercial,

3). Industrial and

4). Infrastructure

Software's Covered in Classroom Training in the form of Workshop

1). ETABS – 3 Day workshop = 24 hrs.
2). SAFE – 2 Day workshop = 16 hrs.
3). AutoCAD – 2 Day workshop = 24 hrs.
4). REVIT – 3 Day workshop = 16 hrs.

Detailed syllabus of all the 4 software is attached to this document.

Complimentary Online training support after the classroom training (Dates and time can be mutually decided after classroom training is over)

1). ETABS – 4 hrs.
2). SAFE – 4 hrs.
3). AutoCAD – 4 hrs.
4). REVIT – 4 hrs.

Fees structure:

1). There is no restriction on number of students who can attend the training and the fees is charged on Lumpsum basis all inclusive.

2). Dates for classroom training @ campus and Complimentary Online support trainings will be decided mutually based on academic calendar of the college in advance by both the parties.

3). EDBPL would charge a lunpsum amount of Rs 6,00,000 + 18 % GST for the whole training (classroom + online + certification)

4). College shall pay 50 % fees upon signing and accepting of this mou

5). Remaining fees shall be paid immediately after the Classroom training is over.

ACCOUNT DETAILS: -

BANK NAME	HDFC BANK
BANK ACCOUNT NUMBER	50200000209630
BANK ACCOUNT HOLDER NAME	ECONSTRUCT DESIGN AND BUILD PVT LTD
IFSC CODE	HDFC0000885
BRANCH NAME	BTM LAYOUT, BANGALORE, KARNATAKA

In witness where of the parties have signed this MOU on dated_____ Place - Bangalore.

HOD **Principal**

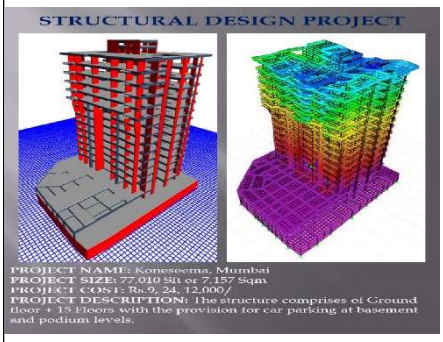
For Econstruct Design & Build Pvt Ltd

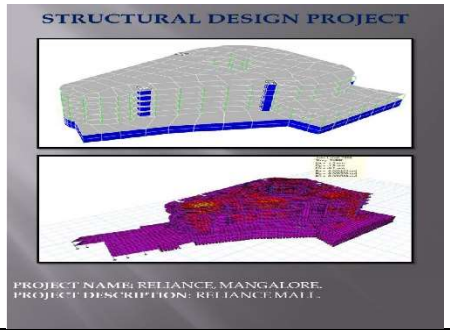
Shraddha Sandeep Pingale — Jt..Managing Director

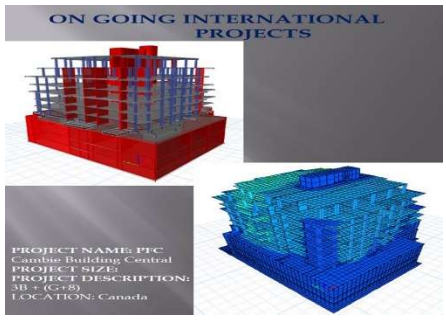
Sandeep D Pingale — Founder & M.D

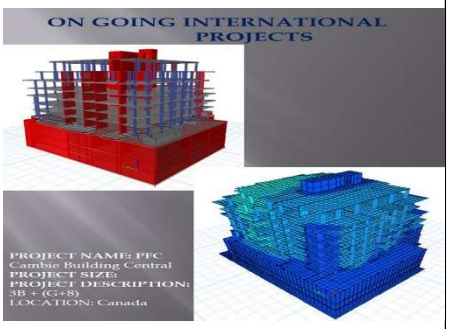
PROJECTS : STRUCTURES

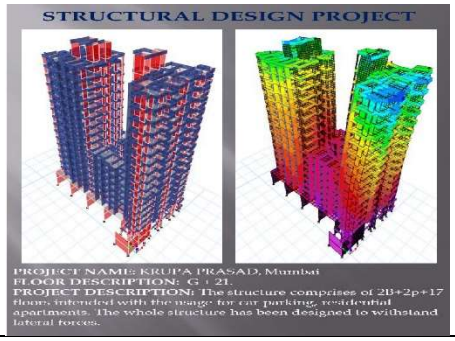
ECONSTRUCT Design & Build Pvt. Ltd.

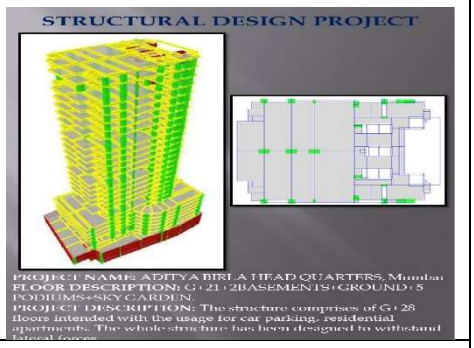


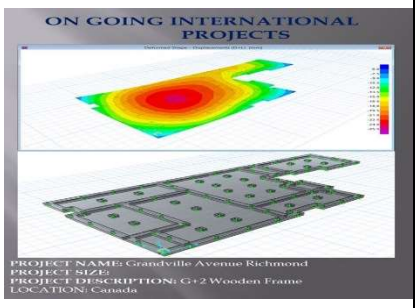


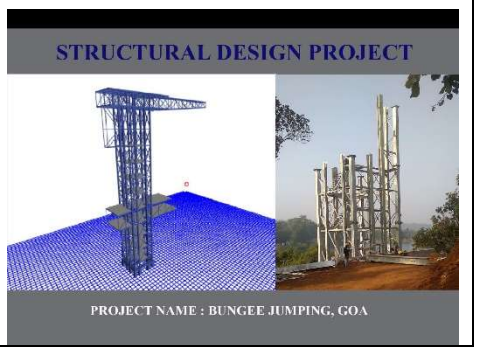






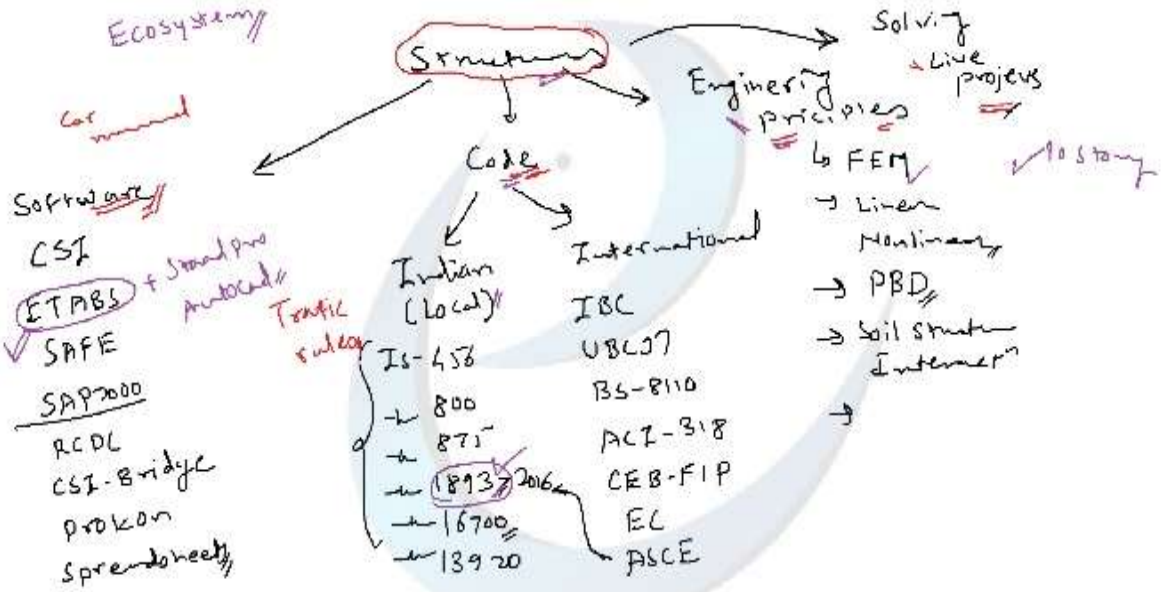


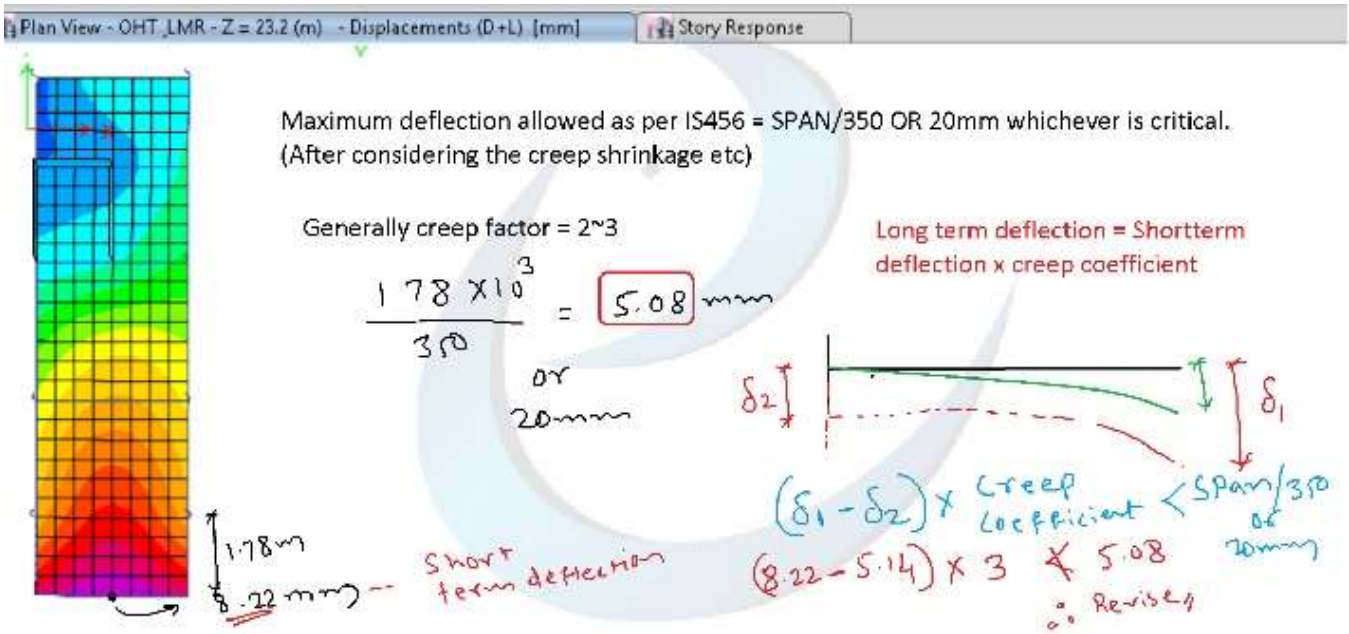




Bangalore Address: Venkatdhari heights, 2nd floor Parappana Agrahara main road, Kudlu, Bangalore-560068
Mobile: 9036744017 | 7259222888 Email: shraddha@e-construct.in
www.e-construct.in | www.civilstudio.in

GLIMPSE OF TRAINING / WHITEBOARD





P-DELTA ANALYSIS

1.0 P-Delta analysis is geometric non-liner second order analysis

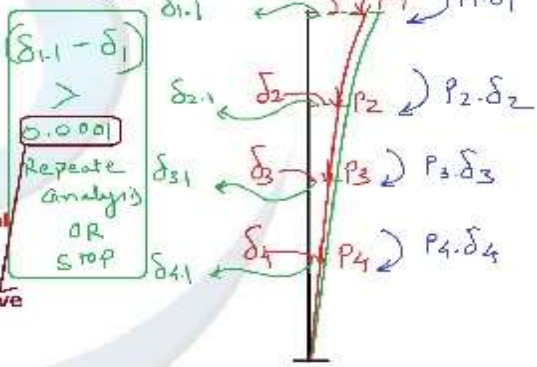
2.0

1.5 D
Or
1.2 D + 1.2 L

Whichever is critical

Tolerence for iterative analysis.

3.0



4.0 P-Delta analysis is getting used in various other types of analysis also. Like for e.g. Buckling analysis, Construction sequence analysis, Pushover analysis etc.

WIND LOAD COEFFICIENT CALCULATION:

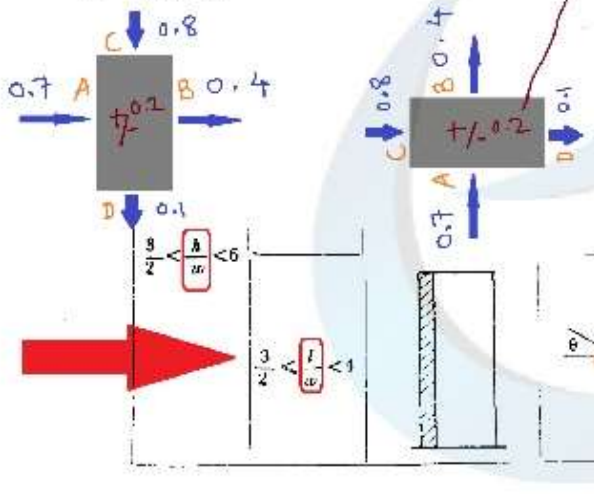
h= 23.2-2.9~ 20m

h/w=1.57

w= 12.7 m

l/w=1.74

l= 22.16 m

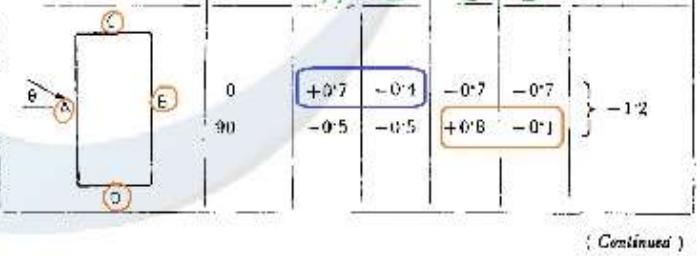


+/- 0.2 Internal pressure coefficient need be considered for glass facade bldgs.

θ indicates the angle of the force acting on it.

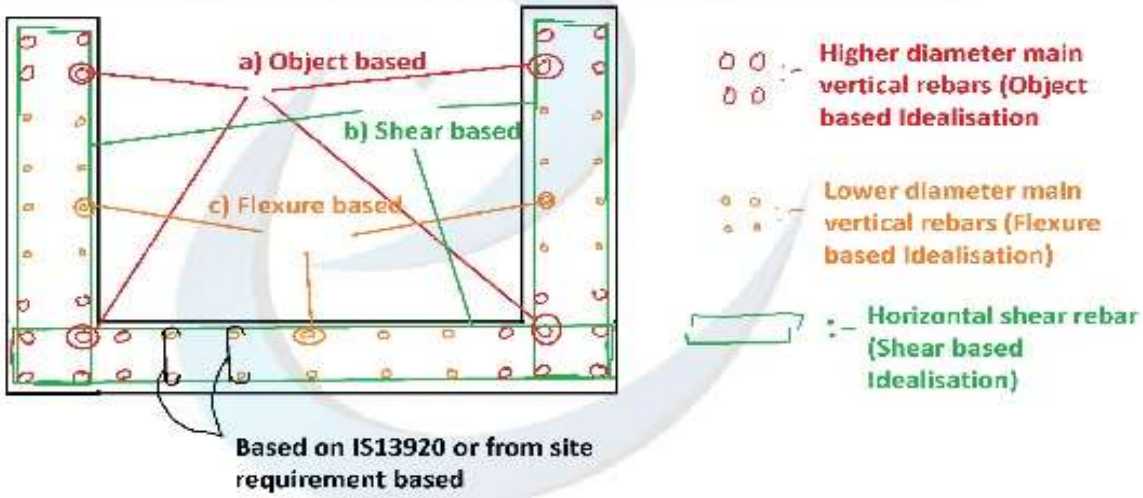
+ sign indicates that the force is acting towards the body

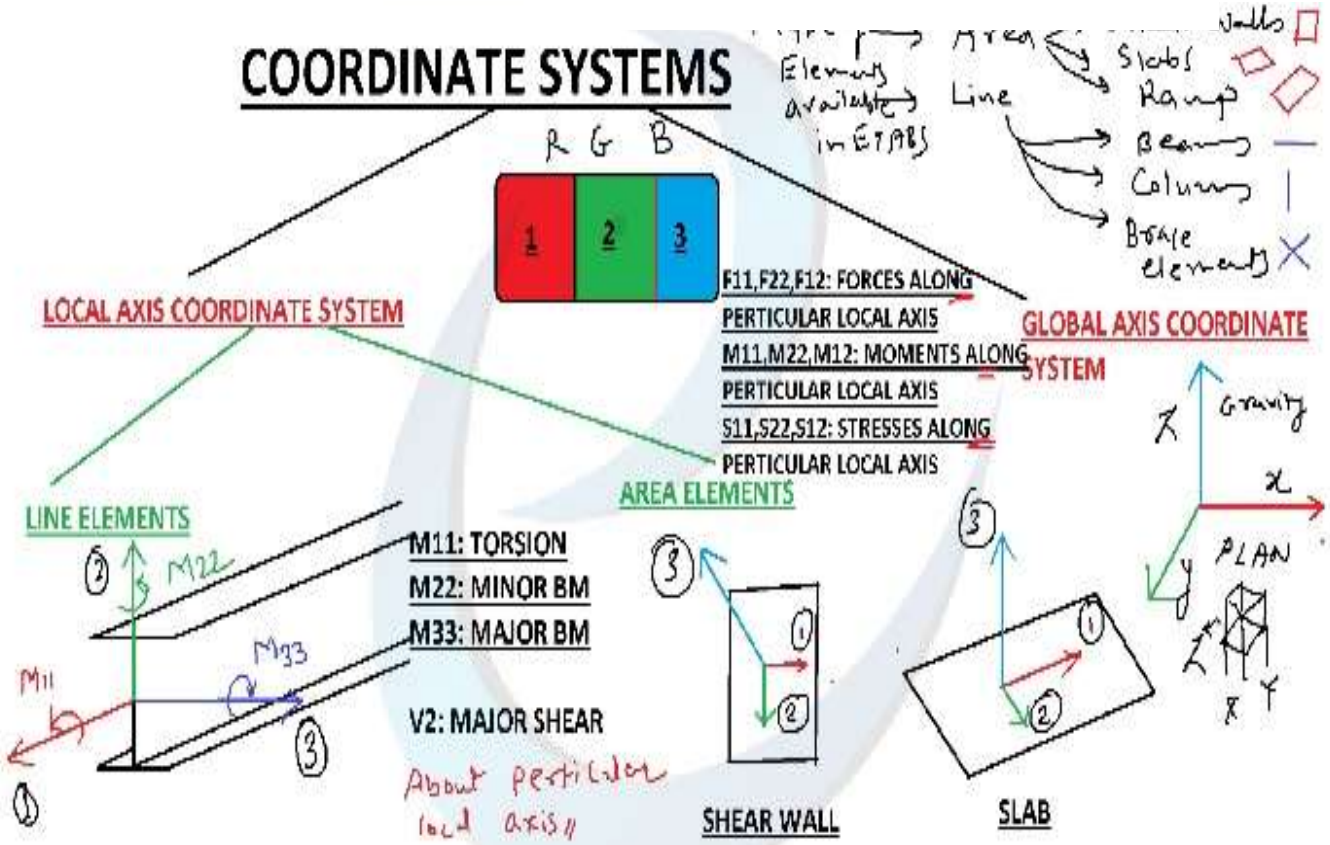
− sign indicates force acting away from body.

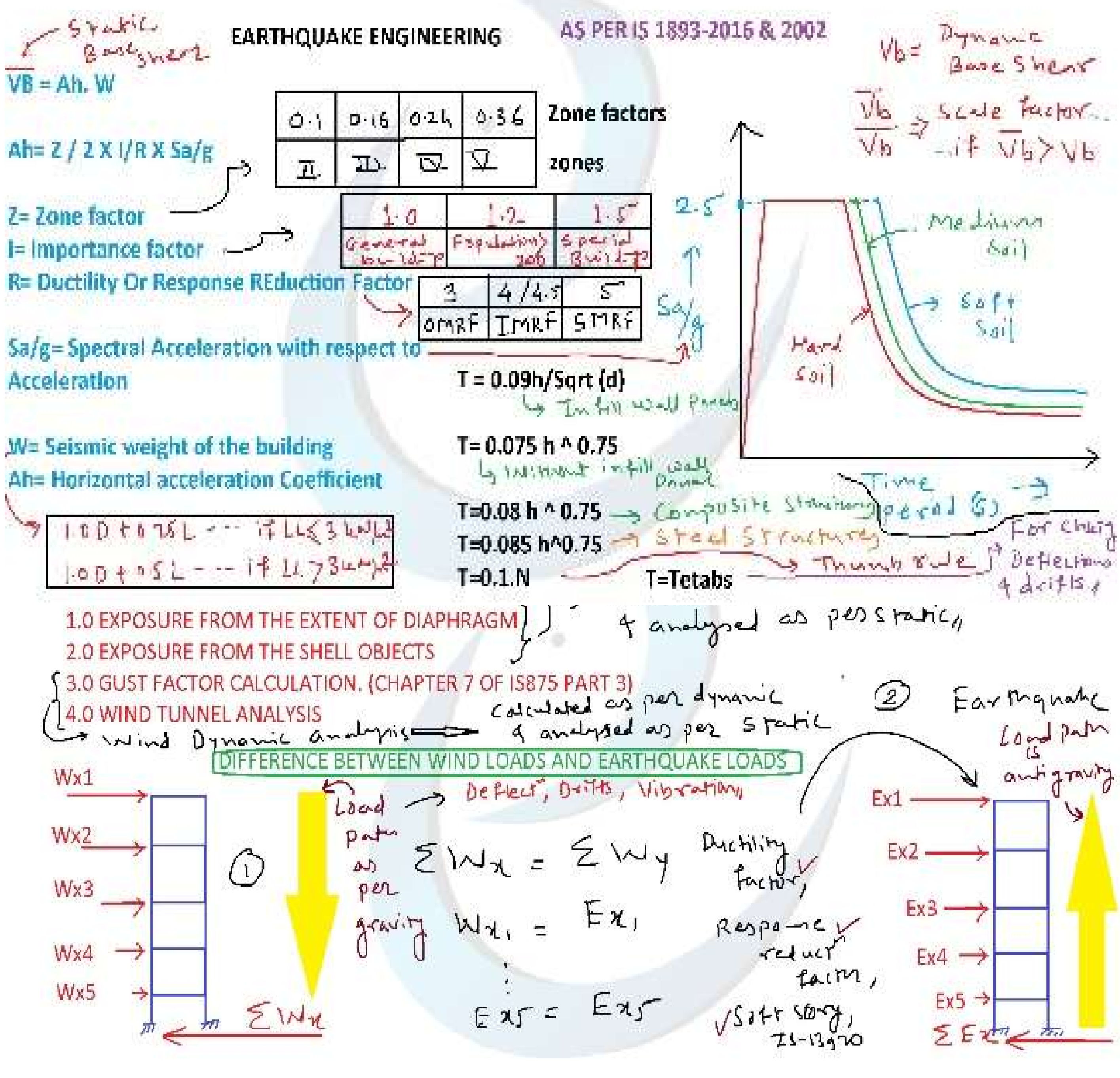


(Continued)

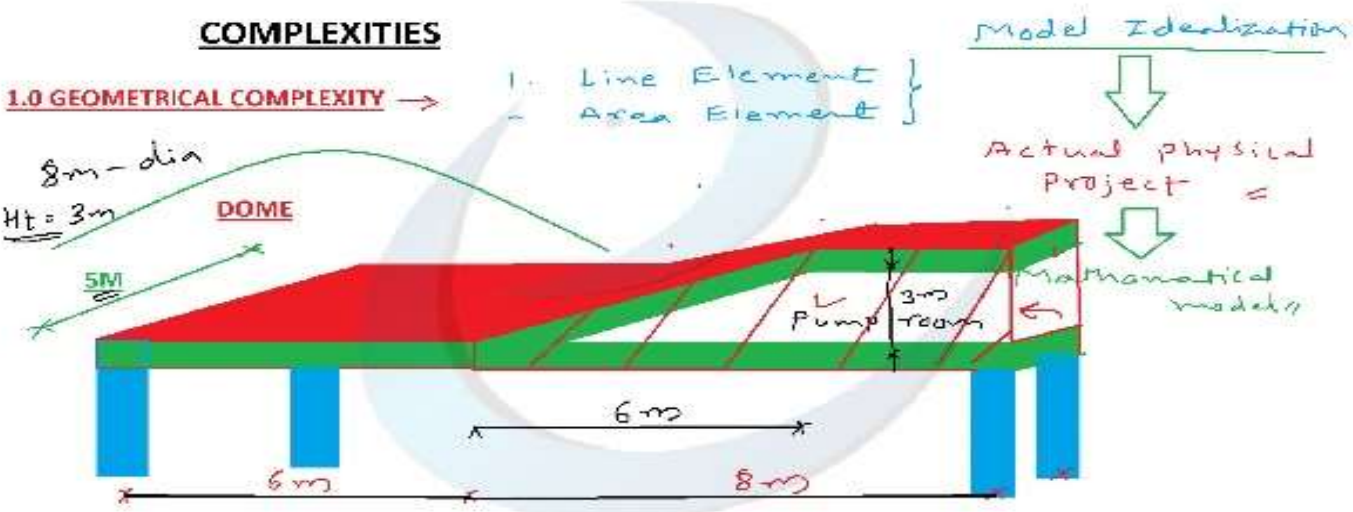
U shape or any Irregular shape shear wall design Idealizations






EARTHQUAKE ENGINEERING
AS PER IS 1893-2016 & 2002
Static Base shear
VB = Ah. W
Ah= Z / 2 X I/R X Sa/g
Z= Zone factor
I= Importance factor
R= Ductility Or Response REduction Factor
Sa/g= Spectral Acceleration with respect to Acceleration
W= Seismic weight of the building
Ah= Horizontal acceleration Coefficient
0.1 0.16 0.24 0.36 Zone factors
II III IV V zones
1.0 1.2 1.5
General buildings Population 200 Special Buildings
3 4/4.5 5
OMRF IMRF SMRF
Vb= Dynamic Base Shear
scale factor
Medium Soil
Soft Soil
Hard Soil
2.5
Sa/g
Time period (S)
T = 0.09h/Sqrt (d)
Infill wall panels
T= 0.075 h ^ 0.75
without infill wall panel
T=0.08 h ^ 0.75
Composite structures
T=0.085 h^0.75
Steel Structures
T=0.1.N
Thumb rule
T=Tetabs
For checking Deflections & drifts
1.0 EXPOSURE FROM THE EXTENT OF DIAPHRAGM
2.0 EXPOSURE FROM THE SHELL OBJECTS
3.0 GUST FACTOR CALCULATION. (CHAPTER 7 OF IS875 PART 3)
4.0 WIND TUNNEL ANALYSIS
& analysed as per static
Wind Dynamic analysis
Calculated as per dynamic & analysed as per static
DIFFERENCE BETWEEN WIND LOADS AND EARTHQUAKE LOADS
Earthquake Load path is antigravity
Load path as per gravity
Deflect, Drifts, Vibration
Ductility factor
Response reduct factor
Soft storey
Wx1
Wx2
Wx3
Wx4
Wx5
Ex1
Ex2
Ex3
Ex4
Ex5

COMPLEXITIES



GRAVITY LOADS

1.0 DEAD LOAD:

AREA LOADS (General)

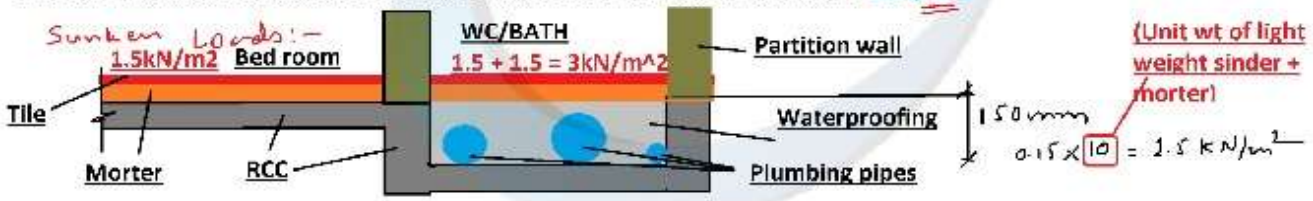
a. SELF WEIGHT SHALL BE CALCULATED BY ETABS AUTOMATICALLY { By selfweight multiplier=1.0 in Dead load case }

b. LOAD COMMING FROM TILES AND SCREED = (Density of Tile X Thickness of Tile) + (Density of Screed (or morter) x Thickness of Morter)

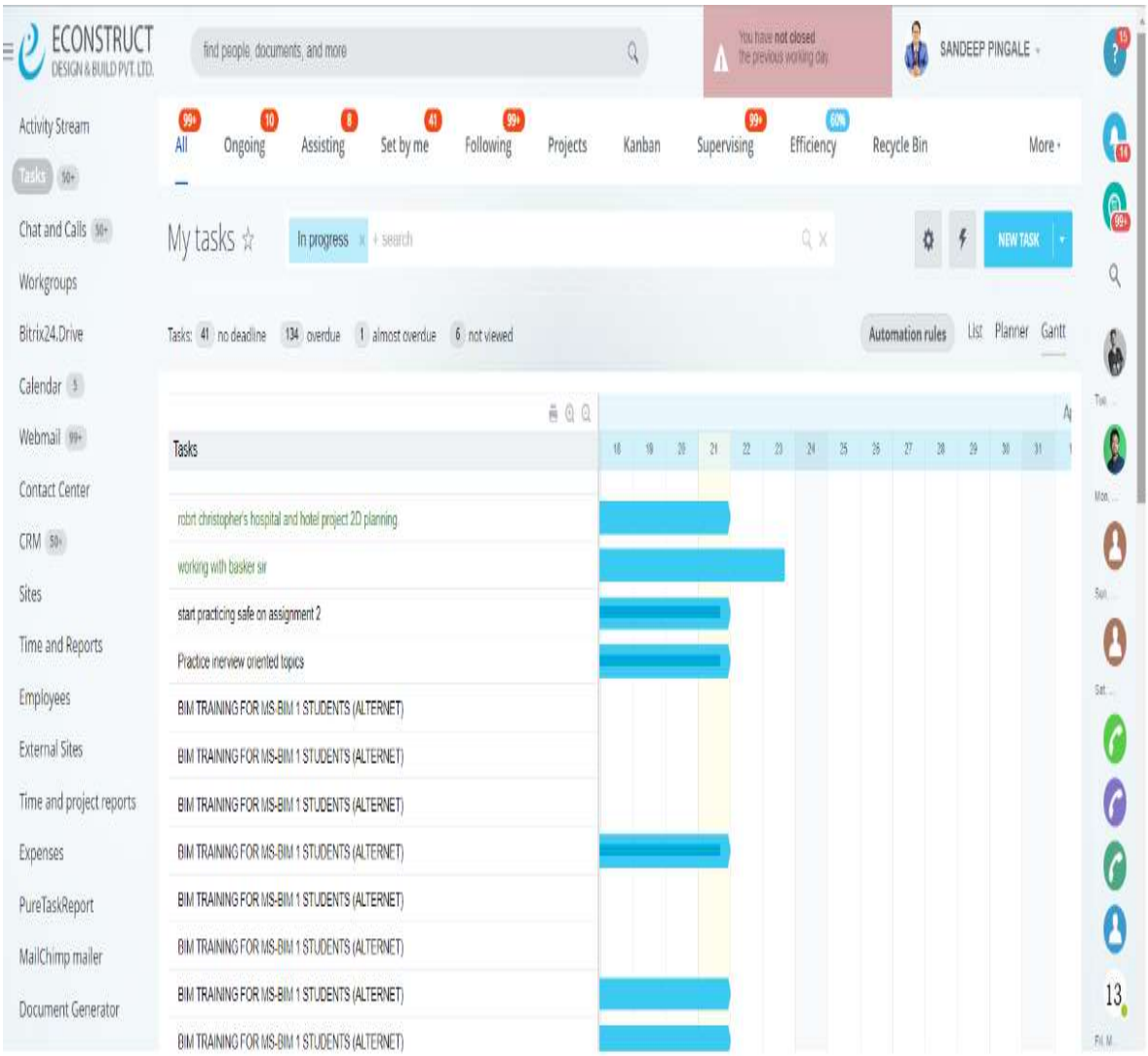
This value generally varies between 1kN/m^2 to 2kN/m^2

1.5 kN/m²

2.0 LIVE LOAD: AS PER IS 875 PART 2 FOR RESIDENTIAL BUILDINGS LIVE LOAD= 2kN/m^2

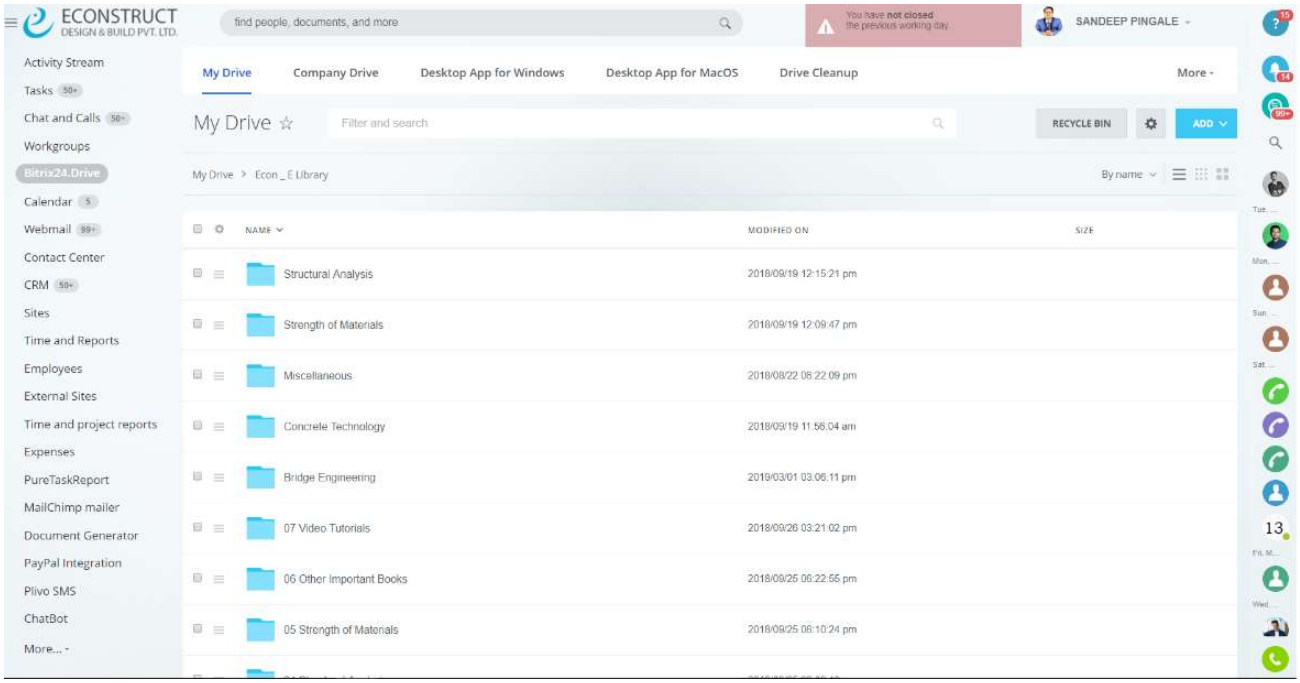


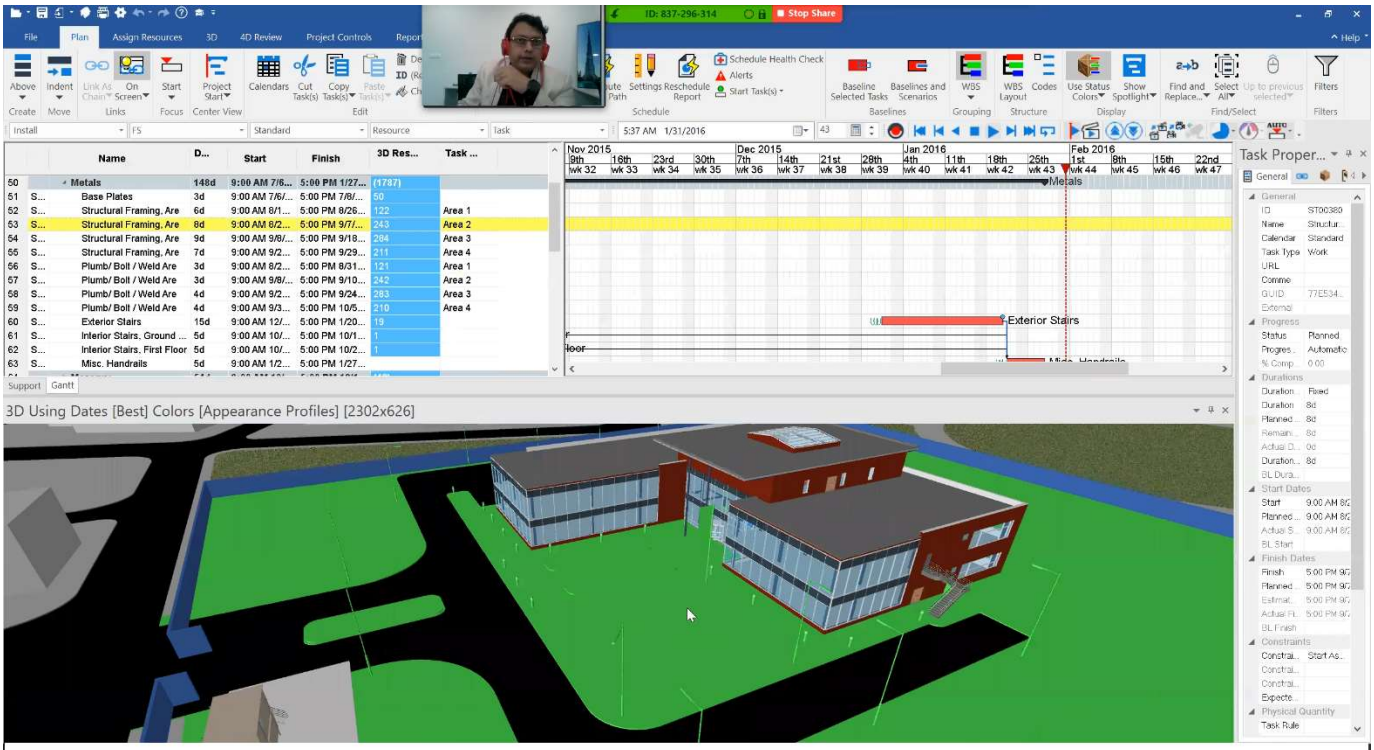
Screenshot of ONLINE Training ERP. Each student would get a Log in and password for this type of Online doubt clearing sessions and trainings



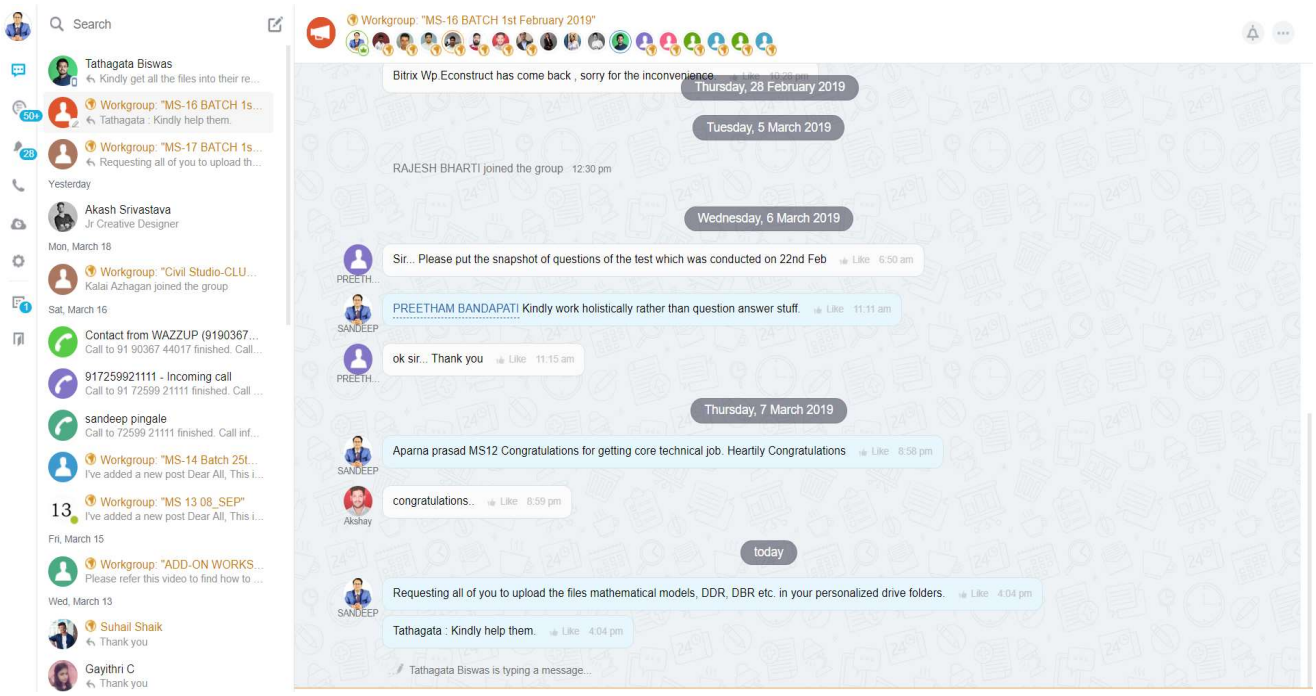
e-construct.in

ECONSTRUCT Design & Build Pvt. Ltd.





Bangalore Address: Venkatdhari heights, 2nd floor Parappana Agrahara main road, Kudlu, Bangalore-560068
Mobile: 9036744017 | 7259222888 Email: shraddha@e-construct.in
www.e-construct.in | www.civilstudio.in



Bangalore Address: Venkatdhari heights, 2nd floor Parappana Agrahara main road, Kudlu, Bangalore-560068
Mobile: 9036744017 | 7259222888 Email: shraddha@e-construct.in
www.e-construct.in | www.civilstudio.in