JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY
WAKNAGHAT, P.O. – WAKNAGHAT,
TEHSIL – KANDAGHAT, DISTRICT – SOLAN (H.P.)
PIN – 173234 (INDIA) Phone Number- +91-1792-257999
(Established by H.P. State Legislature vide Act No. 14 of 2002)

15 Days ETABS Online Training Program Report

Duration: 19th March – 2nd April 2025 (Every Alternate Day, 4:00 – 6:00 PM)
Mode: Online
Program Coordinator: Dr. Tanmay Gupta, Assistant Professor
Department: Civil Engineering Department (CED), Jaypee University of Information Technology (JUIT), Waknaghat
Industry Partner: CSI Engineering Software Pvt. Ltd., India
Collaborators:

- **Mr. Lakshay**, CSI Engineering Software Pvt. Ltd.
- **Mr. Anwesh Bhaduri**, Structural Engineer and Certified ETABS Instructor

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To strengthen the computational and analytical skills of aspiring and practicing structural engineers, the Civil Engineering Department of JUIT, Waknaghat, successfully conducted an intensive 15 Days ETABS Online Training Program from 19th March to 2nd April 2025. Coordinated by Dr. Tanmay Gupta, the initiative was supported by CSI Engineering Software Pvt. Ltd., India, and expertly delivered by Mr. Anwesh Bhaduri.

This structured program catered to a wide academic spectrum—PhD, M.Tech, B.Tech students, and alumni—with over 30 participants. It aimed to provide participants with a deep, practical understanding of the ETABS software suite, widely regarded as the industry standard for structural analysis and design.

All sessions were conducted online, recorded, and made available for public reference via the CED official webpage, ensuring sustained learning beyond the event.

In today's fast-evolving construction industry, ETABS has become an indispensable tool for structural engineers. Its ability to integrate modeling, analysis, design, and documentation into one platform makes it an essential skill for civil engineers, particularly those engaged in high-rise buildings, seismic design, and performance-based design.

- Rising Structural Complexity: Modern buildings demand tools that can handle irregular geometries, inclined members, and dynamic loading—all of which ETABS handles efficiently.
- Code Compliance & Safety: ETABS offers built-in support for global and national design codes, enabling engineers to design safe and regulation-compliant structures.

- Dynamic Analysis Capabilities: From seismic analysis to time history and pushover analysis, ETABS empowers engineers to simulate real-world load conditions.
- Integration & Documentation: With seamless CAD/BIM integration and advanced detailing tools, it bridges the gap from model to construction documentation.
- Sustainability & Optimization: ETABS enables performance-based and cost-optimized design, aligning with the growing global demand for sustainable infrastructure.

The software's continued evolution aligns with global industry demands, making it critical that students and professionals alike stay proficient in it. This training program was a step toward meeting that imperative, which covered following topics:

Module 1: Modeling Techniques

- Importing CAD Drawings: Effective workflows for integrating DWG/DXF files into ETABS.
- Complex Geometry Modeling: Techniques for modeling shells, curved and irregular structures.
- Reference Planes and Grids: Mastering grid systems for non-rectangular buildings.
- Modeling Staircases & Ramps: Accurate geometry and load distribution in sloped elements.
- Tilted and Sloped Members: Analysis of non-orthogonal structural members.

Module 2: Load Applications

- Wind Load Analysis: Built-in wind load generation and manual application techniques.
- Seismic Load Analysis: Use of response spectrum and time history methods for earthquake simulations.
- Deflection and Drift Analysis: Serviceability checks and performance evaluations.

Module 3: Analysis Techniques

- Pushover Analysis: Evaluating ductility and seismic resilience.
- Time History Analysis: Studying dynamic response under real-time loading.

- Modal & Response Spectrum Analysis: Dynamic behavior evaluation for seismic regions.

Module 4: Design and Optimization

- Stress & Strain Contours: Visualizing internal forces within complex models.
- Shear Wall & Coupled Wall Design: Techniques for lateral stability and performance.
- Seismic Isolation & Damping Systems: Modelling friction and viscous damping devices.

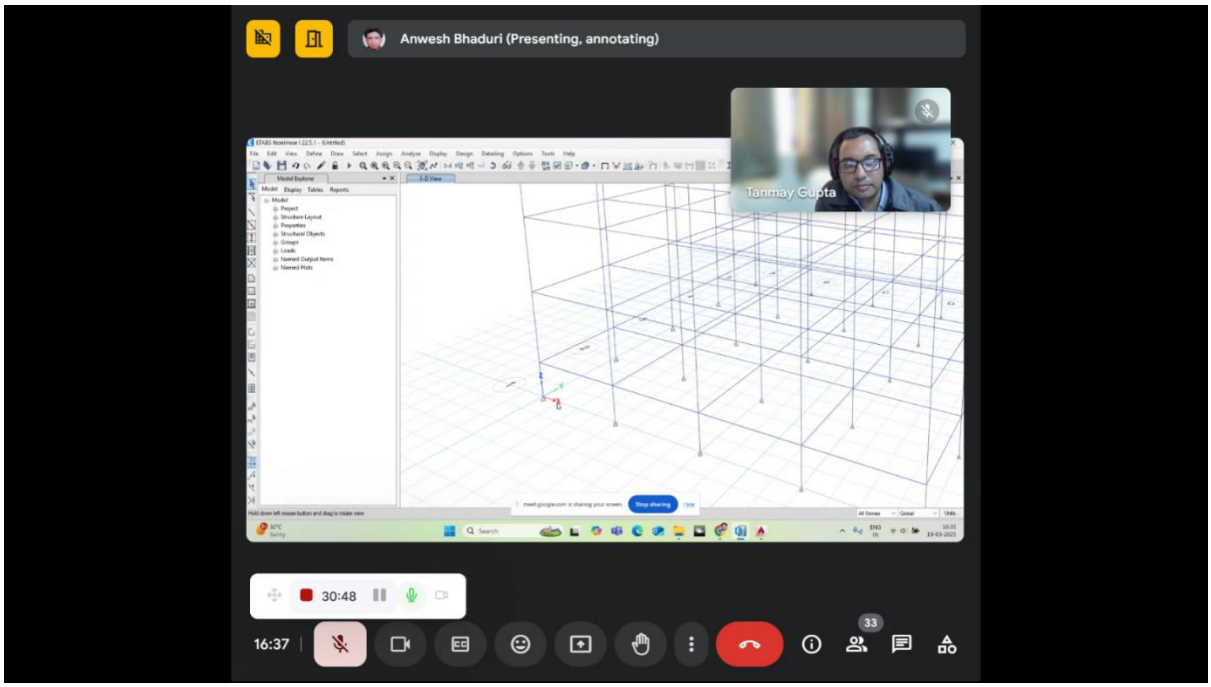
More than 30 participants, including current students and alumni from Ph.D., M.Tech, and B.Tech programs, actively engaged in the sessions. Participants appreciated the depth and practical relevance of the content, especially the seamless blend of theoretical clarity and hands-on demonstrations.

All sessions were interactive, and participants were encouraged to model and analyze real-world scenarios alongside the instructor.

The recordings and resource materials are now available through the official CED webpage, supporting lifelong learning and skill enhancement.

- Program Coordination: Special appreciation goes to Dr. Tanmay Gupta, who played a pivotal role in coordinating with CSI India, mobilizing participants, managing logistics, and ensuring seamless session delivery.
- Departmental Support: The Head of the Department, Prof. Ashish Kumar, extended heartfelt congratulations to Dr. Gupta for his commendable leadership and initiative.
- Industry Partnership: Gratitude to Mr. Lakshay from CSI Engineering Software Pvt. Ltd. for his continuous support and guidance.
- Technical Instruction: Special thanks to Mr. Anwesh Bhaduri, whose expertise and teaching style made complex topics highly accessible.

This ETABS training not only enriched the knowledge base of the participants but also marked a significant step in aligning the academic curriculum with cutting-edge industry practices. With growing challenges in structural design and safety, such programs act as vital bridges between classroom learning and practical application. Dr. Tanmay Gupta's initiative, commitment, and hands-on involvement made this training a model example of faculty-led academic excellence at JUIT.


Anwesh Bhaduri (Presenting, annotating)
Tanmay Gupta
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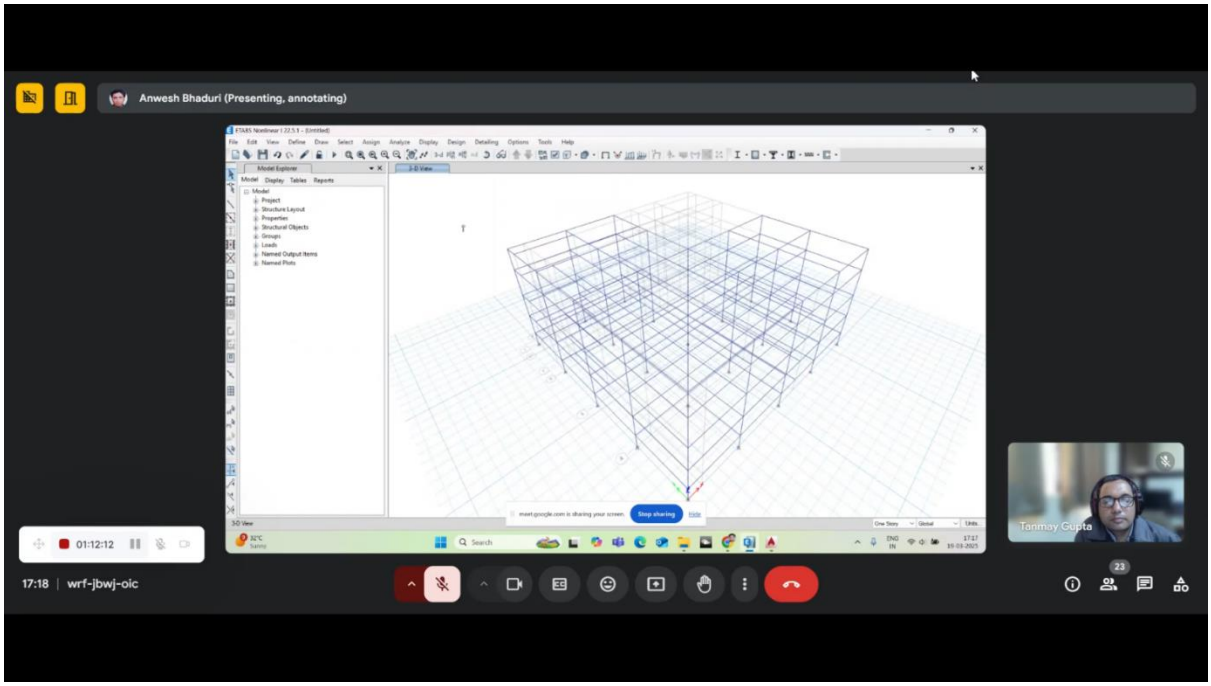
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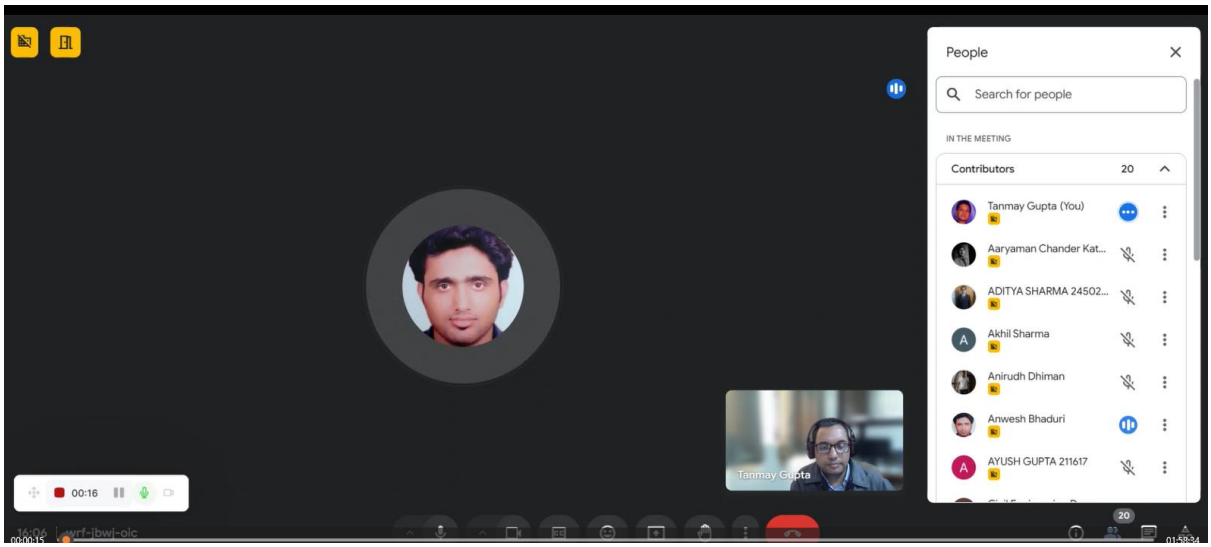
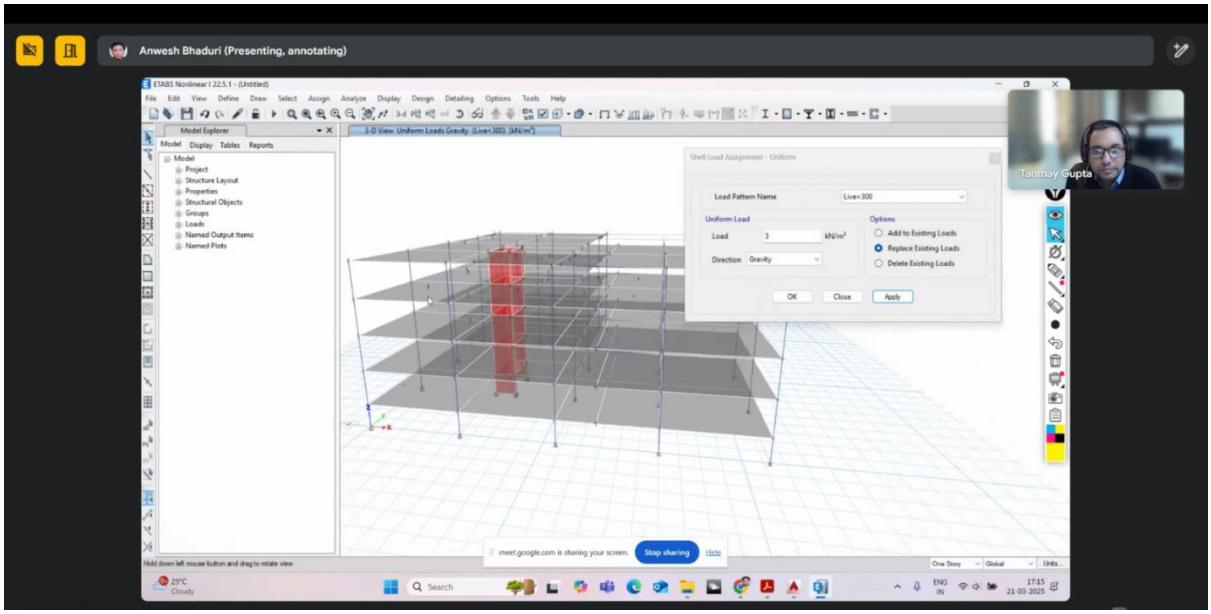
Tanmay Gupta


People
Search for people
IN THE MEETING
Contributors 20
Tanmay Gupta (You)
Aaryaman Chander Kat...
ADITYA SHARMA 24502...
Akhil Sharma
Anirudh Dhiman
Anwesh Bhaduri
AYUSH GUPTA 211617
00:16
Tanmay Gupta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Tanmay Gupta
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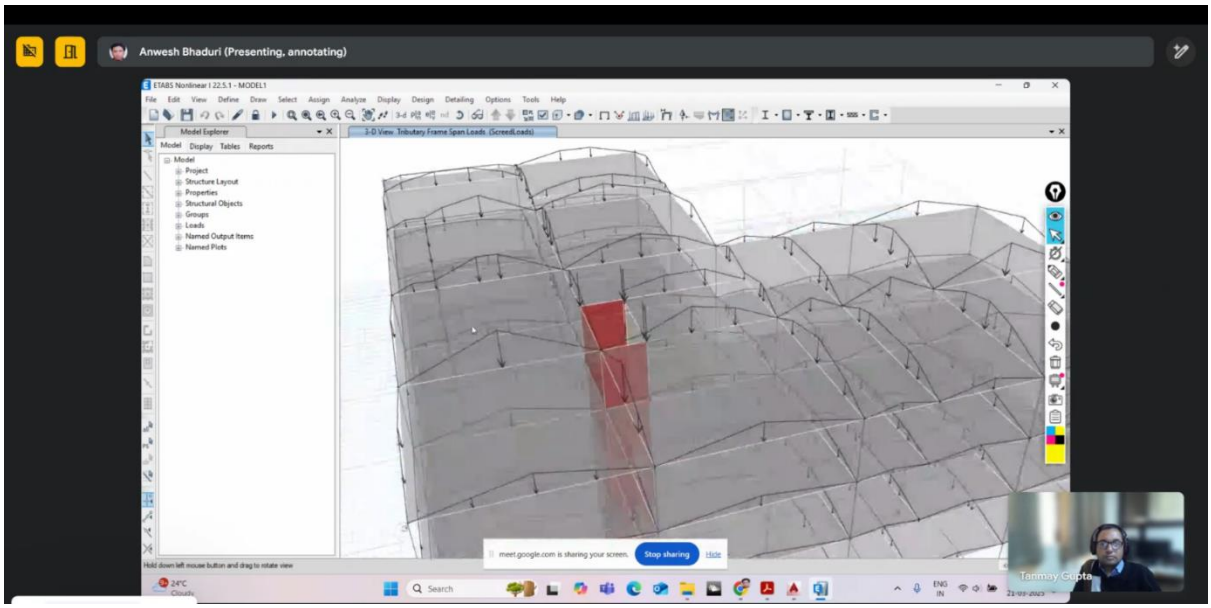
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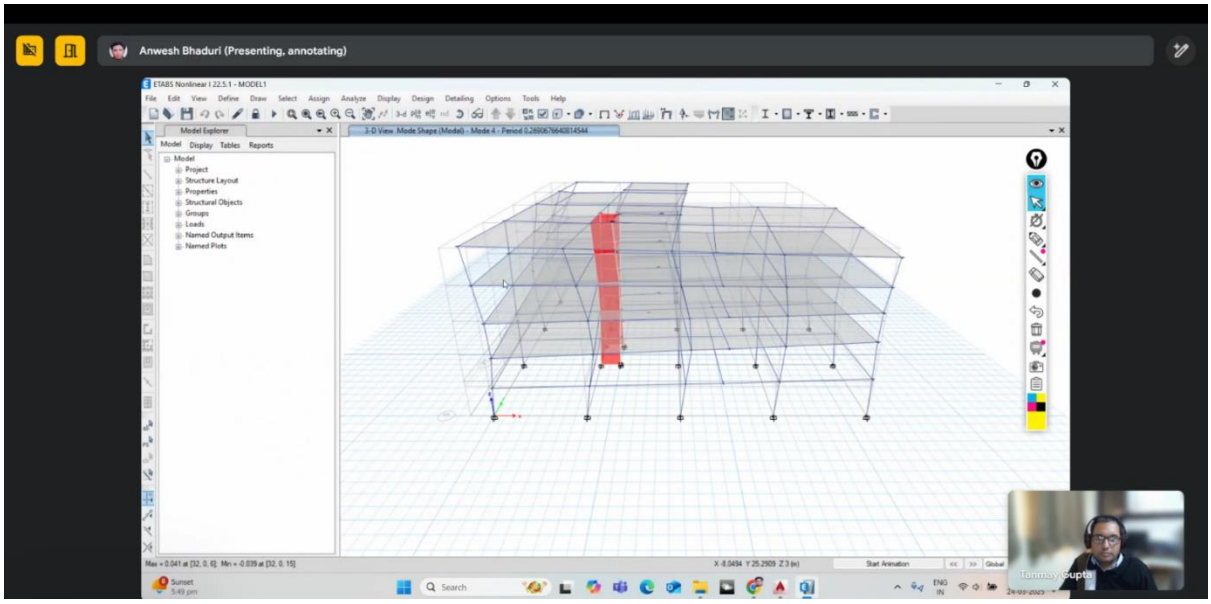
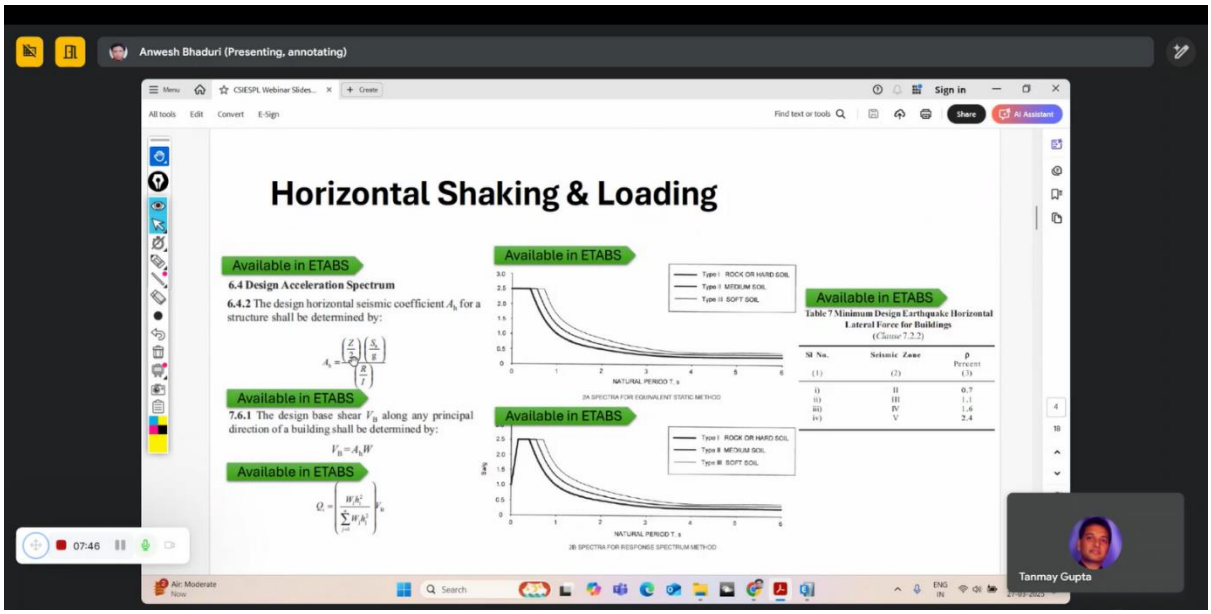
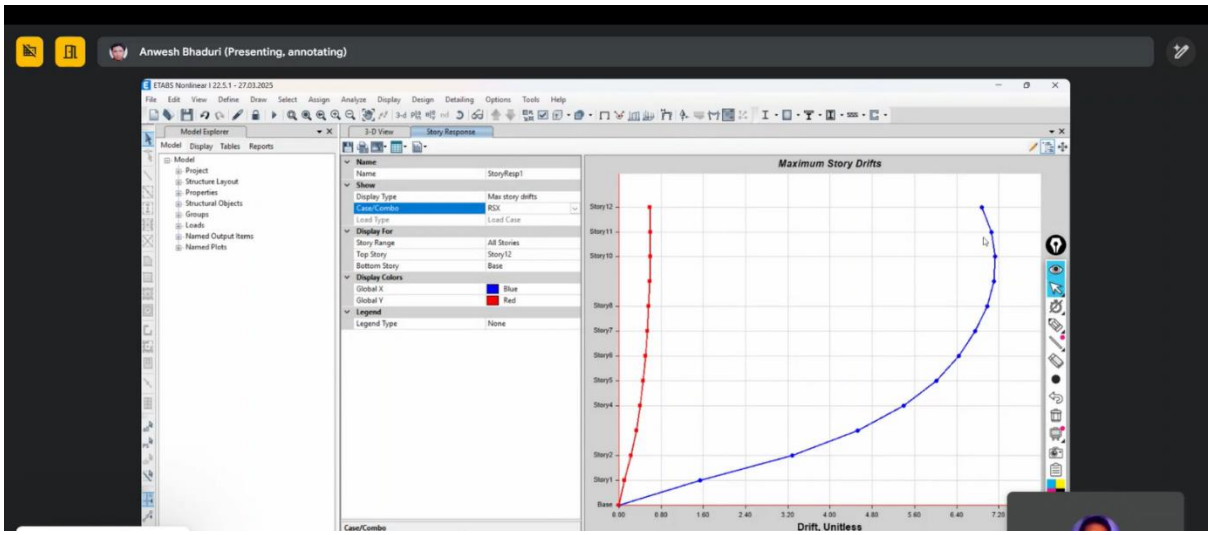
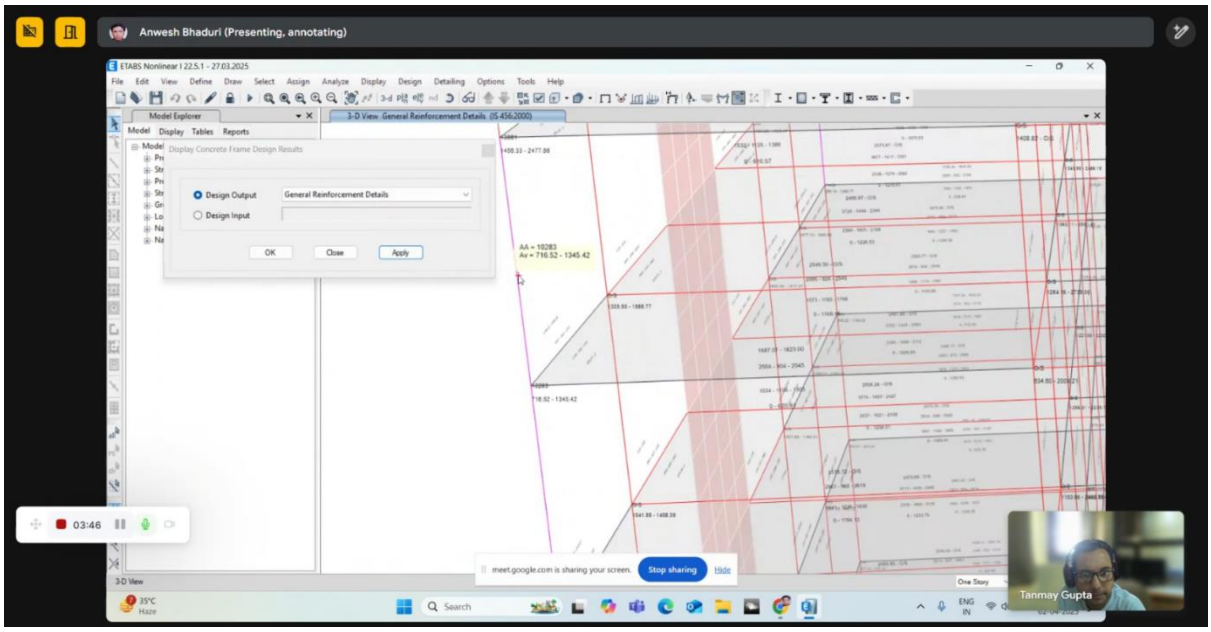

Anwesh Bhaduri (Presenting, annotating)
Tanmay Gupta


Anwesh Bhaduri (Presenting, annotating)
Horizontal Shaking & Loading
Available in ETABS
6.4 Design Acceleration Spectrum
6.4.2 The design horizontal seismic coefficient A_h for a structure shall be determined by:
Available in ETABS
7.6.1 The design base shear V_B along any principal direction of a building shall be determined by:
$V_B = A_h W$
Available in ETABS
Available in ETABS
Available in ETABS
Table 7 Minimum Design Earthquake Horizontal Lateral Force for Buildings
(Clause 7.2.2)
Sl No. | Seismic Zone | ρ Percent
(1) | (2) | (3)
i) | II | 0.7
ii) | III | 1.1
iii) | IV | 1.6
iv) | V | 2.4
Available in ETABS
Tanmay Gupta


Anwesh Bhaduri (Presenting, annotating)
Maximum Story Drifts
Drift, Unitless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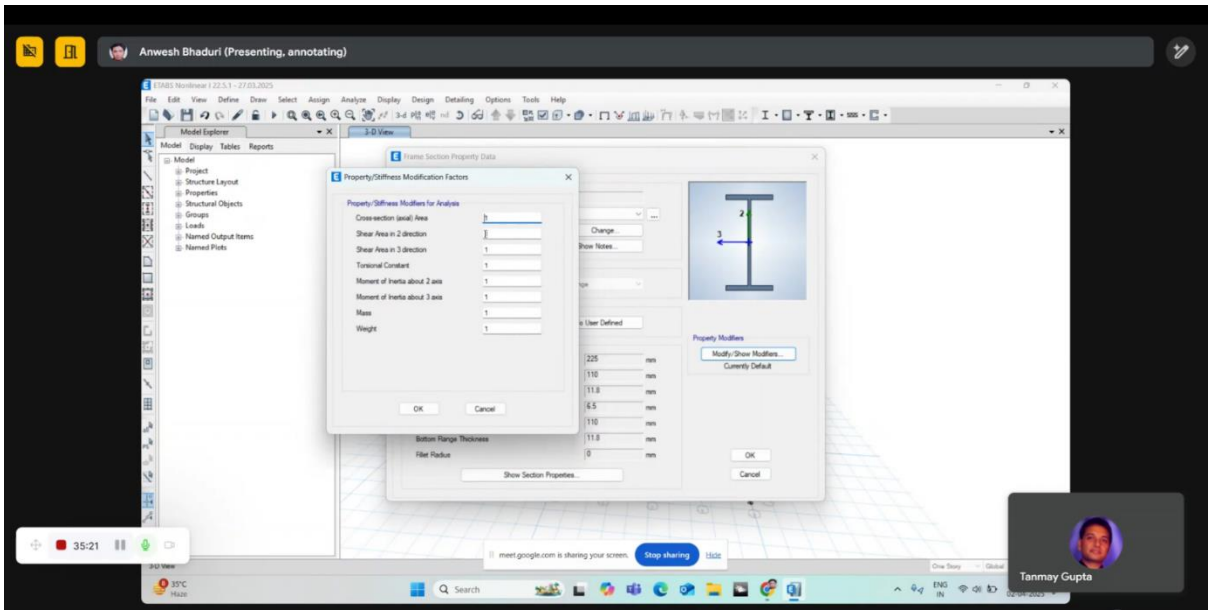
Tanmay Gupta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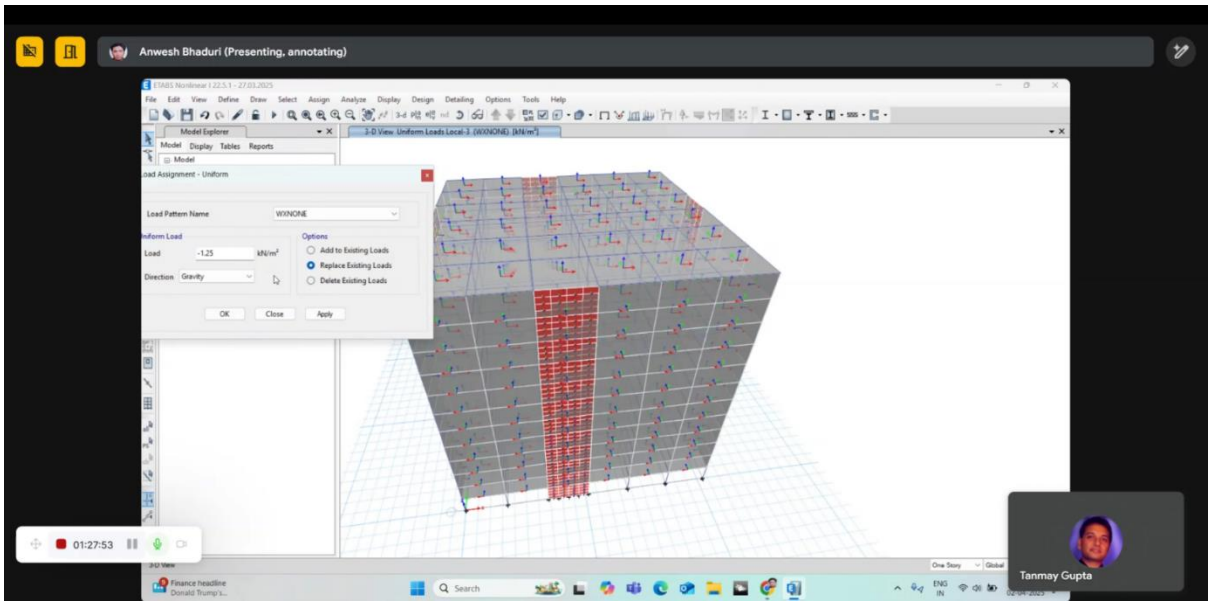
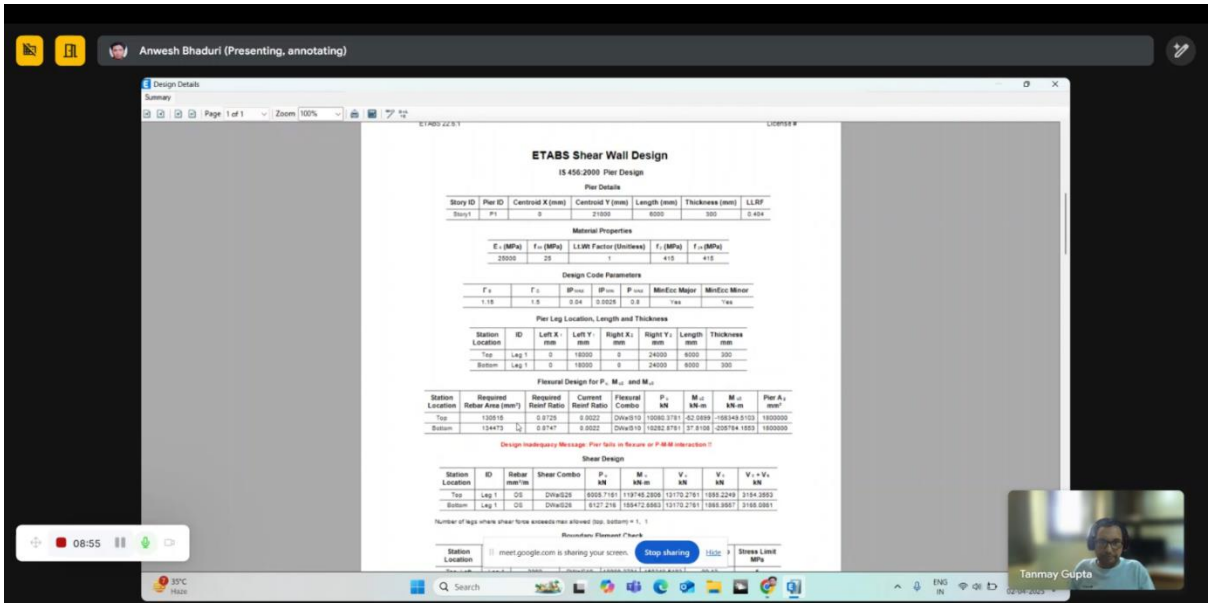
Tanmay Gupta


Anwesh Bhaduri (Presenting, annotating)
Load Assignment - Uniform
Load Pattern Name
WXNONE
Uniform Load
Load
-1.25
kN/m²
Direction
Gravity
Options
Add to Existing Loads
Replace Existing Loads
Delete Existing Loads
OK
Close
Apply
01:27:53
Tanmay Gupta


Anwesh Bhaduri (Presenting, annotating)
Design Details
Summary
ETABS Shear Wall Design
IS 456:2000 Pier Design
Pier Details
Material Properties
Design Code Parameters
Pier Leg Location, Length and Thickness
Flexural Design for P, M22 and M33
Shear Design
meet.google.com is sharing your screen.
Stop sharing
Hide
08:55
Tanmay Gupta