Ronit Tapiawala

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Education:

University of Illinois Chicago (UIC) Graduation: May 2026
Bachelor of Science in Civil Engineering | GPA: 3.29 / 4.00
Relevant Coursework: Reinforced Concrete Design, Structural Analysis, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Construction Equipment & Methods, Sustainable Construction

Certifications:

OSHA 10-Hour Construction Safety Certification Awarded: 2025
CMIT Level 1 (Construction Management & Inspection Training) Awarded: 2025

Skills and Proficiencies:

- **Software:** AutoCAD, Civil 3D, Revit, MicroStation, Abaqus CAE, GeoStudio, ArcGIS Pro, HCS
- **Analysis & Design:** Structural Analysis, FEA, Load Calculations, Foundation Design, Hydraulic Analysis, Traffic Engineering
- **Standards:** ASCE 7, ACI 318, AASHTO LRFD, IDOT Standards, ASD & LRFD Design Methods
- **Construction:** Cost Estimation, Quantity Takeoffs, Construction Phasing, Site Coordination, Safety Compliance
- **General:** Technical Report Writing, Microsoft Excel / Word / PowerPoint

Engineering Projects:

Central Park Avenue Bridge Replacement – Capstone Design UIC, Spring 2026
Team Lead
- Led a full multi-discipline bridge redesign for a Chicago city street — structural, geotechnical, and hydraulic scopes in one integrated package.
- Produced structural drawings, traffic management/MOT plans, and constructability review per IDOT and AASHTO LRFD standards.
- Developed construction phasing plan and cost estimate with quantity takeoffs for concrete, steel, and earthwork.

Structural Roof System Design UIC
- Calculated dead, live, and wind loads per ASCE 7; sized beams, open-web joists, and metal decking using ASD and LRFD methods.
- Delivered complete member schedules, connection details, and load diagrams as the final design package.

Finite Element Analysis – Gusset Plate with Bolt Holes UIC
- Modeled a steel gusset plate under tensile loading in Abaqus CAE — refined mesh at bolt holes to accurately capture stress concentrations.
- Validated FEA results against hand calculations and documented full methodology in a formal technical report.

Work Experience:

Aakash Association May 2022 – Jun 2022
Site Supervisor | Residential Construction
- Managed day-to-day operations across multiple active residential construction sites simultaneously — crew scheduling, material procurement, and equipment coordination.
- Conducted daily safety walkthroughs and toolbox talks; maintained incident logs and held a clean safety record across all concurrent sites.
- Verified material deliveries against project specs and maintained procurement records for cost control.

Math and Science Learning Center, UIC Sep 2023 – May 2026
Mathematics Learning Assistant
- Tutored students in calculus and applied mathematics — built the ability to break down complex technical problems and communicate solutions clearly, a skill directly applied in engineering report writing and design reviews.

New Student and Family Programs, UIC May 2024 – Aug 2024
Orientation Leader
- Coordinated a two-day program for 300+ incoming students — managing logistics, personnel, and real-time issues under a fixed schedule, directly parallel to coordinating multi-party construction project delivery.

Recreation and Wellbeing, UIC May 2025 – May 2026
Intramural Sports Official
- Made consistent, high-pressure decisions for 50+ participants per shift — developed the on-site judgment and conflict resolution skills essential for managing crews and resolving field issues in construction.