# Bob Builder

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## Highlight of Qualifications

- Completed year 3 in McMaster University's Civil Engineering Co-op program and eligible for a 4-16 month co-op as of May 2027.
- Worked on real-world projects in transportation, water systems, and building design. Helped create reports, drawings, and design plans with teams of engineers and students.
- Strong design and software skills developed by using programs like AutoCAD, Revit, SAP2000, ETAP, and EPANET to make accurate and practical designs. Focused on safety, cost savings, and getting things built right.
- Strong collaborator proven by working closely with different teams on internships and student projects. Helped build a 20-foot steel bridge and represented McMaster in national competitions

## Education

**Bachelor of Engineering Co-op (BEng)** | *Civil Engineering* **2024 – 2029**

*McMaster University*

## Work Experience

**Transportation Engineering Intern** | *GO Transit, Toronto ON* **May - Aug 2026**

- Delivered 15+ electrical and control system design deliverables (e.g., P&IDs, single-line diagrams, loop diagrams) by collaborating with multidisciplinary teams across global projects
- Improved design accuracy by 20% through detailed voltage drop, grounding, and lighting calculations using ETAP and EasyPower
- Streamlined procurement processes by preparing 10+ technical bid evaluations and equipment specifications, accelerating vendor selection
- Contributed to inspections and design reviews, ensuring compliance with CSA, NEC, and IEC standards

**Structural Engineering Intern** | *ABC Engineering Firm, Toronto ON* **May – Aug 2025**

- Assisted in the structural analysis and design of residential buildings using SAP2000 and ETABS
- Created detailed construction drawings and 3D models in AutoCAD and Revit
- Gained hands-on experience with load calculations, material selection, and technical report writing

**Landscaping Apprenticeship** | *ABC Engineering Firm, Toronto ON* **May – Aug 2024**

- Maintained residential and commercial properties by performing lawn care, planting, mulching, and hardscaping tasks, ensuring neat and professional appearances across 15+ client sites
- Operated and maintained landscaping equipment including mowers, trimmers, and power tools, ensuring safe usage and completing daily tasks on schedule
- Communicated effectively with clients and team members to understand landscaping needs, prioritize tasks, and complete projects ahead of schedule
- Assisted in landscape design planning by suggesting layout ideas and plant selections suited to local climate and soil conditions

## Projects

**Systems Engineering Project** | *Municipal Hydraulics Final Group Project* **Mar - Apr 2027**

- Designed and analyzed a complete municipal water and wastewater system for a hypothetical urban development, optimizing pipe network layout and pump selection to reduce energy losses by 15%
- Applied EPANET to simulate water distribution networks and assess pressure zones, ensuring compliance with municipal design standards
- Collaborated in a team of 4 to deliver a technical report and oral presentation, demonstrating proficiency in hydraulic modeling and communication

**Transportation Impact Study Project** | *Transportation Engineering Group Project* **Nov – Dec 2026**

- Delivered a comprehensive transportation impact study for a proposed urban development, identifying potential congestion points and recommending signal timing adjustments to improve intersection Level of Service (LOS) by up to 20%
- Applied traffic flow theory, demand forecasting, and intersection capacity analysis using methodologies from the Canadian Capacity Guide

## Extracurricular Activities

**Vice President of Events** | *Institute of Transportation Engineers McMaster Chapter* **Oct 2026 – Present**

- Increased attendance by 40% by organizing 8+ technical events on transportation engineering topics, including software workshops and infrastructure site tours
- Secured 3 new industry partnerships by coordinating with firms and agencies to deliver high-impact presentations and networking opportunities, demonstrating communication, management and teamwork skills in professional settings
- Reduced planning time through streamlined logistics and budget tracking, ensuring consistent, technically focused programming

**Team Member** | *McMaster University Steel Bridge Team* **Sept 2025 – Present**

- Utilized AutoCAD, SolidWorks, and SAP2000 to model structural components and perform finite element analysis, achieving a 15% reduction in deflection under load
- Participated in hands-on fabrication using MIG welding, cutting, and drilling, ensuring compliance with CSA S16 design standards and safety protocols
- Contributed to project management, budgeting, and logistics, helping the team meet all deliverables ahead of the competition deadline
- Represented McMaster University at the 2025 CSCE National Finals, competing against top engineering schools across Canada in timed construction and load testing events



## Skills

**Software:** MATLAB, Simulink, ETAP, EasyPower, SAP2000, Autodesk Inventor & AutoCAD, ANSYS, LabVIEW, SolidWorks, Fusion 360, Revit, Python, Excel, MS Office, GSuite

**Certifications:** CPR & Standard First-Aid Certification, Completed WHMIS training**, G-class driver's license**