

KRISTEN MACHINA

3B Civil Engineering
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SKILLS

Technical

- Familiar with asphalt, concrete, and soil testing procedures and standards
- Knowledgeable with MTO roadside design standards and guidelines
- Exposure to building and property inspection, project management, and field surveying methods
- Strong data analysis and technical writing skills

Computer

- Skilled with AutoCAD, Microsoft Office (Word, Excel, PowerPoint), Photoshop
- Familiar with, MATLAB, HTML, CSS
- Exposure to Synchro, SAP2000, 3ds Max, JavaScript

Personal

- Demonstrated leadership capabilities through coaching and captaining experiences
- Strong organization and time management skills
- Independent, creative, quick learner

EDUCATION

University of Waterloo

Candidate for Bachelor of Applied Science, Civil Engineering

Waterloo, ON

Sep. 2011 – Apr. 2016

Transport Principles and Applications (CIVE 342)

- Determined optimal geometric and pavement design for a highway based on a set of design criteria
- Introduced to queueing theory and demand models

Geotechnical Engineering 1 (CIVE 353)

- Determined soil characteristics through lab testing (compaction, consolidation, direct shear, permeability)
- Analysed effective stresses on soils in order to determine failure criteria

Structures and Properties of Materials (CIVE 265)

- Tested slump, air content, and tensile and compressive strength of different concrete mix designs
- Performed tensile strength testing on a variety of industrial polymers and steels

WORK EXPERIENCE

Amico Infrastructures

Student Project Manager/Field Assistant

Windsor, ON

May – Aug. 2014

- Assisted project manager with field and office duties on Rt. Hon. Herb Gray Parkway
- Collected and tracked foreman paperwork (timesheets, trucking and stone tickets, safety documents)
- Managed quality inspection documents and Time and Materials documents for work done outside contract

Ontario Ministry of Transportation

Road Design Engineering Assistant

St. Catharines, ON

Sep. – Dec. 2013

- Updated drawings for roadside barrier installations (temporary concrete barrier, cable guide rail)
- Updated drawings for MTO Bikeway Design Manual and AODA compliant Detectable Warning Systems
- Carried out quantity and cost estimates for safety improvement alternatives

Ontario Ministry of Transportation*Road Maintenance Engineering Assistant*

St. Catharines, ON

Jan. – Apr. 2013

- Assisted in writing a paper on the effects of climate change on winter road maintenance
- Analyzed Ontario climate data for use in winter maintenance database
- Assisted in organizing the 2nd annual MTO Pavement Markings Workshop

LVM Inc.*Laboratory Technician*

Toronto, ON

May – Aug. 2012

- Performed QA testing on various materials, including hot mix asphalt, asphalt cement and asphalt emulsion
- Responsible for receiving, preparing and testing of samples according to standard test procedures and project requirements (ASTM, OPSS, AASHTO)

International Erosion Control Systems*Drafting Technician*

LaSalle, ON

2008-2011

- Prepared AutoCAD drawings of concrete erosion control blocks for various projects
- Exposed to basic erosion control measures

D.W. Machina Civil and Environmental Consulting Services*Field Technician*

LaSalle, ON

Aug. 2011

- Assisted with building and property inspection on Phase I environmental site assessment
- Prepared site report using field notes

VOLUNTEER EXPERIENCE

South County Volleyball Club Developmental Program*Assistant Coach*

Windsor, ON

Oct. 2010 – Aug. 2011

- Aided students ages 7 to 14 in basic skills and strategies of volleyball
- Assisted head coach with skill demonstrations and education, ran warm-up activities, facilitated gameplay situations

AWARDS AND CERTIFICATIONS

- Windsor-Essex Chapter Professional Engineers Ontario Scholarship, Nov. 2011
- President's Scholarship, University of Waterloo, August 2011
- Queen Elizabeth II Aiming For The Top Scholarship, Sep. 2011
- Ontario Scholar Award, June 2011
- Ontario French Immersion Certificate, Jun. 2011
- Sandwich Secondary School Honour Roll, 2008-2011

ACTIVITIES AND INTERESTS

Volleyball

- Captain of Civil Engineering class team, 2012 – present
- High School Team member, Nov. 2007 – Mar. 2011

Art

- In the process of writing and drawing an adventure/fantasy webcomic
- Developed comic hosting website using HTML and CSS

Math Club

- Participated in CEMC sponsored contests, Sep. 2007 – Dec. 2010
- Achieved top 25% in Fermat Contest, Feb. 2010