To Whom It May Concern:

I am writing to apply for the New Graduates in Mechanical Engineering – Transportation position at SNC-Lavalin. As a new grad in mechanical engineering, I have always been intrigued by all the large-scale engineering work done by SNC-Lavalin in my hometown of Montréal such as the Champlain Bridge and its direct impact on our transportation infrastructure. Having always been interested in public transportation systems, I would love the opportunity to work under the guidance of renowned engineers and add value to your team in projects such as the REM. I thoroughly believe in my ability to contribute as a mechanical engineer with my well-rounded skillset and industry experience.

As a motivated problem solver and industrious learner, I have achieved proficiency in the fields of mechanical design and analysis. During my internship at Alphacasting, I have designed an industrial ABB robot capable of cutting steel gates and runners from investment casting molds. My tasks consisted of managing the project as well as individually drafting and designing the robotic cell. Also, I created several cutting routine prototypes using simulation software and worked with many departments and people to ensure we met all the technical and manufacturing specifications. In the end, I delivered a highly automized and safe solution and helped save thousands of operator hours. During my internship in the continuous improvement department at Groupe AGF, I delivered a detailed report on streamlining workflows and reducing project costs. This holistic report consisted of an analysis of the entire supply chain to reduce operating overhead, wasted time and effort. Dealing with EPCM contracts, I investigated bottlenecks throughout every department and offered solutions to reduce shipping errors and delays that amounted hundreds of thousands of dollars’ worth of waste.

As a self-starter, I also took on several projects within the academic setting where I have developed the necessary interpersonal skills to flourish in a dynamic work environment. A team of students and I have worked closely with a client from the Montreal Neurological Institute and Hospital to design and manufacture a head stabilizer for new 7-Tesla MRI machines. I successfully helped design a process to model patient’s heads and manufacture a custom head stabilizer using 3D printing technology. This streamlined and inexpensive process could then be easily performed by technicians to use in the novel 7-Tesla MRI machines. Additionally, I worked with a team of students and the City of Laval to provide an in-depth analysis on the retrofitting of an industrial warehouse into a multipurpose municipal building. I contributed visiting the site to analyze current building envelope and HVAC systems and performing heat transfer calculations to offer a proposal that is efficient and satisfies building code. The proposed building envelope would yield $92,512 of annual savings with a payback period of only 3.5 years and the HVAC system would yield $50,000 of annual savings with an estimated payback period of 8 years.

Working at SNC-Lavalin requires excellent communication, teamwork, technical and problem solving skills that I have demonstrated during my stay at McGill University. I would very much welcome the occasion to speak with you and can be reached at 438-763-7770 or [shakil.chowdhury@mail.mcgill.ca](mailto:shakil.chowdhury@mail.mcgill.ca). Thank you for your consideration.