E.S. Fox Limited Commercial & Institutional Structural Projects



COMPANY CONTACT

E.S. Fox Limited — Structural Steel and Bridge Division www.esfox.com 905-354-3700 x1328

HEAD OFFICE

P.O. Box 1010 9127 Montrose Road

Niagara Falls, Ontario L2E 7J9 TELEPHONE: 905-354-3700 WEBSITE: www.esfox.com



E.S. Fox Limited Affiliations







Professional Engineers Ontario











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SERVICES

- ENGINEERING
- FABRICATION
- STRUCTURAL DESIGN
- STRUCTURAL STEEL ERECTION
- BRIDGE ERECTION
- MILLWRIGHTING | RIGGING
- BOILERMAKING
- MECHANICAL
- ELECTRICAL
- SHEET METAL
- REFRIGERATION
- HVAC



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E.S. Fox Limited

CORPORATE OVERVIEW

Since 1934, E.S. Fox Limited (ESFL) has set the standard for safety and quality in the fabrication and construction industry. ESFL is a privately owned, Canadian, multi-trade company, providing a single source for Industrial, Institutional, Commercial, and Power Generation projects. With over 3.0 million direct-hire man-hours last year, we self-perform Structural Steel Fabrication and Erection, Mechanical, Electrical, Sheet Metal, HVAC, Refrigeration, Millwright / Rigging, and Boiler Making.

The strength of our company stems from the vast experience of its people, the integration of a variety of skilled trades, and dedication to total control of construction through computerized planning and monitoring techniques.

ESFL has established a reputation for high quality workmanship, operational flexibility, efficiency, and timely project completion.

CONSTRUCTION CAPABILITIES

As a fully integrated, multi-trade construction firm, E.S. Fox Limited provides clients with a single source solution for their detail engineering, fabrication, construction, and maintenance needs. We are a solutions based provider that delivers a superior level of service from "cradle-to-grave," as we offer multi-trade, service oriented solutions for all your ICI and Power Generation projects.

FABRICATION CAPABILITIES

E.S. Fox Limited is proud to operate three state-of-the-art fabrication facilities across Ontario. At our main fabrication facility in Port Robinson, we offer over 83,000 square feet of production space. We work to the highest standards to produce Pipe Spools, Modules, Cryogenic Cold Boxes, and Pressure Vessels. With over 800 weld procedures and 40 quality certifications including nuclear, E.S. Fox Limited continues to be a leader and a symbol of Canadian strength and tradition in the supply of Quality Fabrication Services for the Industrial. Commercial. Institutional. and Power Generation markets for over eight decades.



E.S. Fox Limited Environmental Health and Safety

SAFETY CULTURE

At ESFL, employee safety, protection of the environment, and work quality are the main focus of our safety culture. Both management and employees work together in an effort to further advance knowledge of safety and incident prevention. Together we work to ensure a safe work environment for all. Our employees believe in the fundamental principle that safety is everyone's responsibility.

One of our core values is to "Prevent the Event." Incident prevention is the integral part of every job, with the safety and well-being of each individual the <u>number one priority</u>.

SAFETY PROGRAM KEY ELEMENTS

- Corporate Safety Manual
- Site Specific Safety Plans
- Orientation and Training
- Incident Investigation
- Lessons Learned Bulletins
- Job Safety Analysis
- Workplace Inspections
- Senior Management Review

- Safety First Attitude
- Trending and Analysis
- Setting Objectives and Targets
- Safety Workshops
- Mentoring Program
- J.H.S.C.
- Strong Communication
- Accountable Supervision
- Safety Meetings







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E.S. Fox Limited

Quality Assurance



ISO

- ISO 9001:2015
- ISO 14001
- ISO 18001

CWB

Structural Steel CWB W47.1 Div. 1

Structural Aluminum CWB W47.2 Div. 1

CSA

- CSA N285.0 Nuclear Class 1,2,3, & 4 Parts, Components & Support (Shop & Field)
- CSA N285.0 Nuclear Material Supply Ferrous and Non-Ferrous (3 Locations)
- CSA N286-12 Nuclear
- CSA N299 1 2016
- CSA B51 Boiler, Pressure Vessels & Pressure Piping & Repairs (Shop & Field)
- CSA B51 Category A, B, C, E & H Type Welded Non-Welded Fittings (Shop & Field)
- CSA B51 Hot Tap & Line Stopping (Shop & Field)
- CSA Z7396. 1-17 Medical Gas Pipeline Systems Part 1

ASME

- National Board Registration for ASME Section III, R, VIII (Shop & Field)
- ASME Section III, Division 1: N, NPT, NA, NS
- ASME Section VIII, Division 1 & 2 Pressure Vessels (Shop & Field)
- ASME U, U2, S, & PP Stamps (Shop & Field)
- ASME U, UM Stamps: Edmonton Division (Shop & Field)
- ASME B31.1 Power Piping (Shop & Field)
- ASME B31.3 Process Piping (Shop & Field)
- ASME B31.5 Refrigeration Piping (Shop & Field)
- CSA B52 Mechanical Refrigeration Code









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E.S. Fox Limited

Locations & Facilities

Head Office: Niagara Falls, ON —240,000 square feet

Branch Location	Capabilities		Square Footage
Darlington, ON	Construction		
Hamilton, ON	Construction	Fabrication	3,000 sq. ft.
Kingston, ON	Construction	Fabrication	17,000 sq. ft.
Port Robinson, ON		Fabrication	83,000 sq. ft.
Sudbury, ON	Construction		
Thunder Bay, ON	Construction	Fabrication	5,000 sq. ft.
Tiverton (Kincardine), ON	Construction		
Vaughan (Toronto), ON	Construction		
Oshawa, ON	Construction		
		Total Fabrication	108,000 sq. ft.



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We provide the following construction services:

- Piping
- Electrical
- Structural Steel
- Ironworkers
- Millwrights
- Boiler Making
- Sheet Metal

- HVAC
- Instrumentation & Controls
- Operating Engineering
- Insulation
- Carpenters
- Labourers
- Refrigeration



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FABRICATION CAPABILITIES

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Modules and Vessels

- Process Modules and Equipment Skids
- Cryogenic Air Distillation Columns for: Oxygen, Nitrogen, and Argon
- Air Liquefaction / Separation
- Hydrogen Purification
- Catalyst Reclamation
- Oil / Water Purification

Pipe Fabrication

- Stand alone contracts & support of field projects and other fabrication projects
- Area of expertise is high alloy materials: Stainless Steel, Aluminum, Titanium, Chrome-Moly
- ◆ Carbon Steel up to 84" Diameter
- Victaulic—Roll Grooved Piping up to 48" Dia.
- Jacketed Pipe



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PORT ROBINSON SHIPPING

We are unique in that we have access to the Welland Canal at our Port Robinson facility. This includes our own loading docks, where we can ship oversized modules from up to 800 tons to any water accessible location in the world.

Transportation Access & Dock Facilities

- ◆ 1/2 mile from Highway 406 extension providing direct access to Queen Elizabeth Highway
- ◆ 1/4 mile from Canadian National Railroad line
- Heavy Barge Roll On/Roll Off Loading Dock extending into the Welland Ship Canal turning basin providing 10' draught and 400 ton capacity
- Heavy Lift Dock of 800 ton capacity, dock face 475 ft. draught 25 ft. The dock can accommodate maximum Seaway length vessels
- The site incorporates 5 acres of level, well compacted, crushed stone assembly area



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UNIQUE PROJECTS

ESFL is heavily involved in the fabrication and erection of standard industrial and commercial structural systems and bridge installations. We also take on a wide range of unique bridge projects that require a good measure of agility and ingenuity in order to meet owner's expectations. We are well-equipped and welcome opportunities to work on projects that involve:

- Fast track projects on logistically sensitive sites and locations
- High rise buildings
- Derrick work
- Work in occupied structures
- Existing building reinforcement
- Equipment installations
- Pre-engineered buildings
- Towers
- Architecturally Exposed Structural Steel (AESS)

- Hoisting utilizing helicopter lifts
- Falsework / shoring required for unique erection sequences
- Field welding of various metals including stainless steel
- Road closures for cranes
- BIM project requirements
- Demolition
- Tower crane work—install, jacking, removals
- Field touch-up painting services



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St. Lawrence Market North

Scope

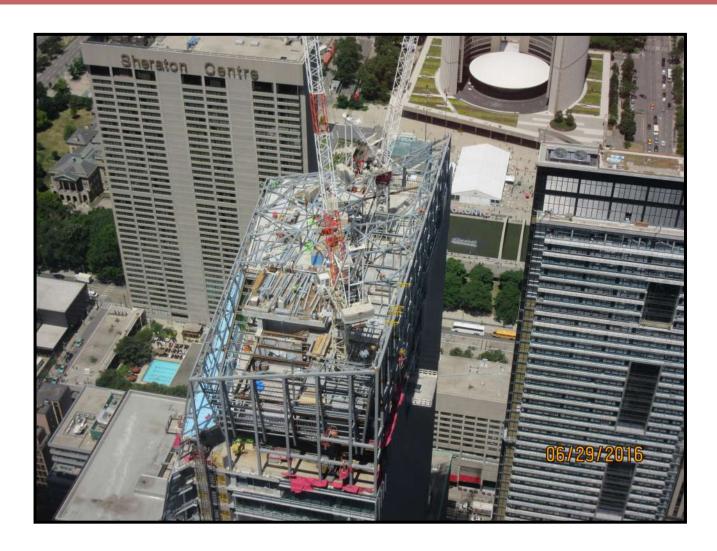
Supply & install of structural steel and steel deck for the new five story St. Lawrence Market North building in the heart of downtown Toronto. Scope including erection of roughly 1700 tons of structural steel, a large portion of which being AESS.

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100 Adelaide Street West

Scope

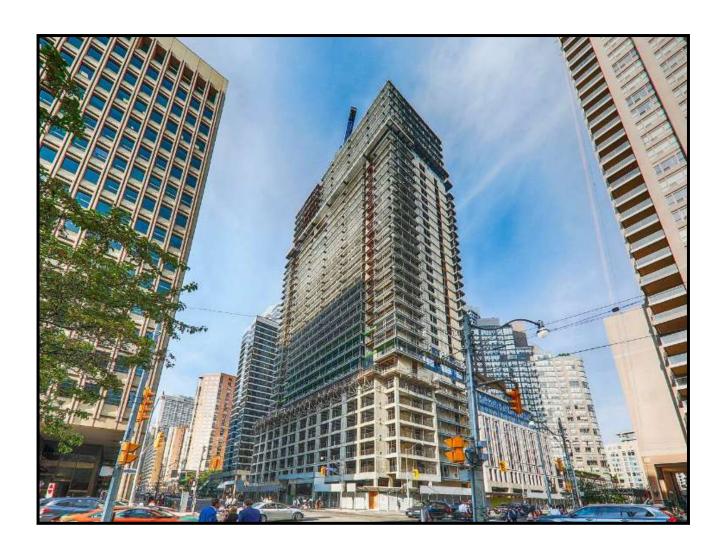
1200 tons of AESS steel for the penthouse starting at the 550' elevation. This project required a high level of co-ordination with all mechanical equipment installation, jumping and removing of tower cranes. The BMU's were used to complete the steel erection.

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The Britt Condo

Scope

This 13 level structural steel addition to the top of an existing 31 floor concrete condominium consisted of approximately 1,200 tons of structural steel. Located in downtown Toronto on Bay Street, this project involved an increased level of logistics planning due to the busy location with no laydown areas.

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Eglinton LRT Science Centre Station Building

Scope

Supply and install of structural steel for the new LRT Science Centre Station on Eglinton Street, Toronto. Scope includes erection of a seven bay bus terminal and two fully accessible entrances, the main entrance featuring a modern architectural AESS finish.

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Wilfrid Laurier University Global Innovation Exchange

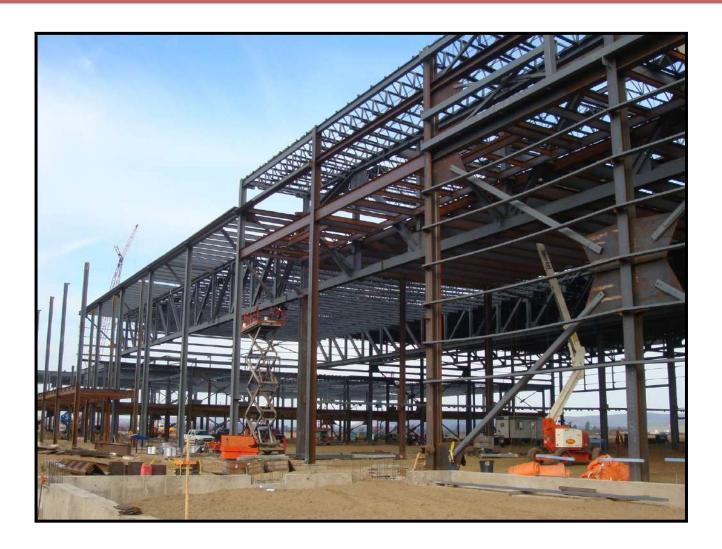
Scope

Supply and installation of structural steel for an additional building on the University campus. This was a very complex & unique structure containing AESS, a 115' long truss with 90' of it being cantilevered.

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CFB Petawawa Helicopter Hangar

Scope

Erection of approximately 7,500 tons of structural steel framing for a new helicopter hangar. Four cranes erected simultaneously to meet schedule deadlines.

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NHS Health Care Complex & Walker Family Cancer Centre

Scope

Erection of approximately 1,600 tons of structural steel framing for various portions of the new health care facility. To meet a very tight schedule, E.S. Fox Limited erected around the clock with three tower cranes.

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McMaster Innovation Park

Scope

A complex project featuring two main areas of structural framing that were high bay, complete with crane runways and a mechanical penthouse consisting entirely of sloping surfaces. Also included was an architecturally exposed atrium area with two elliptical column sections supporting a "fin" feature at the top (60' long x 5' deep made of 2" thick plate).

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Table Rock House Upper Level

Scope

Construction and renovation to an existing and occupied building. Much of this steel was architectural in nature and tied into the existed building on several sides on various levels. New construction also included a pedestrian bridge, entrance building and clock tower for tourist access to the building.

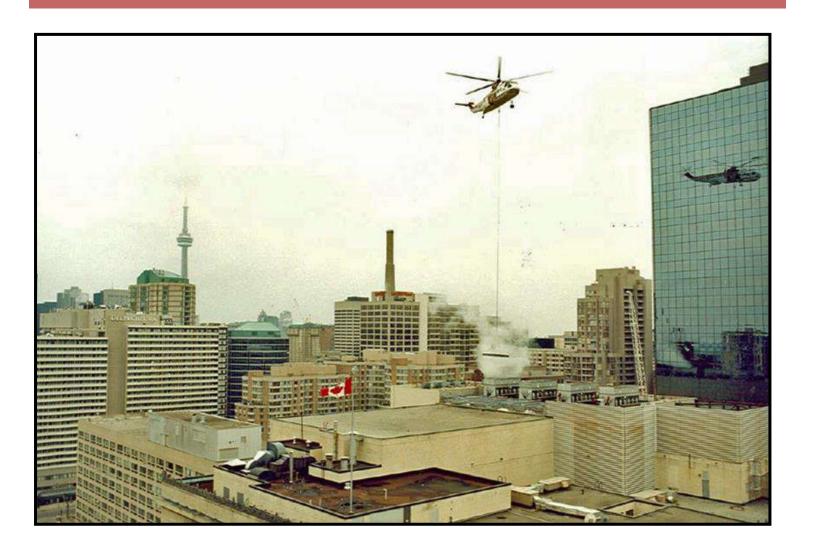
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PORT ROBINSON **HAMILTON** TORONTO THUNDER BAY **OSHAWA**



TD Bank College Park Modernization Upgrade

Scope

An 80' long, 12' deep truss was erected inside an existing plenum space to support new structural steel for mechanical and electrical equipment on the roof. In 5 hours over 130 pieces of steel were erected on the roof using a helicopter. Erection was done at an average of 2.5 minutes per lift.

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Embassy Suites Elevator Shaft

Scope

A new 48 storey (500' high, 150 ton) high-speed elevator shaft added to the existing hotel while in operation. No road disturbance or pedestrian traffic restrictions occurred during operation. A portable crane was erected on the roof of the hotel for hoisting purposes.

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