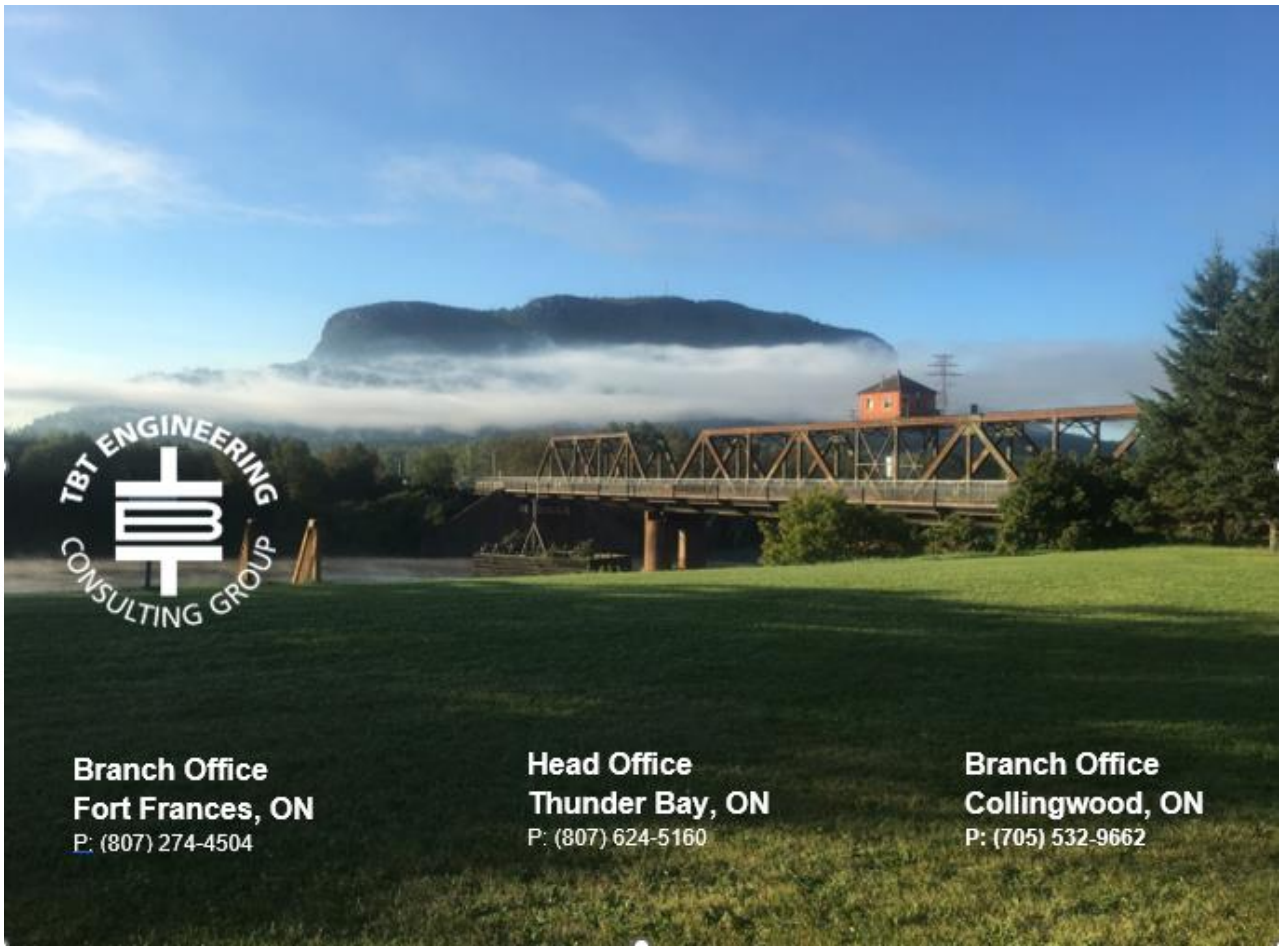
TBT ENGINEERING
CONSULTING GROUP

Statement of Qualifications

Building Engineering

Electrical Engineering – Mechanical Engineering – Structural Engineering



Company Overview

TBT Engineering Limited (TBTE) is a multidisciplinary engineering and consulting firm specializing in Building Sciences, Infrastructure Engineering, Material Engineering, and Earth and Environmental services.

TBTE holds Certificates of Authorization with the Professional Engineers of Ontario, Professional Geoscientist of Ontario, and Association of Ontario Land Surveyors. Our certified materials testing laboratory is qualified to provide services in accordance with CSA, CCIL, MTO-LS, OPSS, AASHTO, and ASTM. We are also members in good standing with associations including PEO, ACEC, CEO, CGWA, IHSA, AOLS, and PGO. We deliver highly personalized services to all clients through all phases of their projects. Our ability to consistently complete projects on time and within budget is demonstrated through high client satisfaction ratings and returning clients which has resulted in the longevity and success of TBTE.

TBTE is committed to supporting Indigenous groups and communities through engagement and meaningful participation in partnerships and Agreements with First Nation and Metis communities across Northern Ontario. TBTE is a Corporate Member of the Canadian Council for Aboriginal Business (CCAB) and the Anishnawbe Business Professional Association (ABPA).

Building Sciences Services and Engineering

TBTE provides complete building engineering services encompassing innovative and practical designs that meet and exceed the expectations of both clients and building users.

We have extensive experience in complex building construction and renovation projects ranging in scale and size from federal buildings, provincial buildings, schools, healthcare facilities, airports and car dealerships to name a few.

Utilizing local market knowledge and technical expertise, our multidisciplinary approach to building design consistently produces cost-effective, functional, sustainable, and inspired solutions. TBTE can design sustainably in net zero or LEED designated requirements.

TBTE has been involved in building condition assessments, building energy audits, studies, re-roofing and insulating, foundation and structure waterproofing, masonry façade rehabilitation, window replacement, whole building modeling and infrared investigations, providing solutions to extend or protect client assets for the long term.

Our clients come from a broad range of sectors, including First Nations, government, industrial, commercial, institutional, and residential. From creation to completion, we assist contractors, property owners, architects, and countless other clients in reaching the optimum potential of every project with which we are involved.

Core Competencies and Services

Building Engineering	Earth & Environmental	Materials Engineering	Infrastructure
Electrical Engineering ▶ Power & Lighting Systems ▶ Life Safety Systems ▶ Standby Generation ▶ Communications & Security ▶ Short Circuit/Arc Flash ▶ Renewable Energy Systems **Mechanical Engineering** ▶ HVAC ▶ Plumbing Systems ▶ Boiler Plants ▶ Chiller Plants ▶ Automated Building Controls ▶ Building Energy Modelling ▶ Bulk Fuel Storage Systems ▶ Grain Handling Facilities ▶ Compressed Air **Structural Engineering** ▶ New Build Design ▶ Retrofit & Addition Design ▶ Pre-Engineered Building Foundation Design ▶ Retaining Wall Design ▶ Building Condition Assessments	Geotechnical Engineering Pavement Engineering Environmental Services Geological Services	Laboratory Services Field Testing & Inspection Drilling Services	Contract Administration Highway & Roadway Engineering Municipal Engineering Legal Surveys Engineering Surveys
*Statement of Qualifications for remaining TBTE divisions are available upon request.			

Vice President & Electrical Manager of Building Engineering

Franco Gorenszach, P.Eng.

Franco is a Senior Electrical Engineer with over 23 years of managerial skills and knowledge. Franco possesses extensive experience working on manufacturing, commercial, and institutional projects. Franco specializes in high voltage installations and electrical system design for buildings and sites, including power distribution, interior and exterior lighting, motor controls, fire alarm, emergency/standby generation, security access/CCTV, communications systems, and photovoltaic systems. Franco has also achieved energy savings for a variety of private and public sector clients by conducting renewable energy business cases, photovoltaic studies, energy audits, and general lighting and electrical upgrades to meet customer savings goals.

New Building and Retrofit Design

Being a multi-discipline engineering company, we have in-house experts with skills required for large new building projects and renovation projects. Services offered include;

- Electrical Engineering
- Mechanical Engineering
- Structural Engineering
- Civil Engineering
- Geotechnical / Geological Engineering
- Environmental Assessments
- Legal Surveys
- Topographic Surveys
- Construction Surveys
- Materials Testing

Having all of the above mentioned disciplines in-house provide clients with the benefits of enhanced project collaboration which reduce engineering costs and schedule.

Recent Projects

École Elsie MacGill Public School

TBTE provided engineering services including mechanical, electrical, structural, civil, environmental, geotechnical, and legal survey services for the construction of a new elementary school building. The project involved a full scope of services from conception to 100% design documents, tendering phase, and contract administration. In addition, a separate tender for pile foundations was completed before the start of the general contract work to improve overall schedule.

Project Name:	École Elsie MacGill Public School		
Project Location:	130 Churchill Drive, Thunder Bay, ON P7C 1V3		
Value of Project:	$27M	**Project Delivery Method:**	Design-Bid-Build
Owners Name:	Lakehead District School Board	**Completion Date:**	2020
Description of the Project Scope:			
TBT Engineering was retained for sub-consultant engineering services from conception through to 100% design documents, tendering phase, and contract administration. The school is 8,400 sq m gross floor area (GFA), new build construction with Major Occupancy, Group A Division 2, Assembly Occupancy, two stories, Building Classification OBC 3.2.2.24, sprinklered, non-combustible. The school includes administration and staff areas, childcare facility, kindergarten, classrooms, servery, library, science classroom and an oversized gym complete with 2nd floor viewing gallery.			

FedEx Ground Package Terminal Design Build

TBTE was retained by Tom Jones Corporation to provide engineering services for a new pre-engineered FedEx Ground Terminal Building in Innova Park in Thunder Bay, ON. TBTE provided structural, mechanical, electrical, civil, geotechnical, topographic survey and materials testing. In addition to the deliverables, TBTE provided contract administration services throughout construction.

Project Name:	FedEx Distribution Facility		
Project Location:	Innova Business Park, Premier Way, Thunder Bay, ON		
Value of Project:	$4.7M	**Project Delivery Method:**	Design Build
Owners Name:	FedEx	**Completion Date:**	2020
Description of the Project Scope:			
TBT Engineering was retained for sub-consultant engineering services for a design build project with Tom Jones Corporation. The building is 1,127 sq m gross floor area (GFA), new build construction with Major Occupancy, Group F-2 and Group D, Building Classification OBC 3.2.2.24, sprinklered, non-combustible, one storey. The building includes distribution area and administration office area.			

Sioux North High School

TBTE provided engineering services including mechanical and electrical for the construction of a new secondary school building. The project involved a full scope of services from conception to 100% design documents, tendering phase, and contract administration.

Project Name:	Sioux North High School		
Project Location:	86 3rd Ave. N, Sioux Lookout, ON P8T 1A9		
Value of Project:	$24.08M	**Project Delivery Method:**	Design-Bid-Build
Owners Name:	Keewatin Patricia District School Board	**Completion Date:**	2019

Description of the Project Scope:

TBT Engineering was retained for sub-consultant engineering services from conception through to 100% design documents, tendering phase, and contract administration.

The school is 6,000 sq m gross floor area (GFA), new build construction with Major Occupancy, Group A Division 2, Assembly Occupancy, two stories, Building Classification OBC 3.2.2.24, sprinklered, non-combustible.

The school includes administration and staff areas, gymnasium, washroom and locker facilities, cafetorium/theater, storage, program rooms, and classrooms including general, shops, music, science, cosmetology, exercise, computer, life skills, library, visual arts, and food lab.

Two other leased spaces, Firefly and Confederation College, were included within the building. Confederation College required a simulated health lab within their space.

Matawa Education and Care Centre – Renovation

TBTE provided engineering services including mechanical, electrical, structural, civil, environmental, and geotechnical for the renovation of the Matawa Education and Care Centre building. The project involved a full scope of services from pre-design, costing, design development, detailed drawings and specifications for permit, tendering phase and contract administration.

A major component of the project was the upgrading of the entire mechanical system within the building. The mechanical upgrade included removing the existing steam boiler plant and the installation of new HVAC equipment.

Project Name:	Matawa Education and Care Centre		
Project Location:	200 Lillie St. N, Thunder Bay, ON P7C 5Y2		
Value of Project:	$11M	**Project Delivery Method:**	Design-Bid-Build
Owners Name:	Matawa	**Completion Date:**	2021
Description of the Project Scope:			
TBT Engineering was retained for sub-consultant engineering services from conception through to 100% design documents, tendering phase, and contract administration. Renovation to an existing building. The building is 13,413 sq m GFA, Major Occupancy, Group A Division 2 and Group C, Assembly Occupancy, two stories, Building Classification OBC 3.2.2.24, sprinklered, non-combustible. The renovations were performed in two phases due to funding constraints. Areas of renovation included basement, main floor and second floor. The following areas were developed: public entrances, administration and student support, cafeteria and commercial kitchen, learning spaces, cultural, spiritual and recreational areas, exterior cultural spaces including sweat lodge and healing centre, physical and mental health spaces, student accommodations.			

Electrical Engineering Services

Assistant Manager of Electrical Engineering: Justin Kierstead, P.Eng.

Justin is a results-oriented professional Electrical Engineer with nearly 15 years of design, troubleshooting, contract administration, and project management experience in commercial, institutional, and industrial settings in both the private and public sectors. Justin is a designer for new and retrofit projects spanning across Northwestern Ontario, including power distribution, interior/exterior lighting, motor and HVAC controls, fire alarm, fire suppression, emergency generation, security access/video cameras, voice/data communication systems, and photovoltaic systems.

Notably, Justin achieved an Electronics Engineering Technologist designation in only 18 months. Justin also achieved energy savings for a variety of commercial and institutional buildings through energy audits, lighting retrofits, and controls upgrades. Justin provided capital planning assessments that provided portfolio planning information and energy savings to reduce building operation and maintenance costs.

Electrical Engineering

TBTE provides complete electrical engineering solutions for commercial and institutional clients and facility owners. Our technical staff work primarily to plan, design, and consult with clients on versatile projects.

We have served a broad client portfolio that encompasses private corporations, First Nations, non-profit organizations, housing corporations, and public sector infrastructure, including federal, provincial, and municipal governments. Our projects have been successfully completed in hospitals, schools, clinics/labs, courthouses, police detachments, correctional facilities, office buildings, apartments, recreational centres, restaurants, and hotels. Other engineering services are also available through our partnerships with sub-consultant architects.

Commercial / Institutional Services:

- Electrical Power Distribution, Lighting and Grounding
- Life Safety and Fire Protection Systems
- Standby Generation
- Communications, Cabling and Security
- Short Circuit/Arc Flash
- Renewable Energy Systems
- Feasibility Studies, Reports and Costing
- Asset Condition Assessments
- Contract Administration
- Project Management

Power and lighting requirements are a core business of electrical consulting. We provide value engineering utilizing the latest codes and industry standards, and we take innovative approaches to system design and product selection. TBTE has extensive experience and understanding of the latest energy-efficient electrical products and applications, resulting in the lowest lifecycle costs and years of energy savings.

As a mandatory code requirement, the protection of the occupants in a building is carefully reviewed by our electrical technical staff. Often working with other consultants, a coordinated approach is taken to all life safety items, such as fire alarms, sprinklers, extinguishers, smoke and heat detection, monitoring, emergency lighting, way finding, and backup power.

Coordination of design and provision for IT, video, phone lines, and building security is essential to a modern building design. In collaboration with our clients, we review and confirm all aspects of the design and implementation to ensure a smooth transition at the time of occupancy.

Owners and operators of buildings must have plans for the life cycle costing of their assets. Condition assessments form a major part of maintenance planning and are often an important tool for planning future upgrades and replacement of major building components. Our asset condition assessments allow our clients to prioritize and properly plan for immediate action or future deferral of preventative maintenance and capital upgrades. As an important planning tool for clients, feasibility studies help to validate a project at the earliest stages. A proper option analysis is an important first step in advancing a project to the planning, design, and construction phases. Typically, several options are compared using cost, quality, availability, life cycle, and other factors during the evaluation. Our feasibility reports have a reputation for clear and concise analysis and costing, allowing our clients to make informed decisions and confidently plan for capital expenditures.

TBTE has assisted our clients with a wide variety of renewable energy options for their specific location and needs. We have successfully completed projects utilizing photovoltaics, solar thermal (heat recovery solar walls), and smart lighting (intelligent dimming ballast control and daylight harvesting). Smart metering and small wind energy studies and designs are also in our design portfolio.

Recent Projects

New Builds
- Ecole Elsie MacGill Public School, Thunder Bay, ON
- 3 Storey Office Building, Fort William First Nation, ON

Building Retrofits
- Atikokan High School, Atikokan, ON
- Matawa Education & Care Centre, Lillie St., Thunder Bay, ON

Lighting Upgrades
- Beaver Brae High School, Kenora, ON
- Multiple Schools, Superior Greenstone District School Board, ON

Video Surveillance
- Westgate High School, Thunder Bay, ON
- Service Canada Centre, Sudbury, ON

Communications
- IT Refresh, Board Wide, Superior Greenstone District School Board, ON
- St. Mary’s School, Fort Frances, ON

Electrical Studies
- Thunder Bay Correctional Centre, Electrical Distribution Study, ON
- Fort Frances Courthouse Electrical Service Study, Fort Frances, ON

Photovoltaic
- 40KW Ground Mount Dual Axis Trackers, MNR Armstrong, ON
- 20KW Roof Mounted, Lakehead University Kitchen, Thunder Bay, ON

Structural Engineering Services

Manager of Structural Engineering: Eric Mickelson, M.Eng., LEED AP

Eric Mickelson, M.Eng., LEED AP is TBTE's Manager of the Structural Engineering department at TBTE and possesses over 27 years of experience providing structural and civil engineering analysis and design, contract administration, project management and field inspection work for a variety of clients in Northwestern Ontario. Eric specializes in buildings, foundations, simply span bridgework and roofing. He has extensive experience working on manufacturing, commercial, municipal and institutional projects.

In addition to the above, Eric is a LEED AP (Leadership in Energy and Environmental Design Accredited Professional).

Assistant Manager of Structural Engineering: Erik Knudsen, P.Eng.

Erik is TBTE's Assistant Manager of the Structural Engineering Department with over 11 years of experience in the field of structural engineering. Erik's experience includes working on the design, inspection, investigation and modifications to residential, commercial, industrial and institutional structures. Erik Consistently performs detailed design with construction costs in mind to ensure that the most efficient and cost-effective structure is provided. Erik has been involved in the evaluation of a number of private and public structures such as detailed structural analysis to determine if they meet current Building Code requirements, envelope reviews and building condition assessments. His familiarity with typical construction practices helps to provide a practical design approach to ensure that construction of the design is efficient and cost effective.

Structural Engineering

Our structural engineering division is comprised of highly skilled professionals dedicated to providing quality services on a wide range of projects through the planning, investigation, design, and construction phases. Areas of design include single and multistorey buildings constructed out of timber, structural steel, concrete, masonry, and precast concrete for both new and renovated structures. Foundation design includes both shallow and deep foundations with experience in designing foundations in extremely poor soil conditions.

Coordination with the Geotechnical Engineer, whether it is TBTE's own Geotechnical Department or an outside company, is performed to ensure that the most effective and efficient foundation is designed. If both TBTE's Structural and Geotechnical Departments are involved in

a project, coordination between the two groups to determine the anticipated loading is performed to fine tune the geotechnical investigation to determine the most practical approach to the foundation design.

Renovations, retrofits, and additions to existing structures also commonly involve the Structural Department. This includes design of new openings in load bearing elements, removal of walls and the design of new supporting beams. When designing additions to existing structures great care is taken to ensure that the addition does not negatively impacting the existing structure, and if it is unavoidable reinforcement of the structure is designed. Coordination between TBTE's Mechanical, Electrical and Structural groups for renovations/retrofits is key to providing the required information to the contractor performing the work.

The Structural division performs a wide range of inspections and investigations to building issues as a result of envelope issues or damage caused by a number of various causes for both the private and public sector. These investigations are performed to assess the cause of the issues and provide repair and remediation options to resolve the issue causing the damages as well as provide recommendations for repair to the structure.

Our structural engineering team includes bridge engineers RAQS certified with the Ministry of Transportation Bridge for: Bridge Engineering – Biennial Inspection, Bridge Engineering – Design and Evaluation Single Span, and Bridge Engineering – Rehabilitation. Bridge engineering services include bridge and structural culvert inspection, evaluation, and design of single and multi-span bridges and culverts including replacements and rehabilitations.

Licensed to practice in Ontario, our team is always looking to take on the next challenge and is eager to work with new and existing clients. Our clientele includes school boards, First Nations communities, municipal and provincial governments, builders, developers, contractors, and several public and private organizations.

A summary of TBTE's most frequently requested structural engineering services includes:

Services Provided:
New Building Structural Design
Renovation/Retrofit and Additions to Existing Structures
Pre-Engineered Building Foundation Design
Shallow and Deep Foundation Design
Retaining Wall Design
Building Condition Assessment
Structural Building Code Review of Existing Buildings
Building Permit and Construction Drawings
Construction Specifications
Bridge and Structural Culvert Inspections (OSIM)
Bridge and Structural Culvert Evaluations in accordance with Canadian Highway Bridge Design Code

Recent Projects

New Builds

- Ecole Elsie MacGill Public School, Thunder Bay, ON
- LDML 3 Storey Office Building, Fort William First Nation, ON

- Salvation Army, Thunder Bay, ON
- Public Works Garage, Marathon, ON

Building Renovations/Retrofits
- Atikokan High School, Atikokan, ON
- Matawa Education & Care Centre, Lillie St., Thunder Bay, ON
- Nuna Logistics Renovation & Heavy Equipment Shop, Thunder Bay, ON
- Various Provincial & Federal Government Building Repairs/Replacements

Retaining Walls
- High Street Retaining Wall, Thunder Bay, ON
- Waste Transfer Station Wall, Bingwi Neyaashi Anishinaabek, ON

Building Code Reviews/Building Condition Assessments
- River Ridge Condominium, Kenora, ON
- OPG Silver Falls Generating Station Structural Review, Silver Falls, ON
- Kenora Courthouse Structural Review, Kenora, ON
- Public Works Garage Building BCA, Manitouwadge, ON

Bridge Rehabilitation & Design:
- Farm & Pardee Bridge Replacement, Neebing, ON
- Pedestrian Bridge Design, Thunder Bay, ON
- River Lake Access Pedestrian Bridge, Bingwi Neyaashi Anishinaabek, ON
- Turtle River & Little Turtle River Bridge, ON

Bridge Inspection/Evaluation:
- Resolute FP Bridge Evaluations, 2022
- MTO Bridge Inspections, 2022
- Shebandowan Bridge Inspection, Shebandowan, ON
- Township of Neebing Bridge Inspections, Neebing, ON

Mechanical Engineering

Manager of Mechanical Engineering: Dave Shalley, P.Eng., LEED AP

Dave possesses nearly 30 years of experience in commercial and institutional engineering projects, collaborating and innovating with exceptional leadership, coaching, and mentoring qualities. Dave has successfully completed 60-80 mechanical projects each year while maintaining a high level of quality and service delivery.

Dave manages staff and clients confidently, resulting in sustained working relationships with recurrent clients and a healthy working environment for staff. Dave has developed long term client relationships by completing energy studies, condition reports, and mechanical system assessments, which provide the client with a phased approach for mechanical system upgrades.

Dave was a major contributor to the energy reduction initiatives completed by the City of Thunder Bay. The reduced energy consumption in city-owned and managed buildings has

resulted in surplus funds available for further mechanical system upgrades. Dave was the lead engineer for new and retrofit mechanical systems at the Matawa Education Centre and Salvation Army Journey to Life Centre, with construction capital costs in excess of $5M.

Assistant Manager of Mechanical Engineering: Danny W. Fedun, C.Tech.

Danny has over 27 years of experience collaborating on a variety of projects in the Mechanical Engineering and fabrication fields, including the design of grain handling facilities, commercial HVAC systems, process and utility piping, bulk fuel-oil storage and distribution systems, weir gate and dam sites, project management, industrial wastewater systems, as well as many small specialty product designs. Danny focuses on cost effective design strategies and logistics to ensure that projects are completed on budget and on time. Danny has extensive experience collaborating as part of a design team and working in industrial, commercial, and residential environments. Danny also specializes in housing and construction projects in remote, as well as road access First Nations communities.

Mechanical Engineering

TBTE provides complete mechanical engineering solutions for commercial, industrial, and institutional clients and facility owners. Our technical staff work primarily to consult, plan, and design with clients on a variety of projects.

We have served a broad client portfolio that encompasses private corporations, First Nations, non-profit organizations, housing corporations, and public sector infrastructure, including federal, provincial, and municipal governments. Our projects have been successfully completed in hospitals, schools, clinics/labs, courts, police detachments, correctional facilities, diesel generating stations, bulk fuel storage facilities, office buildings, apartments, recreational centres, restaurants, and hotels. Other engineering services are also available through our partnerships with sub-consultant architects.

Commercial / Institutional Services:
• HVAC
• Plumbing Systems
• Boiler Plants
• Chiller Plants
• Automated Building Controls
• Building Energy Modelling
• Feasibility Studies, Reports and Costing
• Asset Condition Assessments
• Contract Administration
• Project Management

Heating, ventilating, and air conditioning systems within a facility are critical to a healthy workplace, and, when designed properly, will operate with the lowest possible cost to the owner over the life of the equipment. Similarly, building plumbing designs that fully consider the latest in water conservation technologies inevitably translate to significant operating costs savings over the life of the facility. Comfort, versatility, and energy efficiency are just some of the important considerations our engineers incorporate into our mechanical designs. Our engineers and designers carry out detailed heating and cooling load analysis utilizing computerized energy modeling software prior to making equipment selections. Right sizing equipment is just a first

step for ensuring good performance with minimal operating cost. TBTE can provide high quality mechanical HVAC and plumbing designs for new and existing facilities. Our design philosophies fully consider green building and sustainable design principles.

Specialty Services:

- Energy Audits
- Certified Commissioning
- Retro-Commissioning
- LEED Certification and Green Building Design

TBTE's mechanical division actively considers and promotes the efficient use of energy as a matter of policy in all of our designs. Our firm currently employs (2) LEED Accredited Professionals (Leadership in Energy and Environmental Design) who are actively involved in the LEED designs and certification process on several projects. We have provided innovative and unique green solutions in our engineering designs on both LEED and non-LEED certified buildings for over 20 years and are fully committed to helping our clients meet their energy reduction targets while minimizing the negative impact on the natural environment.

Industrial Services:

- Industrial Heating and Ventilation
- Material Handling
- Piping and Process Design
- Electrical Power Distribution, Protection and Lighting
- Feasibility Studies, Reports and Costing
- 3D AutoCAD Modelling

TBTE can incorporate the latest technological developments in the design of complete systems to heat and ventilate your facility. We have completed a vast selection of projects for paper mills, manufacturing facilities, grain elevators, mines, sawmills, and public utilities. Our expertise ranges from steam generators, boilers, and economizers to condensing systems, chillers, and heat/energy recovery units. These engineered systems provide increased safety, air quality compliance and comfort, resulting in greater productivity.

TBTE can provide conceptual designs and prototyping services utilizing the latest in 3D modeling software. Our 3D computer modeling capabilities provide an effective tool for visualization and option analysis that help our clients to understand and interpret sophisticated designs virtually before they're built. 3D software helps to connect each phase of the design process through a single digital model. The model allows our design team to test, innovate, and optimize 3D CAD designs efficiently and accurately, resulting in maximum value solutions for our clients. TBTE currently works with the latest versions of AutoCAD Inventor, REVIT, and Plant Design.

First Nations Services:

- Remote Fuel Stations
- Diesel Generating Stations
- Electrification Studies
- Asset Condition Assessments
- New Housing & Renovation Project Management

TBTE has developed many long-term working relationships with First Nations communities and tribal councils, a result of numerous years of successfully completed design and engineering projects. TBTE's designs respect the need for rugged simplicity in remote areas where access to maintenance contractors cannot always be relied on.

First Nations communities across Ontario continue to have expanding infrastructure requirements that are critical to basic community needs and economic development. TBTE recognizes these needs and has the resources and experience to provide high quality, low maintenance, and reliable mechanical and electrical infrastructure designs and retrofits. TBTE has completed well over one hundred successful projects with First Nations clients across Ontario and is firmly committed to maintaining our successful track record going forward.

Proper management, storage, and handling of liquid fuels in remote communities is critical to reliable equipment operation and reducing the risk of costly contamination to the natural environment. TBTE has extensive expertise in fuel system design and understands the unique challenges of fuel handling and storage in remote areas. Our design team carefully considers proper containment for spills, robust leak detection, safe fuel transfer areas and processes, abundant access for operator and maintenance personnel, and user-friendly web-based remote access controls. Based on hundreds of successfully completed fuel system projects, TBTE is uniquely qualified to upgrade existing systems and provide designs for new fuel storage and handling systems that have a reputation for extremely safe, low risk, and reliable long-term operation.

The generation of electrical energy for primary or backup power is the lifeblood of many remote communities that do not have access to the Ontario provincial electrical grid. TBTE can provide complete services as a prime consultant for new and retrofitted generating station projects right from feasibility study stages to final commissioning. Assessment of existing facilities is a crucial first step that considers life expectancy, efficiency, capacity, and expansion capabilities. Appropriate infrastructure, such as proposed site location, buildings, access, and distribution lines are factored into the study phase that weighs all options against life cycle costing. TBTE has the experience and can assemble a highly competent team to provide full engineering services which range from upgrades to new stations built to Hydro One Remote Communities' design standards.

Recent Projects

New Builds

- Ecole Elsie MacGill Public School, Thunder Bay, ON
- Grain Storage Expansion, Mission Terminals, Thunder Bay, ON
- Salvation Army, Journey to Life Centre, Thunder Bay, ON
- Sioux Lookout Highschool, Sioux Lookout, ON

Building Retrofits

- Atikokan High School, Atikokan, ON
- Matawa Education & Care Centre, Lillie St., Thunder Bay, ON
- Ecole Secondaire Chateau Jeunesse, Longlac, ON
- Lakehead University, Thunder Bay, ON

Fuel Systems
- Weenusk DGS Bulk Storage Upgrade, Weenusk, ON
- Webequie Hydro One DGS New Construction, Webequie, ON
- Fuel Storage & Dispensing (2 sites), City of Thunder Bay, Thunder Bay, ON.
- North Spirit Lake DGS Bulk Storage Upgrade, North Spirit

Studies & Assessments
- 30+ Building Condition Assessments for The City of Thunder Bay, Thunder Bay, ON
- Plumbing Studies for BGIS, Various Government Buildings, Regional
- Confederation College, Heat Rejection Study, Thunder Bay, ON
- BNA First Nation, Capital Planning Study & Master Plan, Sand Point First Nation, ON

Misc Projects
- Micro Filtered Water, Resolute FP, Thunder Bay, ON
- House Renovation & New Builds, Neskantaga First Nation, Lansdowne House, ON
- Conveyor Guarding, New Gold, Rainy River, ON