Experienced and innovative project solutions

INDUSTRIAL BUILDINGS DESIGN
Enhancing our client's mission

Stantec helps industrial organizations around the world improve their operations and achieve long-term success through process improvements and our facility designs. Our approach involves using space more effectively, reducing costs, and optimizing production flows. We create value for our clients through our unique differentiators:

- Speed to market
- Integrated project delivery
- Efficiency by design
- Global expertise, local delivery
Speed to market

Not just fast, but right. Fast track has evolved into schedule stacking, which pulls both design tasks and construction activities out of their normal sequence. This allows projects to complete faster but requires additional coordination to minimize the risks. Our integrated team approach ensures ongoing coordination and open communication with all stakeholders, while enabling our team to focus on the project’s critical path tasks. Our experience with ultra-fast track projects, and our ability to quickly engage additional team members enables Stantec to meet our client’s schedule needs on major projects and multi-site rollouts.

FedEx Ground - Rialto Hub Expansion
Rialto, California
No.1
INTEGRATED ARCHITECTURAL & ENGINEERING FIRM, BD&C 2019
Integrated project delivery

We assemble truly integrated design teams that actively involve all disciplines concurrently during design, versus a traditional approach to design sequencing. This helps us quickly and efficiently develop coordinate design solutions that meet the project’s requirements. This integrated approach can reduce design time and cost, and produces better project outcomes for our client’s. Our integrated project delivery services include:

- Architecture
- Civil Engineering
- Control Systems Integration
- Data Analytics/Operations Research/Optimization
- Discrete Event Simulation & Static Modelling
- Electrical Engineering
- Energy Analysis
- Energy Reduction & Sustainable Design
- Environmental Approvals, Planning, & Compliance Services
- Facility Design & Engineering
- Functional Programming & Planning
- Industrial Process Engineering & Equipment Layouts
- Industrial Safety System Design & Regulatory Compliance Certification
- Lean/Six Sigma/Continuous Improvement/Process Improvement/Operational Excellence
- Machine Design & Automation
- Machine Safety Risk Assessment
- Materials Management/Supply Chain/Logistics
- Mechanical Engineering
- Project & Program Management
- Site Selection & Feasibility Studies
- Structural Engineering
- Time & Motion Study/Predetermined Motion-Time Systems/Engineered Labour Standards
- Work Productivity and Optimization
- Water Treatment
- Work Methods/Human Factors Engineering/Ergonomics
Efficiency by design

We create value for our clients by gaining a deep understanding of their fundamental business needs and objectives and developing integrated solutions that achieve those goals. Combining our experience and understanding of our clients’ needs, we help them achieve high performance in safety, quality, and cost efficiency for industrial facilities.
Global expertise, local delivery

Whether selecting our integrated approach or complementing your current team with one of our specialized disciplines, we can provide integrated industrial architecture, engineering and management services throughout the entire project cycle – regardless of location. From upfront analysis and evaluations, to detailed design documents and start-up to commissioning, our team will combine our world class expertise with our local knowledge to help your project succeed.

22,000
staff globally

240+
office locations across North America

400
office locations globally
Focused on what matters

Our core values guide us in all that we do. The way we protect our people, our clients, and our communities reflects who we are, what we believe in, and how we do our work. At Stantec, we do what is right, which means our health, safety, and environmental programs are the foundations of our business.

Health and Safety
ISO 45001:2018 Certified

Quality Assurance and Control
ISO 9001:2015 Certified

Environmental Services
ISO 14001: 2018 Certified
Areas of expertise

With a global presence, Stantec serves a wide spectrum of public and private clients. We find smart and progressive solutions that keep you at the top of your industry. Key industrial sectors we serve include:

- Warehouse, Distribution & Logistics
- Operations, Maintenance & Storage
- Manufacturing
- Food & Beverage
- Data Centers
Sustainability

We believe sustainable design can defy expectations and propel our communities into the future. We're helping clients realize the full potential of their projects in terms of life cycle cost, energy efficiency, carbon reduction, and human health and wellness. Designs consider optimization of Building Automation System controls to allow connections to Smart Buildings.

Informed by data and grounded in the market, we design to support human resilience, health, and wellness while delivering value through life cycle cost analysis and reduction of energy and carbon use. Our integrated approach considers the following:

- **LEED®**: With over 850 LEED Accredited Professionals, we’ve worked with clients and communities to complete over 625 LEED® certified projects.

- **WELL Building Standard™**: Our WELL Accredited Professionals have been trained on the WELL rating system and can guide project teams through the process of achieving certification.

- **Passive House**: With a growing number of Certified Passive House Consultants, Stantec is committed to the international Passive House standard and supports clients pursuing passive building certification.

- **Fitwel**: Stantec is a Fitwel Affiliate Member and our commitment goes beyond our Champion status; we have Fitwel Ambassadors, the mark of professional excellence that allows our teams to lead projects through the Fitwel process.

- **Envision®**: Stantec has over 90 Envision Sustainability Professionals on our team across North America continues to increase, reflecting our ongoing commitment to sustainable infrastructure systems.
No.1

COMPLETED NORTH AMERICA’S FIRST ENVISION CERTIFIED PROJECT—CERTIFIED PLATINUM AND CANADA’S FIRST ZERO CARBON BUILDING - DESIGN
Warehouse, Distribution & Logistics

We design networks, facilities, processes, and systems that meet the increasing pace and complexity of distribution. Our simulations and designs help you to use space more efficiently and effectively, reduce costs, improve output, and increase productivity, service levels, shareholder value, and revenue.

We look at how to balance the operating requirements of a warehouse and distribution center with site development constraints, environmental issues, municipal approvals, neighborhood impacts, and regulatory requirements. Project types include:

- Warehouses
- Distribution Centers
- E-Commerce Fulfillment Centers
- Logistics Facilities
- Multi-Modal Facilities
- Expansions & Renovations
- Support Facilities
CONFIDENTIAL FULFILLMENT CENTER CAMPUS

Greater Detroit Area, Michigan

Located a short drive outside of downtown Detroit, a leading e-commerce retailer will occupy a distribution campus that will be home to nearly 4 million-square-feet of warehouse/logistics facilities and house at least 1,500 full- and part-time workers. This location will be the first site nationally to accommodate both a fulfillment center and a last-mile delivery station and will be the only second distribution facility of its type in Michigan to use robotics technology.

Stantec is providing integrated architectural, structural, mechanical, electrical, and plumbing engineering services to design both facilities beginning with the Owner’s concept template. This 5.5 level, roughly 3.7 million square-foot fulfillment center will include product storage and retrieval space, sortation process space, a main office, maintenance shop, shipping/receiving area, and remote break and washroom facilities. It will house state of the art warehousing and sortation equipment and will operate 24/7/365. The 200,000+ square-foot delivery station will house office spaces and a warehouse to support material handling equipment associated with the last mile delivery of e-commerce packages.

While under construction, Stantec will provide construction administration services, including design clarifications, submittal reviews, attendance at weekly construction meetings, and conducting monthly site visits to verify for the Owner that the work is being performed as indicated. As the Owner refines its requirements and standards on an ongoing basis, Stantec will make the appropriate changes to the design, and will work with the contractor to incorporate them into the project to remain on schedule.

CONFIDENTIAL DELIVERY STATION PROGRAM

Northeastern USA

Stantec is currently providing jurisdictional research, existing conditions surveys, as-built and topographic surveys, architectural and engineering design, permitting and construction administration services for 19 new and existing light industrial facilities for a leading global e-commerce retailer.

Facilities range in size from 25,000 square-feet to 500,000 square-feet and are being developed in three phases:

• Phase I, which includes due diligence, building programming, and developing a site plan based on the Owner’s initial concept and design proforma with the goal of fitting their requirements into the existing buildings and site (14 to 21-day schedule).
• Phase II, which involves permitting (including value engineering), and developing bid and construction documentation (28-day schedule).
• Phase III, which includes contract administration and final project close-out.

The challenging schedule to deliver these stations requires completion of the first two phases within 5 to 6 weeks. Since Stantec’s multi-disciplinary team encompasses the majority of services required for these projects in-house, staff have become flexible in accommodating drawing revisions to the contractor as quickly and efficiently as possible. Additionally, our team is proactive in finding innovative ways to reduce schedule timelines to allow the Owner to meet its Phase III deadlines.
FEDEX GROUND RIALTO HUB EXPANSION  
*Rialto, California*

To meet growing consumer demand, FedEx Ground decided to expand its Rialto facility as part of a nationwide network expansion to increase daily package capacity and enhance the speed and service capabilities across the FedEx Ground network. This $27 million facility was designed to handle in-bound and out-bound critical, time-sensitive packages that are transported to and from the sort facility via over-the-road trailer trucks.

Stantec provided design services for this 100,000-square-foot loading and unloading addition to an existing 400,000-square-foot distribution facility as well as a three-story office addition. The scope also included a maintenance garage expansion; a new stand-alone security/office building; upgraded structural, electrical, low voltage, and mechanical systems for the existing building; and existing drop off and pick up as well as additional parking areas and site circulation paths.

Humidity controls were an important aspect of the design necessary for maintaining proper operation of the offices and control rooms. Stantec coordinated directly with the power company to provide new electrical feeds for the additional loads required by the new construction and integrated their design with the existing fuel cell system and roof mounted solar system.

Throughout construction, Stantec reviewed and approved all submittals and RFIs, performed regular site visits, and worked closely with the contractor to deliver the project on time and on budget.

FRITO LAY NEW DISTRIBUTION CENTER  
*Surrey, British Columbia*

Stantec provided full engineering and architectural design services, LEED consulting services, and energy and daylight modeling services during construction for this new, award-winning distribution center. Leveraging many emerging best practices for sustainable buildings, the Distribution Center was awarded LEED® Silver certification.

The warehouse/distribution center features a high bay (9144mm clear) mono-slope roof with tilt-up concrete wall panels. The distribution center accommodates delivery van as well as tractor trailer vehicles with dock heights of 860mm and 1200mm respectively. Warehouse racking is a mixture of individual ‘pick’ type racking as well as pallet racking. The office area accommodates administrative and sales functions and includes meeting, training, and seminar spaces.

The site planning and design incorporated solutions to maximize circulation, access, and building configuration to accommodate present needs, while also finding ways to accommodate future expansion needs. The location, in combination with an electric vehicle delivery fleet, will significantly reduce Frito Lay’s contribution to GHG emissions.
Operations, Maintenance & Storage Facilities

We know the right operations facility plays a key role in supporting the business objectives and overall success of our clients. That’s why we take every step together—from functional planning and program development, to facility design and project execution—we find the right solutions to help you achieve service, reliability, safety, and quality.

Every facility has unique operational, building, site, community, and environmental obligations. We understand how each of these requirements contribute to the operational effectiveness of the industrial community and the health of your organization. Project types include:

- Municipal & Public Utility Operation Centers & Works Yards
- Industrial Operations & Maintenance Facilities
- Aircraft Hangar & Airside Maintenance
- Transit Facilities
SMUD EAST CAMPUS OPERATIONS CENTER
Sacramento, California

When the Sacramento Municipal Utility District (SMUD) outgrew its 3.6 hectare maintenance yard, the organization wanted a new facility that would not only accommodate future growth, but also set an example for energy efficient building design. The District turned to Stantec and Turner Construction to put together a design-build team and develop a new 33,603 square-meter east campus operations center on a 20 hectare site. The campus includes offices, equipment repair shops, maintenance and warehouse buildings, storage space, and parking for fleet and employee vehicles.

As one of the largest NetZero energy projects in North America, producing as much energy as it consumes, our approach to meeting the District’s net zero energy goals included design techniques for low energy heating, cooling, and lighting that reduces energy consumption by 40%. Less energy use means a lower upfront cost for solar panels, since fewer were required. Alternative energy sources provide the remaining energy with power grid back-up.

In total, the building has annual savings of over 3.7 million kilowatt hours in electricity—that's enough electricity to power 413 homes. The SMUD East Campus also contributed to two 2013 Consulting Engineers of Alberta Showcase awards for Stantec, including one for sustainability. And, as the icing on the energy-efficient, growth-accommodating cake, the project received LEED® Platinum Certification.

DEPARTMENT OF NATIONAL DEFENCE 443 SQUADRON HANGAR FACILITY
Patricia Bay, British Columbia

As technology evolves, newer solutions arrive and older ones are retired. Such is the case at the Canadian Department of National Defence’s 443 Maritime Helicopter Squadron in Patricia Bay, BC.

The six Sea King maritime helicopters that 443 Squadron currently supports were set to be replaced with nine new CH-148 Cyclones. During the transition to its new fleet, the base may be required to operate and provide maintenance support to both the Cyclone and the Sea King.

Working closely with the Department of National Defence, and with greater efficiency, effectiveness, and security in mind, our design consolidated all 443 Squadron operations into one facility. In keeping with the operational mandate, the facility is fully compliant with all building codes and airfield zoning regulations, and is designed to post-disaster standards.

The new 443 Squadron operations and maintenance hangar provides storage for five aircraft, two maintenance bays, an interior wash and maintenance bay, and maintenance shops. In addition to administrative and personnel support facilities, the hangar provides warehousing, shop, and work space for the in-service support contractor/aircraft supplier (Sikorsky). Exterior provisions include ramp areas, taxiway, rinse bay, and a refueling area, plus access to roadways, parking lots, and service.
WHITBY RAIL MAINTENANCE FACILITY
Whitby, Ontario

Serving the Greater Toronto Area region of more than six million people, GO Transit requires efficient, organized facility solutions to keep its service on-track. That’s why the design of its new, 28 hectare, Whitby Rail Maintenance Facility is so important to so many people.

Designed to achieve LEED® Gold certification, the facility consists of 46,451 square-meters of building space equipped to provide complete maintenance services to GO Transit’s existing rolling stock as well as future electric multiple unit trains. As lead design consultant, Stantec worked closely with Metrolinx, Infrastructure Ontario, Bird-Kiewit (the builder), and Honeywell (the facility manager), to develop a cost-effective design for the life of the facility that meets myriad functional and operational requirements.

Our role included design management, architectural, building engineering, landscape, civil, site, track, transportation, signal and yard control design services. As part of the design, we considered the current and future needs of the client; sufficient yard tracks were included for the daily storage and maintenance of up to 13, 12-car consists, and expandable to 22, 12-car consists in the future. Staff parking for up to 300 employees was also incorporated onto the site.

With several permitting agencies and approval authorities invested in the project, our team relied on our extensive experience, deep knowledge, strong relationships, and creative thinking to bring this facility to completion.

LOS ANGELES METRO DIVISION 13 BUS OPERATIONS & MAINTENANCE FACILITY
Los Angeles, California

The LA Metro Division 13 Bus Operations and Maintenance facility in downtown Los Angeles was the first ground-up bus operations and maintenance facility for Los Angeles County Metropolitan Transportation Authority in nearly 30 years.

The design is highly functional, sustainable, and efficient creating an energetic, restorative facility that provides a healthier work environment and is considered a sought-after location for employees.

Features such as photovoltaic system, 100% rainwater capture, green roof, naturally illuminated people spaces, vibrant and open interiors, and shared fitness studio all contribute to the triple bottom line principles of sustainability.

This facility that stands in stark contrast to the uninspired spaces that have become commonplace with most transit facilities. Division 13 is a sleek and modern addition to Downtown, and its environmental elements serve as a model for other buildings that celebrate both function and space.
Manufacturing

In today’s manufacturing environment, pressure on companies is increasing: reduce production costs, increase productivity, perform under shorter delivery times, and comply with evolving safety and environmental regulations within a limited budget. Our team of specialists take a hands-on approach to help our clients meet these demands head on.

We provide integrated architecture, engineering and management services throughout the entire project cycle. From upfront analysis and evaluations, detailed design documents and start-up to commissioning, our designs will increase output, apply automation and robotics, improve safety and ergonomic performance, and increase reliability and quality performance. Types of projects include:

• Automotive
• Aerospace
• Medical Equipment
• Cement & Aggregates
• Wood & Tissue
• Chemicals & Polymers
• Steel & Metals
• Consumer Products
**MERCEDES-BENZ FUEL CELL STACK MANUFACTURING CLEAN ROOM**  
_Burnaby, British Columbia_

Housed in the existing building of Ballard Power Systems, this $4.5 million state-of-the-art facility includes a clean room, a liquid injection molding room, fuel cell stack final assembly room, and locker room. The clean room was designed to ISO Class 8 equivalent standards and will be commissioned for manufacturing of fuel cell stacks used in Mercedes-Benz cars worldwide.

Bringing deep clean room facility design experience, our integrated team designed the structural, mechanical, and electrical systems. We brought in clean room specific cranes to avoid any contamination in the manufacturing operations area. And, three air-showers were designed to comply with sterile requirements at the employee entrances. Hyper fast tracked with an aggressive construction schedule, the project met all production timelines. Daily coordination between the design team, operational team in Germany, and contractor on-site was key to the project’s success. Fuel cell technology represents a viable transportation alternative that will provide people with a zero-local emission vehicle.

A commitment to innovation has guided the Daimler Benz organization since they helped pioneer the internal combustion engine. Hydrogen fuel cell technology is part of the future of mobility and Daimler Benz, together with Stantec, are working together to pioneer this evolution.

**CANADIAN AUTOPARTS TOYOTA INC. (CAPTIN) MANUFACTURING PLANT EXPANSION**  
_Delta, British Columbia_

Our integrated team of engineers and architects provided the schematic design, as well as scope, schedule and cost definition for the additional 5,600 square meter expansion to Toyota’s aluminum wheel manufacturing plant.

To meet the tight schedule, work was contracted in seven packages including preload, mechanical equipment, electrical equipment, and structural steel. Dealing with a steel structure on a restricted site area, our plan allowed steel erection and other construction to progress simultaneously. Built within limited space on the site, we were challenged with meeting local regulatory requirements for property setbacks and road allowances. Working with a tight design timeframe, we met with local authorities to discuss their requirements. We conducted a conceptual study to determine the maximum size of the expansion for the available property and developed a site that met the needs of Canadian Autoparts Toyota Inc. (CAPTIN) and the local community.

By implementing an effective work plan, and collaborating with CAPTIN and local representatives, we were successful in delivering a fully operational facility. The new expansion is increasing production capacity by 33 percent, resulting in the wheel rim production increase from 6,000 to 9,000 per day.
TISSUE MACHINE REPLACEMENT, IRVING TISSUE
New Brunswick

Stantec worked with the client from the conceptual phase through to detailed design, construction, start-up and commissioning for installation of its new 5,000 FPM crescent former tissue machine.

This project replaced an existing 128 inch trim single layer headbox Fourdrinier tissue machine with a current Metso Crescent Former with a 2-ply headbox, felt section, Yankee hood air system reel and unwind stands. As part of the conceptual phase, Stantec prepared detailed cost estimates.

We also provided dynamic process modeling, equipment sizing and selection, 3D modeling for virtual walkthroughs, construction planning and progress reporting. Engineering was also provided for balance of plant services to support the changes to the mill resulting from the new machine. Meeting a 30-day turnaround, the project was completed on schedule and on budget while exceeding quality and production targets.

BOEING MURRAY PARK BUILDING EXPANSION
Winnipeg, Manitoba

This LEED® Silver certified project included the design of a new single storey 155,400 square-foot building addition of at the west end of an existing Boeing Fabrication Plant. The expansion was comprised of open floor area industrial fabrication space complimented by a large staff amenity space and office mezzanine. Programmatic spaces included a clean room, staging areas, finishing areas, autoclaves, and shipping and receiving. A new 700 stall parking space and access route, complete with new guard house, supports the building expansion along with an upgrade of an existing parking lot and site access.

We provided a variety of multi-disciplinary services to Boeing for this project including program and project management, environmental services, geotechnical engineering and materials testing, civil engineering, architectural and interior design, structural engineering, mechanical engineering, electrical engineering, and sustainable building services. We also facilitated numerous additional studies at the facility including compliance to building code, building service upgrades, and future building expansion studies.
4,000+
INDUSTRIAL FOOD AND BEVERAGE PROJECTS COMPLETED ACROSS NORTH AMERICA IN THE PAST FIVE YEARS
We recognize the unique challenges faced by food and beverage manufacturers. Quality, throughput, yield, and time-to-market requirements are key factors that drive this unique market. For decades Stantec has provided award-winning, integrated design and engineering services to the food and beverage manufacturing industry. From frozen to confectionary, meat and fish to dairy, beverages to potatoes, we’ve been able to remain an industry leader by listening to our clients and working as a single team focused on collaboration, creativity, and vision.

While the industry is always changing, with new technologies, trends, and regulations appearing almost overnight, our focus remains the same: helping clients realize better cost, schedule, and safety performance. Our experts tune-in to what our clients tell us so we truly understand their priorities and objectives. Project types include:

- Production Facilities
- Distribution Facilities
- Refrigeration Plants
- Plant Upgrades & Expansions
- Control Room Upgrades
- Wastewater Treatment Plant Upgrades
FRITO LAY DISTRIBUTION CENTER
Rochester, New York

Stantec provided architecture and engineering services in association with William McDonough & Partners for the design of a 40,900 square-foot LEED® 2.1 Gold certified food distribution warehouse and office facility.

The facility incorporates various sustainable strategies to achieve material, resource, and energy conservation. The design process also addressed the client’s existing facility standards with assessment of cost/benefit and system paybacks.

The center is Frito-Lay’s first exclusively green environmentally friendly building and serves as a model of resource conservation through innovations in renewable energy, alternate lighting, energy efficiency standards, and environmentally intelligent choices.

INDUSTRIAL INSECT PROTEIN PRODUCTION FACILITY
Balzac, Alberta

Stantec provided integrated architectural and engineering services for this $32 million industrial insect protein production facility in Balzac, Alberta. The project includes the design and construction of an insect protein production facility within an existing 166,000 square-foot industrial building.

Inside the facility, the client will be raising black soldier fly larvae, an insect with a high protein and fat content that can be processed into animal feed. According to client, bugs are ‘the future of food’.

This facility has four distinct process areas which each have specific equipment, processes, and operational needs. The insect rearing area is the largest and most custom area; it is made up of a number of automated crane systems to handle large, stacked trays and a specialty HVAC system to maintain the proper climate for the insect population. A large amount of specialized process equipment was required for this facility, which Stantec worked closely with the client to validate during the design phase.
Rogers Foods has been milling quality flour and cereal products from Canadian grain for over 60 years. Production demand has overfilled the capacity of the existing mill in Chilliwack, BC, prompting the Flour Mill Expansion Project.

Stantec provided preliminary engineering, concept design, and overall project management for the construction of mill. The project included two concrete slip form structures: one for grain storage silos, and one for the five-story mill that has the capacity of producing a wide-variety of flour products. The project expanded the mill by means of constructing a new mill building immediately adjacent and connecting to the existing structure. This allows personnel to operate both areas simultaneously and permits trucks exiting the expansion to use the existing scale. Through incorporation of the latest automation and milling technology along with the installation of a series of steel silos and new double load-out bays, the Flour Mill’s production capacity is able to increase by 80%, which adds an additional 250 metric tons of wheat milling capacity per day.

Stantec was retained to provide multi-disciplinary architectural and engineering services to plan, coordinate, and implement plant upgrades to support the manufacturing of food grade bags for wine, juice and other food products. The expansion allowed for the consolidation of all food grade processing operations into a single facility, optimizing parts flow and material handling, and provided significant cost reductions.

This $12 million expansion included converting 45,000 square-foot of existing warehouse space into a LEED® certified, climate controlled, IMP food grade manufacturing space. Extensive site and infrastructure upgrades were added including a solar parking cover, enhanced process cooling for new injection molding equipment, a 7.5 ton bridge crane, and a major electrical power upgrade to handle additional equipment loads.

The plant upgrade also required the addition of 8,000 square-feet of new office space, with break rooms, offices, a quality control laboratory and many ADA improvements. A plant wide BMS, building management system was added to integrate and optimize the process and facility cooling system.
Data Centers

Mission critical telecommunication, control and data center facilities need a well thought out strategy for flexibility, scalability, resiliency and redundancy. This strategy should incorporate several key principles in the site location, building selection, floor layout, electrical system design, mechanical design, and the concept of modularity that enables such facilities to change and adapt as needed.

Our primary focus is always to establish meaningful relationships with the users, guiding them to functional solutions that foresee future trends in telecommunications, control and data center technologies. We help control and data center owners manage user expectations by thoroughly understanding the technical aspects of an individual client's requirements. We promote telecommunication, control, and data center design strategies that include reliable building systems, security features, and mission critical layouts which are expandable, functional and efficient.

We serve a wide range of clients such as healthcare, transit, financial institutions, call centers, and educational institutions. Project types include:

- Telecommunications Centers
- Data Centers
- Emergency Operations Centers
- Utility Control Centers

Stantec understands that data is king, and as such, redundancy (N+1) is required, which often includes generators, UPS, and automatic switchgear.
LAKELAND REGIONAL HEALTH MEDICAL CENTER, DATA CENTER
Lakeland, Florida

Hospital’s today contain hubs of critical information used to help improve a patient’s quality of life, educate on what habits to change, and even save lives, it came as no surprise when the system turned to our project manager’s to ensure the safekeeping of its new data center.

As part of this master facility plan, Stantec’s project managers coordinated all of the intricate facets required to build an efficient and secure data center. Working alongside the architects and engineers, the team oversaw the design and construction related to this $12 million data center. The estimated total project area is 4,500 square-feet, and the scope included a data center along with a fifth floor data center converted to an intermediate distribution frame room.

Thanks to this project, the medical campus will now have a safeguarded data center to serve its hospital personnel and the administration.

FORENSIC SERVICES & CORONER’S COMPLEX, DATA CENTER
Toronto, Ontario

Stantec is providing architectural, structural, mechanical, electrical and communications (IT/Security) Engineering services for one of the largest and most advanced forensic facilities in the world. The $250 million Forensic Services and Coroners’ Complex (FSCC) is a consolidated, state-of the art forensics laboratory, medical autopsy, and coroner’s courts complex that combines the offices of the Centre of Forensic Sciences and the Office of the Chief Coroner into one facility to better serve the people of Ontario.

The Stantec team catered to the client’s unique needs for this multipurpose facility, which included the design of a Tier III Data Center. The data center includes 3 UPS systems of 350 kVa each and 20 racks. The IT cabling and data center combine with the conceptual design of all applicable technologies for the facility, including an optimal visualization of data and user interface. Security measures vary by zone for the whole facility and naturally include the protection of the data center. A new 4 x 2500 KVA diesel fired backup generator system protects the power supply of the whole facility.
EMERGENCY OPERATIONS CENTER
Calgary, Alberta

Stantec provided mechanical engineering as well as mechanical and electrical fundamental commissioning for this $41 million emergency operations center project. Located in a residential area adjacent to a heavily accessed green space the new Center is a three level building, with three depressed courtyards and 4000 m² of the building located below grade minimizing site impact.

To meet the program requirements the building has developed into three very distinct zones that match operations. At the grade Level 0 will be the new Media Center accessed by media and the public. In a secure Level –1 the Emergency Operations, Public Call Safety Call center plus support and office spaces will all be located accessible only to staff with adequate security clearances. At the lowest Level - 2 will be the new Data Center along with support spaces including the main mechanical and electrical rooms. The EOC and Data Center have some very specific technical requirements. The most particular is that the facility be capable of operating for 72 hours off grid during an emergency event. To achieve this requirement; rest, dining and fitness areas have been incorporated into the design along with backup water from a local well and off grid power, heating and cooling powered by onsite diesel power generation of 2.6MW of total capacity. The data center in the facility, which will be the main data center for the City, accounts for almost 2MW of redundant UPS load and 1MW of mechanical cooling load making it the largest mechanical and electrical load within the building.

OTTAWA SUPPORT CENTER, DATA CENTER RELOCATION, BANK OF CANADA
Ottawa, Ontario

Stantec provided mechanical and electrical engineering to Bank of Canada for the design of a $37 million relocated Data Center and new office building, used specifically for the Bank of Canada's back up and redundancy operations, and in support of their business continuity plan.

To accommodate the needs of the new Data Center, the existing building underwent major renovations that allowed the server room to operate as a standalone Tier 3 system. All the mechanical and electrical systems of the original building were modified to incorporate the new equipment required by the project. The system was designed in such a way as to maximise the heat recovery and the free cooling when permitted. The total area of the data center is 300 m² with a raised floor and has a power requirement of 500 kW.

The total cooling capacity for the Data Center is around 100 tons, not including the redundant pieces of equipment. The LEED process was followed for this project although no certification was sought once the project was completed.

Stantec designed the facility to ensure expansion over the 20 next years, by providing infrastructure and expansion possibilities. During the construction phase Stantec was present to provide on-site supervision. The Construction has been phased to ensure continuous uninterrupted services in the support center.
“We are a committed, total solutions partner that will always do what is right for your projects, and your company. We care about your business - we succeed when you succeed.”

— DAVE CALDER, SECTOR LEAD - INDUSTRIAL
The Three C’s

COMMUNITY
When we say community, we don’t just mean the neighborhoods people call home. We mean everyone and everything with a stake in the work that we do, from our Stantec and industry colleagues, to the clients we collaborate with, and the people and places we impact.

Whether creating, sustaining, or revitalizing a community, we help people of diverse cultures and perspectives work together toward a shared success. Although our work helps to create physical communities, our ultimate goal is to create something far more meaningful—a sense of community.

CREATIVITY
For us, creativity is driven by purpose. Knowing that transformation is truly possible inspires us to approach every situation with a fresh perspective. Our innovative and collaborative approach to problem solving helps bring big ideas to life through creative solutions.

Whether our contribution is a design that strikes the perfect balance between function and aesthetics, a feat of engineering that redefines what’s possible, or a project management approach that delivers results, we strive for outcomes that transcend the challenges they solve and shape the communities we serve for the better.

CLIENT RELATIONSHIPS
We’re better together. This belief shapes how we collaborate with our clients, our partners, and our communities.

We listen so we can deeply understand our clients’ needs, communicate with purpose so we maintain alignment, and remain open and flexible so we never miss an opportunity to strengthen a project and positively transform a community.
Design with community in mind

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That’s why at Stantec, we always design with community in mind.

We care about the communities we serve—because they’re our communities too. We’re designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe. Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at stantec.com or find us on social media.