Executive Summary

“The opportunities for reimagining education have never been greater and perhaps, more important. With a burgeoning world population, technology acts as an innovative disruptor to our ever-increasing demands on our scarce resources, evolving political landscapes, diverse perspectives and globalization. Innovation is more important now than ever.”

- Carol Grant-Watt, Head of STS

Strathcona-Tweedsmuir School is a private university prep school in Okotoks, Alberta, Canada. STS is Alberta’s first full IB World School, and Alberta’s only independent school authorized to deliver IB Programmes in Grades 1 through 12, authorized to offer Primary Years Programme (PYP), Middle Years Programme (MYP) and IB Diploma. Along with these strong academic programs, the school is dedicated to providing each student the opportunity to self-actualize through a wide range of co-curricular learning experiences, including art, design, music, theater, and a celebrated outdoor learning program.

The rural campus of Strathcona-Tweedsmuir School is a spectacular natural wonder. During the initial Discovery Visit, the design team was immediately struck by the school’s dedication to the outdoors, observing the entire student body out enjoying the campus during morning break, despite the snow cover. Inside, multiple renovations over the years left the building disjointed, with multiple wings connected by corridors and staircases, and windows with views of parking areas rather than the natural setting beyond.

Through the process of multiple engagement workshops and a student-led tour of the campus, a consensus among the school community emerged regarding their priorities in re-designing STS. These priorities were to align their learning spaces with their dedication to the outdoors and move their curriculum to a student-directed model. Their ideas were embedded into the plan, then into the reality of a large new elementary years addition and re-imagined campus.

Based on the Learning Community model, the new Elementary wing is designed as a flexible learning environment where teaching best practice is optimized. Each learning community is self-contained and features different sizes of learning studios, from breakout rooms suitable for a small group of students, to larger spaces that can accommodate an entire grade. Each learning community also has areas for students to do project-based learning, working with their hands, using tables, tools and technology to create tangible objects. Classrooms have strong connections to the exterior space so learning can happen inside and out – there are two dedicated outdoor classrooms, in addition to an outdoor amphitheater.

Highlights include:
- Flexible spaces to enable teachers to incorporate a wider variety of activities and better align instruction with learning styles
- Bright, open, and warm spaces that enhance student comfort and increase the sense of belonging within each learning community
- Maker studios that allow for innovative, creative project work that may be messy or large
- Expanded fine and performing arts spaces to meet the creative needs of students with facilities and technology conducive to artistic expression that include:
  - Acoustically optimized band and choral rooms
  - A purpose-built drama room
  - Larger visual arts spaces
  - Small group and individual rehearsal rooms
- A new Heart of the School with Welcoming Entry
- Purposeful landscaping for learning outdoors

It’s important to understand that the new wing was designed from the inside-out, with education functionality and outdoor connection being the major design driver. It was not created to be a dominant exterior form, but to integrate with the extensive outdoor environment.

Physical challenges included the interface between the new wing and the rest of the school. The reality was quite different from the multiple building plans and surveys done through the years. The extreme area weather also hampered construction, particularly the excavation. Despite these issues, the design team finished the project and it opened in January 2018.
Scope & Budget

220 Acre Campus  6,500 Square Foot Addition  80,000 Square Foot Total  Cost: $24 Million USD
School Community Engagement

**Early Engagement:** There were many recurring threads that emerged from workshop discussions; these themes were reinforced by surveys answers and sketches produced during the workshop.

Throughout the process of Discovery, it was apparent that there was a great interest on the part of the school community to better connect with the natural environment and landscape despite the challenges of climate. Because the campus is located a distance from the city core of Calgary, it was determined that the land setting must become the school’s strongest asset rather than an obstacle to maintaining a strong educational presence in the future.

**The STS Strategic Plan:** To be competitive within the current independent school landscape in Calgary, STS must provide a better educational experience than competing schools to overcome the obstacles of distance from the city center and higher tuition.

Five key pillars were developed to guide the Strategic Plan. These are built on a foundation of continued academic excellence, and take advantage of the school’s strengths:
1. Integrated Programming
2. Global Perspective
3. Center for Excellence
4. Unique Natural Setting
5. Extensive Alumni Network

These pillars shaped the entire design process, even during this early planning phase.

**Community Hopes:** After an innovative learning spaces Best Practice presentation, the STS community were given a chance to express their hopes for the new Master Plan. Some responses:

“I’d love to see an inviting entrance and wonderful common spaces, including a fireplace.”

“We need a main “heart” of school with a large gathering area for events, meetings, and volunteers. This would enhance community and efficiency.”

“I hope for learning spaces to encourage collaboration and student centered learning.”

Quotes from school community members have been used throughout this submission, most taken from the Design Team’s debriefing interviews in May, 2019. The Team considers these interviews an important part of the planning and design process.

**Initial Discovery Visit Agenda**
- Pre-Workshop info sharing and staff survey
- Pre-Workshop media list with helpful information
- Initial Site Meeting – Master Planning Workshop Day 1
- Design Team introductions at school morning meeting
- Meeting with students and teachers to discuss educational and design strategies, work plan and engagement process
- 60 minute meeting with the Education Leadership Team
- Site walk with STS Students
- Discovery Dialogues with Design Team Educator and teachers
- Evening Best Practice presentation and workshop with full community including parents and alumni
- Initial Site Meeting – Master Planning Workshop Day 2
- Discovery Dialogue development with Design Team Educator and Teachers
- Sustainable Design, Education, and local Ethos Integration Workshop
- Design Patterns Workshops, including a) “outside-in,” considering site opportunities and constraints and b) “inside-out,” from the learner’s perspective
Student Site Walk

The Design Team toured the campus with a student group of all ages, who took turns telling us stories about each campus amenity, what it meant to them and to the ethos of the school. These details were used in the design process to frame interior views and create indoor/outdoor connections to the important places on campus. Note that the students are standing in the school entry in this image, a very uninspiring space.
The Bell Memorial was a quiet area for contemplation, and commemorated a tragedy in the school’s past. Students felt that the bell would need to be incorporated into the Master Plan, but that it didn’t need to be in the same place.

Nature Trails and Critter Cams were another well-used resource for outdoor learning. The students expressed interest in developing the area further and creating an outdoor learning space nearby.

The “Bus Line” not only provided a terrible view from this entire school wing, it was dangerously configured for traffic flow.

An Outdoor Learning Center was the base for outdoor activities, and was regarded as an informal space to relax in. The students felt that it could be improved as a learning space.

The Observatory and Lake provided many opportunities for project-based learning, but access to them was difficult.

Students were proud of the many sport fields on campus, but they also identified the area to be the most easily redesigned.
Strathcona-Tweedsmuir School is accredited as Southern Alberta’s first full International Baccalaureate World School, and Alberta’s only independent school authorized to deliver IB Programmes in Kindergarten through Grade 12. STS belongs to a select group of six percent of IB World Schools across the globe, representing 1 percent of North American IB schools, offering a continuum of all three levels of IB programming.

Strathcona-Tweedsmuir School offers the Primary Years Program (PYP) to students in the Kindergarten to Grade 6, the Middle Years Program (MYP) for Grades 7-10, and an option to complete the Diploma Program (DP) for students in Grades 11-12.

Through the IB Program, STS encourages students to become active and compassionate life-long learners – developing their own cultural and national identity, then broadening their intercultural understanding and respect and helping to create a more peaceful world. The IB continuum also prepares students for success in post-secondary studies. Leading universities and colleges actively recruit IB graduates, often offering them credit or advanced standing for their work.

This is the motto of the Strathcona-Tweedsmuir community and continues to be the core foundation that permeates all aspects of STS culture. Students are encouraged to pursue a life of purpose in multiple ways: through developing their character, pursuing their passions, taking risks, and forging deep relationships with one another. The cultivation of well-being and the development of the whole self prepares students to be civic leaders with global perspectives and empathy. The IB program exposes students to divergent perspectives and challenges them to refine their critical thinking skills. The outdoor education component of the community supports the pursuit of adventure, risk taking and courage. The tenets of the Strathcona Community can be described as:

- Core of Community
  - Focus is on the development of well-rounded individuals
  - Deeply rooted history of being trailblazers and risk takers
  - Proximity fosters interpersonal learning and collaboration
  - Emphasis on different ages working together

- Connection with Nature
  - Supports inquiry-based learning
  - Encourages students to pursue wellness
  - Real-world application of educational concepts

- Innovation and Design
  - Multimodal learning experiences
  - Human-centered design approach with wide circle of influence
  - Transdisciplinary learning
  - Providing students with skills to facilitate their own learning

“At STS there are a lot of opportunities to innovate and create your own projects. In Grade 10 for my personal project I designed and 3D printed a prosthetic leg design, and it really pushed me out of my comfort zone. In Grade 12 year I just worked in a science design lab analyzing CT scans for cancer patients.”

- Aliza Jaffer, Grade 12 student
“Design and design thinking are as critical to students today as air is to breathing.”

- Alanna Wellwood, Director of Innovation
Project Skateboard: Learning Design Thinking

Planning  Experimenting  Prototyping
The new elementary wing perfectly mirrors what STS wants their students to become: it’s courageous, it’s bold, and it stays true to the STS core values of character, citizenship, and scholarship. Physical connections created by the campus redesign and new elementary wing facilitate both interpersonal relationships and meaningful interactions with nature—embedding learning within the real-world contexts. This was, in part, made possible by the unique size and location of the campus which allowed the design team to create a more open, permeable campus while ensuring safety was at the forefront of each design decision.

Natural movement throughout the campus is enabled by a design that encourages an ebb and flow between the inside and outside which, in turn, produces a calming effect and a sense of well-being throughout the school. This sense of well-being is reinforced by one of the most significant factors contributing to healthy buildings and effective learning environments—lighting. A combination of natural daylighting and intentionally oriented views are combined with artificial lighting throughout the new addition in order to produce different conditions for learning.

Combined, these design elements form a physical learning environment capable of expanding opportunities for developing new perspectives. Most importantly, permeable boundaries—both visually and physically—between the indoor and outdoor learning spaces fluidly unite the entire campus within warm embrace of mother nature.
The Exterior Echoes the Local Mountains in All Seasons
Site Master Plan

The new wing and renovation in the old building turn the view away from parking areas and towards the learning landscape.
Specialized Spaces

The **Performance Stair** is used for both casual and formal presentations.
Specialized Spaces

The **Tech Maker Space** connects a prototyping lab with an outdoor testing site.
Specialized Spaces

This Nest Space has a built-in shelving system with views to the adjacent Creative Commons.
Specialized Spaces

The **Creation Commons** is a highly flexible, wet and messy area that flows into the Tech Maker Space.
Specialized Spaces

This Media Bar is one of many that are located throughout the new Elementary Wing.
Specialized Spaces

This **Project-Based Learning Space** can convert to accommodate any sized project.
Design Details that Enhance the STS Mission and Ethos

LEFT:
Built-in signage and labels prompt space and amenity usage now and in the future. This creates continuity of the STS ideals, and cues students and teachers to expand their educational experiences.

BELOW:
A fireplace serves as the warm heart within the Heart of School. The memorial bell that was designated as important in the Discovery site walk now hangs in a custom niche.
Results of the Process

The Design Team used the engagement process as a true basis for the Master Plan and the resulting renovations, new wing, and campus redesign. The following pages demonstrate how seriously input was considered from the school community. Each features a student or teacher sketch from the Discovery Phase, an image of the education space result, and quotes from school community members.

HEART OF SCHOOL

“This is a campus with a heartbeat in the middle. The design has taken two sections of the school and actually created a core that has allowed it to function as a whole by bringing the old and new together.”
- Carol Grant-Watt, Head of STS
Results of the Process

WELCOMING ENTRY

Hopes for the STS Master Plan:
“An inviting ‘Wow’ entrance that highlights the school and community.”

“An inviting North entrance and wonderful common spaces.”

“A center of school (i.e. foyer and entrance is overwhelming) with learning spaces clearly connected to center of school.”

- From Collected Discovery Quotes

![Image of STS building with sketch of WELCOMING ENTRY]

Strathcona-Tweedsmuir School: A4LE 2019 LEsolutions Awards
Results of the Process

INDOOR/OUTDOOR CONNECTIONS

“We love the idea that the building connects with the outdoors and that we can take our learning outside seamlessly.”
- Brianna Dawe, Performing Arts Director
Results of the Process

STUDENT-DIRECTED LEARNING

“Our favorite thing about this space is that it invites all different kinds of productivity. Students will often self-identify where they need to work, individually or collaboratively.”
- Alanna Wellwood, Director of Innovation
Results of the Process

LEARNING COMMUNITY

“The flexibility and the choice we are able to offer our students helps us differentiate and create a personalized profile for their learning.”

- Lara Unsworth, Strategic Enrollment Management
“The connection to nature shapes my perspective at STS because we have a lot of opportunities to choose how we want to learn. We are always prepared for what could happen—we don’t really change what’s going to happen based on the weather.”

- Sara Race, Grade 5 Student