

HIGHLANDS SCHOOL EXPANSION & MODERNIZATION

COMPLETION: SEPTEMBER 2022

LOCATION: EDMONTON, AB

CLIENT: EDMONTON PUBLIC SCHOOLS



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EXECUTIVE SUMMARY

HIGHLANDS SCHOOL

Highlands School is located in the historic Edmonton neighbourhood of Highlands, which was annexed by the city in 1911. As the area grew, so did the need for a school, leading to the school board commissioning a new permanent public school. Opened in 1914, Highlands School was designed by architect George E. Turner in the Collegiate Gothic architectural style at approximately \$210,000.00.

The school served the community well until the onset of the Second World War population boom, and more space was needed. An addition was added in

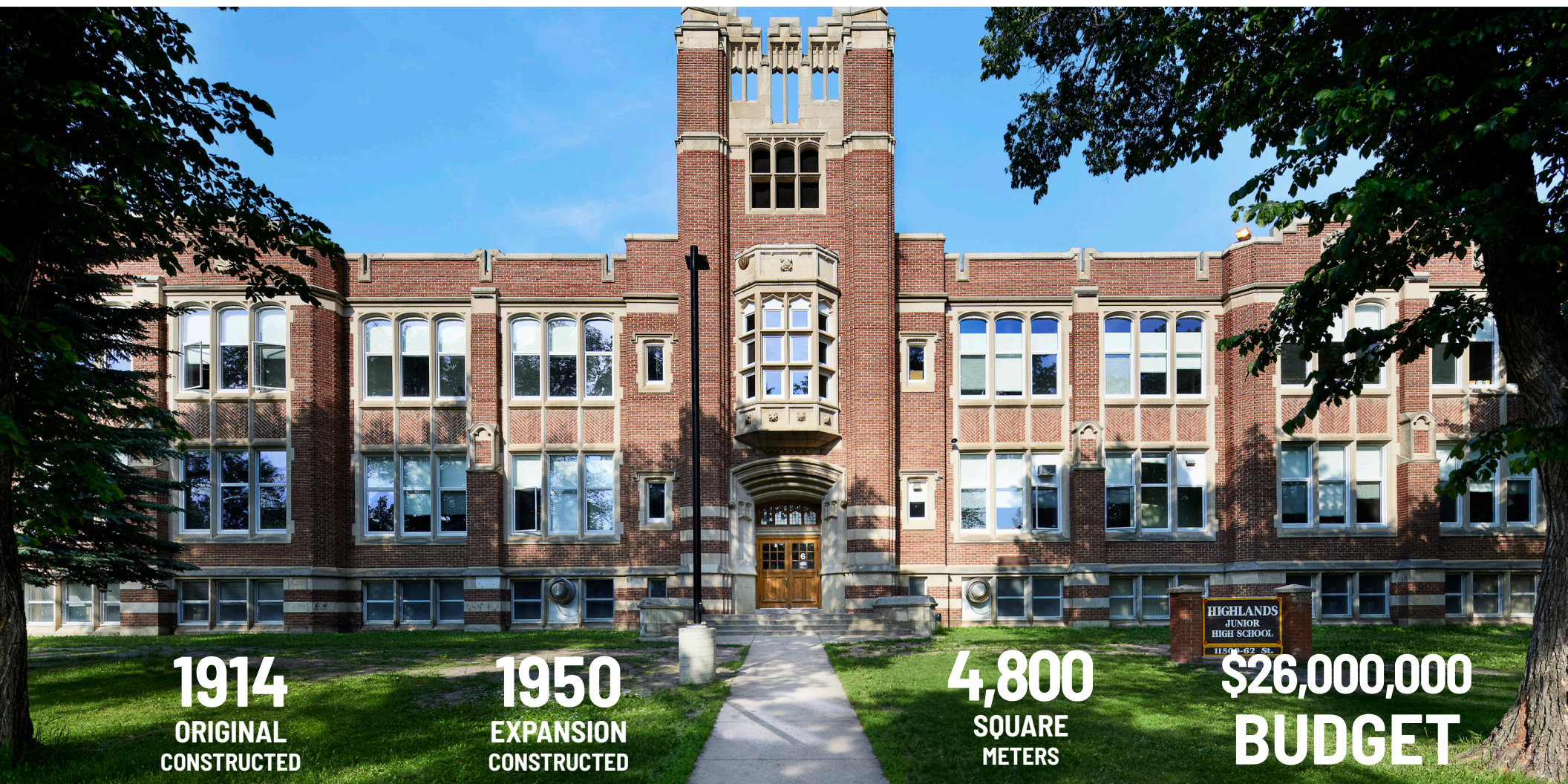
1954, designed by architect Max Dewar in the Modern International architectural style, which unfortunately did not harmonize with the design of the existing building.

After that, multiple renovations and upgrades occurred throughout the 1970s until 2018, when it was decided that more space and updated programming were required – and thus, the telling of the new portion of the Highlands School story began.

The project consisted of a complete mechanical and electrical services upgrade to the main and second

floors of the original building. The dark and non-functional 1954 addition was also demolished to make room for a new two-story facility and gymnasium. The design of the new addition utilized an efficient building footprint to accommodate an expansion of 800 students and allowed accessibility requirements to be met in a heritage facility.

In addition, the new school brought modern educational programming and technology in inspiring 21st-century learning environments to the community while maintaining the heritage features of its treasured gem.



1914

**ORIGINAL
CONSTRUCTED**

1950

**EXPANSION
CONSTRUCTED**

4,800

**SQUARE
METERS**

\$26,000,000

BUDGET

SCOPE OF WORK AND BUDGET

HIGHLANDS SCHOOL

COMMUNITY CONTEXT AND EXISTING BUILDING

Highlands School is situated in a mature residential neighbourhood in the Northeastern quadrant of Edmonton, Alberta. The rich history of the area informs the neighbourhood's character, infusing it with a vibrant and diverse community. With few similar amenities nearby, paired with the treasured presence that the school holds in the community, it acts as an important space for local families to gather.

Before the expansion and modernization, three significant issues existed at Highlands School:

1. Accessibility

Due to the time period in which the original school was built, current accessibility concerns and requirements did not exist. Therefore, major accessibility issues were apparent within the original building – such as no elevator or lift and a main floor elevation of 1.6m above grade significantly hindered students with mobility issues from moving freely between floors.

2. Connectivity

When the 1950s addition was added, it was joined to the original building with an at-grade breezeway which, in time, became an entrance for students and staff. As the 1950s addition lacked windows, the space became a dark and unappealing way to enter and move through the building.

3. Programming

The age of the building also contributed to continued difficulty in applying modern educational programming to the original spaces. Classrooms lacked the standard accepted area sizes, no open and collaborative spaces existed, and both gymnasiums were undersized in area and height. As well, the school board had committed to implementing 21st-century learning environments throughout their schools, and the original building did not align with these values.

The new modernized and expanded Highlands School integrates elevators for accessible vertical circulation and an innovative ramp design that connects the new building to the original. The design of the addition follows 21st-century learning principles, with ample meeting spaces and learning commons available for collaborative and flexible use.



2008

2020



2020

2020



2021

2022



Visioning for Highlands School

In the initial programming and design phases, multiple workshops were held to engage the participation of the community, staff, and students in developing the project vision.

Community and Staff Visioning Workshops

Through their Infrastructure Stakeholder Engagement & Support Team, Edmonton Public Schools (EPS) organized multiple consultation events with the different stakeholder groups.

In order to encourage and facilitate participation, staff sessions were held in the mid-to-late afternoon, whereas community events took place in the early evenings and mid-week. An introductory verbal presentation around the

concept and features of twenty-first-century school pedagogy and design began each session. Because, in many ways, such infrastructure differs from traditional academic delivery models and facilities, the presentations were supported by graphics of both the working and physical relationships and the principles involved in delivering 21st-century learning principles.

Student Visioning Workshops

To engage the young voices of those who would be using the school, the following methods were used:

1. Precedent images were assembled, categorized and made available to the group for discussion and feedback electronically and on-site in hard copy.
2. Thoughts and priorities were solicited in bullet

form from all attendees. In the span of just 30 minutes, hundreds of ideas and concerns were generated with the project team.

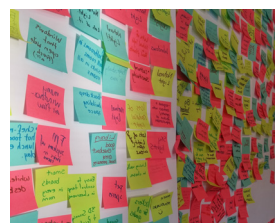
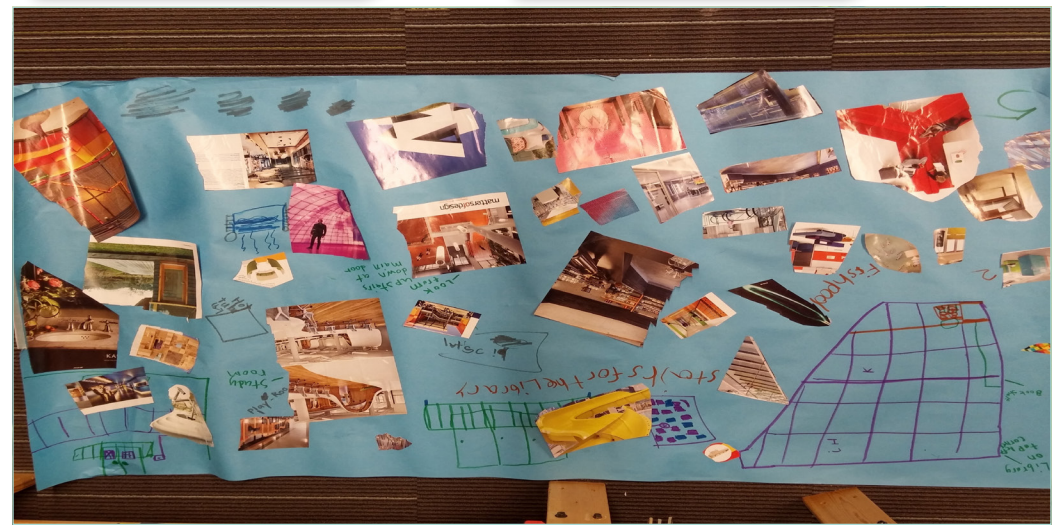
3. Scaled two-dimensional cut-outs of all program spaces (i.e. classrooms and teaching, support areas, administration, gym, library/media, etc.) for the new school were provided to participants in conjunction with a site plan. Participants were encouraged and supported in imagining and laying out the interior and exterior spatial relationships and adjacencies.
4. EPS project website URL was posted and flagged repeatedly for community access to consult and comment.

STAFF ENGAGEMENT

COMMUNITY ENGAGEMENT

STUDENT WORKSHOP

STUDENT ENGAGEMENT

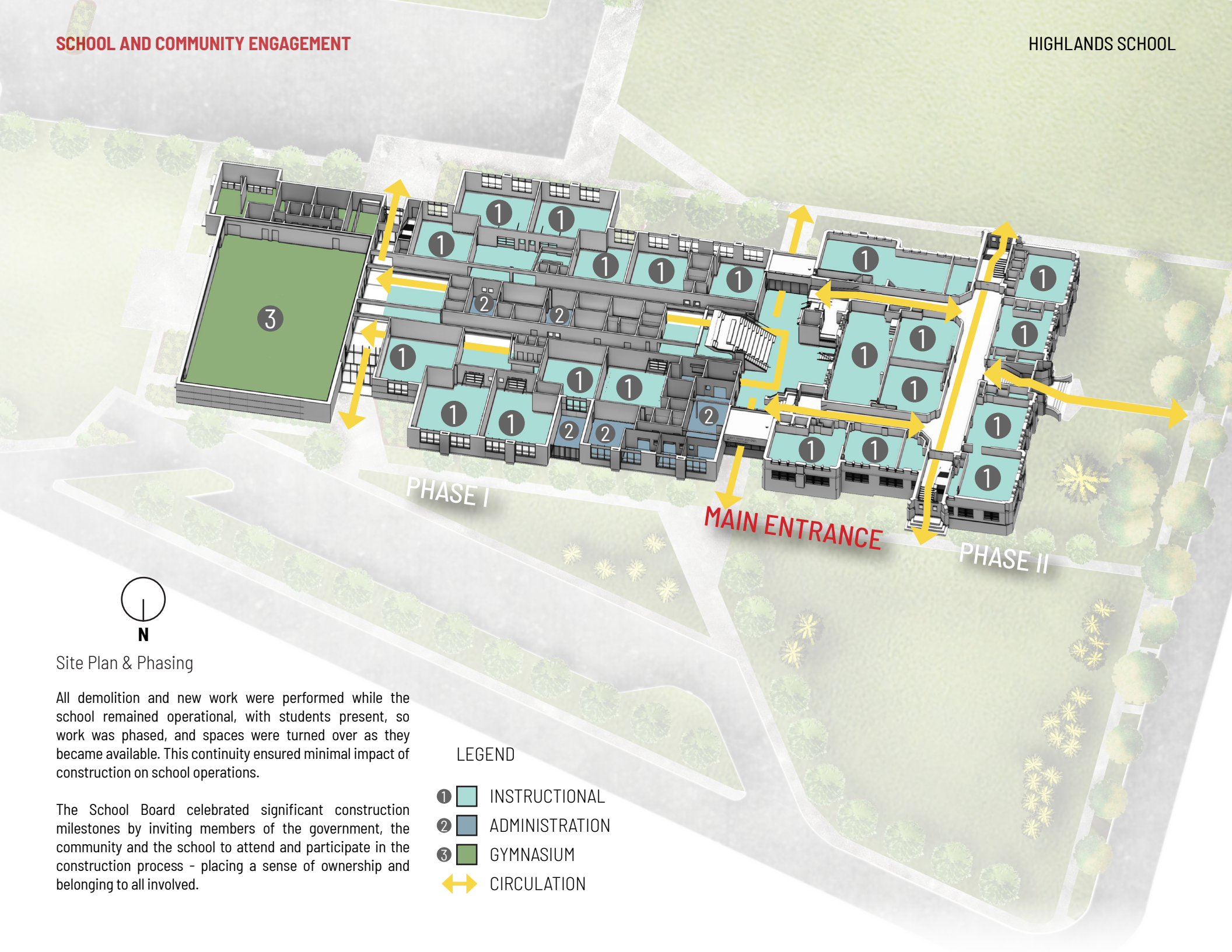


Visioning for Highlands School

Positioning of the school on the site was explained: setbacks, vehicular access points relative to streetscape (and respectful of City of Edmonton Planning and Transportation guidelines), pick-up and drop-off points, fire-fighting access, parking areas, play areas, sports fields, bicycle racks, primary and secondary building entrance points, connectivity to the outdoors, etc.

Upon completing the engagement sessions, all information was compiled into a report for transparency, trust-building, and review at intervals throughout the design process.





Site Plan & Phasing

All demolition and new work were performed while the school remained operational, with students present, so work was phased, and spaces were turned over as they became available. This continuity ensured minimal impact of construction on school operations.

The School Board celebrated significant construction milestones by inviting members of the government, the community and the school to attend and participate in the construction process - placing a sense of ownership and belonging to all involved.

LEGEND

- 1 INSTRUCTIONAL
- 2 ADMINISTRATION
- 3 GYMNASIUM
- ↔ CIRCULATION

EDUCATIONAL ENVIRONMENT

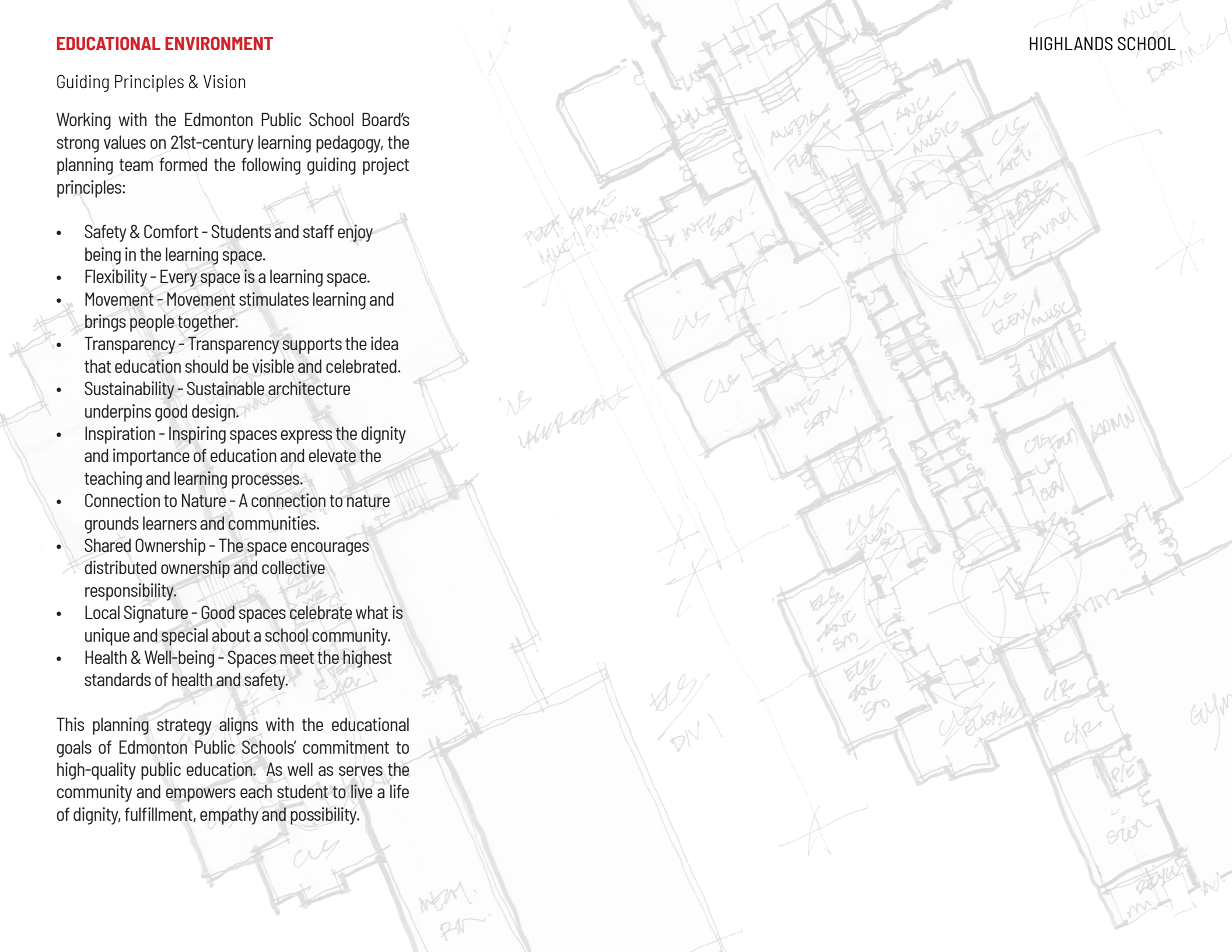
HIGHLANDS SCHOOL

Guiding Principles & Vision

Working with the Edmonton Public School Board's strong values on 21st-century learning pedagogy, the planning team formed the following guiding project principles:

- **Safety & Comfort** - Students and staff enjoy being in the learning space.
- **Flexibility** - Every space is a learning space.
- **Movement** - Movement stimulates learning and brings people together.
- **Transparency** - Transparency supports the idea that education should be visible and celebrated.
- **Sustainability** - Sustainable architecture underpins good design.
- **Inspiration** - Inspiring spaces express the dignity and importance of education and elevate the teaching and learning processes.
- **Connection to Nature** - A connection to nature grounds learners and communities.
- **Shared Ownership** - The space encourages distributed ownership and collective responsibility.
- **Local Signature** - Good spaces celebrate what is unique and special about a school community.
- **Health & Well-being** - Spaces meet the highest standards of health and safety.

This planning strategy aligns with the educational goals of Edmonton Public Schools' commitment to high-quality public education. As well as serves the community and empowers each student to live a life of dignity, fulfillment, empathy and possibility.



RESULTS OF PROCESS

HIGHLANDS SCHOOL

Community Impact

Another guiding principle of the school was the making of community connections. This principle supports the idea that schools should connect with the community in meaningful ways.

For Highlands, spaces reserved for joint community use are located on the main floor near the main entrance to promote community outreach and involvement. The scale and transparency of the entrance creates a connection with the community,

welcoming them in to gather and further build valuable relationships.

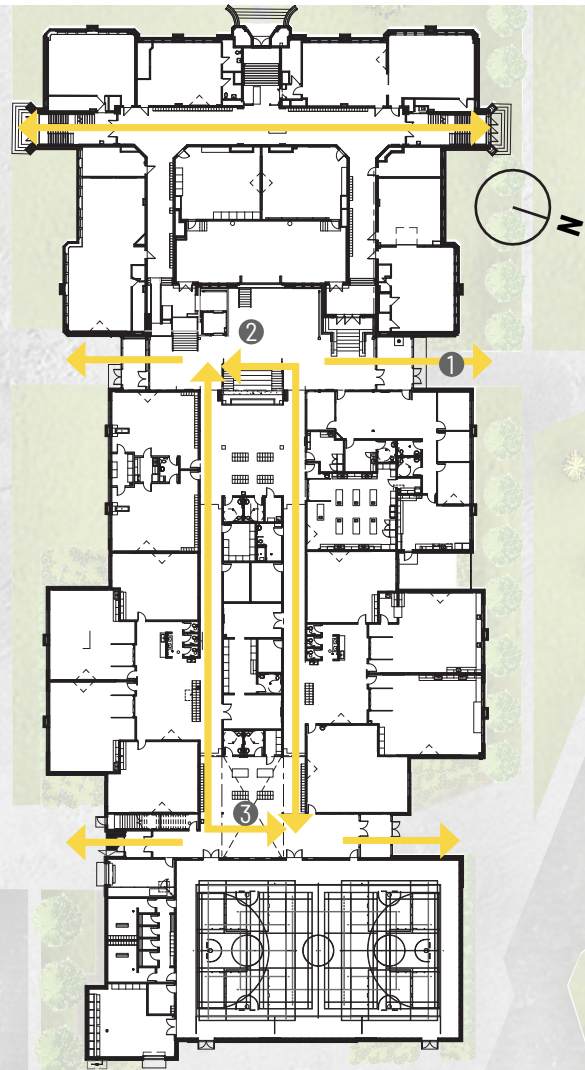
Maintaining and operating a heritage building is no easy task. The school board's decision to conserve the original school was one made with the community at the heart of it. This is perhaps one of the most significant impacts of all.

MODERNIZATION & RENOVATION

COST: 28 MILLION

AREA: 4,800 m²

Phasing: Highlands school was occupied throughout the modernization of the school.



PHYSICAL ENVIRONMENT DESIGN

Pride and Identity

For Highlands School, creating a sense of place rooted in the rich history of the original school and the community was paramount.

Guiding the design was the regal exterior features of the 1912 structure and the ornate features running through the interior spaces. As the original school was such a well-loved fixture of the community, the new addition needed to work softly in the background, adding a modern appeal but still allowing the original features to shine and be appreciated as they should be.

This was achieved by paying significant attention to the massing of the old and new structures. A delicate balance ensued in highlighting the 1912 components and not overwhelming the site with the new building. As an example, the new eight-meter-high gym added significant volume, but the sections closest to the street side were treated as 'negative' space by using the dark cladding which contrasted with the brighter masonry components of the building. This reduced attention to the large mass of the gym allowing focus to remain on the interesting features that the rest of the school displayed.

The school's interior design remained focused on the historical aspect as well as including the strong emphasis placed on the arts in the original school. To allow the new school addition to flow with the original, historical architectural components were pulled throughout the new building. These details include coved ceilings, limestone surrounds, brick, curved shapes, terrazzo-inspired flooring, moulded rubber base and a neutral colour palette with a touch of timeless jewel-toned accent colours.

The goal was to create a neutral space that would not conflict with the artwork and murals displayed and to create an inspiring and vibrant environment for the students and staff that flowed effortlessly as users moved through the spaces.

Walnut wood tones were placed throughout to offer a warm and welcoming feel and to add a timeless but modern flair to the school. Vinyl sheet flooring, abuse-resistant drywall, terrazzo block, concrete, wall tile and commercial-grade carpet tile were all used for their durable properties. Still, all contribute individually to the design balance of new and old.



PHYSICAL ENVIRONMENT DESIGN

Relationship-Driven Design: Inclusive Accessibility

For over a century, Highlands school was non-accessible other than by temporary lifts. The design of the new school connects to the original building by way of strategically placed stairs and ramps to overcome height differentials, with a new elevator incorporated into the design to meet current accessibility requirements.

Inclusivity is celebrated with accessible ramps placed in the light-filled heart of the new school, providing safe, comfortable, and engaging movement by all students throughout the building.



PHYSICAL ENVIRONMENT DESIGN

Flexible and Adaptable Learning Environments

21st Century school design acknowledges that learning happens everywhere. The design of Highlands School looks beyond the “cells and bells” tradition of the one teacher/one classroom model and towards a more collaborative, flexible approach to teaching and learning. Traditional school design segregates learning into classrooms separated by circulation corridors and other ‘non-learning’ support spaces. The learning environments for the 21st century need to create places where students feel comfortable, safe and welcome wherever they are.


Flexible learning environments are visible throughout the school, with classrooms centered on individual learning community commons. These spaces act as separate teaching and learning opportunities, away from the structured environment of the classroom and offer students the flexibility to learn in ways that best suit their own individual learning styles and personalities. While still separated from the rest of the school building, the community commons can be used as a quiet area to perform focused work or large overhead doors, which are included in every classroom, can be opened to create an open and collaborative learning experience.



PHYSICAL ENVIRONMENT DESIGN

Welcoming and Safe Gathering Spaces

A new transparent and light-filled entry welcomes you right into the central Learning Commons of the school. This space features expansive glazing on either side, infusing the area with natural light, which research has shown is a significant contributor to human well-being. A central staircase with integrated seating acts as the heart of the school, providing space for gathering, learning, and artistic performances. All movement through the buildings passes through this central space, promoting intentional interactions among students and staff throughout the day.

 Gathering Spaces



HIGHLANDS SCHOOL



Art Emphasis

The original Highlands School placed great pride in a large art core basis used to inform the new school's concept. Special attention was given to creating spaces for art display, performances, and movement. The general finishes of the building were kept muted and neutral to help bring focus to the beautiful art collection that the school owned, as well as the artwork prepared by the students.

The central Learning Commons and Flex Space are the new building's performing and visual arts hub. The original gymnasium was repurposed as a theatre space which opens onto the large central feature stair where students can gather to watch performances. In addition, the switchback ramps' walls and nooks that flank the Learning Commons and are flooded with light act as an innovative art display area.

As students move through the building, they are immersed in the art of their peers and contemporary artists.



PHYSICAL ENVIRONMENT DESIGN

Natural Light and Transparency

The design introduces “open to below” spaces, and when synergized with clerestory spaces, the result is a central core flooded with natural light. This results in an engaging, flexible space that inspires excellence and creativity. A combination of soft seating and hard-top tables enables flexible learning, circulation, and presentation space that is directly and indirectly connected to the school entrance.

In addition to the proven benefits of natural light to people’s well-being, the abundant glazing also reinforces the guiding principle of transparency, emphasizing the idea that learning should be visible and celebrated.



PHYSICAL ENVIRONMENT DESIGN

User Comfort and Sustainability

A significant factor in user comfort within a space is the ability for people to have a level of individual control over their environment. To achieve this at Highlands, considerations were made to allow teachers and staff the opportunity to adjust airflow and lighting levels to suit the requirements of each space on an individual basis. A minimum of two operable windows and dimmable light fixtures were provided for each classroom and numerous other locations throughout the building.

The sustainability story of Highlands includes photovoltaic panels on the roof and Building Integrated Photovoltaic (BIVP) panels, which were part of the material finish for the south wall of the gymnasium. The panels aid in energy generation and as a teaching opportunity through Dashboards – which the school uses to engage the students in sustainability initiatives.

In addition, the school has been designed and constructed to LEED Silver Certification standards.



PHYSICAL ENVIRONMENT DESIGN

Durable and Healthy Materials

Using durable materials that work in balance and harmony with the original heritage finishes of the building was of utmost importance to the design team. Brick, limestone, and composite metal panel used in conjunction with a building envelope that exceeds the basic requirements of Alberta Infrastructure ensure that the school will remain in good condition and easily maintained for years to come.

The selection of brick and limestone finishes creates a seamless visual transition from original to new, and the black and charcoal metal panels polish it off with a subtle modern touch.

On the interior of the building, brick and limestone accents are integrated into carefully selected areas with warm walnut-colour-stained wood, terrazzo block, exposed concrete finishes, and black accent features. The combination of materials results in a clean and modern space that pays homage and appreciation to the beauty of heritage architecture.

