MANASC ISAAC

ATHABASCA, ALBERTA

OLD BRICK SCHOOL

DESIGN DEVELOPMENT REPORT

NOVEMBER 29, 2019 | MANASC ISAAC ARCHITECTS LTD.

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ATHABASCA COUNTY

Athabasca

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SIGN ON SHEET

We have reviewed the Design Development Report and the layouts for the proposed project and accept it as reasonable basis for further development of the design.

Dated:

County of Athabasca

Town of Athabasca

MANASC ISAAC

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1.0

INTRODUCTION AND BACKGROUND

- PROJECT BACKGROUND
- WHAT HAS CHANGED
- DESIGN VISION

1.0 INTRODUCTION & BACKGROUND

PROJECT BACKGROUND

The Athabasca Old Brick School has served many purposes in its lifetime. Built in 1914, the building is a testament to, and a manifestation of, the optimism, and the anticipatory development, in the region at the time. The Old Brick School symbolizes an era of tremendous growth, fueled by resource, and railway speculation. Anticipatory growth, coupled with the devastation of a fire in 1913, necessitated the construction of the Old Brick School. Old Brick School, as it stands today, documents the rich history of Athabasca and gestures towards an equally optimistic future of what Athabasca could be.

"Beautiful and colossal" – this sentiment has not diminished through the years.

The four-classroom school served the community as such until the late 1960's. Subsequently, the school has housed various community groups and organizations including the current, and only, tenant, the Athabasca Pottery Club for the past 60 years. Other than the Athabasca Pottery Club, today, the grandeur of the Old Brick School is contrasted by its current, and unfortunate, vacancy.

The Town and County of Athabasca, through its joint ownership, selected Manasc Isaac Architects to explore the revitalization of the Old Brick School. Funding was secured through a grant provided by Municipal Affairs to assess the existing building and develop a design for its revitalization.

In February, 2019, the project to revitalize the Old Brick School kicked off with Phase I: Feasibility Study. The Feasibility Study explored statistical information including population studies and demographics, a building assessment was completed and the report including alternative scenarios, the most prevalent, and appropriate being, an Arts and Culture Centre scenario. This Feasibility Study phase including active community engagement sessions and with a conceptual design outcome. Phase II: Schematic Design, outlined in the Schematic Design Report in August 2019, carries the design of the Arts and Culture Centre forward and investigates the logistics of all the "Should-Do" items required to reimagine a successful future for the Old Brick School. This report, completed in November of 2019, Phase III: Design Development is based on the foundation put forth in the Schematic Design Report and surges forward with the Arts and Culture Centre embodiment of the Old Brick School towards a successful future for the building as a community amenity and cultural hub for Athabasca.

This Design Development Report with its; historic prevalence and rehabilitation at the forefront, coordinated between architectural and engineering designs, as well as sustainable design strategies, proposed schedules for alternative scenarios and an associated opinion of probable cost, provides an integrated and coherent deep-dive for this integral phase of the project. This phase ensures that moving into any of the future Arts and Cultural Centre scenarios is seamless and implementable.

CHANGES FROM FEASIBILITY STUDY

The concept which was arrived upon during the Feasibility Study took considerations from the various engagements and discussions that were held during the initial stages of this project. Since the Feasibility Study, deeper investigations have explored the dynamics of the programs proposed and the strength of concept of those programs.

The following outlines the areas of improvement in design since the Feasibility Study:

- The mirrored studio has been removed from the programming and replaced with a multi-purpose room flex space adjacent to the kitchen and will be added to accommodate the theater's, occasional, need for overflow green room space and can act as additional seating space for the cafe.
- The connection with the theatre has been removed.
- The Community Cafe/Evening Bar programming has been expanded to include a teaching kitchen/food prep area.
- A unifying theme that connects all the spaces, is one of culture, the arts, and education.
- Refined opinion of probable cost.

CHANGES FROM SCHEMATIC STUDY

The following outlines the areas of focus in design since the Schematic Design Report:

- Design of the basement for the Athabasca Pottery Club.
- Further documentation and understanding of the historic relevance of the building.
- Further development of accessibility and circulation inside and outside of the building.
- Implementation and importance of the School as an Arts & Cultural Centre for the Town.
- Refined sustainable design implementation.
- Refined scenarios of design implementation.
- Refined opinion of probable cost.
- Further coordination between consultants.
- Interior design including selected materials and finishes that balance the history, and the contemporary reimagining of the building.

HAZMAT

HAZARDOUS MATERIAL ABATEMENT

The hazardous materials in the building will be abated according to the Hazardous Material Assessment completed in 2017. For the full HAZMAT documentation, see the Appendix of this report.

AUTHORITIES HAVING JURISDICTION

CODE REVIEW

Manasc Isaac has met with the Authorities Having Jurisdiction, at the Inspectors Group Inc., for the Old Brick School Re-Imagine and have reviewed the design and the code compliance put forth in this Report. See Appendix D for the 'Issued for Design Development' Drawings which includes a full Code Compliance review for the Old Brick School.

DESIGN VISION

The discussions of this project have generated two main ideas, both of which have been distilled into guiding design philosophies formulating the vision for the Old Brick School:

1) The Athabasca Old Brick School should be a community building, which upholds its roots through its; art, culture, and historic programming.

2) "Noise is Life". Therefore, to bring noise into the building is also to bring life back into the building. This design intends to activate all the spaces, at all times of the day, and year, of the, formerly vacant, school in order to bring the bustle of Athabasca back into its old brick walls.

With these two philosophies acting as the pillars of design, the intention of this project is to reflect the vision of the community that it serves and restore the historic school into a well-loved and well-used building for its community. The vision for this revitalization project is to be forward-thinking in its sustainability goals and programs, while simultaneously reflecting upon and celebrating its historical significance.

The reimagined Old Brick School as an Arts and Culture Centre for the Town of Athabasca with be that which strikes the perfect balance of old and new.

It will uphold the historical nature of the building through:

- Tending to the facade and historical, architectural, character defining elements and features of the building.

- Creating a historical classroom and alternating museum to celebrate the knowledge and history of the Old Brick School and the Town of Athabasca, amongst other relevant Alberta Histories.

- The Athabasca Pottery Club has, in there over 60 year history, made their own clay from Athabasca soils. This design makes the process of clay-making known and celebrated through one of the oldest forms of arts and culture-making, pottery. Also, this clay may very well be the same clay that made the bricks that make-up the Old Brick School, as the clay stores were once used by brick-makers from between Athabasca, all the way to Edmonton.

CURRENT OLD BRICK SCHOOL, 2019

CORNER STONE LAYING OF THE OLD BRICK SCHOOL, 1913

The contemporary nature of the Old Brick School Re-imagine will take into account:

- Upgrades that do not hinder or mask the expression of the historic school, and only enhance it.
- Draws off historical interior design as inspiration for upgrades to interiors, finishes, fixtures, and materials.
- Provides a space where contemporary spaces support arts and culture activities.
- Creates a space where a range of demographics are accommodated, young to old, with a focus on youth and seniors.
- Creates a space that is active and inhabited all year round, and throughout each day and into the night. A space that changes with the seasons and where the programs that are implemented are revenue generating.
- Provides an amenity to the Town of Athabasca in a way that no other space can. Its a community centre and cultural hub, where people of the Town will want to take their friends, families, and visitors, alike.

VIEW OF ATHABASCA, ATHABASCA LANDING, HISTORICAL PHOTOGRAPH, 1912

2.0

HISTORIC VALUE & APPROACH

2.0 HISTORIC VALUE & APPROACH

HISTORIC VALUE

As a Registered Historic Resource, the Old Brick School is a documentation of the rich history of Alberta and is one of the most prevalent moments of architectural history still standing in Athabasca. Responding to a centenarian building, the design of the revitalization project is cognizant of, and sensitive to, the elements that give the building its historic value, character and grandeur.

The concept of conservation does not mandate that everything stay as it is. The intention of conservation is to ensure that its heritage value is carried forward and enjoyed by future generations – this does not come without some change. The "Statement of Significance, Athabasca Public School", written by Alberta Culture, outlines and defines the following, all of which have be acknowledged in the design, in this Report, and will be celebrated in its revitalization.

The Statement of Significance, Athabasca Public School, by Alberta Culture outlines and describes the:

- Description of Historical Place
- Heritage Value
- Character Defining Elements

DESCRIPTION OF HISTORICAL PLACE

Historic Place: a structure, building, group of buildings, district, landscape, archaeological site or other place in Canada that has been formally recognized for its heritage value.

- Definition from the Standards and Guidelines for the Conservation of Historic Places in Canada

The Athabasca Public School was built in 1913/14. It is a large, hip-roofed, two-storey building constructed of red brick with limestone details. Its front elevation is dominated by a central tower with battlements and an impressive arched doorway surmounted by a large name stone. The school is one of the largest brick buildings in Athabasca and has become a community landmark. It is situated prominently on a landscaped, treed lot at the west end of 48th Avenue in the Town of Athabasca.

VIEW OF ATHABASCA SCHOOL, HISTORICAL PHOTOGRAPH, 1923

HERITAGE VALUE

Heritage Value: the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present and future generations. The heritage value of a historic place is embodied in its character-defining materials, forms, location, spatial configurations, uses and cultural associations or meanings.

- Definition from the Standards and Guidelines for the Conservation of Historic Places in Canada

The Athabasca Public School possesses heritage value as an excellent example of Edwardian era, Collegiate Gothic architecture. It is also significant as a representation of institutional construction trends in pre-First World War, small town Alberta. Fuelled by resource and railway speculation, the community of Athabasca Landing experienced tremendous growth in the pre-First World War period. The pace of growth and a devastating fire in 1913 necessitated the construction of new buildings. Many of these buildings, such as the Athabasca Methodist (now United) Church and the Grand Union Hotel, were impressively large for such a small community, reflecting the town's optimism and anticipation for future growth. Similar is the Athabasca Public School, which was built during the winter of 1913-14 to replace smaller, crowded schoolhouses. The new public school was an impressive two storey, Collegiate Gothic style building, which was described at the time as being "beautiful and colossal." This style is based on the architecture used by many European academic institutions, notably the Oxbridge universities and is characterized by robust construction, towers, parapets and battlements, Gothic and Tudor arches and massive entry portals. Exterior decorative elements, such as sills and lintels, quoins, capstones, cornices and parapets, are typically executed with lighter-coloured sandstone, limestone or concrete, contrasting sharply with the dark red brick usually used as the primary construction material. This style's association with Old World educational traditions made it a popular choice in Edwardian-era North America and it was used extensively for urban schools and academic buildings throughout Alberta, mostly in Calgary and Edmonton, but also in some smaller centres. Like most Collegiate Gothic style buildings, the Athabasca Public School is constructed primarily of red brick with contrasting limestone highlights. The building rests on a foundation of rough-faced sandstone and is surmounted by a bell-cast, hip roof with gable-roofed dormers. The school's front facade is dominated by a large, central tower flanked by two large airshafts and capped with a crenallated parapet. A massive entry portal, accessed by heavy stone steps and railings, features large wooden doors set in a wide Tudor-arch at the base of the tower. The doorway is surmounted by cornices and an entablature bearing the school's name. Tall, narrow recesses, simulating arrow slits, are situated in the windowless dormers and on the sides of the tower. Many decorative elements are constructed of high-quality Indiana or Bedford limestone, including the entry portal; tower parapet; sills and lintels; belt course; cornices; and chimney caps. Upon completion, the school had four classrooms with nine windows each and two recreation rooms in the basement and was large enough to accommodate students of all grades. The interior mill work, such as window and door frames, picture rails and banisters, is relatively simple yet sturdy in design, suitable for the heavy use experienced in a school environment. The wide corridors feature plain wainscoting and doors with transoms and the classrooms feature green chalkboards with wooden frames and ledges.

The onset of the First World War and decisions made by the railways frustrated the town's expectations. The Canadian Northern Railway ended at the town and other railways bypassed the community completely. However, the continued presence of the impressive Athabasca Public School and nearby Athabasca United Church testifies to the expectations many of Alberta's smaller communities had of becoming leading urban centres. The school, with occasional additions to the rear, remained in use until the mid-1960s, at which time it became a community arts centre and office building.

CHARACTER DEFINING ELEMENTS

Character-defining Element: the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the heritage value of a historic place, which must be retained to preserve its heritage value.

- Definition from the Standards and Guidelines for the Conservation of Historic Places in Canada

In general, the character defining elements make-up a solid appearance; distinctive pattern of light-coloured Indiana or Bedford limestone decorative highlights, which contrasts with the red brick construction of the exterior walls. The key Character Defining Elements and their scope of work for the Athabasca Public School (Old Brick School) revitalization are defined in great detail on the following pages.

CHARACTER DEFINING ELEMENTS

EXTERIOR

1 WOOD SHINGLE-CLAD BELL-CAST HIP ROOF

2 BRICK AIR-SHAFTS THAT FLANK CENTRAL TOWER

3 LIMESTONE CORNICE & BATTLEMENTS

4 GABLE ROOF BRICK DORMERS & LIMESTONE DETAIL

5 BRICK RECESSES

6 LIMESTONE SILL & LINTEL

7 CENTRAL THREE STOREY BELL TOWER

8 FENESTRATION PATTERN & WINDOWS ON CENTRAL TOWER

9 FENESTRATION PATTERN & WINDOWS ON FACADE

10 LIMESTONE BELT COURSE & ROUGH-FACED STONE

11 LIMESTONE ENTABLATURE

12 LIMESTONE FRONT PIECE & DETAILS

13 LIMESTONE ENTRY PORTAL

14 LIMESTONE FRONT ENTRY STEPS

15 WOODEN, ARCHED ENTRY DOOR

INTERIOR

1 LATH AND PLASTER WALLS & CEILING

2 GREEN CHALK BOARDS

3 MILLWORK INCLUDING:
- PICTURE RAILS, BANISTERS & BASEBOARDS
- RAILINGS AND WAINSCOTING
- DOOR AND WINDOW FRAMES AND TRIM

4 WOOD STRIP FLOOR

5 CLASSROOM DOORS AND NINE-LIGHT TRANSOMS

6 MECHANICAL FIXTURES INCLUDING:
- HISTORICAL HEATING FIXTURES
- PEASE ECONOMY STEAM HEATER AND VENTILATOR

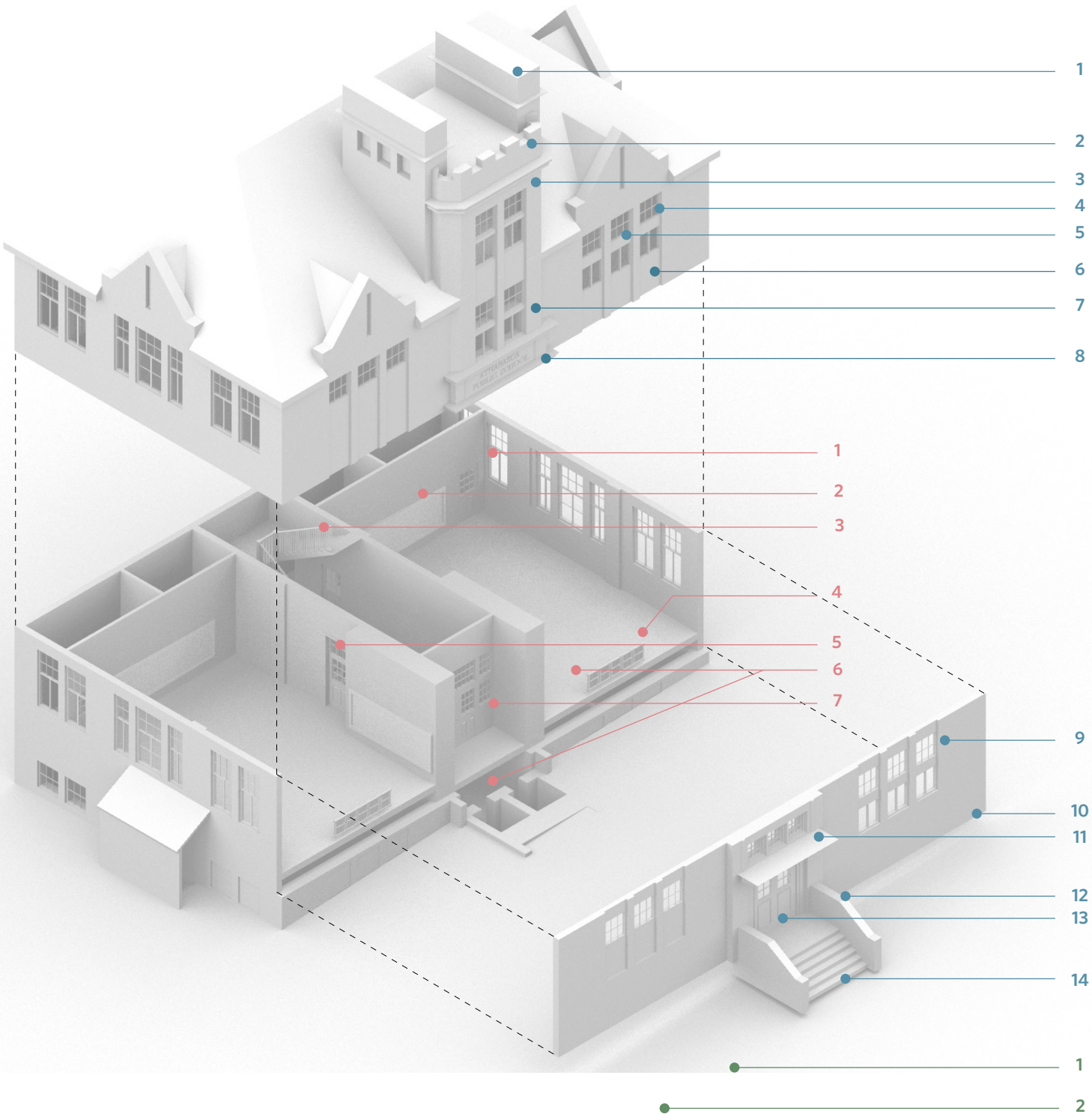
7 CORRIDOR ENTRYWAY DOOR, TRANSOMS AND LIGHT PANELS

8 DOOR HARDWARE INCLUDING:
- PUSH BARS
- HINGES
- KNOBS AND HANDLES

LANDSCAPE

1 PROMINENT LOCATION WITH VIEWS IN COMMERCIAL DISTRICT

2 LANDSCAPED, PARTIALLY TREED LOT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EXTERIOR

1 WOOD SHINGLE-CLAD BELL-CAST HIP ROOF

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15 WOODEN, ARCHED ENTRY DOOR

WOOD SHINGLES ON HIPPED ROOF AND GABLE DORMER

1. WOOD SHINGLE-CLAD BELL-CAST HIP ROOF

The wood shingle-clad bell-case hip roof is in fair to good condition. When the roof needs to be maintained, and replaced in the next 10-15 years, careful attention must be given to the detailing, pitch, exposure, material, and shape and form of the existing, character defining roof elements. To replace the entire roof, the approximate value to do so is $230,000.00. The underside of the roof, the internal wood roof structure, is to be painted with intumescent to achieve the flame-spread rating specified.

VIEW FROM SOUTHWEST

2 - BRICK AIR-SHAFTS THAT FLANK CENTRAL TOWER

The two large, vertical brick projections with limestone caps containing air-shafts, flanking the tower are defined as character defining elements of the exterior wall. The brick air-shafts that flank the central tower with limestone details at their top are in a condition that will require minimal repair. They require a cleaning. Slight distress, damage or deterioration are to be repaired and stabilized with a compatible material, where the form and the assembly of the shafts, shall be consistent with its current state.

SOUTH ELEVATION

3 - LIMESTONE CORNICE & BATTLEMENTS

The limestone cornice and battlements are located at the top of centrally-located, three storey, red brick tower and air-shafts. These exterior wall details require a cleaning and minimal repair. Such small limestone repairs shall include using a replacement material in kind.

4 - GABLE ROOF BRICK DORMERS & LIMESTONE DETAIL

Gable roof dormers with brick gable ends and simple, limestone box cornices, situated on the south and north sides and on the west (front) side flanking the tower are exterior wall details that are in very good condition. They require a cleaning. If and when minimal repairs are necessary, any intervention shall retain the brick dormer and limestone details material, form, expression, and wall assembly.

5 - BRICK RECESSES

Tall, rectangular brick recesses in the gable ends and on the sides of the tower and chimneys, resembling arrow slits as an exterior wall detail are to be maintained in a consistent manner with their current architectural expression, form and material. The brick recesses are in good condition and for protection, require a cleaning. When masonry repointing occurs in the brick recesses, a mortar, mortar joint, and colour that are replacements in kind of the existing, quality workmanship and methodologies must be used.

6 - LIMESTONE SILL & LINTEL

Limestone window sills and lintels, in general, are in good condition. There are some second floor sills that are cracked and/or broken. These exterior wall details are imperative to the character defining elements of the building and must be repaired and maintained. Repair the cracks and reinforce the broken and cracked sill. If the sill or lintel need to be fully replaced, a replacement material, if the same limestone is not available, an appropriate substitute material of missing elements is required.

CENTRAL THREE STOREY BELL TOWER & FENSTRATION PATTERN AND WINDOWS ON CENTRAL TOWER

7 /8 - CENTRAL THREE STOREY BELL TOWER & FENESTRATION PATTERN & WINDOWS ON CENTRAL TOWER

The central three storey bell tower is an exterior wall character defining element. Made up of predominately brick and limestone, if and when the central three story bell tower needs to be repaired, its wall assembly including its functional and decorative elements are to be retained. Currently, the elements of the central three story bell tower are in good condition and only require a protective cleaning.

The fenestration pattern of the tower with three small six-paned windows at the first floor level, and pairs of nine over one windows on the upper two levels are a 'windows' character defining element. This is the only occurrence of an atypical type of window. These are the three square windows above the main entrance. All the windows, typical or atypical in their properties, operation and characteristics including their form and materials must be retained in their restoration intervention. The majority of the windows need to be replaced, where only a handful can be restored. Both a restoration and replacement process are necessary for all windows. Replace all the single pane glass with a double pane glass in all windows. Repairing of counterweight systems, and caulking. See window detail in the Design Development Drawing Set, Appendix D.

WEST FACADE, FENSTRATION PATTERN & WINDOWS ON PRIMARY ELEVATION

9 - FENESTRATION PATTERN & WINDOWS ON FACADE

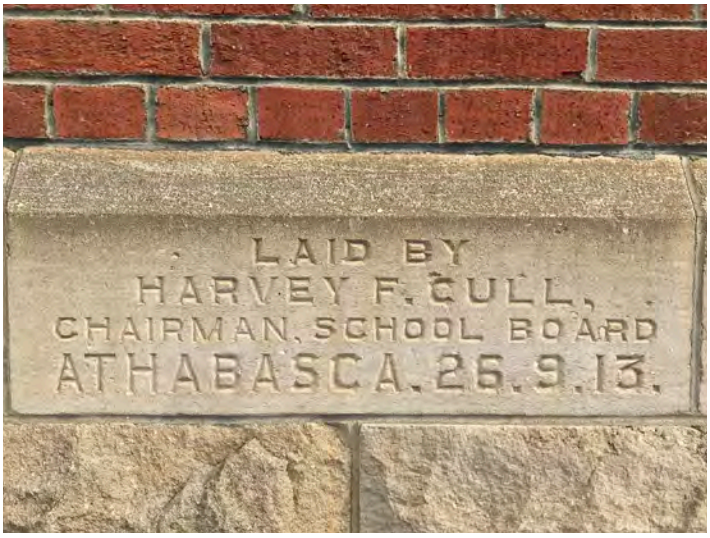
The unique fenestration of the primary elevation with regularly spaced nine-over one windows to the south of the central tower and smaller, nine light windows to the north of the tower are a 'windows' character defining element. The windows, in their properties, operation and characteristics including their form and materials must be retained in their restoration intervention. The majority of the windows need to be replaced, where only a handful can be restored. Both a restoration and replacement process are necessary for all windows. Replace all the single pane glass with a double pane glass in all windows. Repairing of counterweight systems, and caulking. See window detail in the Design Development Drawing Set, Appendix D.

10 - LIMESTONE BELT COURSE & ROUGH-FACED STONE

The limestone belt course between the foundation and the first storey and the rough-faced stone foundation are exterior wall character defining elements. It has been determined that the deterioration of the exterior wall through investigation is quite minimal. Protective measures include maintaining through a gentle cleaning. Any repairing of small cracks or chips in the limestone belt course or rough-faced stone foundation should match the existing work as closely as possible, both physically and visually.

One stone of the belt course is engraved with the words 'Laid By Harvey F. Cull. Chairman, School Board, Athabasca. 26.9.13.' The stone is in good condition and should be preserved as such.

LIMESTONE BELT COURSE & ROUGH FACED STONE FOUNDATION



ENGRAVED LIMESTONE BELT COURSE

11 - LIMESTONE ENTABLATURE

The large, limestone entablature bearing the words ATHABASCA PUBLIC SCHOOL is a sign that is part of an exterior wall, character defining element. It is in good condition and conservation methods need only to be minimal at this point. These should only include protecting the entablature by maintaining through a light cleaning.

LIMESTONE ENTRY PORTAL

12 - LIMESTONE FRONT PIECE & DETAILS

The limestone front piece with large stone brackets, situated underneath three six-paned windows and projecting over the front door; limestone cornices situated below and above the entablature and below the tower battlement and chimney caps are a refined detail of the exterior wall, and windows, doors and storefronts, as well as contributing to the building form. Overall the limestone front piece and details are in fair to good condition. The bottom-most limestone front piece supported by stone brackets has some chips and cracking occurring. For preservation methods, protection through cleaning, and repairing the chips and cracks by either patching, piecing-in, with materials in kind, as well as with work that, as closely as possible matches the existing work, both physically and visually.

13 - LIMESTONE ENTRY PORTAL

The massive front entry portal, constructed of limestone and situated in the base of the tower, is a exterior wall and building form character defining element. Although robust, the entry portal has experienced graffiti, chipping, and weathering at its base. Preservation methods include; protection through the cleaning and removal of graffiti repairing the chips and cracks by either patching, piecing-in, with materials in kind, as well as with work that, as closely as possible matches the existing work, both physically and visually.

14 - LIMESTONE FRONT ENTRY STEPS

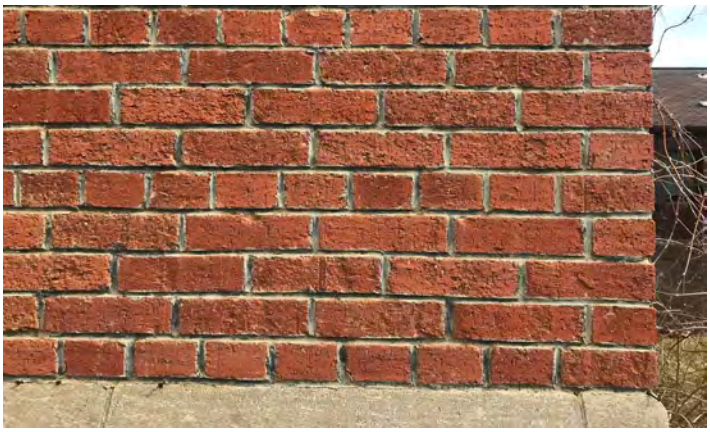
Large, limestone front entry steps with limestone capped, field stone railings are a character defining element that requires preservation. Larger chips out of the front of the entry steps as well as out of the limestone capped stone railings, also weathering at the base of the top landing stone, has been documented. Preservation of the steps and the railings is to be done through protection and repairing methods. Gentle cleaning must occur, and protection through repairing the chips and cracks by either patching, piecing-in, with materials in kind, as well as with work that, as closely as possible matches the existing work, both physically and visually.

HEAVY WOODEN ARCHED ENTRY DOOR WITH SIX LIGHTS SET WITH IN A TUDOR ARCH

15 - WOODEN, ARCHED ENTRY DOOR

The heavy, wooden, arched entry door with six lights set with in a Tudor arch are a door, is a character defining element. The existing door, although sturdy, has weathered considerably at its base, and requires rehabilitation. Rehabilitation includes removing the door and restoring the wood back to its original condition. Protection of the door must be taken when considering finishes on the restored door. Making the door weather tight, adjusting hardware, sealing openings and joints is imperative while retaining the glazing in the door ensuring that the function, material and decorative elements are consistent with that of the original.

EXTERIOR GENERAL



EXTERIOR BRICK

BRICK REPOINTING & CLEANING

The masonry, both the brick and limestone, as character defining elements are to be preserved and in some locations restored. Restoring and preserving the masonry includes, cleaning it, applying appropriate surface treatments, sealing in addition to repointing the brick. Before repointing, removing of deteriorated or inappropriate mortar by carefully raking the joints, while avoiding damaging the masonry is to be undertaken. Repairing the masonry through the repointing, then, where there is evidence of deterioration, such as disintegrating or cracked mortar, or loose bricks, or damp walls, should be completed.

Before preservation can begin, identifying the particular characteristics and sources of the type of stone or brick used, and the composition of the mortar must be determined. Such formal characteristics of the brick include the brick recesses, the brick window returns, amongst others.

EXTERIOR DOORS

Only the front heavy wood door is defined as a character defining element, however, all the doors, if historic, should be preserved, rehabilitated or restored. Contributing to the overall envelop of the building, as for sustainable implementation, it is important for the conservation to include ensuring that the doors are water-tight, and air-tight, sealing all openings and joints. The installation of weatherstripping, and adjusting hardware must be completed.

EXTERIOR WINDOWS

The fenstration pattern and window on the primary facade and tower are defined as character defining elements to be historically conserved. The majority of the windows although some are smaller than others, are formally, materially, and functionally, are the same.

The wood of the windows in adhering to the general guidelines for preservation, rehabilitation and restoration require the removing of damaged, deteriorated, or thickly applied coatings to the next sound layer, using the gentlest means possible, and retaining and replacing coatings to help protect the wood from moisture, ultraviolet light and wear. Most of the windows are able to be removed, rehabilitated, and placed back in the facade, where in some particular cases, they will have to be fully restored. All windows will be restored to have double sashes, and upgraded weather performance, where the operation and materials will be maintained.

In fulfilling the restoration of the Old Brick School, the basement windows (currently filled in with soldier bricks) will be restored back to their original state as glazed windows. To protect against the present homeless population in Athabasca, bars will be placed over the basement windows.

EXTERIOR WINDOW SILL

EXISTING FILLED IN BASEMENT BRICK WINDOWS

EXTERIOR BELL ON ROOF

BELL ROPE IN 'PRINCIPALS OFFICE'

EXTERIOR BELL

The exterior bell is not defined as a character defining element in the Statement of Significance for the Athabasca Public School, however, it has been determined as a function object of importance to the revitalization of the Old Brick School. The bell sits on the existing room and is covered by a wood-frame canopy. The rope from the bell extends down through the roof in what once was the Principals Office. The bell, wood-frame canopy, and the rope are to be cleaned, repaired, and further maintained.

INTERIOR

1 LATH AND PLASTER WALLS & CEILING

2 GREEN CHALK BOARDS

3 MILLWORK INCLUDING:
- PICTURE RAILS, BANISTERS & BASEBOARDS
- RAILINGS AND WAINSCOTING
- DOOR AND WINDOW FRAMES AND TRIM

4 WOOD STRIP FLOOR

5 CLASSROOM DOORS AND NINE-LIGHT TRANSOMS

6 MECHANICAL FIXTURES INCLUDING:
- HISTORICAL HEATING FIXTURES
- PEASE ECONOMY STEAM HEATER AND VENTILATOR

7 CORRIDOR ENTRYWAY DOOR, TRANSOMS AND LIGHT PANELS

8 DOOR HARDWARE INCLUDING:
- PUSH BARS
- HINGES
- KNOBS AND HANDLES

AREA ON THE CEILING TO BE REPAIRED

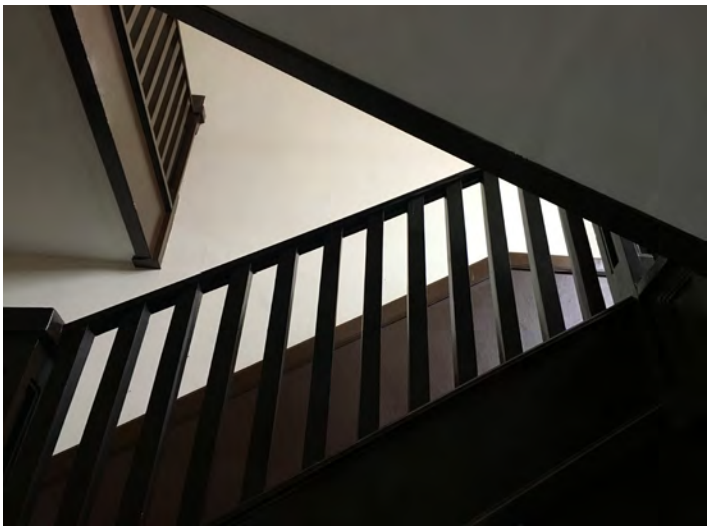
1 LATH AND PLASTER WALLS & CEILING

The lath and plaster walls and ceiling are character defining elements and are to be restored fully and throughout. In some instances, the entire lath and plaster will have be restored, where in others only a gentle cleaning and repainting for conservative purposes may be necessary.

GREEN CHALK BOARD

2 GREEN CHALK BOARDS

The green chalkboards with wood frames and ledges fixed to the walls of the former classrooms are character define elements. As they are of importance and significance to the conservation of the Old Brick School the green chalkboards to be preserved in their existing locations, or moved a new location in the building to support the functionality of the new design. All green chalkboards wood frames and ledges are to preserved in their entirety, and where necessary, to be repainted with the same dark brown colour in kind. If restoration is necessary, the same material, function, placement on wall, and form is to be consistent with the existing.



BASEBOARD, WAINSCOTING AND TRIM

3 MILLWORK: RAILS, BANISTERS, BASEBOARDS, WAINSCOTING, DOOR AND WINDOW FRAMES AND TRIM

The simple yet sturdy style of extant historic mill work, such as door and window frames, picture rails, banisters, newel posts, railings and corridor wainscoting are character defining elements that will be rehabilitated and repainted their original dark brown colour.

EXISTING CARPET PULLED UP

4 WOOD STRIP FLOOR

Extant historic wood strip flooring is a character defining element. Currently, there are multiple finishes applied overtop of the wood strip flooring, including; carpet and vinyl flooring. The current finishes applied to the existing hardwood floor are to be removed and the extant historic wood strip floor is to be rehabilitated.

CLASSROOM DOORS AND NINE-LIGHT TRANSOMS

5 CLASSROOM DOORS AND NINE-LIGHT TRANSOMS

Wide, wooden classroom doors with nine-light transoms are a doors character defining element. To conserve the doors, the hardware and glazing need to be considered. As these are a historical element, and the current code does not require them to hold a fire resistance rating, they will remain as is, and conserved where necessary.

HISTORICAL MECHANICAL BOILER FACEPLACE

MECHANICAL DAMPER REGULATOR

HISTORICAL RADIATOR

6 MECHANICAL FIXTURES INCLUDING: HISTORICAL HEATING FIXTURES, PEASE ECONOMY STEAM HEATER AND VENTILATOR

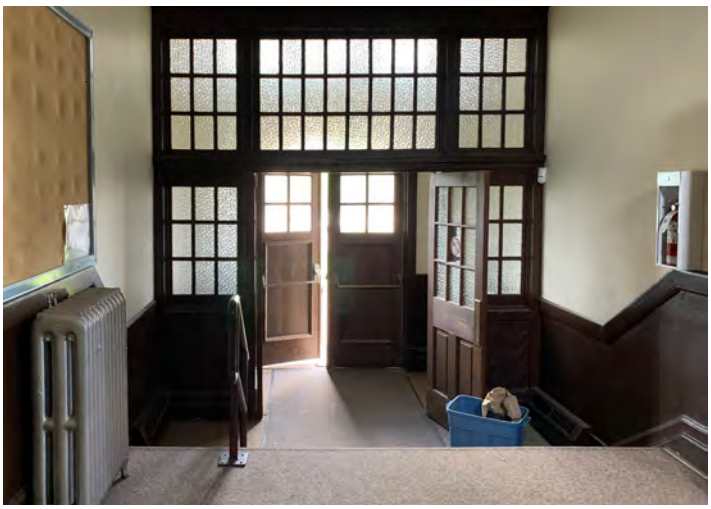
The extant historic heating fixtures and Pease Economy Steam Heater and Ventilator located in the basement bearing corporate markings and other markings such as "PATENTED 1906, I BRING THEE COMFORT, CLEAN THESE FLUES DAILY" are all character defining elements located throughout the building. These will all be conserved in different ways. The historic heating fixtures such as the damper regulator with be preserved and remain in place. As no longer functional, the historic radiators will be restored through cleaning and painting, and placed throughout the building in locations where they can be celebrated. The Pease Economy Steam Heater and Ventilator located in the basement will remain, and be conserved in a way that it too will be celebrated.

7 CORRIDOR ENTRYWAY DOOR, TRANSOMS AND LIGHT PANELS

The wood-framed, corridor entry way with double door flanked by nine-light side panels and surmounted by a large, three-paneled transom with two nine-light panels flanking a twenty-four light central panel is a character defining element. The door, transom, and side lights are in fair condition and will be rehabilitated where necessary. As these are a historical element, and the current code does not require them to hold a fire resistance rating, they will remain as is, and will be conserved as necessary.

8 DOOR HARDWARE INCLUDING, PUSH BARS, HINGES, KNOBS AND HANDLES

Extant historic door hardware, such as push bars, hinges, knobs and handles are character defining elements and will be conserved throughout the interior.



FOYER PARTITION WALL AND DOOR WITH TRANSOM AND SIDELIGHTS

INTERIOR GENERAL

HISTORIC DISPLAY CABINET

MILLWORK AND FURNITURE

The conservation of the Old Brick School includes new millwork for the community cafe and evening bar, teaching kitchen, makerspace, and office. Although, the historic display cabinets are not considered character defining elements, all three will be rehabilitated and used throughout the building.

The 1920's classroom will be fit out with period-appropriate classroom furniture.

LANDSCAPE

1 PROMINENT LOCATION WITH VIEWS IN COMMERCIAL DISTRICT

2 LANDSCAPED, PARTIALLY TREED LOT

1 PROMINENT LOCATION WITH VIEWS IN COMMERCIAL DISTRICT

A landscape character defining element, the prominent location at the end of a roadway and on a hill overlooking Athabasca's main commercial district is of importance, and although this prominent existing location is not able to be altered, the views in the commercial district are to remain.

2 LANDSCAPED, PARTIALLY TREED LOT

The Old Brick School, situated on a landscaped, partially treed lot, is a character defining element. In order to preserve and rehabilitate this character defining element, the Standards and Guidelines for the Conservation of Historic Places in Canada states that firstly, the landscape's vegetation is documented and understood over time, using archival resources, such as photographs.

Then, protecting and maintaining the vegetation is essential to preserving the site's historical values. This should be done through maintaining the vegetation by using non-destructive methods and daily, seasonal and cyclical tasks and using maintenance practices that respect the habit, form, colour, texture, bloom, fruit, fragrance, scale and context of the vegetation.

Landscaping for the Old Brick School is expanded upon in Section 4.5 Landscape Design, of this Report.

OLD BRICK SCHOOL SITE AND LANDSCAPE, 1970

OLD BRICK SCHOOL SITE AND LANDSCAPE, 1945

EXISTING OLD BRICK SCHOOL SITE AND LANDSCAPE, 2019

OLD BRICK SCHOOL SITE AND LANDSCAPE, 1970

HISTORIC APPROACH

While adhering to the Standards and Guidelines for the Conservation of Historic Places in Canada, the historical approach to the revitalization of the Old Brick School is designed to be a sensitive balance between the integration of a contemporary program, in a restoration of a historic structure. This approach stems from the intent to uphold as much of the historic nature of the building as possible, while implementing a contemporary way of using it. This adheres to everyone's desire to place life back in the building, and not have it fall into disrepair and/or fall to ruin.

The goal of the approach is to ensure that the Old Brick School becomes a self-sustaining entity, and a vital amenity to the serve the Town and the surrounding municipalities, in a way that no other building can. In its acknowledgment of the past, with its integration with the future, The Old Brick School will be the foundation of the town, and become its most prized focal-point. The Historic evolution of this building will uphold its ability to morph and change into its new self, not too drastically, leaving the historical remnants and character defining elements, while keeping it alive.

The approach to the upgrades comes with them as a historically valid idea with the outlook that the contemporary implementation is considered 'good' as long as this then allows people to engage with the building in a more meaningful way. This speaks to the case of the additional stair-case up to the attic, the exterior staircase to the outdoor patio and upper patio space, and with allowing for the existing mechanical space in the basement with its historical boiler cover plate left in place and restored, opening it up to allow for people to engage with how the mechanical use to work.

The Historical Approach, and the design of the Old Brick School proposed in this Report does take into account that in eventuality, the Theatre and the Library will eventually be demolished and rebuilt. As the Old Brick School is currently connected with both, consideration of this relationship in anticipating what 'could be' in the future, is important and imperative.

3.0

SUSTAINABILITY

- SUSTAINABILITY GOALS
- SUSTAINABLE DESIGN STRATEGY

3.0 SUSTAINABILITY

SUSTAINABILITY GOALS

> "THE GREENEST BUILDING, IS THE ONE THAT IS ALREADY BUILT."
>
> - CARL ELEFANTE

"Revitalization" implies a newfound strength, energy, and life. This revitalization project, therefore, demands that we not do "more of the same"– we need to do better.

Through conversations and workshops with the Brick School Steering Committee and engineering consultants, a sustainability goal was designed for the Old Brick School project:

> REIMAGINE THE BUILDING TO HAVE A LOWER OPERATIONAL CARBON FOOTPRINT THAN THE EXISTING BUILDING, IN ITS CURRENT STATE, DOES

Analysis into energy consumption, water consumption, and choice of materials will help best inform the project in order to achieve the sustainability goal.

SUSTAINABLE DESIGN STRATEGY

ARCHITECTURAL SUSTAINABLE DESIGN

The architectural sustainable design strategies are first and foremost to facilitate coordination between all consultants to ensure that the reimagining of the Old Brick School outcome adheres to the Steering Committee's sustainability goal. In that and with knowing that 'the greenest building, is the one that is already built' - all systems and the scope of the work has considered the sustainable implementations where possible.

Knowing that in an existing building, more passive sustainable design strategies, such as orientation, sun and daylight exposure, passive ventilation, are difficult to design for and that the existing brick envelope shall not be disrupted, the following, more technical, sustainable, design strategies have been implemented:

- Conservation of existing building structure, envelope and elements, where possible
- The design and implementation of new sustainable building systems
- Chosen sustainable materials and finishes
- No VOC's

MECHANICAL SUSTAINABLE DESIGN

The mechanical design strategies for the Old Brick School project includes, ultra-high efficient boilers 99% efficiency, a dedicated outdoor air system (DOAS)with an energy recovery. The room fan coil units provide excellent occupant comfort and reduce energy cost, they only operate when the room is occupied. The DOAS unit and the fan coils reduce the overall fan power energy required over a more typical variable air volume system or a constant volume system.

Plumbing fixtures will be water conserving and domestic hot water generation will be by tank-less style water heater.

ELECTRICAL SUSTAINABLE DESIGN

The electrical design strategies will mainly be centered on the lighting strategy within the building. Energy efficient LED fixtures have been selected to ensure a low lighting power density while also meeting minimum light level requirements. The lighting control system will also be designed such that rooms that are vacant and not in use will have automatic controls to shut the lights off. Additionally, day light sensors will ensure that light fixtures in areas that receive significant day light will be shut off.

Consideration was given to photo-voltaic panels to convert the building to net zero, however this would require converting the mechanical system in the building to a fully electric system. This change would then result in an increased electrical service size and a very large photo-voltaic array which after review was not feasible for this project.

LANDSCAPE ARCHITECTURE SUSTAINABLE DESIGN

In line with the sustainable design goals for the project the landscape design will feature sustainable strategies. The ideal southwest exposure of the patio will naturally extend its usage into the shoulder seasons. In the winter fire bowls could be provided to further prolong occasional patio use into the winter months. Planter boxes delineate the patio area as opposed to a fence or railing. The plants in these containers are suggested to be edible and are envisaged to be used in the café. All in ground planting will be carefully selected to be drought resistant and will not require any permanent irrigation after the initial establishment.

Rainwater

All rainwater will be retained on site. Selected rainwater leaders will discharge into rainwater barrels. The water will be used to irrigate the edible planting in the raised beds.
Paving slabs used for the patio will be laid to ensure permeability.

4.0 THE DESIGN

- ARCHITECTURAL
- STRUCTURAL
- MECHANICAL
- ELECTRICAL
- LANDSCAPE

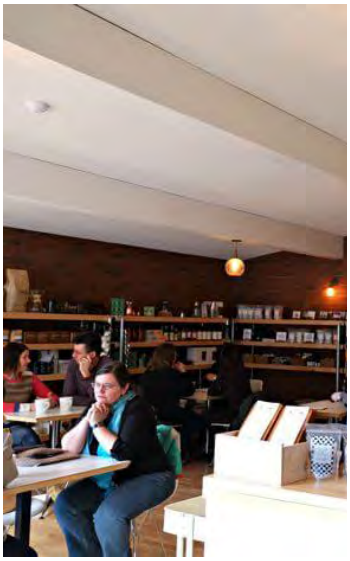
4.1 ARCHITECTURAL DESIGN

4.1 ARCHITECTURAL DESIGN

PROGRAM

As a former educational institution, the programming of the new Old Brick School, as an Arts & Culture Centre pays homage to its roots. The underlying theme of education persists throughout the building with the original four classrooms reprogrammed into four spaces not only as an amenity for the community, culture, making and arts, but also, most importantly for learning.

THE HALLWAY CAFE, EDMONTON AB



LITTLE BRICK CAFE, EDMONTON AB

MAIN FLOOR

KITCHEN / MULTIPURPOSE ROOM (TEACHING KITCHEN / FLEX SPACE)

The ***Kitchen/ Multi-purpose Room***, which serves the cafe is predominatley a teaching kitchen where culinary/food prep learning can coincide with the operations of the cafe. The adjacent space provides opportunity for the theatre to use as additional green room space, overflow cafe seating, or event space.

This space also functions as a multi-purpose room, to serve many of the Towns gathering needs. When its not functioning as described above, It can be rented out and utilized as a meeting room, teaching room, as an additional classroom space for the Athabasca Pottery Club, birthday parties, and so on.

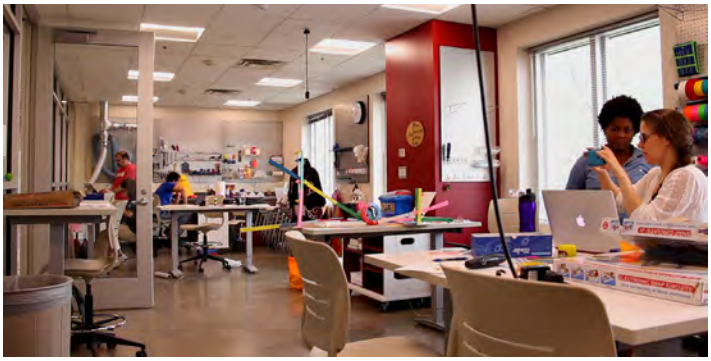
COMMUNITY CAFE, EVENING BAR AND PATIO

The ***Cafe/Bar***, which spills out into the outdoor patio, described below, collects the boisterous noises of a vibrant cafe during the day. In the evening, the space is able to be reconfigured into a relaxed and sophisticated bar, elegant and accented with rich colours. The Cafe/Bar provides space for working and amenities such as outlets and WiFi. There is a small 'store' component where the Pottery Club and the Teaching Kitchen can sell their goods in the cafe. The patio also transforms from a sun-bathed, day time lounge to a licensed patio/bar on select evenings.

As this space is beautifully yet simply designed, with the original character of the Old Brick School enhanced, it will be a special venue to hold events, outside of the day-to-day community cafe and evening bar, such as weddings, which can occur all year round.

MAKERSPACE - CAPILANO EPL, EDMONTON AB

HISTORIC CLASSROOM IN MCKAY AVENUE HISTORIC SCHOOL, EDMONTON AB



MAKERSPACE

SECOND FLOOR

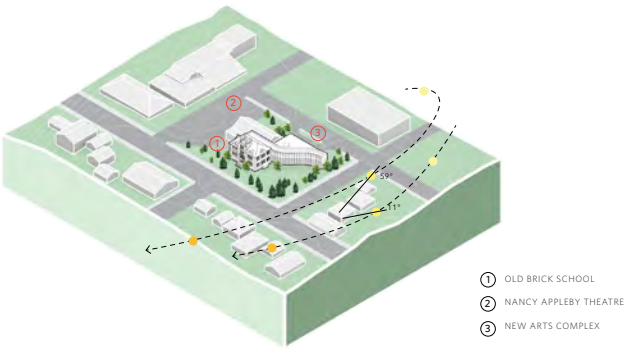
1920S CLASSROOM & ALTERNATING MUSEUM

The northern classroom on the second floor will be restored to its original state as a ***1920s Classroom*** – an homage to the school's history. This space provides opportunities for school trips and event rentals. In addition to the 1920's classroom, this space will also be utilized as a ***alternating museum***. Much like other historical classrooms and schools, this alternating museums will hold a variation of exhibitions throughout the year that bring awareness about the historical relevance of a variety of different places and/or topics.

MAKERSPACE

The lift exits into the classroom above the cafe. Ushered into the center of the floor, everyone is able to fully engage with the ***Makerspace***. This is an area where patrons are able to create a whatever they want, while having full access to doing so with new technologies and technologies that they might not have access to elsewhere. The technologies that will be available in this space include: 3D printer, Creative iMac Computers, Cricut Make, Digital Conversion Tools, Photo Scanner with film negative guides and a Sewing Machine, as well as others. This makerspace also include a digital recording and sound studio space.

It is anticipated, that eventually, the adjoining theatre and the library will be revitalized or re-built completely. In both scenarios, the Old Brick School has included this forethought into the design, and into the programming for the eventual 'arts and cultural centre.' This explains the integration of the makerspace, which is usually found in a library, and/or the potential to place an 'archive' in the Old Brick School as well.



WORK-IN OFFICE SPACE

POTTERY CLUB

BASEMENT

WORK-IN OFFICE SPACE

Located at the top of the stairs, in the old Principals Office, the ***work-in office space*** is a roomy but quiet desk space for 4 people with adequate under the stair storage. This office space also provides the access to the attic / mechanical room up a new staircase.

UPPER PATIO

The upper floor has access to a southeast ***rooftop patio*** through the east exterior door adjacent to the lift entrance. This brightly lit outdoor space provides visitors quick access to an intimate patio space and leads down onto the on-grade patio. This second floor exit also acts as a fire escape.

POTTERY CLUB

The basement of the Old Brick School is inhabited by the ***Athabasca Pottery Club***, and has been for over the past 60 years, the current and long-term tenant of that space. There are members that have been attending the Pottery Club since it opened.

The space is already a lively space that is rich in history, making, arts, community and culture. From their clay making process to throwing, glazing, firing, displaying and selling of pottery pieces, whether for utilitarian purposes or for art, this space embodies and demonstrates what the remainder of the Old Brick School could be.

In historical relevance, it is important to note that the Athabasca Pottery Club utilizes Athabasca rich soils, originally used for brick making in the area and around Alberta, The Athabasca Pottery Club is one of the few Pottery Clubs in Canada to make their own clay.

Slight modifications and upgrades will be made to the Pottery Club space to brighten-up the space, provide more storage, enhance their already vibrant culture and to allow for all programs in the building to act in a symbiotic nature.

SPACE PROGRAM

OLD BRICK SCHOOL SPACE PROGRAM

BASEMENT

The basement of the Old Brick School holds the program of the Athabasca Pottery Club. The program is dispersed between a variety of clay making, throwing, glazing, and firing tasks as well as adequate storage, and to keep the current Pottery Club culture alive, a kitchen. The new electrical room has also been designated to the basement.

MAIN FLOOR

The dominant program on the main floor is the entrance foyer flanked by the teaching kitchen / flex space (multipurpose space) and the community cafe / evening bar. In addition, two washrooms, one of which is universal in design, a lift, storage and a janitors closet which is found under the stairs. Leading from the community cafe down a set of stairs to the south is the outdoor patio.

SECOND FLOOR

The dominant program on the second floor is the 1920s Classroom, the Makerspace and an the Work-in Office Space. In addition, there is; storage, two washrooms, on of which is universal in design, a lift, and a janitors closet. The rooftop patio extends off of the elevator lobby and has an additional exterior staircase to the mainfloor cafe and the outdoor patio on ground level.

ATTIC

The attic, previously not programmed, now houses the mechanical room. This mechanical room is accessed by a new staircase in the Work-in Office Space.

OLD BRICK SCHOOL - PROGRAM LIST		
Floor	**Program**	**Total Area (sqft)**
BASEMENT		
	CLAY MAKING	354
	BOOT/COAT	20
	KITCHEN	83
	HAND BUILDING	538
	WHEELS	199
	DRYING WALL STORAGE	26
	KILN STORAGE	68
	GLAZING STORAGE	87
	KILN ROOM	170
	WASHING STATION	33
	W/C	35
	LIFT	36
	ELECTRICAL ROOM	112
	Basement NET	**2,014**
	Basement GROSS	**2,279**
MAIN FLOOR		
	COMMUNITY CAFE / EVENING BAR	802
	TEACHING KITCHEN	284
	MULTI-PURPOSE FLEX SPACE	499
	W/C	28
	W/C (UNIVERSAL)	38
	LIFT	41
	STORAGE	79
	J/C	30
	First Floor NET	**1,775**
	First Floor GROSS	**2,339**
	OUTDOOR PATIO	673
SECOND FLOOR		
	1920S CLASSROOM	770
	COATROOM	80
	MAKERSPACE	530
	WORK-IN OFFICE	181
	W/C	34
	W/C (UNIVERSAL)	62
	LIFT	41
	Second Floor NET	**1,662**
	Second Floor GROSS	**2,339**
	ROOFTOP PATIO	255
ATTIC		
	MECHANICAL ROOM	179
	Attic Floor NET	**1,662**
	Attic Floor GROSS	**2,339**
	BUILDING NET	**5,451**
	BUILDING GROSS	**6,957**

EXISTING TO RENOVATED

EXISTING FLOORPLANS

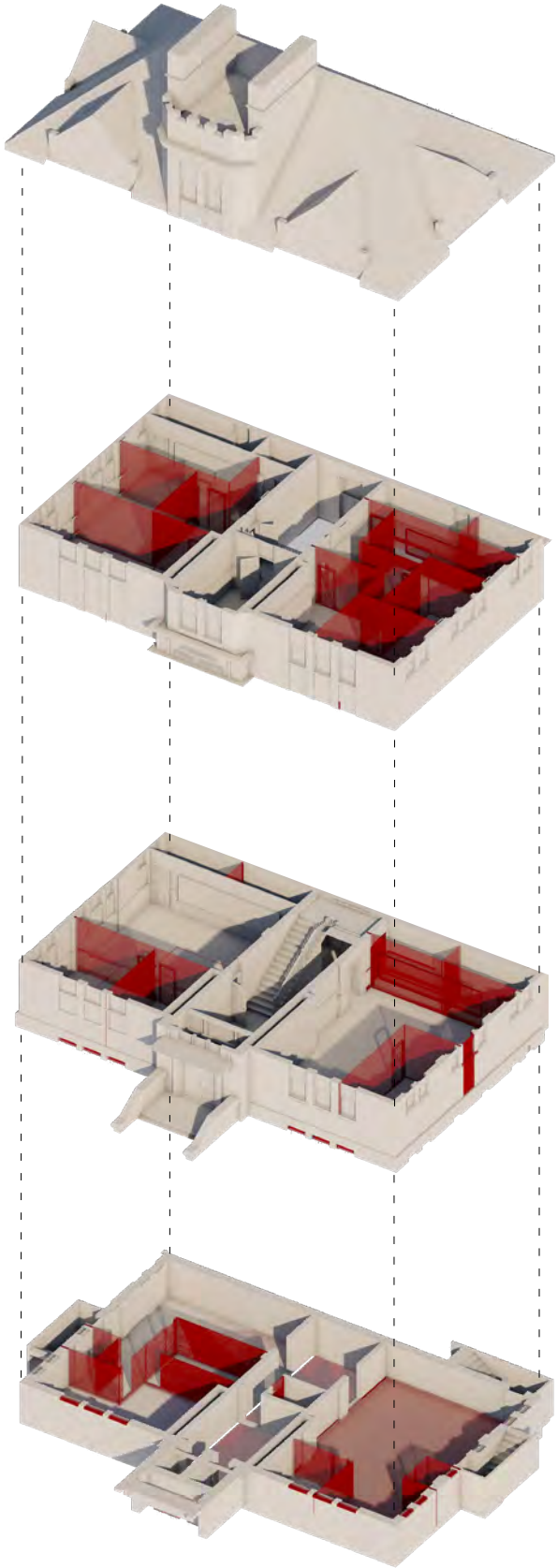
ROOF

ATTIC

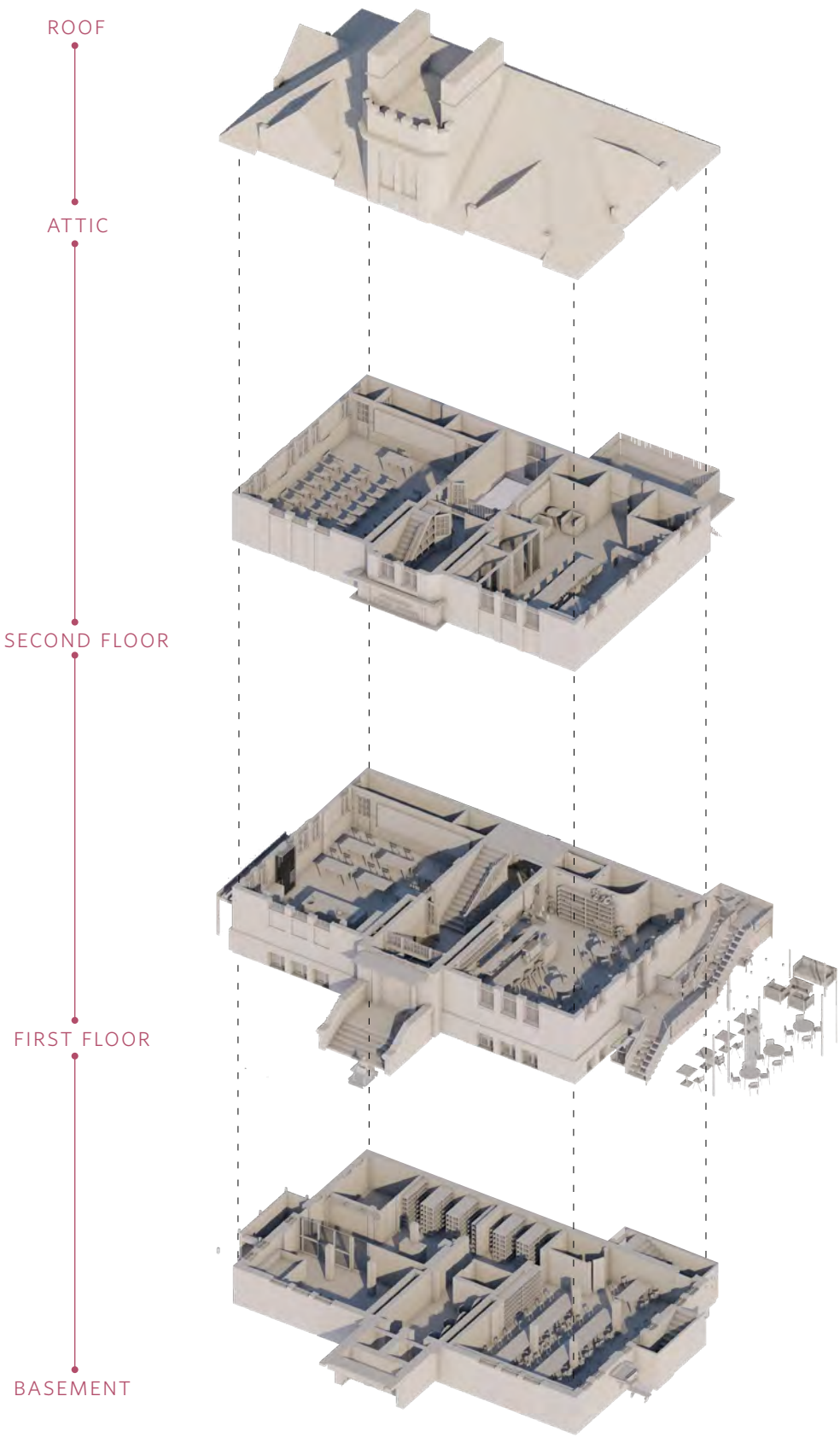
SECOND FLOOR

FIRST FLOOR

BASEMENT



RENOVATED FLOORPLANS



ARCHITECTURAL DESIGN ELEMENTS

EXTERIOR

EXTERIOR ARCHITECTURAL DESIGN

The exterior of the building will predominately remain the same, with all of the character defining elements conserved. The additional architectural design elements to the exterior building are minimal and are necessary for accessibility and to meet Code requirements.

Furthermore, the exterior of the building will be revitalized with additional landscaping, and the outdoor patio. Both of which are described in further detail in section 4.5 Landscape Architecture, of this Report.

INTERIOR

INTERIOR PARTITION WALLS

The interior partition walls in the building will be removed, according to demolition plan. New stud walls will be built into the building per the design development layout.

GLASS PARTITION WALLS

Glass partition walls are designed in the teaching kitchen/ flex space and are suspending from a track to permit the division or dismantling of 'rooms within rooms'. This allows not only for alternative uses in the space, but also allows for multiple users to use either side of the space at the same time.

INTERIOR FINISHES & FIXTURES

WALL FINISH

The interiors walls will be patched (to meet the conservation of the lath and plaster), primed, and repainted to match the light field colour that exists in the building. The new stud walls in the building will also be painted the same field colour. Some rooms will have program-specific finishes such as the community cafe, the teaching kitchen, and washrooms. The community cafe has a anaglypta wallcovering applied to a single wall that adds the look of a historical wall finish in a contemporary way. The teaching kitchen for cleanliness will include a material backsplash, where the bathrooms will include a tile wall finish.

CEILING FINISH

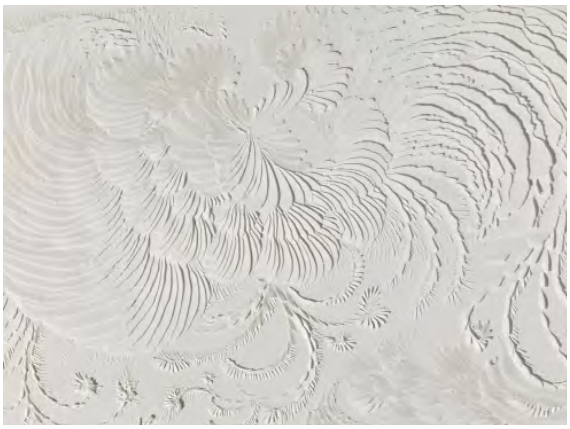
The ceiling of the Old Brick School will be restored in the areas necessary, including where they have been demolished and/or affected by water damage. The ceiling will be patched (to meet the conservation of the lath and plaster), primed, and repainted to match the existing colour, in kind. Some areas, including the community cafe, will have an ceiling finish that is darker in appearance that what is currently in the space.

LIGHT FIXTURES

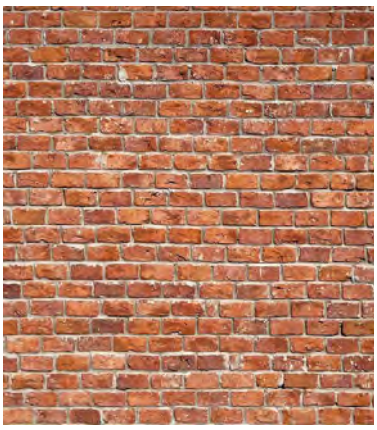
The Old Brick School was built originally without electricity, and as the light fixtures in the school are not a character defining element, the light fixtures in the space, being all from different era's with alternative forms and shapes will be replaced. All the light fixtures will be new, and hold reference to the historic nature of the project through their form. Coordinated with the electrical engineering and the interior design of all the spaces, the fixtures light levels are warm and appropriate for all the uses and spaces in the revitalization.

MATERIAL FINISHES BOARD

GENERAL FINISHES



ANAGLYPTA WALLCOVERING



EXISTING BRICK TO REMAIN

PAINT PALETTE

EXTANT STRIP WOOD FLOOR

VINTAGE AREA RUGS

WASHROOM FINISHES

BEVELLED SUBWAY TILE

VINTAGE STYLE HEXAGON MOSAIC TRANSITION

VANITY LIGHTING

FARMHOUSE SINK OPTION

BAR AREA

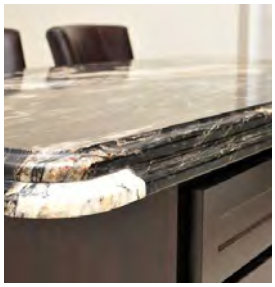
BAR WOOD FINISH

HEXAGONAL TILE ON BAR FRONT / HANDMADE CERAMIC LIGHTS

BACK BAR INSPIRATION

ESTATUAIRO MARBLE BAR TOP

AGED BRONZE BASE AND RAIL



DOUBLE OGEE EDGE PROFILE

OVERBAR BULKHEAD WITH PLANTS

DINING AREA

HANDMADE CERAMIC LIGHTS

DINING AREA PRECEDENT IMAGE

BANQUETTE UPHOLSTERY (X2)

WALL LIGHTS

GENERAL LIGHTING

SEATING INSPIRATION

SEATING INSPIRATION

CIRCULATION & ACCESSIBILITY

MAIN ENTRY LIMESTONE STEPS

OLD BRICK SCHOOL NORTH ELEVATION WITH FIRE-ESCAPE, 1970

OLD BRICK SCHOOL SOUTH ELEVATION WITH FIRE-ESCAPE, 1979

EXTERIOR

HORIZONTAL CIRCULATION

SITE CIRCULATION

The site circulation allows for multiple points of access. These access points are from the main road to the west, the parking lot to the north, and from the library entrance to the south. As a focus, accessibility to and from the building has been designed to provide many choices, and levels of circulation to accommodate everyone with multiple levels of mobility. Also considered are the ways in which users will come to and from the Old Brick School, which will predominately be by car or bike.

VERTICAL CIRCULATION

EXTERIOR STAIRCASE

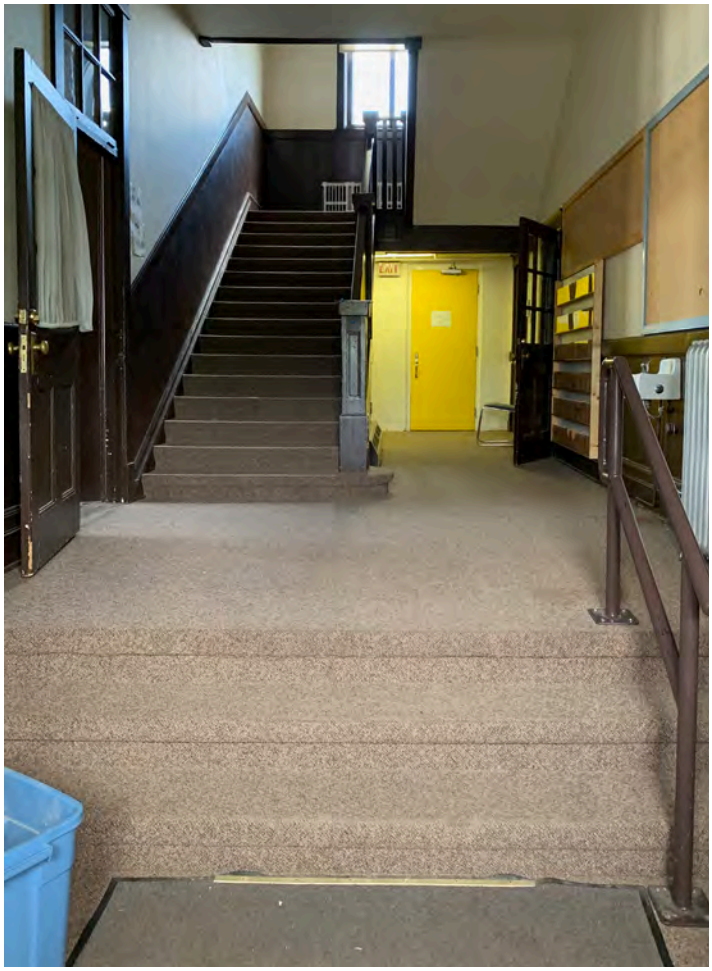
The exterior staircase leading from the second floor makerspace to the rooftop patio down to the cafe and outdoor patio is a fire exit, and is necessary by code. It offers alternative access points, and a quick route. It also will take on the appearance of an old 'fire-escape' staying true to the revitalization and conservation of the building when implementing 'new' elements.

RAMP

A ramp is placed for accessibility to the front entrance and is placed over the heavy front limestone steps. Consideration of a wheelchair platform instead of ramp was discussed, and a ramp was determined for its lack of maintenance, and its lesser of a visual impact on the front of the building.

WHEELCHAIR PLATFORM

A wheelchair platform has been placed on the south side of the building adjacent to the exterior staircase for ease of access into the community cafe from the outdoor patio. Yet another way for barrier-free patrons to access the building.



STEPS FROM FOYER TO MAIN FLOOR

INTERIOR

HORIZONTAL CIRCULATION

MAIN FOYER TO 'HALLWAYS' / WHEELCHAIR PLATFORM

In order to transverse the three steps from the main foyer into the mainfloor 'hallway', a wheelchair platform has been added on the north side of the foyer steps.

From this point the horizontal circulation is considered in such a way as to allow for all patrons to access the basement and the second floor quickly, and easily, regardless of your physical abilities.

VERTICAL CIRCULATION

ELEVATOR/LIFT

A lift servicing all three floors of the building will be installed. Given the tight physical constraints of the building, a Limited Use, Limited Application elevator (LU/LA) can provide accessibility throughout the building from the pottery club in the basement to the historical classroom and alternating museum on the second floor, this lift is accessible from all floors and at anytime of day.

BARRIER FREE DESIGN

UNIVERSAL WASHROOMS

Individual, universal, gender-free washrooms are located on every floor to accommodate all barrier-free requirements. These washrooms are located along a barrier-free path of travel, and placed in strategic locations for ease of access and use.

COMMUNITY CAFE / EVENING BAR

TEACHING KITCHEN / MULTIPURPOSE ROOM / FLEX SPACE

MAKERSPACE / DIGITAL RECORDING SOUND SPACE


PARIS

HISTORICAL CLASSROOM / TEMPORARY MUSEUM

OFFICE SPACE / DESK SPACE

ATHABASCA POTTERY CLUB

4.2 STRUCTURAL DESIGN

4.2 STRUCTURAL DESIGN

The Old Brick School is a two-storey plus basement historic building located in Athabasca, Alberta. Constructed in 1913, the building generally consists of wood framed roof and floor structures spanning to load bearing clay brick walls. This project's renovation and addition will facilitate the building's continued and improved functionality with growing public demand. Throughout the design process, the goal will be to develop economical structural solutions, fully integrated with other building design disciplines.

This Design Development report will outline the structural design strategies that will guide this project.

DESIGN ASSUMPTIONS

The new or altered structural components of the Old Brick School project will be designed in accordance with the requirements of the National Building Code 2019 - Alberta Edition (NBC 2019 - AE). The structural systems will be capable of sustaining the minimum loading requirements of the Building Code.

Relevant Climatic design parameters for the project are taken from the NBC 2019 - AE for the town of Athabasca.

SNOW LOADS
Ss = 1.5 kPa + snow accumulation
Sr = 0.1 kPa

ONE DAY RAIN
1/50 = 86 mm

IMPORTANCE CATEGORY

As required by the NBC 2019 - AE, all buildings shall be assigned an Importance Category. As prescribed by the Building Code, the structural renovations and addition to The Old Brick School will be assigned a "Normal" importance Category.

It is important to note that while the design of new structural components will comply with the requirements of the NBC 2019 - AE, the existing structure that is not affected by the proposed revitalization will not be reviewed or upgraded to meet the current code requirements. As the existing exterior of the building is anticipated to have minimal structural alterations, the current lateral structural system are not reviewed.

EXISTING STRUCTURE AND ORIGINAL DESIGN

The main and second floor of the building is framed with wood joists spanning between beams. The main floor joists are supported by wood beams and steel beam for the second floor joists. The beams are supported by load bearing brick walls along the building exterior and load bearing brick walls either side of the main "corridor" that separates the 'classroom' spaces of the building. Wood joists span across the existing attic "corridor" area between brick walls, however, there are no existing floor sheathing. The roof structure consists of wood roof trusses supported by the primary brick bearing walls below. The top chord member of the wood roof trusses extends past the exterior face of the building to create a small roof overhang.

Both the main floor and second floor interior spaces are column free between the load bearing brick walls. In the basement of the building, wood columns have been added to reduce the span of the primary wood support beams. It is speculated that columns were added to permit shallower wood beams within the basement. Although not exposed to view, it is anticipated that the foundations of the Old Brick School consist of conventional grade supported concrete footings.

As original structural drawings are not available for the building, the design superimposed live load for the main and second floors of the building is not known at this time. However, based on the size and geometry of the existing floor joist framing while acknowledging the original purpose of the building, the existing main and second floor structures are expected to support a minimum superimposed live load of 2.4 kPa (50 psf) and 4.8 kPa (100 psf) as required by the Building Code for "Classrooms" and "Corridors" respectively.

POTENTIAL BUILDING USE AND RENOVATIONS

With the propose renovations and revise use and occupancy of the main floor, the structural load carrying capacity of the existing main floor structure will require upgrades to 4.8 kPa (100 psf) to satisfy the live loading requirements per the

Building Code. The anticipated upgrade will include installation of additional wood floor joists between the existing joists, new Engineered or built up wood columns in the basement, and new concrete pad footings at each of the new columns.

The "classroom" area of the second floor structure is projected to remain as classroom or convert into office space, both occupancy categories require Live load capacity of 2.4 kPa (50 psf) per the Building Code, which matches the estimated existing floor capacities, therefor structural upgrades are not anticipated for the second floor with the current scope of renovations.

The "Attic" space above the corridor have been proposed as potential location for new mechanical units. To satisfy the "Equipment Areas" minimum Live Load requirement of 3.6 kPa (75 psf) per the Building Code, the structure of the existing "Attic" will require structural reinforcements. Currently the floor structure of the "Attic" consisted of wood joists similar to the corridor spaces at the main and second floor. The anticipated structural upgrade will be a new floor sheathing to be install on the existing joists to provide lateral stability to the joists.

Geotechnical investigation is not within the budget of these design services, and should be provided previous or in conjunction with the next phase of design to provide the design parameters for new foundation elements and the necessary information to review and verify existing foundation capacities.

NEW LIFT

A new Lift within the space has been proposed for access to each floor from basement to the second floor. This will require new floor openings within the existing wood framed structure. Local structural sub-framing for the openings and reinforcement of existing joists are anticipated.

ROOFTOP PATIO ON EXISTING LINK STRUCTURE

Conversion of the existing roof structure of the link to the Nancy Appleby Theatre to an exterior patio have been proposed. A set of architectural drawings from McIntosh Workun & Cherneko Architects, dated April, 1980, indicates wood joist framing for the roof structure of existing corridor spaces. To accommodate the proposed patio conversion, the existing structure will be required to support a specified "Assembly Area" live load of 4.8 kPa (100 psf) as specified by the NBC 2019 - AE. Existing structural framing indicated by the drawings appears to meet the 4.8 kPa live load requirement, however, as-built conditions will need to be confirm prior to start of construction.

EXIT STAIRS

Two new sets of exit stairs are proposed for the renovation. One set is proposed for the main floor and one set is proposed for the new roof top patio. The exit stairs will consist of conventional steel framing with reinforced concrete foundation, this is to ensure the proper functionality of the entrance doors by mitigate the effects of seasonal soil movements.

DESIGN DEVELOPMENT DRAWINGS

The attached Design Development drawings provide details of the proposed structural renovations for the Athabasca Old Brick School project.

4.3 MECHANICAL DESIGN

4.3 MECHANICAL DESIGN

DESIGN STANDARDS

Mechanical systems shall be designed and installed to maximize usable space within the building while maintaining optimum service clearances for maintenance and repair.

All equipment and materials shall be designed and installed in a neat and orderly fashion. In finished areas all mechanical systems shall be concealed.

CODES AND STANDARDS

Mechanical systems shall be in accordance with applicable codes and standards including, but not limited to:

Alberta:

- Alberta Building Code (ABC) 2019

National:

- National Energy Code of Canada for Buildings (NECB) 2017
- National Plumbing Code (NPC) 2017
- Canadian/American Air Balance Council (CAABC)
- Canadian Standards Association (CSA):
- Canadian Gas Association (CGA):
- B149.1 Natural Gas and Propane Code

International:

- Air Conditioning and Refrigeration Institute (ARI)
- American National Standards Institute (ANSI)
- American Standard for Testing and Materials (ASTM)
- American Society of Mechanical Engineers (ASME)
- American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE):
  - Standard 62.1
  - Standard 55
- National Fire Protection Association (NFPA)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

OUTDOOR DESIGN CONDITIONS

The sizing of mechanical systems shall be based on the outdoor air conditions shown in the following table:

	DRY BULB (°C)	WET BULB (°C)	REFERENCE
SUMMER	27	19	ABC 2.5% Athabasca
WINTER	-38	---	ABC 1% Athabasca

VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

Ventilation to meet acceptable indoor air quality shall be in accordance with ASHRAE Standard 62 and the applicable building code.

INDOOR DESIGN CONDITIONS

The indoor space conditions shall be in accordance with the following table:

	SUMMER		WINTER	
	TEMPERATURE °C (°F)	RELATIVE HUMIDITY	TEMPERATURE °C (°F)	RELATIVE HUMIDITY
ALL SPACES	24 (75) +/- 1°c	50% +/- 5%	22.2 (72) +/- 1°c	NOTE 1

Note 1: Note 2: No humidification is provided since the building envelope does not have a continuous vapour barrier.

HVAC

HEATING SYSTEM

The heating plant shall be sized to serve:

- Perimeter envelope losses.
  (Assuming: Brick R8, Windows R1, Attic R12)
- Building air handling unit heating coils.
- Reheat, if required.
- Entrance heating.

The heating water pumping system shall be primary/secondary. The primary system shall consist of two pumps in a run/standby configuration dedicated to the main heating water heat exchangers.

Secondary heating water pump sets (run/standby) shall vary flow in response to building requirements through the use of variable speed drives. Secondary systems shall be provided for:

- Perimeter heating (supply water temperature shall be adjusted in relationship with outdoor air through the building automation system).
- Building air handling unit heating coils [(supply water temperature shall be adjusted in relationship with outdoor air through the building automation system).

Heating coils subjected to below freezing conditions shall be serviced by a glycol heating system complete with plate and frame heat exchanger and glycol distribution pumps. Glycol shall be 40%propylene glycol by volume.]

Perimeter heating shall be provided through radiant panels mounted in the ceiling.

Entrances and service spaces shall be heated by force flow heating water cabinets or unit heaters.

Chemical treatment systems including pipeline filters shall be provided for all heating water systems.

BOILERS

The central boiler plant shall consist of two ultra-high efficiency, condensing, gas-fired boilers each sized for approximately 50% of the total heating water requirement.

The central boiler plant will be 2 boilers with individual capacity of 83.5 kW (285000MBH) input, total capacity of 167 kW.

COOLING SYSTEM

A central chiller plant located on the roof shall produce chilled water for cooling.

The chilled water plant shall be decoupled into a primary and secondary pumping system. The primary loop shall be glycol for freeze protection. Glycol shall be 40% propylene glycol by volume.

- The cooling plant shall consist of single air-cooled chiller with 2 compressors operating on HFC-401 with a capacity of 91.5 kW (26 tons).

AIR HANDLING SYSTEMS

A central chiller plant located on the roof shall produce chilled water for cooling. The cooling is specifically needed for comfort as the building will not be reinsulated, and without it, the solar heat gain in the summer overheats the building.

Room Fan Coil Units

- Rooms shall be provided with horizontal, slab-hung 4 pipes fan coil units.
- With the exception of larger rooms, one fan coil unit shall be provided per room and ducted within ceiling space.
- Thermostat or BAS sensor shall be remote mounted.

Dedicated Outdoor Air System DOAS

- Conditioned ventilation/outdoor air shall be supplied to each room with 100% outdoor air
- Unit shall consist of dampers, filters, chilled glycol cooling coil glycol heating coil and supply fan with heat recovery sections to reclaim/reject waste heat from exhaust air streams.
- The DOAS system will have a capacity of 1040l/s, (2200cfm).
- The DOAS exhaust fan will be interlocked with the Kiln exhaust fan. When kiln exhaust fan is operating the DOAS exhaust air will be directed to the kiln room to accommodate the make up air requirement.

KILN EXHAUST SYSTEMS

The Pottery Club kilns will be provided with a canopy hood located directly over the 3 existing electric kilns.

- The canopy hood will be approximately 4.35m X 2.0m with an exhaust volume of 1000l/s (2100cfm).
- The kiln exhaust system make up air requirement will be provide by directing the DOAS exhaust air to the kiln room.

INSULATION

Insulation for HVAC systems shall be in accordance with NECB 2019.

PLUMBING

New washrooms in the building include five. One in the basement, two on the main floor (in existing washroom location) and two on the second floor. There are two new kitchens in the building. One smaller more residential style in the basement, and a teaching kitchen on the main floor.

- The Plumbing System shall conform to the National Plumbing Code.
- Above floor sanitary drains and vents PVC DWV XFR
- Buried storm piping within the building shall be PVC.
- Buried sanitary piping within the building shall be PVC.
- Domestic water piping shall be copper type L.

SANITARY SYSTEMS

A complete system of plumbing fixtures and sanitary drainage and vent piping shall be provided.

New above grade drains shall be collected and drained by gravity to site sanitary sewers.

PLUMBING FIXTURES

The following plumbing fixtures are anticipated for the project:

GROUP		DESCRIPTION
W-1	WATER CLOSET	Floor mounted, flush tank
U-1	URINAL	Wall hung, electronic flush valve
L-1	LAVATORY	Counter mounted, electronic "no touch" 100mm (4inch) centre set
JS-1	JANIOR SINK	Precast floor mounted, faucet with hose set
S-1	SINK	Counter mounted, single bowl, stainless steel, 200mm (8inch) centre set

Plumbing fixtures shall be water conserving type. Minimum (Refer to LEED/ENERGY CONSERVATION) baseline requirements:

	METRIC	IMPERIAL
WATER CLOSET	6.0 litres per flush	1.6 gallons per flush
URINAL	3.8 litres per flush	1.0 gallons per flush
LAVATORIES (PUBLIC)	1.9 LPM @ 414 kPA	0.5 GPM @ 60psig

DOMESTIC COLD WATER

A new domestic water service shall be brought into the building for domestic water and fire services. The domestic water shall be isolated from the municipal water supply by approved backflow prevention devices.

DOMESTIC HOT WATER

Domestic hot water shall be generated by gas-fired tankless heaters located in the mechanical room.

A recirculation loop and recirculation pump shall maintain flow in the domestic hot water system to maintain hot water at the fixtures at all time.

NATURAL GAS

Natural gas shall be distributed to the mechanical room. All gas piping shall be schedule 40. Piping 64 mm (2-1/2 inch) and larger shall be welded.

INSULATION

Insulation for plumbing systems shall be in accordance with NECB 2017.

All exposed insulation shall be complete with canvas lagging suitable for painting.

FIRE PROTECTION

GENERAL

The Fire Protection System shall conform to the Alberta Building Code.

PORTABLE FIRE EXTINGUISHERS

General areas including offices shall be covered by water type extinguishers. Mechanical rooms, electrical rooms and similar spaces shall be provided with chemical fire extinguishers.

SYSTEM CONTROLS

BUILDING AUTOMATION SYSTEM (BAS)

A microprocessor system incorporating direct digital control shall be installed to control and monitor the mechanical systems. The BAS shall be BACNET or Echelon compliant where possible.

The BAS shall control and monitor air handlers, exhaust fan, heating and cooling equipment, and terminal units. The BAS shall interface with chillers, cooling towers, and boilers.

The building operator's terminal shall be located in the mechanical room, an additional mobile operators terminal is recommended.

AIR AND WATER BALANCING

All air and water systems shall be balanced prior to building turn-over. Balancing reports shall be submitted for review by the consultant and owner.

COMMISSIONING

CONTRACTOR COMMISSIONING

Contractor shall perform equipment testing piping, ductwork and obtain sign-offs, equipment start-up and check sheet with manufacturers, arrange for training on equipment provided to owner.

4.4 ELECTRICAL DESIGN

4.4 ELECTRICAL DESIGN

The following information is provided as the electrical portion of the Design Development Report for the Athabasca Old Brick School. The information contained in this report represents the electrical consultant's interpretation of the information provided to date by the client and the architect.

The electrical design will conform to the latest versions of the Canadian Electrical Code, Alberta Building code, Canadian Standards Association and Underwriters Laboratories of Canada, Illumination Engineering Society of North America, Institute of Electrical and Electronics Engineers, the model National Energy Code of Canada for Buildings, and any other applicable codes.

SITE SERVICES

ELECTRICAL POWER SITE SERVICES

The school building is being sub fed from the adjacent annexed theatre building. The annexed theatre building is currently being serviced by a utility pole-mounted transformer located on the North West side of the building. The electrical service provider in the area is Fortis. The main electrical room is located in the adjacent annexed theatre building near the theatre stage. The main distribution in the annexed building is a 600 Amp 120/208V three phase 4-wire service with 600 Amp frame and 600 Amp trip main breaker. Due to the addition of the kitchen area, an elevator and the inclusion of building cooling within the school, an electrical service size increase will be required. Based on preliminary calculations the service size for the school and annexed theatre building will be 1200 Amps at 120/208V three phase. Due to the size of the service a pad mount transformer will be needed. The pad mount transformer is to be located in the parking lot on the North side of the brick school. The duct bank for the electrical new service shall have a minimum of one spare conduit for future considerations. The service size, entrance point and utility transformer location will be further refined as the design progresses and mechanical motor information becomes available. Lightning protection is not a code requirement and has not been requested by the client and as such will not be provided for the building.

COMMUNICATIONS SERVICES

There is an existing copper service terminated into a BIX block located on the second floor of the school building. There has been a request for a new communication service from Telus. The new service will be fed from pole mounted infrastructure located on the North West side of the building. There will be 2@ 103mm (1 for Telus and 1 spare) underground conduits brought into the building from the pole location to the electrical room in the basement. Further coordination with Telus will be required during the next phase of the project.

PARKING CONTROLS

There will be no additional parking stalls as part of the scope of this project and as such no block heater receptacles or parking control will be in the scope of this project.

EXTERIOR LIGHTING SYSTEMS

The exterior lighting scope of the project will be limited to wall packs located outside the building near the upper floor patio and café space. The exterior café space will also market style string lights and bollard style lighting to light up the adjacent exterior staircase. The Electrical consultant's design will ensure that the light level around the building will be such as not to disturb the adjacent properties and buildings, but provide adequate light to address any visual and safety concerns made to the exterior electrical system for the building and as such no exterior lighting will be in the scope of this project.

POWER DISTRIBUTION

ELECTRICAL SYSTEMS AND DISTRIBUTION

The 1200A, 120/208V three-phase electrical service will run underground through a concrete encased conduit and into the main distribution panel within the new electrical room located on the North side of the basement. The main distribution will be provided with copper bussing and a microprocessor based digital AC metering device. All breakers within the Main distribution will be solid state trip molded case breakers. Ground fault protection will also be required, as per the CEC. The Main distribution will in turn sub feed the existing distribution located within the annexed theatre space. This will help reduce the downtime and construction in the theatre space during the renovation of the school project. The MDP will also feed branch panels located throughout the school building. The conductors from the MDP to the branch panels will be sized for a maximum 2% voltage drop at full load. Branch circuit conductors will be a minimum #12 to allow for a maximum 3% voltage drop at full load. Transient voltage surge suppression will be provided integral to the main distribution.

There are currently 4 branch panels located throughout the building. Panel 2BA will be located in the electrical room and will be dedicated for the basement loads – including any potential loads required for the pottery club. Panel 2BB will be located on the main floor near the kitchen and will be dedicated for main floor loads. Panel 2BC will be located in the maker space on the second floor and will be dedicated for second floor loads. Panel 2BM will be located in the mechanical penthouse for all mechanical loads.

Convenience receptacles will be provided throughout the facility to a maximum separation of 24m. Receptacles will also be placed within close proximity to all exterior doors on the exterior of the building for maintenance purposes. A comprehensive color coding and identification system will be required for all electrical systems.

MOTOR CONTROL

Motor starters will be provided near mechanical equipment as required. Non-fused overcurrent protection will be provided for individual motors, unless specifically required or recommended by the mechanical manufacturer.

EMERGENCY POWER SYSTEMS

There is no indication that an emergency generator will be required for the building.

LIGHTING SYSTEMS

GENERAL LIGHTING SYSTEMS

All existing light fixtures and associated wiring will be removed and new Interior lighting will be designed in accordance with IESNA standards to provide adequate light levels for the intended use of each individual space. Based on these guidelines the following light level averages and lighting power densities will be designed to:

SPACE NAME	AVERAGE LIGHT LEVEL DESIGN TO	LIGHTING POWER DENSITY
CLASSROOM	450-500 Lux	7 W/m2
MAKER SPACE	400-500 Lux	7 W/m2
KITCHEN	500 Lux	6 W/m2
CORRIDORS/CENTRAL STAIR	300 Lux	5 W/m2
STORAGE ROOMS	200 Lux	3 W/m2
POTTERY SPACE	500 Lux	6 W/m2

LUMINARIES

All interior lighting will be achieved through LED fixtures. All lighting is to be installed such that any luminaire is able to be relocated 2 meters in any direction upon completion of construction by the contractor providing adequate flex cable. The lighting color temperature throughout the building will be consistent at 3500K and will have a minimum color rendering index of 80. All LED fixtures will be specified to be a minimum of 60,000 hours at L70. The following light fixture types will be used for each space within the building:

- Classrooms/Maker Space: Suspended direct LED fixture with circular shade
- Corridors/Central Stair: Cylindrical LED down light
- Mechanical/Electrical/IT Rooms: Strip light fixtures
- Storage Rooms: Strip light fixtures
- Pottery Space: Linear LED surface mount fixture
- Patio: Combination of LED stringer lights, wall packs and bollards

INTERIOR LIGHTING CONTROL

Interior lighting will be controlled primarily by a combination of wall mounted on-off switches, motion sensors and daylight sensors as prescribed by the latest version of the National Energy Code. Lighting control will be utilized such that lights will only be on if there are occupants within the space. Fixtures in areas receiving significant amounts of natural light will also be controlled by daylight sensors, so that they are not on when enough ambient light is being provided by natural sources.

The makerspace, classroom and café will all be designed with multi-level dimmable switching to allow for a variety of different tasks and moods. A small low-voltage switching system will be provided to control lighting in communal areas, such as corridors and stair cases. Exterior lighting will also be controlled through the low voltage lighting control system through program and photocell inputs.

EXIT AND EMERGENCY LIGHTING SYSTEMS

Exit signage and emergency lighting will be designed to the latest version of the Canadian Electrical Code and Alberta Building Code. Exit signage for the building will be mounted such that it is visible throughout all areas of the building. Exit signs in the renovated space will be specified to be the running man pictogram to meet the latest code requirements. Both emergency egress lighting and exit signage will be battery powered.

COMMUNICATION AND AUXILARY SYSTEMS

GENERAL COMMUNICATION SYSTEM

The new electrical room located on the North side of the basement will also act as the main telecommunication room for the brick school. CAT 6 horizontal cabling will be provided at select locations throughout the building and will be installed and tested from wall junction to patch panel located in the electrical room. Requirements for wireless access in the building will be coordinated with the client and data points will be located for wireless access points (WAPs) to provide adequate coverage for the building. All active communication system and all equipment provided on the rack will be supplied and installed by the client. The scope of the design will include communication cabling, and wall mounted rack including patch panels. All communication cabling will be run within conduit.

CARD ACCESS SYSTEM

Rough in for a programmable card access system will be provided to control access to select doors within the school. The scope of the contractor will be limited to conduit and conductors, all system components and commissioning to be provided by the owner at a later date.

SECURITY SYSTEMS

Rough in for a simple intrusion detection system will be provided consisting of perimeter door and window monitoring, interior motion sensors, and keypads at the main entrances. The scope of the contractor will be limited to conduit and conductors, all system components and commissioning to be provided by the owner at a later date.

PUBLIC ADDRESS SYSTEM

A public address system has not been requested by the client and as such will not be included within the scope of this project.

CCTV SYSTEM

Rough in for a CCTV system will be required consisting of interior cameras to monitor the entrances of the building. Further discussion will be had with the client to determine whether exterior cameras are required and if additional interior cameras will be required. The scope of the contractor will be limited to conduit and conductors, all system components and commissioning to be provided by the owner at a later date.

FIRE ALARM SYSTEM

There is an existing non addressable fire alarm system in place for the annexed theater and library buildings. The fire alarm system will be extended to the school portion of the building. An annunciator panel will be located at the main entrance of the brick school. All new fire alarm devices within the brick school will be addressable, class A. It would be recommended that the existing system within the adjacent buildings be upgraded to an addressable, single stage fire alarm system as well in order to meet all current codes. This would include replacing conductors for the existing initiating devices and replacing all existing fire alarm devices with new addressable devices.

Electronic smoke and heat detectors will be provided in areas required by code and where additional fire protection is advisable, such as the mechanical and electrical rooms. Horn and strobe locations will be determined by ambient noise levels anticipated in the building.

4.5 LANDSCAPE DESIGN

4.5 LANDSCAPE DESIGN

PATIO

The landscape design focuses on creating a small community patio in the semi-courtyard between the Old Brick School and library; The south-facing patio will not only directly serve the café/ bistro on the main floor, but will also provide seating and mingling opportunity for the new community hub in general.

The patio is designed to allow easy accessibility to and from the site and can be accessed through a staircase from the café on the main floor as well as from the exit staircase on the second floor. It will be enclosed by a combination of metal planters in various heights and sizes, as well as in ground shrub and grass planting to convey a casual and warm community oriented ambiance. The planters could be fabricated out of powder-coated aluminum to achieve any desired colour or built out of corten steel. Some, or most planting could be edible and possibly used in the cafe. The patio will offer various seating possibilities – different table sizes as well as some lounge areas or cozy patio chairs, and possibly feature a fire bowl;

The staircase will be creatively included into the patio. Along the staircase climbers are proposed to grow up a wire trellis; the staircase leading up to the 2nd floor patio will provide shade for a seating nook and it's underside could be finished to provide lighting opportunities or the possibility to hang planting baskets.

The proposed surface material for the patio is an exterior porcelain tile, proving a low maintenance high quality finish.

GENERAL SITE

In general the school site is in very good conditions, and generously treed, however there are a few items that will need to be addressed.

Entrance Area

The path in front of the main entrance requires repair. The gap between pavers has widened and some pavers are missing, which creates accessibility issues. In addition, there is a grading low spot just in front of the steps up to the main entrance. The stoops up to the school have large cracks and need to be replaced.

The two cherry trees flanking the sides of the main path both have Black Knot, a widespread disease of cherry and plum trees, caused by a fungus. Since the disease reduces the aesthetic value of the trees and spreads rapidly, all affected branches need to be pruned or the trees need to be removed.

Drainage

There are a few wet spots on site, particularly on the north and west of the site that will require drainage improvements through the provision of splash pads, minor re-grading and re-sodding.

Future Opportunity

The treed southwest corner of the site, that is currently used by the library for summer programs has great potential to be transformed into an additional community space, such as a community garden, heritage garden, sculpture garden/exterior gallery, a small nature playground or a combination of the above.

PRECEDENT PATIO DESIGNS

CAFE OUTDOOR PATIO SPACE DURING THE DAY

CAFE OUTDOOR PATIO SPACE AT NIGHT

5.0

OPINION OF PROBABLE COST

5.0 OPINION OF PROBABLE COST

OPINION OF PROBABLE COST - CLASS B

This is the summary of the Opinion of Probable Cost is a Class B estimate. This Class B estimate provides a 15% +/- accuracy for the total project costs. This estimate includes construction costs, design costs, contingencies, and internal project management costs.

We have prioritized the costs into the columns; Must Do, Should Do, and Nice to Do. In addition, the costs that would be considered to be funded by historical resources grants and Canadian cultural spaces fund grants have been provided under the Historical Restoration column.

These costs are provided in 2019 dollars.

A detailed breakdown of the Opinion of Probable Cost - Class B is appended to Appendix A.

Item	Elemental Subtotal	Divisional Subtotal	Priority			Historic Restoration	CCSF Eligable Cost
			Must Do	Should Do	Nice to Do		
Div 2 - Demolition		**$315,769**	$245,086	$70,682	$0	$0	$0
Div 3 - Concrete		**$28,660**	$28,660	$0	$0	$28,660	$0
Div 4 - Masonry		**$78,978**	$18,837	$22,468	$37,673	$56,510	$0
Div 5 - Metals		**$106,238**	$0	$106,238	$0	$0	$0
Div 6 - Wood Plastics and Composites		**$204,414**	$94,560	$109,855	$0	$46,112	$5,651
Div 7 - Thermal Envelope		**$47,920**	$0	$47,920	$0	$0	$0
Div 8 - Openings		**$314,194**	$241,108	$73,086	$0	$262,205	$3,391
Div 9 - Finishes and Interior Construction		**$529,676**	$0	$529,676	$0	$367,456	$148,270
Div 10 - Specialties		**$7,233**	$0	$7,233	$0		$1,808
Div 11 - Equipment & Elevating Devices		**$149,186**	$0	$149,186	$0	$0	$37,296
Div 12 - Furnishings		**$55,756**	$0	$18,083	$37,673	$0	$0
Div 21 - Fire Protection		**$5,274**	$5,274	$0	$0	$0	$0
Div 23 - Plumbing		**$101,717**	$1,507	$100,210	$0	$22,604	$7,911
Div 23 - HVAC		**$470,311**	$0	$470,311	$0	$47,980	$117,578
Div 26 - Lighting and Emergency Lighting		**$132,459**	$0	$132,459	$0	$0	$27,464
Div 26 - Power Systems		**$219,288**	$0	$219,288	$0	$0	$111,332
Div 28 - Communications & Security System		**$169,619**	$0	$115,641	$53,978	$0	$42,405
Div 28 - Fire Alarm		**$29,988**	$0	$29,988	$0	$0	$7,497
Div 32 - Site		**$267,328**	$27,803	$227,470	$12,055	$0	$0
Opinion of Project Budget Inclusive of: Contractor General Requirements Contractor Fee Contingecy Design and Project Management Fees Exclusive of: Furniture, Fixtures, Specialized Equipment GST		**$3,234,009**	**$662,834**	**$2,429,795**	**$141,380**	**$831,527**	**$510,603**
Contractor General Requirements and Mobilization, and Fee		$646,802	$132,567	$485,959	$28,276	$166,305	

6.0
CONCLUSION AND NEXT STEPS

6.0 CONCLUSION AND SCHEDULE SCENARIOS

CONCLUSION

The Athabasca Brick School is a historic landmark with deep roots in the community. Today, the school sits vacant and is awaiting its next life to continue its service to the Town of Athabasca and surrounding M.D.'s.

This Design Development report investigates the logistics of the Old Brick School being revitalized into a thriving Arts and Culture Centre. It includes a design developed and refined through different engagements with the Brick School Steering Committee and various Consultants. With the completion of this last phase of the design, the next steps for the project are as follows:

- Continue to develop the programming, operations, and a business case for the project
- Develop a funding strategy for the capital cost of the project
- Investigate grant applicability for future funding
- Coordinate with Alberta Culture to continue the conversation of a Historic Designation

SCHEDULE TO COMPLETE THE WORK

As the schedule to complete the work is dependent on the path forward chosen by the Old Brick School Steering Committee, and based on the funding available, this report provides three alternative scenarios and schedules to complete the work of the Old Brick School, all range in a scheduled time that ranges from immediate implementation to 5 years.

SCHEDULE OF WORK IN SCENARIOS

1) ALL-IN SCENARIO

The all-in scenario takes the approach of implementing the entire scope of work. This scenario implements the entirety of the design and construction over a 2 year period from 2020-2022. This scenario is conceived of for the instance that are all the items that ought to be completed, are, if the funding is available, as the maintenance, and the all-in scenario will be less expensive than the phased scenario.

2) PHASED SCENARIO

The phased scenario takes the approach of implementing the work over a 5 year period from 2020-2024. This scenario moves brick repointing and the reshingling into a maintenance budget, to be completed over the next 10-15years.

3) HISTORIAL CONSERVATION SCENARIO

The historical scenario takes the approach of implementing only the historical conservation scope of work with the understanding that the building is working towards the design put forth in this Report, if approved by Alberta Culture. This scenario implements the historical conservation efforts over a 10-15 year period from 2020-2030/2035. This scenario is conceived of to be implemented parallel to grant funding. The majority of the work ought to be completed in a 5 year period, with some maintenance items extending to 10-15 years.

On the following pages, see the alternative scenario's layed out with associated timelines and a reference provided to the Opinion of Probable Cost - Class B.

1) ALL-IN SCENARIO

The all-in scenario takes the approach of implementing the entire scope of work. This scenario implements the entirety of the design and construction over a 2 year period from 2020-2022. This scenario is conceived of for the instance that are all the items that ought to be completed, are, if the funding is available, as the maintenance, and the all-in scenario will be less expensive than the phased scenario.

See the Opinion of Probable Cost - Class B in section 5.0 and the expanded Opinion of Probable Cost - Class B in Appendix A for the all-in scenario costing.

2) PHASED SCENARIO SCHEDULE OF WORK IN SCENARIOS

The phased scenario takes the approach of implementing the work over a 5 year period from 2020-2024. This scenario moves brick repointing and the reshingling into a maintenance budget, to be completed over the next 10-15years.

Item	2020	2021	2022	2023	2024	Historic Restoration	CCSF Eligable Cost
Div 2 - Demolition	$137,331	$101,082	$77,355	$0	$0	$0	$0
Hazardous Materials Abatement - Per Report	$70,323	$70,323	$70,323				
Contingency on Abatement	$7,032	$7,032	$7,032				
Demolition - General Building Removal	$41,983						
Demolition - Basement Floor Slab		$10,707					
Demolition - Remove Existing Carpet/ Flooring		$13,020					
Demolition - Selective for Reuse	$17,993						
Div 3 - Concrete	$0	$0	$28,660	$0	$0	$28,660	$0
Repair/ Replace Exterior Stairs to basement			$22,604			$22,604	
New concrete pad footing			$6,056			$6,056	
Div 4 - Masonry	$0	$41,305	$37,673	$0	$0	$56,510	$0
Repoint - Limestone lintels			$37,673			$37,673	
Restore - Limestone entry stair		$18,837				$18,837	
Masonry Cleaning		$22,468					
Div 5 - Metals	$0	$0	$36,166	$54,249	$15,823	$0	$0
New Exit Stair from Second Floor			$36,166				
New Roof Patio Railing					$15,823		
Reinforce Roof Structure for New Patio				$54,249			
Div 6 - Wood Plastics and Composites	$0	$76,476	$0	$87,251	$40,687	$46,112	$5,651
Millwork - Bathroom Vanities				$7,233			
Millwork - Cafe Millwork				$29,385			
Millwork - Work Counter					$22,604		
Repair baseboard, trim, chair rail, crown modeling				$22,604		$22,604	
General Rough Carpentry				$22,604			$5,651
Restore chalkboards				$5,425		$5,425	
Restore - Central Stair					$18,083	$18,083	
Upgrade for main floor structure - Wood beams and columns and temporary structures		$76,476					
Div 7 - Thermal Envelope	$47,920	$0	$0	$0	$0	$0	$0
Attic Insulation - Spray Foam & Blown In	$47,920						
Div 8 - Openings	$259,191	$0	$0	$28,632	$26,371	$262,205	$3,391
Repair Windows - Large	$135,020					$135,020	
Repair Windows - Small	$106,087					$106,087	
Repair exterior doors	$7,535					$7,535	
Add new exterior doors	$10,548						
Repair Interior Doors				$13,562		$13,562	$3,391
New Interior Doors				$15,069			
Interior Glazed Wall (includes door)					$26,371		
Div 9 - Finishes and Interior Construction	$0	$203,661	$196,232	$109,817	$19,967	$367,456	$148,270
New Flooring - Main/ Second Floor		$159,734				$159,734	$39,934
New Flooring - Basement - Concrete Clear Coat		$43,927				$43,927	$10,982
Paint Interior - Walls			$63,894				$63,894
Paint Interior - Ceilings				$19,967		$19,967	$19,967

Item	2020	2021	2022	2023	2024	Historic Restoration	CCSF Eligable Cost
Floor Tiling					$9,042		
Wall Tiling					$7,535		
Mirrors					$3,391		
Restore - Lath and Plaster Ceiling			$53,978			$53,978	$13,495
New Partition Walls			$78,360				
Fire Rated Ceilings				$89,850		$89,850	
Div 10 - Specialties					$7,233		$1,808
Washroom Fixtures					$7,233		$1,808
Div 11 - Equipment & Elevating Devices	$0	$149,186	$0	$0	$0	$0	$37,296
New LULA		$103,978					$25,994
Wheel Chair Lifts (on Stairs)		$45,208					$11,302
Div 12 - Furnishings	$0	$0	$0	$0	$55,756	$0	$0
Teach Kitchen Mirror					$18,083		
Fixed Wall Shelving					$37,673		
Div 21 - Fire Protection	$0	$0	$0	$0	$5,274	$0	$0
Fire Extinguishers					$5,274		
Div 23 - Plumbing	$0	$31,645	$70,072	$0	$0	$22,604	$7,911
New Vanity Sinks			$15,823				$3,956
New Toilets			$15,823				$3,956
Stainless Sinks (single or double bowl)			$15,823				
Sediment Separator Pottery Sink		$1,507					
Replace Sanitary Drainage System		$30,138					
New Domestic Water Distribution and Heater			$22,604			$22,604	
Div 23 - HVAC	$0	$0	$22,604	$447,707	$0	$47,980	$117,578
Condesning Boilers				$45,208			$11,302
Heating Distribution Piping and Pumps				$47,980		$47,980	$11,995
Dedicated Outdoor Air Unit				$45,208			$11,302
Supply and Return Air Distribution				$23,990			$5,998
Fan Coils and Duct Distribution				$101,717			$25,429
Chiller				$75,346			$18,837
Chilled Gylcol Distribution and Pumps				$47,980			$11,995
Kiln Exhaust Canopy and Exhaust Fan			$22,604				$5,651
Controls				$60,277			$15,069
Div 26 - Lighting and Emergency Lighting	$0	$0	$109,855	$22,604	$0	$0	$27,464
Replace all Interior Lighting Systems (Main + Second Floor)			$79,867				$19,967
New Exterior Lights at Patio				$22,604			
New Emergency Lighting System			$29,988				$7,497
Div 26 - Power Systems	$0	$75,346	$143,941	$0	$0	$0	$111,332
Replace all Power Systems			$143,941				$35,985
New Utility Connection		$75,346					$75,346
Div 28 - Communications & Security System	$0	$0	$0	$0	$169,619	$0	$42,405
Install new Communications System					$59,976		$14,994
New Utility Connection					$37,673		$9,418
CCTV					$17,993		$4,498

Item	2020	2021	2022	2023	2024	Historic Restoration	CCSF Eligable Cost
Public Address					$17,993		$4,498
Card Access					$17,993		$4,498
Security System					$17,993		$4,498
Div 28 - Fire Alarm	$0	$0	$0	$0	$29,988	$0	$7,497
Install new fire alarm system					$29,988		$7,497
Div 32 - Site	$0	$27,803	$105,485	$0	$134,041	$0	$0
New Patio - Ground Level			$105,485				
New Patio - Roof					$22,604		
Grading - Low Lying Area at Site Entrance		$7,535					
Realign drainage swale		$6,781					
Replace RWL and Add Splash Pads		$6,028					
Brick Walkway - Remove and Replace					$61,709		
Replace concrete path to North Basement Entrance		$7,459					
New Garden Patio Railing					$12,055		
Replace sanitary and water service					$37,673		
Opinion of Project Budget Inclusive of: Contractor General Requirements Contractor Fee Contingecy Design and Project Management Fees Exclusive of: Furniture, Fixtures, Specialized Equipment GST	**$444,442**	**$706,504**	**$828,043**	**$750,260**	**$504,759**	**$831,527**	**$510,603**
						Anticipated Grant Amount	Anticipated Grant Amount
						$415,763	$255,301

3) HISTORICAL CONSERVATION SCENARIO

The historical scenario takes the approach of implementing only the historical conservation scope of work with the understanding that the building is working towards the design put forth in this Report, if approved by Alberta Culture. This scenario implements the historical conservation efforts over a 10-15 year period from 2020-2030/2035. This scenario is conceived of to be implemented parallel to grant funding. The majority of the work ought to be completed in a 5 year period, with some maintenance items extending to 10-15 years.

Item	Historic Restoration	CCSF Eligable Cost
Div 2 - Demolition	$0	$0
Hazardous Materials Abatement - Per Report		
Contingency on Abatement		
Demolition - General Building Removal		
Demolition - Basement Floor Slab		
Demolition - Remove Existing Carpet/ Flooring		
Demolition - Selective for Reuse		
Div 3 - Concrete	$28,660	$0
Repair/ Replace Exterior Stairs to basement	$22,604	
New concrete pad footing	$6,056	
Div 4 - Masonry	$56,510	$0
Repoint - Limestone lintels	$37,673	
Restore - Limestone entry stair	$18,837	
Masonry Cleaning		
Div 5 - Metals	$0	$0
New Exit Stair from Second Floor		
New Roof Patio Railing		
Reinforce Roof Structure for New Patio		
Div 6 - Wood Plastics and Composites	$46,112	$5,651
Millwork - Bathroom Vanities		
Millwork - Cafe Millwork		
Millwork - Work Counter		
Repair baseboard, trim, chair rail, crown modeling	$22,604	
General Rough Carpentry		$5,651
Restore chalkboards	$5,425	
Restore - Central Stair	$18,083	
Upgrade for main floor structure - Wood beams and columns and temporary structures		
Div 7 - Thermal Envelope	$0	$0
Attic Insulation - Spray Foam & Blown In		

Item	Historic Restoration	CCSF Eligable Cost
Div 8 - Openings	$262,205	$3,391
Repair Windows - Large	$135,020	
Repair Windows - Small	$106,087	
Repair exterior doors	$7,535	
Add new exterior doors		
Repair Interior Doors	$13,562	$3,391
New Interior Doors		
Interior Glazed Wall (includes door)		
Div 9 - Finishes and Interior Construction	$367,456	$148,270
New Flooring - Main/ Second Floor	$159,734	$39,934
New Flooring - Basement - Concrete Clear Coat	$43,927	$10,982
Paint Interior - Walls		$63,894
Paint Interior - Ceilings	$19,967	$19,967
Floor Tiling		
Wall Tiling		
Mirrors		
Restore - Lath and Plaster Ceiling	$53,978	$13,495
New Partition Walls		
Fire Rated Ceilings	$89,850	
Div 10 - Specialties		$1,808
Washroom Fixtures		$1,808
Div 11 - Equipment & Elevating Devices	$0	$37,296
New LULA		$25,994
Wheel Chair Lifts (on Stairs)		$11,302
Div 12 - Furnishings	$0	$0
Teach Kitchen Mirror		
Fixed Wall Shelving		
Div 21 - Fire Protection	$0	$0
Fire Extinguishers		
Div 23 - Plumbing	$22,604	$7,911

Item	Historic Restoration	CCSF Eligable Cost
New Vanity Sinks		$3,956
New Toilets		$3,956
Stainless Sinks (single or double bowl)		
Sediment Separator Pottery Sink		
Replace Sanitary Drainage System		
New Domestic Water Distribution and Heater	$22,604	
Div 23 - HVAC	$47,980	$117,578
Condesning Boilers		$11,302
Heating Distribution Piping and Pumps	$47,980	$11,995
Dedicated Outdoor Air Unit		$11,302
Supply and Return Air Distribution		$5,998
Fan Coils and Duct Distribution		$25,429
Chiller		$18,837
Chilled Gylcol Distribution and Pumps		$11,995
Kiln Exhaust Canopy and Exhaust Fan		$5,651
Controls		$15,069
Div 26 - Lighting and Emergency Lighting	$0	$27,464
Replace all Interior Lighting Systems (Main + Second Floor)		$19,967
New Exterior Lights at Patio		
New Emergency Lighting System		$7,497
Div 26 - Power Systems	$0	$111,332
Replace all Power Systems		$35,985
New Utility Connection		$75,346
Div 28 - Communications & Security System	$0	$42,405
Install new Communications System		$14,994
New Utility Connection		$9,418
CCTV		$4,498
Public Address		$4,498
Card Access		$4,498
Security System		$4,498

Item	Historic Restoration	CCSF Eligable Cost
Div 28 - Fire Alarm	$0	$7,497
Install new fire alarm system		$7,497
Div 32 - Site	$0	$0
New Patio - Ground Level		
New Patio - Roof		
Grading - Low Lying Area at Site Entrance		
Realign drainage swale		
Replace RWL and Add Splash Pads		
Brick Walkway - Remove and Replace		
Replace concrete path to North Basement Entrance		
New Garden Patio Railing		
Replace sanitary and water service		
Opinion of Project Budget Inclusive of: Contractor General Requirements Contractor Fee Contingecy Design and Project Management Fees Exclusive of: Furniture, Fixtures, Specialized Equipment GST	**$831,527**	**$510,603**
	Anticipated Grant Amount	Anticipated Grant Amount
	$415,763	$255,301

7.0
APPENDICES

APPENDIX A:

EXPANDED OPINION OF PROBABLE COST (CLASS B)

Item	Elemental Subtotal	Divisional Subtotal	Priority			Historic Restoration	CCSF Eligable Cost
			Must Do	Should Do	Nice to Do		
Div 2 - Demolition		**$315,769**	$245,086	$70,682	$0	$0	$0
Hazardous Materials Abatement - Per Report	$210,969		$210,969				
Contingency on Abatement	$21,097		$21,097				
Demolition - General Building Removal	$41,983			$41,983			
Demolition - Basement Floor Slab	$10,707			$10,707			
Demolition - Remove Existing Carpet/ Flooring	$13,020		$13,020				
Demolition - Selective for Reuse	$17,993			$17,993			
Div 3 - Concrete		**$28,660**	$28,660	$0	$0	$28,660	$0
Repair/ Replace Exterior Stairs to basement	$22,604		$22,604			$22,604	
New concrete pad footing	$6,056		$6,056			$6,056	
Div 4 - Masonry		**$78,978**	$18,837	$22,468	$37,673	$56,510	$0
Repoint - Limestone lintels	$37,673				$37,673	$37,673	
Restore - Limestone entry stair	$18,837		$18,837			$18,837	
Masonry Cleaning	$22,468			$22,468			
Div 5 - Metals		**$106,238**	$0	$106,238	$0	$0	$0
New Exit Stair from Second Floor	$36,166			$36,166			
New Roof Patio Railing	$15,823			$15,823			
Reinforce Roof Structure for New Patio	$54,249			$54,249			
Div 6 - Wood Plastics and Composites		**$204,414**	$94,560	$109,855	$0	$46,112	$5,651
Millwork - Bathroom Vanities	$7,233			$7,233			
Millwork - Cafe Millwork	$29,385			$29,385			
Millwork - Work Counter	$22,604			$22,604			
Repair baseboard, trim, chair rail, crown modeling	$22,604			$22,604		$22,604	
General Rough Carpentry	$22,604			$22,604			$5,651
Restore chalkboards	$5,425			$5,425		$5,425	
Restore - Central Stair	$18,083		$18,083			$18,083	
Upgrade for main floor structure - Wood beams and columns and temporary structures	$76,476		$76,476				
Div 7 - Thermal Envelope		**$47,920**	$0	$47,920	$0	$0	$0
Attic Insulation - Spray Foam & Blown In	$47,920			$47,920			
Div 8 - Openings		**$314,194**	$241,108	$73,086	$0	$262,205	$3,391
Repair Windows - Large	$135,020		$135,020			$135,020	
Repair Windows - Small	$106,087		$106,087			$106,087	
Repair exterior doors	$7,535			$7,535		$7,535	
Add new exterior doors	$10,548			$10,548			
Repair Interior Doors	$13,562			$13,562		$13,562	$3,391
New Interior Doors	$15,069			$15,069			
Interior Glazed Wall (includes door)	$26,371			$26,371			
Div 9 - Finishes and Interior Construction		**$529,676**	$0	$529,676	$0	$367,456	$148,270
New Flooring - Main/ Second Floor	$159,734			$159,734		$159,734	$39,934
New Flooring - Basement - Concrete Clear Coat	$43,927			$43,927		$43,927	$10,982
Paint Interior - Walls	$63,894			$63,894			$63,894

Item	Elemental Subtotal	Divisional Subtotal	Priority			Historic Restoration	CCSF Eligable Cost
			Must Do	Should Do	Nice to Do		
Paint Interior - Ceilings	$19,967			$19,967		$19,967	$19,967
Floor Tiling	$9,042			$9,042			
Wall Tiling	$7,535			$7,535			
Mirrors	$3,391			$3,391			
Restore - Lath and Plaster Ceiling	$53,978			$53,978		$53,978	$13,495
New Partition Walls	$78,360			$78,360			
Fire Rated Ceilings	$89,850			$89,850		$89,850	
Div 10 - Specialties		**$7,233**	$0	$7,233	$0		$1,808
Washroom Fixtures	$7,233			$7,233			$1,808
Div 11 - Equipment & Elevating Devices		**$149,186**	$0	$149,186	$0	$0	$37,296
New LULA	$103,978			$103,978			$25,994
Wheel Chair Lifts (on Stairs)	$45,208			$45,208			$11,302
Div 12 - Furnishings		**$55,756**	$0	$18,083	$37,673	$0	$0
Teach Kitchen Mirror	$18,083			$18,083			
Fixed Wall Shelving	$37,673				$37,673		
Div 21 - Fire Protection		**$5,274**	$5,274	$0	$0	$0	$0
Fire Extinguishers	$5,274		$5,274				
Div 23 - Plumbing		**$101,717**	$1,507	$100,210	$0	$22,604	$7,911
New Vanity Sinks	$15,823			$15,823			$3,956
New Toilets	$15,823			$15,823			$3,956
Stainless Sinks (single or double bowl)	$15,823			$15,823			
Sediment Separator Pottery Sink	$1,507		$1,507				
Replace Sanitary Drainage System	$30,138			$30,138			
New Domestic Water Distribution and Heater	$22,604			$22,604		$22,604	
Div 23 - HVAC		**$470,311**	$0	$470,311	$0	$47,980	$117,578
Condesning Boilers	$45,208			$45,208			$11,302
Heating Distribution Piping and Pumps	$47,980			$47,980		$47,980	$11,995
Dedicated Outdoor Air Unit	$45,208			$45,208			$11,302
Supply and Return Air Distribution	$23,990			$23,990			$5,998
Fan Coils and Duct Distribution	$101,717			$101,717			$25,429
Chiller	$75,346			$75,346			$18,837
Chilled Gylcol Distribution and Pumps	$47,980			$47,980			$11,995
Kiln Exhaust Canopy and Exhaust Fan	$22,604			$22,604			$5,651
Controls	$60,277			$60,277			$15,069
Div 26 - Lighting and Emergency Lighting		**$132,459**	$0	$132,459	$0	$0	$27,464
Replace all Interior Lighting Systems (Main + Second Floor)	$79,867			$79,867			$19,967
New Exterior Lights at Patio	$22,604			$22,604			
New Emergency Lighting System	$29,988			$29,988			$7,497
Div 26 - Power Systems		**$219,288**	$0	$219,288	$0	$0	$111,332
Replace all Power Systems	$143,941			$143,941			$35,985
New Utility Connection	$75,346			$75,346			$75,346
				$0			
Div 28 - Communications & Security System		**$169,619**	$0	$115,641	$53,978	$0	$42,405
Install new Communications System	$59,976			$59,976			$14,994

Item	Elemental Subtotal	Divisional Subtotal	Priority			Historic Restoration	CCSF Eligable Cost
			Must Do	Should Do	Nice to Do		
New Utility Connection	$37,673			$37,673			$9,418
CCTV	$17,993				$17,993		$4,498
Public Address	$17,993				$17,993		$4,498
Card Access	$17,993				$17,993		$4,498
Security System	$17,993			$17,993			$4,498
Div 28 - Fire Alarm		**$29,988**	$0	$29,988	$0	$0	$7,497
Install new fire alarm system	$29,988			$29,988			$7,497
Div 32 - Site		**$267,328**	$27,803	$227,470	$12,055	$0	$0
New Patio - Ground Level	$105,485			$105,485			
New Patio - Roof	$22,604			$22,604			
Grading - Low Lying Area at Site Entrance	$7,535		$7,535				
Realign drainage swale	$6,781		$6,781				
Replace RWL and Add Splash Pads	$6,028		$6,028				
Brick Walkway - Remove and Replace	$61,709			$61,709			
Replace concrete path to North Basement Entrance	$7,459		$7,459				
New Garden Patio Railing	$12,055				$12,055		
Replace sanitary and water service	$37,673			$37,673			
Opinion of Project Budget Inclusive of: Contractor General Requirements Contractor Fee Contingecy Design and Project Management Fees Exclusive of: Furniture, Fixtures, Specialized Equipment GST		**$3,234,009**	**$662,834**	**$2,429,795**	**$141,380**	**$831,527**	**$510,603**

APPENDIX B:

2017 HAZMAT ASSESSMENT

RH Services Inc.

HAZARDOUS MATERIALS ASSESSMENT
OLD BRICK SCHOOL
4720 – 48TH STREET,
ATHABASCA, AB.

Submitted to:

Athabasca County
Athabasca, AB. T9S 1M8

Submitted By:

RH Services Inc.
7340 – 82 Avenue, NW
Edmonton, AB. T6B 0G2

January 2017
AthabascaCounty.01
www.rhservices.ca

EXECUTIVE SUMMARY

RH Services Inc. was retained by Athabasca County to conduct a Hazardous Materials Assessment at the Old Brick School Building, located at 4720 – 48 Street in Athabasca, Alberta. The purpose of the assessment was to identify the hazardous building materials that may impact future plans at the facility.

The findings of our investigation are presented in this report with recommendations on required or suggested actions. In summary:

Asbestos-Containing Materials:
The presence of asbestos was confirmed in floor tiles, sheet flooring, wall plaster, ceiling panels, pipe fitting insulation and debris, dust and piping associated with the abandoned boiler.

The cast iron drain waste and vent piping is suspected to contain asbestos under the lead seal and should be treated accordingly.

Recommendations on asbestos removal are identified in this report.

Lead and Lead Based Paint:
Lead acid batteries were used in emergency lighting systems.
Lead flashings were present at roof penetrations.
Lead had been used to seal the joints of the cast iron drain, waste and vent pipe work.

Lead based paints were identified in the building.

Polychlorinated Biphenyls (PCB'S):
PCB ballasts may be present in older fluorescent light fixtures throughout the facility.

Other Hazardous Materials:
Fluorescent light tubes containing mercury,
Boiler switches and thermostats containing mercury and
Refrigerators containing refrigerants.

Mould and Water Damage:
Several areas with water damage were identified in building.

Budget:
Cost estimate for abatement and disposal of all hazardous materials identified in this report, including air monitoring is in the range of $140K.

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1.0 INTRODUCTION

1.1 BACKGROUND

RH Services Inc. was retained by Athabasca County to conduct a hazardous materials assessment at the Old Brick School Building located at 4720 - 48 Street, Athabasca, Alberta. The assessment was limited to the two-story school building and basement.

The purpose of this assessment was to assist the client in identifying the hazardous materials present in the building and their impact on future plans.

2.0 SCOPE OF WORK

The following services were to be provided by RH Services Inc.:

- Site inspection;
- Sample collection for asbestos and lead paint analysis, as needed;
- Sample and, or data collection for other hazardous materials, as needed;
- Mould bulk samples;
- Report production, with recommendations.

3.0 SITE INSPECTION

RH Services Inc. undertook an inspection of the building on December 20th 2016.

There were several materials that were observed and suspected of containing asbestos, these materials were sampled and submitted to the Scientific Analytical Institute for analysis by polarized light microscopy and dispersion staining techniques. (NIOSH 9002).

Observations were made for the conditions that could offer direct pathways for lead to enter the environment. Other potentially hazardous materials that were observed during our site inspection have been included in this report. All building materials that have been confirmed to contain hazardous materials are included in the following inventory.

Observations were made of conditions that were or could become mould amplification sources. Suspected mouldy building materials were submitted to Enviro-Works Inc. for genus identification.

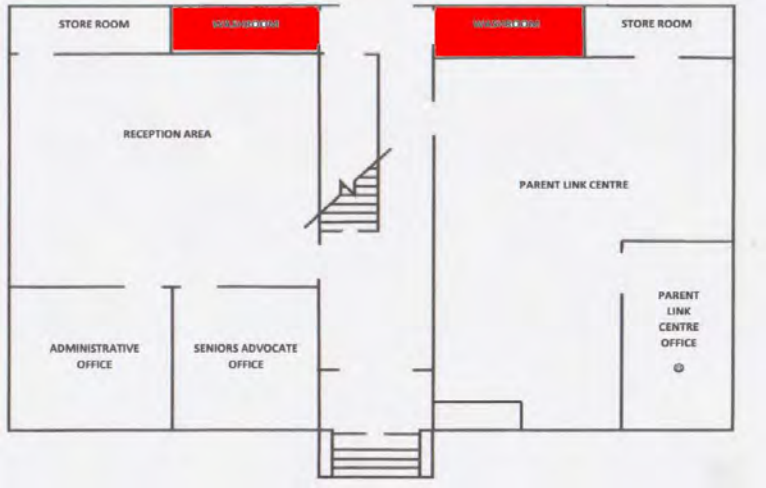
4.0 INVENTORY OF HAZARDOUS MATERIALS

4.1 ASBESTOS CONTAINING MATERIALS

4.1.1 Floor Goods

Asbestos-containing sheet vinyl flooring (Chrysotile 20%) was present in the main floor washrooms. Approximate quantity was one hundred square feet (100 ft^2) in total. See SAI report #1625262 - sample #9. The flooring was in good condition at the time of the assessment.

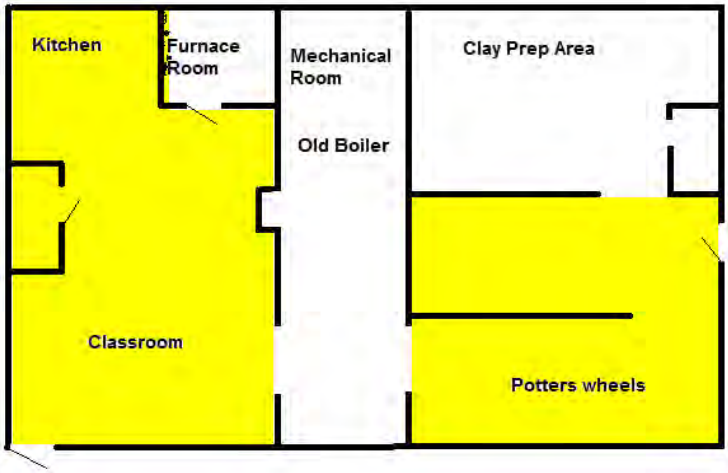
Figure 1. Main Floor, Sheet Vinyl flooring



Locations of the asbestos sheet flooring are shown in RED.

Asbestos-containing vinyl floor tiles (Chrysotile 3%) were present in the basement. Approximate quantity was One thousand two hundred and fifty square feet (1250 ft^2). See SAI report #1625262 - samples #14 & #26. Floor tiles were in fair condition at the time of the assessment.

Figure 2. Basement, Floor Tiles



Locations of the asbestos floor tiles are shown in Yellow.

No asbestos-containing floor goods were present on the second floor.

4.1.2 Wall Plaster

Three samples of wall plaster were collected from the building: two samples from the main floor (south classroom and storage area under the stairs), and one sample was collected from the telephone room on the second floor. One out of the three samples collected contained asbestos (Chrysotile 1-5%). The sample that contained asbestos was taken from the storage room located under the main floor stairs. See SAI report #1625262 - samples #10. Plaster was generally in good condition at the time of the assessment.

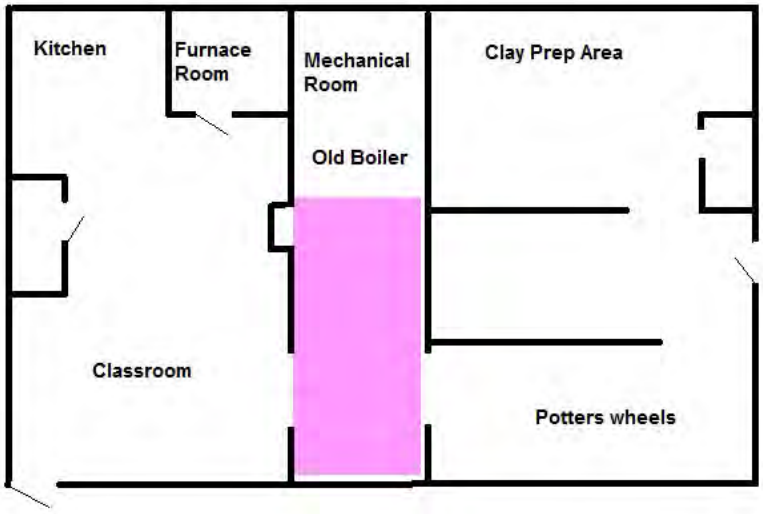
4.1.3 Drywall Jointing Compound

Nine samples of drywall jointing compound were collected from the basement, main floor and second floor of the building. All samples were non-asbestos.

4.1.4 Ceiling Panels

Asbestos-containing ceiling panels were present in the basement. The approximate quantity was two hundred and fifty square feet (250 ft^2). See SAI report #1625262 - sample #20. The board was in fair condition at the time of the assessment with some exposed cut or broken edges.

Figure 3. Basement, Cement Ceiling Panels



Locations of the asbestos ceiling panels are shown in Pink.

4.1.5 Pipe Fitting Insulation

Asbestos-containing pipe fitting insulation (Chrysotile 40%) was identified in the basement of the building. Approximately ten (10) fittings were present. See SAI report #1625262 - samples # 17 & 18. Pipe fittings were in good condition at the time of the assessment.

Pipe fitting insulation was present in the basement classroom and furnace room. Additional asbestos-containing insulation can be expected inside wall cavities and chases that were not accessible during the inspection. All cementitious pipe insulation should be treated as asbestos-containing until lab analysis has proved otherwise.

Typical pipe fitting insulation in the basement classroom (Chrysotile 40%).

4.1.6 Abandoned Boiler Mechanical Area

Asbestos-containing insulation and debris (Chrysotile 50%), abandoned pipe insulation (Chrysotile 60%) and grey caulking on the boiler (Chrysotile 8%) were observed in and around the old abandoned boiler in the basement mechanical space. See SAI report #1625262, sample #21-23. The insulation and debris were exposed, in poor condition and very friable (powdery).

The dust and debris was collected from around the fins of the old abandoned boiler.

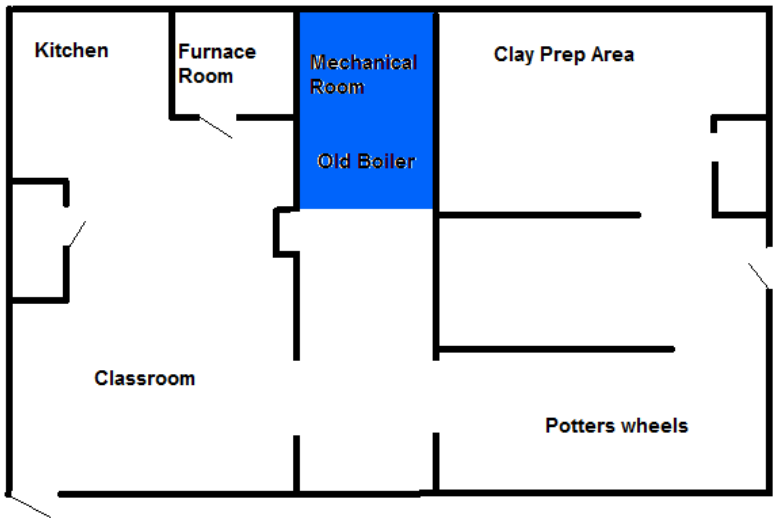
A view looking along the side of the boiler. Fragments of pipe insulation (Chrysotile 60%) and debris were observed on the floor.

A shelving unit was blocking the front of the boiler. The shelving was not moved due to the risk of accidental pottery breakage. It is common for asbestos-containing gaskets to be present inside and around the boiler doors. This was not confirmed during our assessment. It is also common for asbestos containing materials to be present inside the boiler – not confirmed during the assessment.

There was an active HVAC unit within the mechanical space in the vicinity of the abandoned boiler.

The mechanical area where the old abandoned boiler exists should be treated as a restricted area. Appropriate signage and banner tape should be placed at the entrance to this mechanical space and access only permitted by trained personnel wearing appropriate PPE. The area is highlighted in blue in Figure 4 on the next page.

Figure 4. Basement, Abandoned Boiler Mechanical Space



4.1.7 Miscellaneous Asbestos Items

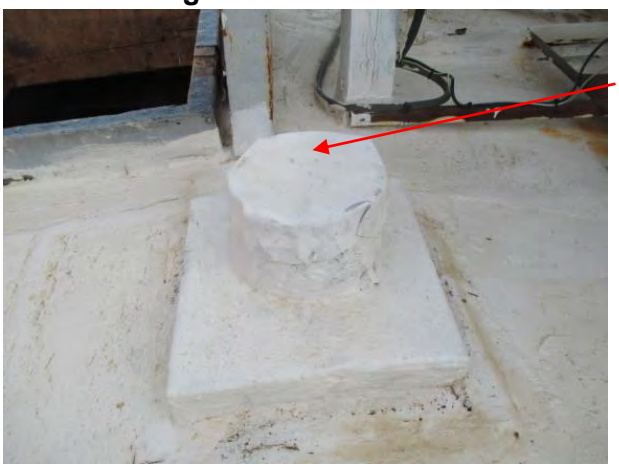
The cast iron drain waste and vent piping is suspected to contain asbestos under the lead seal. This was not confirmed as destructive testing that would compromise the seal is required to obtain a sample. No quantity was obtained.

4.2 LEAD AND LEAD BASED PAINT

Lead had been used to seal the joints of the cast iron drain, waste and vent pipe work. No quantity was obtained.

Lead acid batteries were identified in the emergency lighting system, approximately six (6) units were present.

Lead Flashings



Lead had been used to seal roof penetrations. No quantity was obtained.

Lead Paint

Historically the criteria limit for lead in paint was 5000 ppm (parts per million) (also referred to as 0.5% or 5000 mg/kg). In 2005, under the Federal Hazardous Products Act, in the Surface Coating Materials Regulation, the criteria was amended and the concentration of total lead allowable in a surface coating material (including paint) was lowered to 600 ppm (0.06% or 600 mg/kg). Recently in 2010, an amendment to the Surface Coating Materials Regulation further reduced the concentration to 90 ppm (0.009% or 90 mg/kg).

In summary, any paint with 0.009% lead will require appropriate lead procedures for any disturbance.

Samples of the interior and exterior painted surfaces were collected, and submitted to the Scientific Analytical Institute for analysis by Flame Atomic Absorption Spectroscopy. Results of analytical testing are shown in Table 1 below. Results in excess of the recommended lead concentrations are shown below in Red.

Table 1: Lead in Paint Results

	Description	Lead Results (%)
L1	White paint, ceiling, main floor corridor Typical throughout	**0.17**
L2	Brown painted trim, main floor, south side Typical throughout	**0.43**
L3	White wall paint, basement	**<0.007**
L4	White wall paint, second floor Typical throughout	**0.53**
L5	Brown painted trim, second floor Typical throughout	**0.40**
L6	Brown paint – exterior window frame Second floor	**0.10**
L7	Brown paint – exterior window frame Main floor	**2.4**

In summary, lead containing paint was identified on all interior walls and ceilings (white) and all doors and trim (brown). The one sample of paint from the basement wall (white) was negative. Additional confirmation samples to be collected to confirm no lead in the basement. The interior paints were in good condition, with the exception of some water damaged locations.

Exterior paint on window sills and trim (brown) are all considered lead paint. The exterior paints were in poor condition (spalling) on some window sills and frames.

4.3 POLYCHLORINATED BIPHENYLS (PCB'S)

Oil filled ballasts were present in the fluorescent light fixtures, with older ballasts likely to contain PCB's. The approximate quantity of fluorescent light fixtures observed on site was fifty (50).

4.4 OTHER HAZARDOUS MATERIALS

Fluorescent light tubes that contain a trace of mercury were observed throughout the building. There were approximately ninety (90) four-foot tubes and (10) x eight-foot tubes observed.

Refrigerators containing refrigerant were observed in the basement. Approximately five (5) were observed.

Approximately five (5) thermostat switches containing mercury filled bulbs were identified in the building.

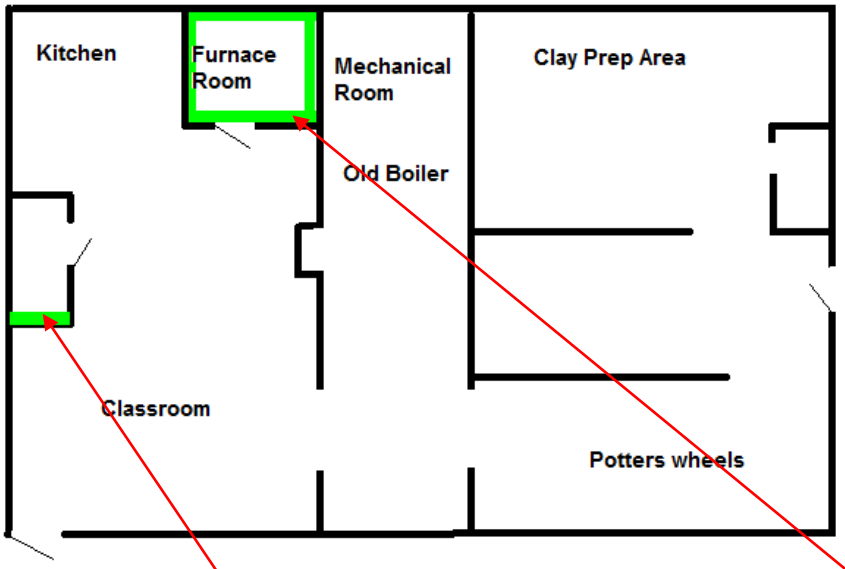
Boiler switches containing mercury filled bulbs were noted. Two (2) were observed.

4.5 MOULD AND WATER DAMAGE

Observations were made of conditions that were or could become mould amplification sources. Several bulk samples of water damaged and mouldy materials were collected and submitted to Enviro-works for mould genus identification.

Water damage was evident on drywall walls in the basement furnace room and classroom washroom. A sample of the water stained drywall was collected from the furnace room and was sent for lab analysis. No fungal growth was identified, See Enviro-works Inc. Report ID# 13559, sample M1. The affected areas are identified in **Green** in Figure 5.

Figure 5. Basement, Water Damage

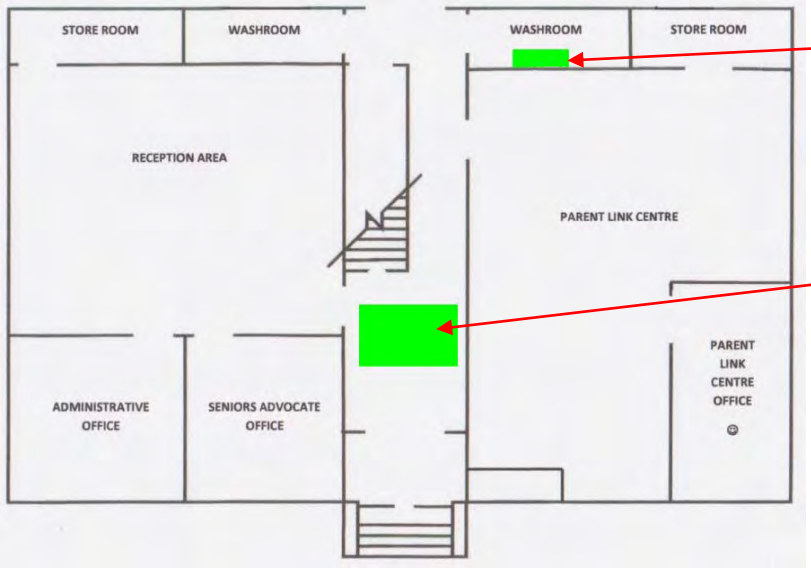


Water staining on bathroom wall. Approximate size of affected area 50 ft^2.

Discolouration and water staining were evident along the bottom of the drywall in the furnace room. Approximate size of affected area 110 ft^2.

Water damage was evident on the plaster ceiling in the main floor lobby. The water is likely from a roof leak, migrating through the second floor. There is also localised water damage to the vanity in the main floor washroom. The affected areas are identified in **Green** in Figure 6.

Figure 6. Main Floor, Water Damage

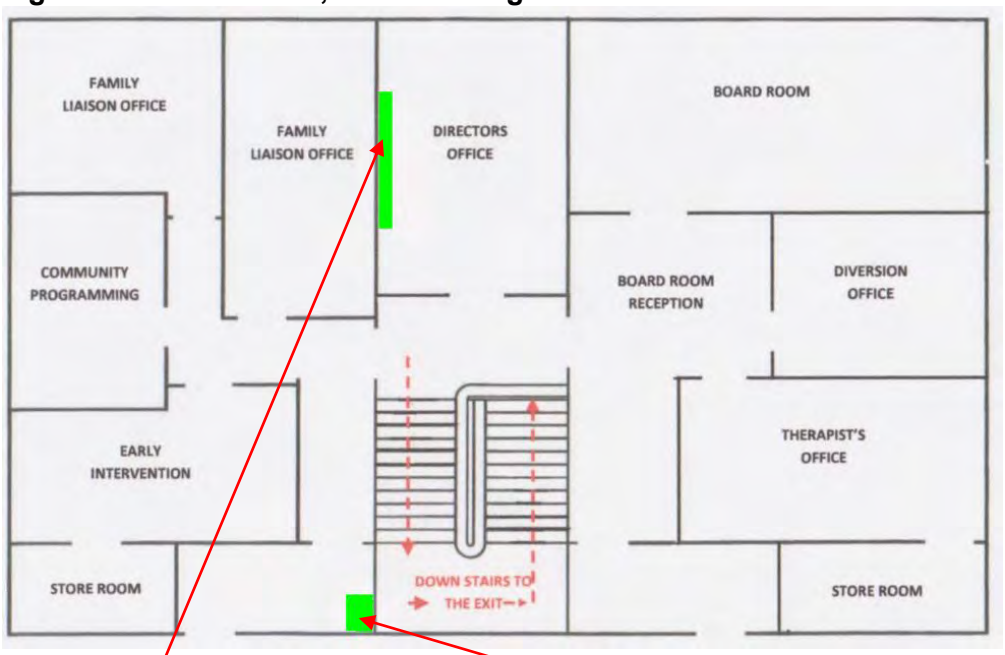


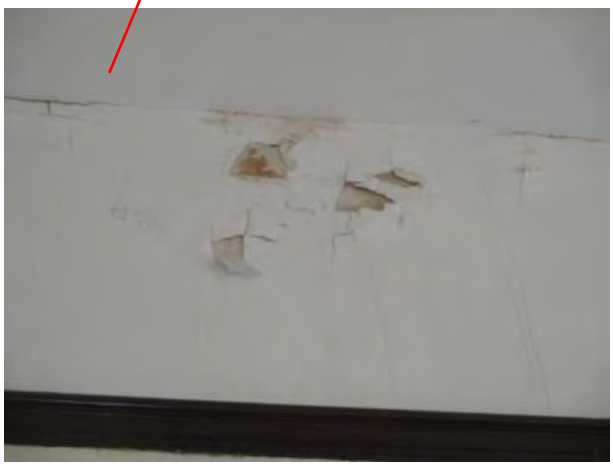
The vanity unit in the washroom had significant water damage and should be replaced.

Spalling paint and water damage to the ceiling of the main entrance lobby (0.17% lead). Approximate size affected 50ft^2.

Water damage was evident on the plaster wall in the second floor office. The damaged was caused by a roof leak, evident in the attic space above. The was also damage to the plaster ceiling around the roof drain in the second floor telephone room. Samples were collected at both locations and sent for lab analysis. No fungal growth was identified, See Enviro-works Inc. Report ID# 13559, samples M2 and M3. The affected areas are identified in **Green** in Figure 7.

Figure 7. Second Floor, Water Damage





Approximate size of affected area 35 ft^2.

Approximate size of affected area 6 ft^2.

Attic Space & Roof

No hazardous materials were identified in the attic insulating materials or in the accessible roof membranes and caulking materials. A few of the roof shingles were observed to be missing.

A bucket had been used to catch water drips from a hole in the roof below the bell.

A picture showing the roof top bell and clapper system. A penetration in the roof was allowing water to enter the attic and migrate into the building, evident on both floors.

Deteriorated roofing.

5.0 RECOMMENDATIONS

5.1 ASBESTOS REMOVAL

The following recommendations refer to Low, Medium or High-risk procedures. This terminology is used in the Alberta Human Services, Occupational Health and Safety, in their “Asbestos Abatement Manual”. By following the guidelines in this document the owner will ensure that all applicable regulations relating to asbestos abatement practices within Alberta are undertaken within compliance. The Occupational Health & Safety Act regulates asbestos control requirements as follows: Prior to demolition or renovation, the following materials will require removal.

5.1.1 Floor Goods

The floor tiles in the basement were in fair condition and can be left in place. If the floor tiles are to be disturbed or removed, then Low Risk abatement procedures is required.

The sheet vinyl flooring in the main floor washrooms is in good condition and can be left in place. If the sheet flooring is disturbed or removed, then Moderate Risk abatement procedures is required.

5.1.2 Wall Plaster

Due to the erratic use of asbestos in the wall and ceiling plaster (one sample out of three contained asbestos). We recommend that prior to any disturbance of the plaster walls or ceilings, this material should be retested for asbestos content and then proceed accordingly. If removal of asbestos-containing wall or ceiling plaster is necessary, Moderate Risk Asbestos abatement procedures should be adopted.

5.1.3 Ceiling Panels

The ceiling panels in the basement were in fair condition and we recommend scheduling the removal of the panels following Low Risk abatement procedures or coordinated in conjunction with other asbestos abatement projects as described in Section 5.1.5.

5.1.4 Pipe Fitting Insulation

The pipe fitting insulation present in the basement of the building (not including the abandoned boiler area) was in good condition and can remain in place provided they are clearly labelled as asbestos material. However, there are only a small quantity remaining in the basement and it is suggested they are removed following Moderate Risk Glove bag removal.

Mechanical insulations may be concealed in pipe chases, above plaster ceilings and in wall cavities. If these insulations are to be disturbed during renovation work or prior to demolition of the building, they should be removed following the appropriate asbestos abatement procedure.

5.1.5 Abandoned Boiler Mechanical Area

The old boiler area in the basement is contaminated. Given this asbestos contamination and the close proximity of the operating HVAC unit, the cleanup requires immediate attention. The asbestos-containing boiler insulation and debris identified in this report should be removed following High Risk abatement procedures. It may be necessary to demolish the brick wall along the side of the boiler to gain access to the asbestos material.

Until the cleanup has been completed, this area of the basement should be treated as a restricted area. Appropriate signage and banner tape should be placed at the entrance to the boiler area and access only permitted to trained personnel wearing appropriate PPE.

5.1.6 Miscellaneous Asbestos Items

Asbestos may exist under the lead seal of the cast iron drain, waste and vent pipe work. At the end of service life or prior to demolition, remove piping for disposal.

5.2 LEAD AND LEAD BASED PAINT

Lead acid batteries in the emergency lighting system should be disposed of through an appropriate facility at the end of their service life.

Lead sealed joints of the cast iron drain, waste and vent pipe work should be removed and disposed of appropriately prior to disturbance or demolition.

Lead flashings on the roof should be handled and disposed of following lead procedures when the roof is replaced or prior to demolition.

Action to remove any spalling paint in the building should follow appropriate lead paint procedures. Spalling paint locations were typically associated with water damaged areas and exterior windows frames/sills.

5.3 POLYCHLORINATED BIPHENYLS (PCB'S)

Inspect the ballasts in the fluorescent lighting fixtures at the end of their service life or prior to demolition. PCB and non-PCB oil filled ballasts to be collected up for appropriate disposal.

5.4 OTHER HAZARDOUS MATERIALS

At the end of service life or prior to demolition the fluorescent light tubes, thermostats, boiler switches and refrigerators should be recycled, reused or disposed of appropriately.

5.5 MOULD AND WATER DAMAGE

Mould remediation has been much less regulated and established than asbestos and less understood. Several jurisdictions have developed mould remediation guidelines that have tried to mitigate mould issues in a safe and yet practical manner, probably one of the best and most copied guidelines is that developed by the City of New York. Alberta Human Services also produced a 'Best practices' guideline in 2009. The Alberta Occupational Health and Safety Act Regulation and Code (July 2009) added a statement in part 4 of the code that states that 'Where mould exists or may exist, an employer must ensure that a worker's exposure to the mould is controlled' (43.1). Appropriate mould remediation guidelines should be followed for the suggested remediation in this report.

Even though no mould was identified in the samples submitted to Enviro-Works Inc. conditions can change and mould growth can occur when conditions are suitable. We recommend that water damaged materials identified in this report should be abated following appropriate procedures.

The water damaged wall plaster and ceilings identified in this report would first have to be tested to confirm asbestos content, and if asbestos is present then Moderate Risk Asbestos abatement procedures would be required. Additionally, the paint (lead-containing) was generally spalling in water damaged locations, therefore lead procedures should be followed to remediate spalling paint. In summary asbestos, lead or mould procedures may have to be addressed as required to remediate water damaged areas.

The water damaged drywall ceiling mentioned in this report should be removed following the City of New York Guidelines on Assessment and Remediation of Fungi in Indoor Environments, **Level III** (or equivalent protocol).

6.0 BUDGET COSTS

Abatement costs include for set up, removal and disposal of materials. Re-insulation and rebuild costs are not included in this estimate.

Item	Budget Cost
Asbestos	
Sheet Vinyl Flooring	$2000
Floor Tiles	$10,000
Plaster unknown	$15,000
Ceiling Panels	$3,000
Piping identified	$1,000
Piping unknown	$2,000
Abandoned boiler cleanup	$15,000
Interior boiler insulation unknown	$10,000
Cast iron drain waste and vent piping	$1,000
Water Damage	
Remediation of water damaged area, including interior spalling paint	$15,000
Other Hazardous Materials	
Spalling paint on exterior window frames, sills	$20,000
Lead, PCB's, mercury, CFC's	$2,000
Subtotal	**$96,000**
Contingency (20%)	$19,200
Air Monitoring and Inspections – estimate 20 days	$25,000
Contingency (20%)	
Total	**$140,200**

7.0 CLOSURE

We trust that the information in this report meets your present requirements. If you have any questions or require further explanation, please contact the undersigned at your convenience. We look forward to working with you in the future.

Yours truly,

RH Services Inc.

Mike Roberts B.Sc.

Reviewed By:

Kevin Simpson

APPENDIX A

ANALYTICAL RESULTS

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY LAB #173190

NVLAP Lab Code: 200564-0

Customer: RH Services Inc.
7340 82 Ave. NW
Edmonton, AB TGB 0G2

Attn: Kevin Simpson

Project: Brick School Assessment

Lab Order ID: 1625262
Analysis ID: 1625262_PLM
Date Received: 12/23/2016
Date Reported: 12/30/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
01 - A *1625262PLM_1*	Wall plaster, south CR, main flr *finish*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
01 - B *1625262PLM_42*	Wall plaster, south CR, main flr *base*	**None Detected**	**5% Cellulose**	**65% Other** **30% Quartz**	Gray Non Fibrous Heterogeneous Crushed
02 *1625262PLM_2*	Brick mortar, rtn air plenum	**None Detected**		**60% Other** **40% Quartz**	Gray Non Fibrous Heterogeneous Crushed
03 *1625262PLM_3*	Wall covering, south cr, main flr	**None Detected**	**80% Cellulose**	**20% Other**	Tan, White Fibrous Heterogeneous Ashed
04 - A *1625262PLM_4*	Sheet flooring, south cr, main flr *vinyl sheet flooring*	**None Detected**	**40% Cellulose**	**60% Other**	Tan Fibrous Heterogeneous Ashed
04 - B *1625262PLM_43*	Sheet flooring, south cr, main flr *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous Dissolved
05 *1625262PLM_5*	Sheet flooring, green, main flr *vinyl sheet flooring only*	**None Detected**	**30% Cellulose**	**70% Other**	Green Fibrous Homogeneous Dissolved
06 *1625262PLM_6*	Black board, south cr, main flr	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Crushed

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Megan Javonovich (49)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

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Date Reported: 12/30/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
07 *1625262PLM_7*	Drywall joint compound, main flr	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
08 - A *1625262PLM_8*	Sheet flooring, brown, main flr *mastic 1*	**None Detected**		**100% Other**	Yellow Non Fibrous Homogeneous Dissolved
08 - B *1625262PLM_44*	Sheet flooring, brown, main flr *vinyl sheet flooring*	**None Detected**	**40% Cellulose**	**60% Other**	Tan Fibrous Homogeneous Dissolved
08 - C *1625262PLM_45*	Sheet flooring, brown, main flr *mastic 2*	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Dissolved
09 *1625262PLM_9*	Sheet flooring, grey mosiac, wash rm *vinyl sheet flooring only*	**20% Chrysotile**		**80% Other**	Gray Fibrous Homogeneous Teased
10 *1625262PLM_10*	Wall plaster, under stairs, main flr *compound*	**3% Chrysotile**		**97% Other**	Tan Non Fibrous Homogeneous Crushed
11 *1625262PLM_11*	Drywall joint compound, north cr	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
12 *1625262PLM_12*	Sheet flooring, green, north cr *vinyl sheet flooring only*	**None Detected**	**30% Cellulose**	**70% Quartz**	Green Fibrous Homogeneous Dissolved

Megan Javonovich (49)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

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Date Reported: 12/30/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
13 *1625262PLM_13*	Exterior brick mortar	**None Detected**		**60% Other** **40% Quartz**	Gray Non Fibrous Heterogeneous Crushed
14 - A *1625262PLM_14*	Floor tile, south, basement *tile*	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Dissolved
14 - B *1625262PLM_46*	Floor tile, south, basement *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Dissolved
15 *1625262PLM_15*	Drywall joint compound, basement *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
16 *1625262PLM_16*	Drywall joint compound, boiler rm *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
17 *1625262PLM_17*	Pipe insulation, south cr, basement	**40% Chrysotile**		**60% Other**	Gray Fibrous Homogeneous Teased
18 *1625262PLM_18*	Pipe insulation, boiler rm, basment	**40% Chrysotile**		**60% Other**	Gray Fibrous Homogeneous Teased
19 *1625262PLM_19*	Floor tile, kiln rm, basement *tile only*	**None Detected**		**100% Other**	Beige Non Fibrous Homogeneous Dissolved

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Megan Javonovich (49)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY LAB #173190

NVLAP Lab Code: 200564-0

Customer: RH Services Inc.
7340 82 Ave. NW
Edmonton, AB TGB 0G2

Attn: Kevin Simpson

Project: Brick School Assessment

Lab Order ID: 1625262
Analysis ID: 1625262_PLM
Date Received: 12/23/2016
Date Reported: 12/30/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
20 *1625262PLM_20*	Ceiling board, basement	**20% Chrysotile**		**80% Other**	Gray Fibrous Homogeneous Teased
21 *1625262PLM_21*	Debris, abandoned boiler, basement	**50% Chrysotile**		**50% Other**	Gray Fibrous Homogeneous Teased
22 *1625262PLM_22*	Caulking, abandoned boiler, basement	**8% Chrysotile**		**92% Other**	Gray Non Fibrous Homogeneous Crushed
23 *1625262PLM_23*	Pipe ins, abandoned boiler, basement	**60% Chrysotile**		**40% Other**	Gray Fibrous Homogeneous Teased
24 *1625262PLM_24*	Brick mortar, abandoned boiler, basement	**None Detected**		**60% Other** **40% Quartz**	Gray Non Fibrous Heterogeneous Crushed
25 *1625262PLM_25*	Drywall joint compound, ceiling *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
26 - A *1625262PLM_26*	Floor tile, north pottery area *tile*	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Dissolved
26 - B *1625262PLM_47*	Floor tile, north pottery area *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Megan Javonovich (49)

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P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY LAB #173190

NVLAP Lab Code: 200564-0

Customer: RH Services Inc.
7340 82 Ave. NW
Edmonton, AB TGB 0G2

Attn: Kevin Simpson

Project: Brick School Assessment

Lab Order ID: 1625262
Analysis ID: 1625262_PLM
Date Received: 12/23/2016
Date Reported: 12/30/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
27 *1625262PLM_27*	Drywall joint compound, clay prep *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
28 *1625262PLM_28*	Drywall joint compound, pottery area *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
29 *1625262PLM_29*	Vinyl wall covering, pottery area *vinyl only*	**None Detected**	**15% Synthetic Fibers**	**85% Other**	Tan Non Fibrous Heterogeneous Ashed
30 *1625262PLM_30*	Black board, 2nd flr	**None Detected**		**100% Other**	Black Non Fibrous Homogeneous Crushed
31 - A *1625262PLM_31*	Sheet flooring, green, 2nd flr *vinyl sheet flooring*	**None Detected**	**40% Cellulose**	**60% Other**	Green Fibrous Homogeneous Dissolved
31 - B *1625262PLM_48*	Sheet flooring, green, 2nd flr *mastic*	**None Detected**		**100% Other**	Brown Non Fibrous Homogeneous Dissolved
32 - A *1625262PLM_32*	Wall plaster, telephone rm, 2nd flr *finish*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
32 - B *1625262PLM_49*	Wall plaster, telephone rm, 2nd flr *base*	**None Detected**	**5% Cellulose**	**65% Other** **30% Quartz**	Gray Non Fibrous Heterogeneous Crushed

Megan Javonovich (49)

Analyst

Approved Signatory

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY LAB #173190

NVLAP NVLAP Lab Code: 200564-0

Customer: RH Services Inc.
7340 82 Ave. NW
Edmonton, AB TGB 0G2

Attn: Kevin Simpson

Project: Brick School Assessment

Lab Order ID: 1625262
Analysis ID: 1625262_PLM
Date Received: 12/23/2016
Date Reported: 12/30/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
33 *1625262PLM_33*	Wall covering, 2nd flr	**None Detected**	**80% Cellulose**	**20% Other**	Tan, White Fibrous Heterogeneous Ashed
34 *1625262PLM_34*	Wall covering, 2nd flr	**None Detected**	**80% Cellulose**	**20% Other**	Tan, White Fibrous Heterogeneous Ashed
35 *1625262PLM_35*	Drywall joint compound, 2nd flr *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
36 *1625262PLM_36*	Drywall joint compound, 2nd flr *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Crushed
37 *1625262PLM_37*	Brick mortar, rtn air plenum	**None Detected**		**60% Other** **40% Quartz**	Gray Non Fibrous Heterogeneous Crushed
38 *1625262PLM_38*	Exterior window caulking	**None Detected**		**100% Other**	Gray Non Fibrous Homogeneous Crushed
39 *1625262PLM_39*	Attic insulation	**None Detected**	**95% Fiber Glass**	**5% Other**	White Fibrous Homogeneous Teased
40 *1625262PLM_40*	Roof ridge caulking, black	**None Detected**	**20% Cellulose**	**80% Other**	Black Fibrous Homogeneous Dissolved

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Megan Javonovich (49)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY
LAB #173190

NVLAP Lab Code: 200564-0

Customer: RH Services Inc.
7340 82 Ave. NW
Edmonton, AB TGB 0G2

Attn: Kevin Simpson

Project: Brick School Assessment

Lab Order ID: 1625262
Analysis ID: 1625262_PLM
Date Received: 12/23/2016
Date Reported: 12/30/2016

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	*Lab Notes*				Treatment
41	Roof coating, white	None Detected		100% Other	White Non Fibrous Homogeneous
1625262PLM_41					Ashed

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Megan Javonovich (49)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 1623262
Client Code: _____

Company Contact Information	
Company: RH Services Inc	Contact: Kevin Simpson
Address: 7340-82 Avenue	Phone ☐: 780 440-4880
Edmonton, Alberta	Fax ☐: 780 440-4890
T6B 0G2	Email ☐: kevin@rhservices.ca

Billing/Invoice Information	Turn Around Times	
Company: RH Services Inc	90 Min. ☐	48 Hours ☐
Address: 7340-82 Avenue	3 Hours ☐	72 Hours ☐
Edmonton, Alberta	6 Hours ☐	96 Hours ☐
T6B 0G2	12 Hours ☐	120 Hours ☒
	24 Hours ☐	144+Hours ☐

PO Number:
Project Name/Number: BRICK SCHOOL ASSESSMENT

Asbestos Test Types	
PLM EPA 600/R-93/116 (PLM)	☒
Positive stop ☐	
PLM Point Count 400 (PT4)	☐
PLM Point Count 1000 (PTM)	☐
PCM NIOSH 7400-A Rules (PCM)	☐
B Rules (PCB) ☐ TWA (PTA) ☐	
TEM AHERA (AHE)	☐
TEM Level II (LII)	☐
TEM NIOSH 7402 (TNI)	☐
TEM Bulk Qualitative (TBL)	☐
TEM Bulk Chatfield (TBS)	☐
TEM Bulk Quantitative (TBQ)	☐
TEM Wipe ASTM D6480-05	☐
TEM Microvac ASTM D5755-09	☐
TEM Water EPA 100.2 (TWT)	☐
Other: _____	☐

Sample ID #	Description/Location	Volume/Area	Comments
01	WALL PLASTER, SOUTH CR, MAIN FLR		
02	BRICK MORTAR, RTN AIR PLENUM		
03	WALL COVERING, SOUTH CR, MAIN FLR		
04	SHEET FLOORING, SOUTH CR, MAIN FLR		
05	SHEET FLOORING, GREEN, MAIN FLR.		
06	BLACK BOARD, SOUTH CR, MAIN FLR		
07	DRYWALL JOINT COMPOUND, MAIN FLR.		
08	SHEET FLOORING, BROWN, MAIN FLR.		
09	SHEET FLOORING, GREY MOSAIC, WASH RM		
10	WALL PLASTER, UNDER STAIRS, MAIN FLR		
11	DRYWALL JOINT COMPOUND, NORTH CR.		

Total # of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
MR	12/22	[signature]	1223 10:30

Accepted ☑

Rejected ☐

A-F-017 EXP 6-17-19

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 1125062
Client Code: _____

Sample ID #	Description/Location (H)	Volume/Area	Comments
12	SHEET FLOORING, GREEN, NORTH CR		
13	EXTERIOR BRICK MORTAR		
14	FLOOR TILE, SOUTH, BASEMENT		
15	DRYWALL JOINT COMPOUND, BASEMENT		
16	DRYWALL JOINT COMPOUND, Boiler Rm		
17	PIPE INSULATION, SOUTH CR, BASEMENT		
18	PIPE INSULATION, Boiler Rm, BASEMENT		
19	FLOOR TILE, KILN Rm, BASEMENT		
20	CEILING BOARD, BASEMENT.		
21	DEBRIS, ABANDONED BOILER, BASEMENT.		
22	CAULKING, ABANDONED BOILER, BASEMENT.		
23	PIPE INS. ABANDONED BOILER, BASEMENT.		
24	BRICK MORTAR, " " , "		
25	DRYWALL JOINT COMPOUND, CEILING.		
26	FLOOR TILE, NORTH POTTERY AREA.		
27	DRYWALL JOINT COMPOUND, CLAY PREP.		
28	DRYWALL JOINT COMPOUND, POTTERY AREA.		
29	VINYL WALL COVERING, POTTERY AREA.		
30	BLACK BOARD, 2nd FLR.		
31	SHEET FLOORING, GREEN, 2nd FLR		
32	WALL PLASTER, TELEPHONE Rm, 2nd FLR.		
33	WALL COVERING, 2nd FLR.		
34	WALL COVERING, 2nd FLR.		
35	DRYWALL JOINT COMPOUND, 2nd FLR		
36	DRYWALL JOINT COMPOUND, 2nd FLR		
37	BRICK MORTAR, RTN AIR PLENUM		
38	EXTERIOR WINDOW CAULKING		
39	ATTIC INSULATION.		
40	ROOF RIDGE CAULKING, BLACK.		
41	ROOF COATING, WHITE.		

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7420

AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL LEAD ISO/IEC 17025:2005 www.aihaaccreditedlabs.org LAB #173190

Customer: RH Services Inc.
7340 82 Ave. NW
Edmonton, AB TGB 0G2

Attn: Kevin Simpson

Project: ATHABASCA

Lab Order ID: 1625159
Analysis ID: 1625159_PBP
Date Received: 12/22/2016
Date Reported: 12/28/2016

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
L1 1625159PBP_1	White ceiling paint - main floor	0.0720	1700	**0.17%**
L2 1625159PBP_2	Brown paint on trim - main floor	0.0577	4300	**0.43%**
L3 1625159PBP_3	White wall paint - basement	0.0586	< 68	**< 0.007%**
L4 1625159PBP_4	White wall paint - 2nd floor	0.0505	5300	**0.53%**
L5 1625159PBP_5	Brown paint on trim - 2nd floor	0.0560	4000	**0.40%**
L6 1625159PBP_6	Brown paint - exterior window frame	0.0651	1000	**0.10%**
L7 1625159PBP_7	Brown paint - exterior window frame	0.0587	24000	**2.4%**

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb).

Taylor Davis (7)
Analyst

Laboratory Director

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 1602159
Client Code: _____

Contact Information

Company Name:	RH SERVICES INC.
Address:	7340 - 82 AVENUE NW
	EDMONTON, ALBERTA, T6B 0G2
	CANADA.
Contact:	KEVIN SIMPSON
Phone ☐:	780 440 4880
Fax ☐:	780 440 4890
Email ☐:	kevin@rhservices.ca.
PO Number:	
Project Name/Number:	ATHABASCA

Billing/Invoice Information

Company:	RH SERVICES INC.
Address:	7340 - 82 AVENUE NW
	EDMONTON, AB. T6B 0G2
Contact:	KEVIN SIMPSON
Phone ☒:	780 440 4880
Fax ☐:	780 440 4890
Email ☐:	kevin@rhservices.ca.

Lead Test Types

Paint Chips by Flame AA (PBP) ☒	Soil by Flame AA (PBS) ☐	Other ☐
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	

Turn Around Times

3 Hours	☐	72 Hours	☒
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☐
48 Hours	☐		

Sample ID #	Description/Location	Volume/Area	Comments
L1	WHITE CEILING PAINT - MAIN FLOOR		
L2	BROWN PAINT ON TRIM - MAIN FLOOR		
L3	WHITE WALL PAINT - BASEMENT		
L4	WHITE WALL PAINT - 2ND FLOOR		
L5	BROWN PAINT ON TRIM - 2ND FLOOR		
L6	BROWN PAINT - EXTERIOR WINDOW FRAME		
L7	BROWN PAINT - EXTERIOR WINDOW FRAME		

Accepted ☑

Rejected ☐

Total Number of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
MC.	12/2/16		12/22 3PM

Page ___ of ___

ENVIRO-WORKS INC.

18949 111 Ave NW
Edmonton, Alberta
T5S 2X4
Ph: 780-457-4652
Fax: 780-473-0767

Client: RH Services Inc.

Project: Brick School

Date Sampled: 20-Dec-16

Sample Taken by: Kevin Simpson

Date Submitted for Laboratory Analysis: 23-Dec-16

Sample Type: Bulk

Date Completed: 23-Dec-16

Lab ID: 13559

Method: Tape Lift From Bulk / Direct Microscopic Examination

COC No.: 43946

Slide ID	Sample No:	Sample Description	Genus Identification	Relative Spore Conc. (loaded/many/few)
1	1	M1-Basement Boiler Room	No Fungal Growth	None
2	2	M2-Second Floor Telephone Rm	No Fungal Growth	None
3	3	M3-Second Floor, Central Office	No Fungal Growth	None

Spore Concentrations are reported subjectively by the analyst as an indication of colony viability. This observation is not a quantification of the fungal colony. The guideline used by the analyst for reporting the concentration is as follows: 'Loaded' = 80% or greater, 'many' = 31% to 79%, 'few' = 30% or less.

This analytical report indicates only the results of the materials submitted and tested at our laboratory. Enviro-Works Inc. is not responsible for any consultation or interpretation of the sample results. Enviro-Works Inc. is also not responsible for the procedure's) used with respect to the sample

Paul Laplante,
Lab Analyst

Reviewed By:

Cherie Laplante, B.Sc.
Lab Manager

APPENDIX C:

STATEMENT OF SIGNIFICANCE

STATEMENT OF SIGNIFICANCE
ATHABASCA PUBLIC SCHOOL

View the from the south west showing the west (front) and south elevations
(*Heritage Resources Management Branch*), 2005

Description of Historic Place

The Athabasca Public School was built in 1913/14. It is a large, hip-roofed, two-storey building constructed of red brick with limestone details. Its front elevation is dominated by a central tower with battlements and an impressive arched doorway surmounted by a large name stone. The school is one of the largest brick buildings in Athabasca and has become a community landmark. It is situated prominently on a landscaped, treed lot at the west end of 48th Avenue in the Town of Athabasca.

Heritage Value

The Athabasca Public School possesses heritage value as an excellent example of Edwardian era, Collegiate Gothic architecture. It is also significant as a representation of institutional construction trends in pre-First World War, small town Alberta.

Fuelled by resource and railway speculation, the community of Athabasca Landing experienced tremendous growth in the pre-First World War period. The pace of growth and a devastating fire in 1913 necessitated the construction of new buildings. Many of these buildings, such as the Athabasca Methodist (now United) Church and the Grand

Union Hotel, were impressively large for such a small community, reflecting the town's optimism and anticipation for future growth. Similar is the Athabasca Public School, which was built during the winter of 1913-14 to replace smaller, crowded schoolhouses. The new public school was an impressive two storey, Collegiate Gothic style building, which was described at the time as being "beautiful and colossal." This style is based on the architecture used by many European academic institutions, notably the Oxbridge universities and is characterized by robust construction, towers, parapets and battlements, Gothic and Tudor arches and massive entry portals. Exterior decorative elements, such as sills and lintels, quoins, capstones, cornices and parapets, are typically executed with lighter-coloured sandstone, limestone or concrete, contrasting sharply with the dark red brick usually used as the primary construction material. This style's association with Old World educational traditions made it a popular choice in Edwardian-era North America and it was used extensively for urban schools and academic buildings throughout Alberta, mostly in Calgary and Edmonton, but also in some smaller centres.

Like most Collegiate Gothic style buildings, the Athabasca Public School is constructed primarily of red brick with contrasting limestone highlights. The building rests on a foundation of rough-faced sandstone and is surmounted by a bell-cast, hip roof with gable-roofed dormers. The school's front facade is dominated by a large, central tower flanked by two large airshafts and capped with a crenallated parapet. A massive entry portal, accessed by heavy stone steps and railings, features large wooden doors set in a wide Tudor-arch at the base of the tower. The doorway is surmounted by cornices and an entablature bearing the school's name. Tall, narrow recesses, simulating arrow slits, are situated in the windowless dormers and on the sides of the tower. Many decorative elements are constructed of high-quality Indiana or Bedford limestone, including the entry portal; tower parapet; sills and lintels; belt course; cornices; and chimney caps. Upon completion, the school had four classrooms with nine windows each and two recreation rooms in the basement and was large enough to accommodate students of all grades. The interior mill work, such as window and door frames, picture rails and banisters, is relatively simple yet sturdy in design, suitable for the heavy use experienced in a school environment. The wide corridors feature plain wainscoting and doors with transoms and the classrooms feature green chalkboards with wooden frames and ledges.

The onset of the First World War and decisions made by the railways frustrated the town's expectations. The Canadian Northern Railway ended at the town and other railways bypassed the community completely. However, the continued presence of the impressive Athabasca Public School and nearby Athabasca United Church testifies to the expectations many of Alberta's smaller communities had of becoming leading urban centres. The school, with occasional additions to the rear, remained in use until the mid-1960s, at which time it became a community arts centre and office building.

Character-Defining Elements

Key elements that define the heritage value of the Athabasca Public School include its:

Exterior
- solid appearance;
- distinctive pattern of light-coloured Indiana or Bedford limestone decorative highlights, which contrasts with the red brick construction of the exterior walls;
- centrally-located, three storey, red brick tower with limestone cornice and battlements;
- fenestration pattern of the tower with three small six-paned windows at the first floor level, and pairs of nine over one windows on the upper two levels;
- unique fenestration of the primary elevation with regularly spaced nine-over one windows to the south of the central tower and smaller, nine light windows to the north of the tower;
- two large, vertical brick projections with limestone caps containing airshafts, flanking the tower;
- massive front entry portal, constructed of limestone and situated in the base of the tower;
- large, limestone front entry steps with limestone capped, field stone railings;
- heavy, wooden, arched entry door with six lights set with in a Tudor arch;
- limestone front piece with large stone brackets, situated underneath three six-paned windows and projecting over the front door;
- large, limestone entablature bearing the words ATHABASCA PUBLIC SCHOOL;
- limestone cornices situated below and above the entablature and below the tower battlement and chimney caps;
- wood shingle-clad bell-cast hip roof;
- gable roof dormers with brick gable ends and simple, limestone box cornices, situated on the south and north sides and on the west (front) side flanking the tower;
- tall, rectangular brick recesses in the gable ends and on the sides of the tower and chimneys, resembling arrow slits;
- limestone window sills and lintels;
- limestone belt course between the foundation and the first storey;
- rough-faced stone foundation;

Interior
- simple yet sturdy style of extant historic mill work, such as door and window frames, picture rails, banisters, newel posts, railings and corridor wainscoting;
- green chalkboards with wood frames and ledges fixed to the walls of the former classrooms;
- lath and plaster walls and ceilings;
- extant historic wood strip flooring;
- wide, wooden classroom doors with nine-light transoms;
- wood-framed, corridor entry way with double door flanked by nine-light side panels and surmounted by a large, three-paneled transom with two nine-light panels flanking a twenty-four light central panel;
- extant historic door hardware, such as push bars, hinges, knobs and handles;

- extant historic heating fixtures;
- Pease Economy Steam Heater and Ventilator located in the basement bearing corporate markings and other markings such as “PATENTED 1906, I BRING THEE COMFORT, CLEAN THESE FLUES DAILY”.

Landscape
- prominent location at the end of a roadway and on a hill overlooking Athabasca’s main commercial district;
- situation on a landscaped, partially treed lot.

APPENDIX D:

ISSUED FOR
DESIGN DEVELOPMENT
DRAWINGS

OLD BRICK SCHOOL RE-IMAGINE

ATHABASCA, ALBERTA

ISSUED FOR DESIGN DEVELOPMENT
November 29, 2019

KATHARINA KAFKA LANDSCAPE ARCHITECTURE

LANDSCAPE
L100 SITE AND LANDSCAPE PLAN

MANASC ISAAC

ARCHITECTURAL
A100 INFORMATION SHEET AND BUILDING CODE ANALYSIS
A101 BUILDING CODE PLANS AND SECTION
A200 BASEMENT FLOOR PLANS
A201 MAIN FLOOR PLANS
A202 SECOND AND ATTIC FLOOR PLANS
A300 REFLECTED CEILING PLANS
A400 BUILDING ELEVATIONS
A500 BUILDING SECTIONS

rjc Engineers

STRUCTURAL
S100 STRUCTURAL PLANS

FOX D.A. FOX ENGINEERING LTD.

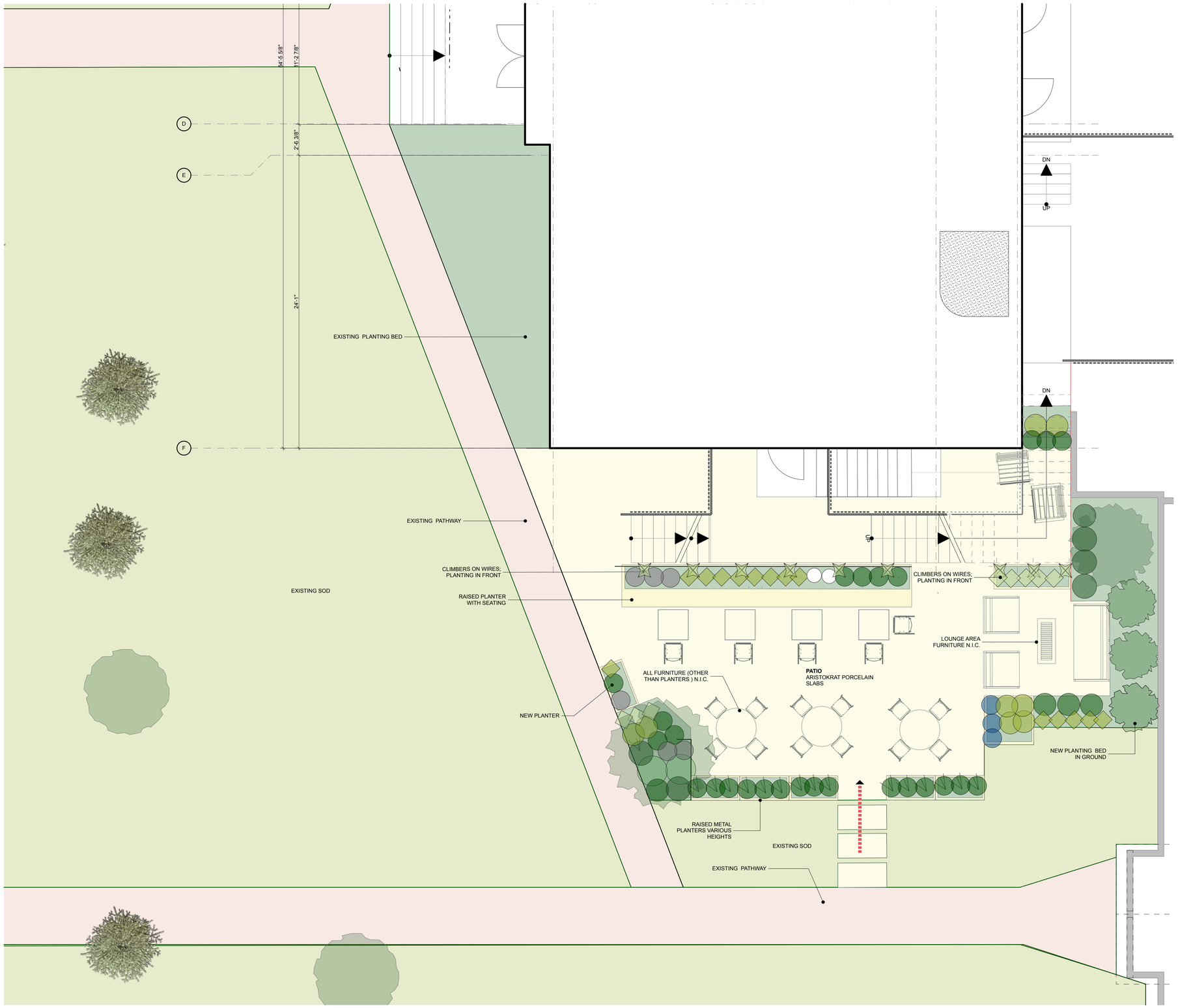
MECHANICAL
M101 BASEMENT - VENTILATION PLAN
M201 MAIN FLOOR - VENTILATION PLAN
M301 SECOND FLOOR - VENTILATION PLAN
M401 HEATING AND COOLING SCHEMATIC

MANASC ISAAC CONSULTING

ELECTRICAL
E100 POWER & COMMUNICATION SYSTEM
E101 LIGHTING SYSTEM

MANASC ISAAC

EDMONTON +1 780.429.3977
CALGARY +1 403.460.4177
manascisaac.com



1 L100 SITE AND LANDSCAPE PLAN

SCALE: 1:50

PROJECT

OLD BRICK SCHOOL RE-IMAGINE

ATHABASCA, ALBERTA

PROJECT NO.

21-8490

CLIENT

ATHABASCA COUNTY

Town of Athabasca

ARCHITECT

MANASC ISAAC

+1.780.429.3977
10225 100 Avenue
Edmonton, AB
T5J 0A1 Canada
manascisaac.com

SUBCONSULTANT

PERMITS AND SEALS

NOTES

DRAWING ISSUED

no.	d/m/y	description
01	15/11/2019	ISSUED FOR REVIEW
02	29/11/2019	ISSUED FOR DESIGN DEVELOPMENT

DRAWING TITLE

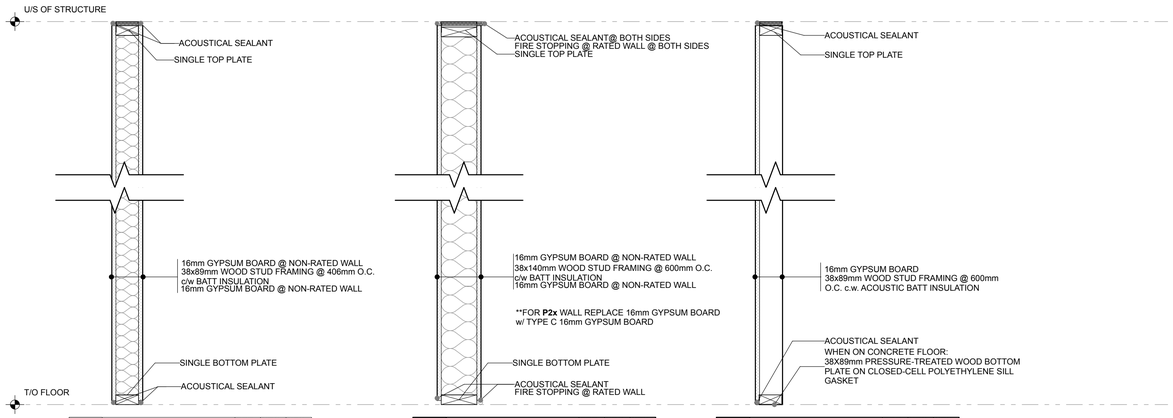
SITE AND LANDSCAPE PLAN

DRAWING NO.

L100

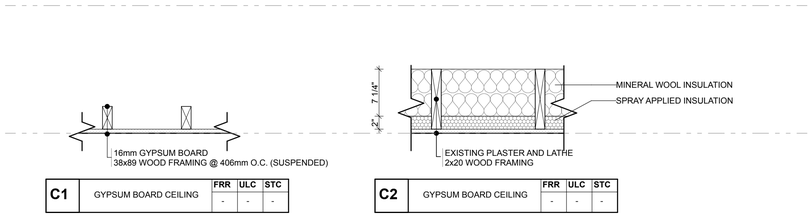
DRAWING SCALE	as noted
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC

INTERIOR WALL ASSEMBLY



		FRR	NBC	STC
P1	FULL-HEIGHT PARTITION	-	W1	36
P1x	FULL-HEIGHT PARTITION	1 HR.	W1	36
P2	FULL-HEIGHT PARTITION	-	W1	36
P2x	FULL-HEIGHT PARTITION	1 HR.	W1	36
P3	FURRING WALL	-	-	-

CEILING ASSEMBLY



		FRR	ULC	STC
C1	GYPSUM BOARD CEILING	-	-	-
C2	GYPSUM BOARD CEILING	-	-	-

WOOD WINDOWS
1. RESTORE ALL WINDOW TRIM TO SOUND CONDITION AND ORIGINAL APPEARANCE
2. STAIN ALL WOOD ELEMENTS AS NECESSARY TO MATCH ORIGINAL FINISHES.
3. GLUE OR REPLACE CRACKED, BROKEN OR MISSING GLASS.
4. REMOVE DETERIORATED PUTTY AND REPLACE WITH NEW
5. CONSOLIDATE AND REPAIR DETERIORATED WOOD SILLS, MUNTINS, FRAMING MEMBERS, AND STILES.
6. CLEAN ALL GLASS.

WOOD FLOORS
1. REMOVE ALL EXISTING CARPET
2. SAND AND STRIP EXISTING WOOD FLOOR. REMOVE ALL SURFACE CONTAMINANTS
3. REMOVE AND REPLACE IRREPARABLE WOOD PLANKS.
4. CLEAN FLOOR IN ACCORDANCE WITH THE FINISH MANUFACTURES RECOMMENDATIONS
5. APPLY SURFACE FINISH ACCORDING TO MANUFACTURER'S RECOMMENDED PROCEDURES

EXTERIOR BRICK

EXTERIOR STEPS
1. REPAIR ALL DAMAGED CONCRETE

EXTERIOR DOORS - NEW

EXTERIOR DOORS - EXISTING
1. RESTORE ALL SURFACES TO SOUND CONDITION AND ORIGINAL APPEARANCE
2. STAIN ALL WOOD ELEMENTS AS NECESSARY TO MATCH ORIGINAL FINISHES.
3. GLUE OR REPLACE CRACKED, BROKEN OR MISSING GLASS.
4. REMOVE DETERIORATED PUTTY AND REPLACE WITH NEW
5. CONSOLIDATE AND REPAIR DETERIORATED SILLS, FRAMING MEMBERS, AND STILES.

INTERIOR DOORS - NEW
1. 45 MIN. FRR REQUIRED

EXTERIOR GUARDRAIL - NEW

EXTERIOR EXIT STAIR

GENERAL NOTES

1 ALL WORK DESCRIBED IN THIS DOCUMENT SHALL COMPLY WITH THE ALBERTA BUILDING CODE 2019 AND ALL OTHER BYLAWS FOR THIS MUNICIPALITY TO THE SATISFACTION OF THE CODE OFFICER

2 THE CONTRACTOR SHALL CHECK AND VERIFY WORK WITH THE APPROPRIATE OWNER'S REPRESENTATIVE AND OFFICIAL BEFORE PROCEEDING

3. THE CONTRACTOR SHALL HOLD THE NECESSARY PERMITS AND LEGAL DOCUMENTS ON WORK SITE AT ALL TIMES CURING THE WORK

4. REFER TO SCHEDULE A FOR SUBMITTAL PROCEDURES INCLUDING SHOP DRAWINGS AND PRODUCT DATA.

5. INSTALLATION OF PRODUCTS AND MATERIALS APPROVED FOR THE PROJECT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE GOVERNING CODES AND REGULATIONS. GOVERNING CODE REQUIREMENTS SHALL OVERRULE THE MANUFACTURER'S SPECIFICATIONS

6. DETAILS ARE REPRESENTATIVE OF A TYPICAL CONDITION AND INTENT OF DESIGN. THE CONTRACTOR SHALL MAINTAIN THE INTENT OF THESE DETAILS AND NOTIFY OWNER'S REPRESENTATIVE WHERE DISCREPANCIES OCCUR.

7. REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL AND CIVIL DRAWINGS FOR THE WORK RELATED TO THIS PROJECT. THESE DRAWINGS ARE TO BE READ AS A UNIFIED SET OF CONTRACT DRAWINGS.

8. CONTRACTOR TO CONFIRM ALL EXISTING SITE CONDITIONS. WHERE EXISTING CONDITIONS INDICATED DO NOT MATCH WORK SITE CONDITIONS, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF THESE DISCREPENCIES.

Project Name: Old Brick School Re-Imagine **Project Location:** Athabasca, Alberta
Project Number: 218490

Preliminary Building Code Analysis

		Building Code	Alberta Building Code 2019				
0	1.3.3 [A]	Application of Division B	☒ NBC	☒ ABC	☒ Part 3	☐ Part 9	
1	1.1.1.[A]	Project Description	☒ Change of Use	☐ New	☐ Addition	☐ Alteration	
2	4.1.2.1 [B]	Importance Categories for Buildings	Normal				
3	3.1.2.1.[B]	Major Occupancy(s)	Assembly, Group A, Div 2		Area (m2)	217	
					Percenatge (%)		
	3.2.2.8. [B]	Multiple Major Occupancy (s)	☐ Yes(Continue to Item 3)		☒ No (Proceed to Item 4)		
4	3.1.3.1. [B] 3.1.3.2. [B]	Separation of Major Occupancies	N/A				
5	Building Design	Building Area (See 1.4.1.2 [A] for definition)	Existing (m2)	New (m2)	Total Building Area (m2)	Site Area (m2)	
			217 M2	None	389 m2	Unknown	
6	Building Design	Number of storeys (See 1.4.1.2. [A] for definition)	Above Grade	2	Below Grade	1	
7	Building Design	Height of building	Grade Line to Top of Highest Parapet (m)		15.25m		
8	3.2.2.10. [B] 3.2.5.4. [B] 3.2.5.5. [B] 3.2.5.6. [B]	Streets Access Route	No. of Streets	2			
			Access Route	9m access to west			
9	3.2.5.15. [B]	Fire Department Connection	☒ Yes	☐ No			
10	3.2.5.15 [B]	Fire Hydrant	Existing	New	Total	Note:	
			Yes		1	within 45m	
11	3.2.5.7. [B]	Water Supply Confirm with Consultant on	☐ Yes	☐ No	TO BE CONFIRMED BY HYDRANT FLOW TEST		
12	3.2.2.20-90 [B]	Building Classification (s)	Up to 2 Storeys not sprinklered. 3.2.2.25				
13	3.3.1.5. [B]	No. of Exits	Floor		No. of Exits		
			Basement		2		
			Main floor		2		
			Second floor		2		
			Roof (Mechanical Room)		1		
			List room(s) more than 60 expected occupants or room area more than 200m2		No. of Exits provided in Design (2 exits minimum)		
			CAFÉ		2		
14	3.4.2.4. [B] 3.4.2.5. [B]	Maximum Travel Distance	Level	Maximum Distance Required	Design of building	Notes	
			First Floor:	30M			
			2nd Floor:	30M			
15	3.2.5.8. [B]	Standpipe Required	☐ Yes	☒ No			
16	3.2.6. [B]	High Building	☐ Yes	☒ No			
17	3.2.2.20-90 [B]	Permitted Construction	☒ Combustible	☐ Non-combustible	☐ Both		
		Actual Construction	☒ Combustible	☐ Non-combustible	☐ Both		
		Notes:					
18	3.2.8. [B]	Interconnected Space	☐ Yes	☒ No	Notes:		
			Opening Area				
		Is the opening area(m2) less than half of the building footprint?	☒ Yes	☐ No	If Yes, Proceed to Item 22. If No, complete item 21.		
			☐ Draft stops ☐ Exit Vestibule	☐ Protected Floor Area	☐ Mechanical exhaust System	☐ Combustible Content Limit	
19	3.1.17.1. [B]	Occupant Load Determination	☒ m2/Person (3.1.17)		☐ Design of Building (Gross Area/m2 per person Required)		
			Basement	Total Permitted Load	Occupant Load	Actual Occupant Load	Notes
			POTTERY CLUB	87			
			Main Floor				
			TEACHING KITCHEN	38			
			CAFE	59			
			Second Floor				
			CLASSROOM	38			
			MAKER SPACE	26			
			Total Building Occupancy Load	Total Permitted Load 167		Total Posted Limit Load	
20	3.8. [B]	Barrier-Free Design	☒ Yes	☐ No, Explain	Notes:		
21	3.3.1.2. [B] 3.1.1.20. [B]	Hazardous Substances	☐ Yes	☒ No	Notes: Asbestos is located in the main floor, vinyl sheet flooring. Asbestos is located in the basement floor tiles. (See the 2017 Hazmat Assessment for the Old Brick School.)		
		Existing Asbestos	☒ Yes	☐ No			
	5.4.1. [B]	Resistance to Air Leakage - Radon	☐ Yes	☒ No			
		Others, Specify					
22		Required Fire Resistance Rating as per Building Classification (line 13)					
		Horizontal Assemblies	FRR	ULC Design No.	Other Rooms	Required FRR	
		Floor	45		3.3.1.21. Janitor's room	1HR	
		Roof	45		3.3.1.22. Laundry Rooms		
		Supporting Members FRR	FRR	ULC Design No.	3.3.1.25. Welding and cutting		
					3.3.1.26. Storage Rooms	1HR	
		Load bearing walls	45		3.3.2.15. Storage Room - Assembly Occupancy	1HR	
		Columns and arches	45		3.3.4.3. Storage Room - Care Treatment or Detention Occupancies		
		Other	Intumescent clear coating to be painted on interior underside of light-frame wood roof structure (truss system)		3.3.6.4. Flamable Liquids and Combustible Liquid Storage	1HR	
	3.6.3.1. [B]	Vertical Service Space Wall			3.6.1.4., 3.6.2.1. Service Rooms (See 1.4.1.2. [A] for definition)		
23	3.2.2.16. [B]	Heavy Timber Roof Permitted	☒ Yes	☐ No	3.6.2.5. Combustible Refuse Storage		
24	3.2.3. [B]	Spatial Separation and Exposure Protection					
		Buiding Elevation	Area of Exposing Building Face (EBF) m2	Limiting Distance (L.D.) m.	L/H or H/L L=Length of exposing building face H=Height of exposing building face (select grater ratio)	Permitted Max % of Openings	Proposed % of Openings
		North					
		East					
		South					
		West					
		Other	1HR				
	3.2.3.7. [B]		Minimum Required FRR	Wall Constructrucion Permitted (combustible or non-combustible)	Wall Constructrucion Proposed (combustible or non-combustible)	Type of Cladding Required (combustible or non-combustible)	Notes
		North					
		East					
		South					
		West					
		Other	1HR			8' Intumescent clear coating	Intumescent clear coating to be painted on west face of 'theatre' wall for 8' starting at northeast corner of old brick school, extending on the combustible cladding for 8' to the north. (to protect against unprotected openings from old brick school) This is only for FSR and not for FRR

PROJECT

OLD BRICK SCHOOL RE-IMAGINE

ATHABASCA, ALBERTA

PROJECT NO.

21-8490

CLIENT

ATHABASCA COUNTY

Town of Athabasca

ARCHITECT

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PERMITS AND SEALS

NOTES

DRAWING ISSUED

no.	d/m/y	description
01	15/11/2019	ISSUED FOR REVIEW
02	29/11/2019	ISSUED FOR DESIGN DEVELOPMENT

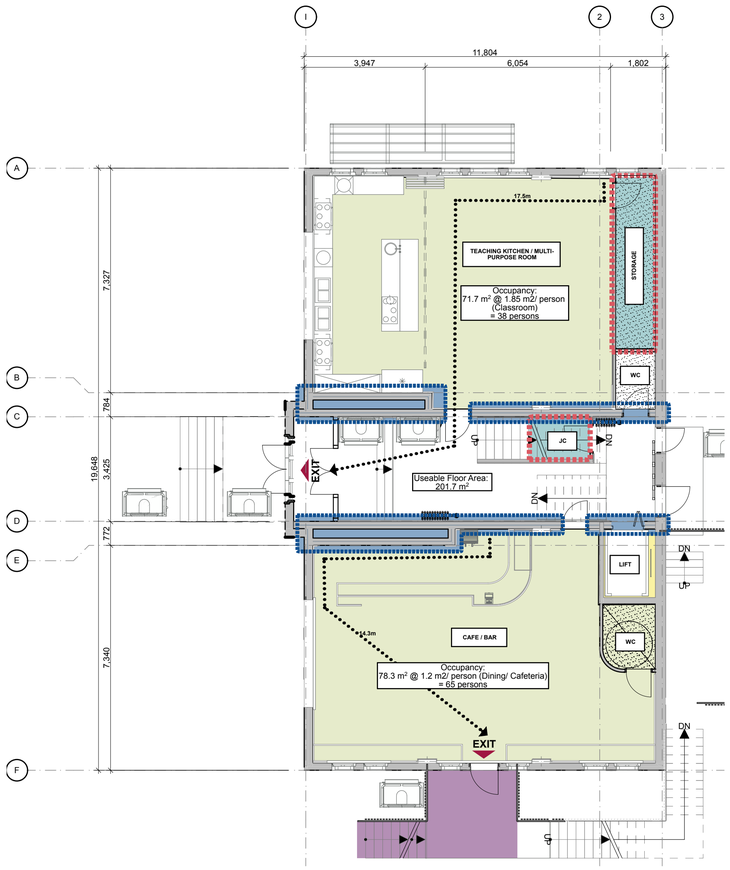
DRAWING TITLE

INFORMATION SHEET AND BUILDING CODE ANALYSIS

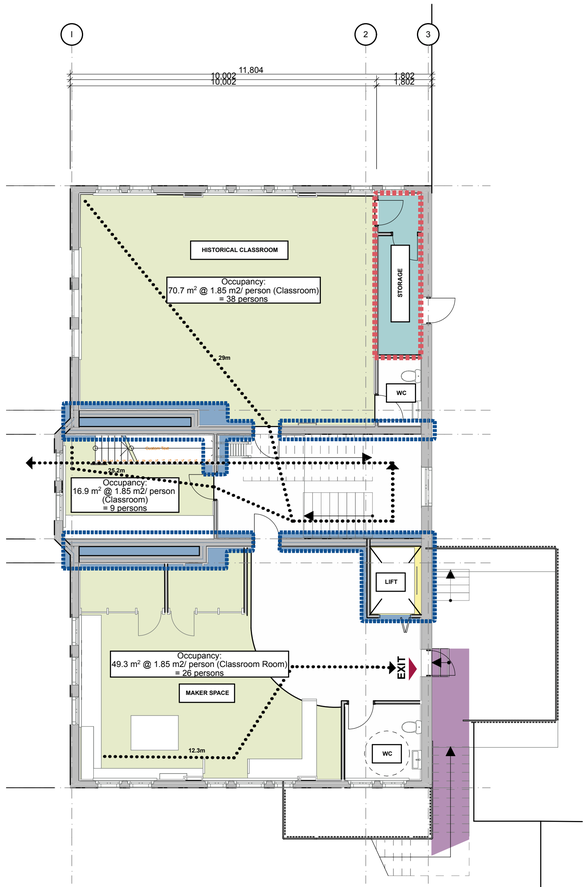
DRAWING NO.

A100

DRAWING SCALE	as noted
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC

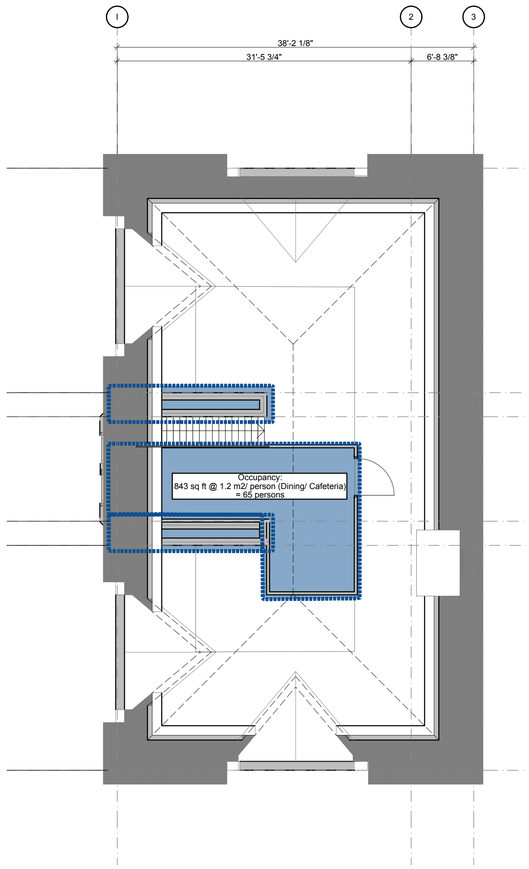


1 BASEMENT - BUILDING CODE ANALYSIS PLAN 1:100

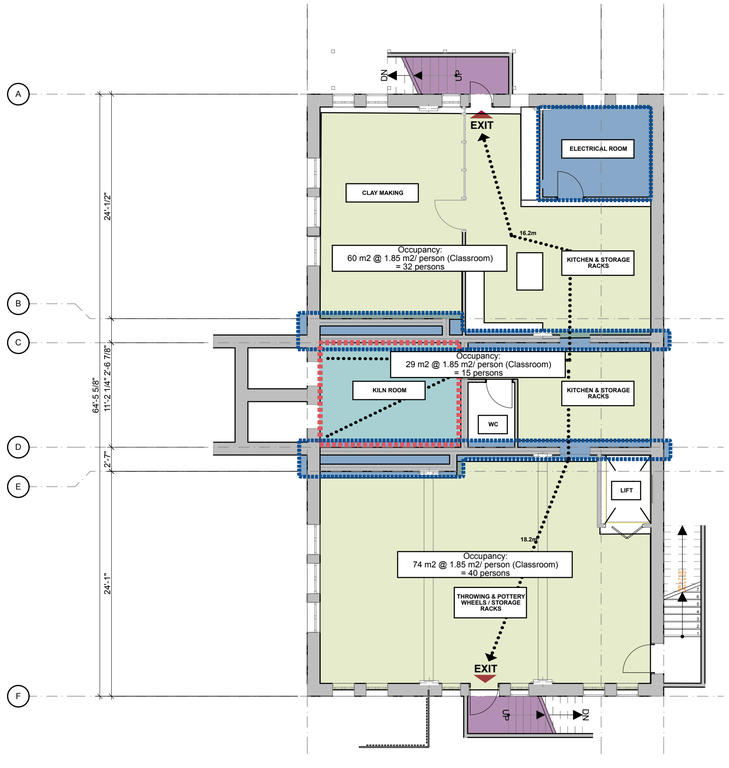


2 MAIN FLOOR - BUILDING CODE ANALYSIS PLAN 1:100

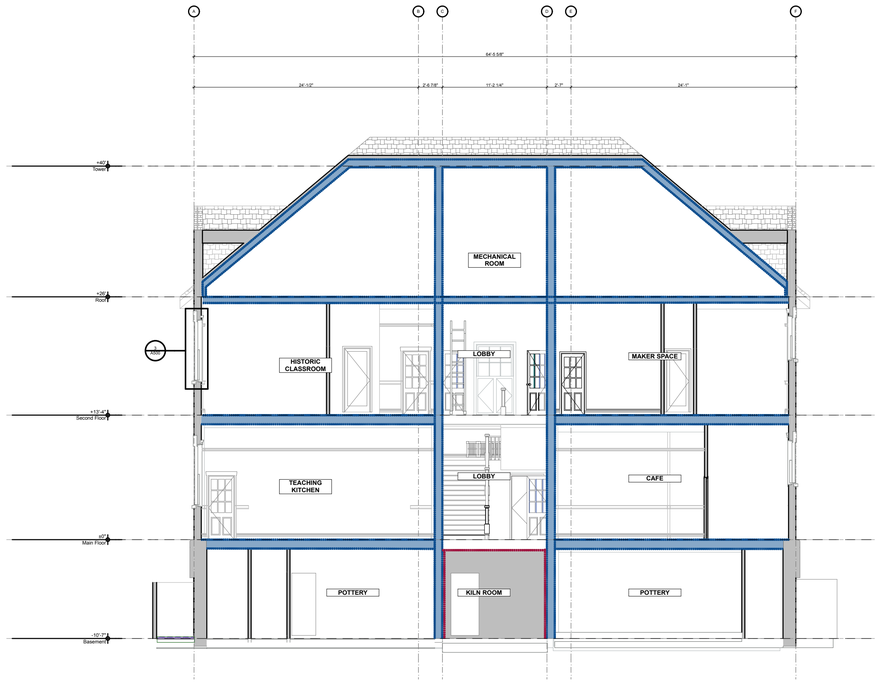
3 SECOND FLOOR - BUILDING CODE ANALYSIS PLAN 1:100



4 ATTIC FLOOR - BUILDING CODE ANALYSIS PLAN 1:100



1 BASEMENT - BUILDING CODE ANALYSIS PLAN 1:100



5 SECTION - BUILDING CODE ANALYSIS 1:100

LEGEND

FIRE SEPARATIONS:

- 45 MIN F.R.R.
- 1HR F.R.R.
- TRAVEL DISTANCE
- **FE-1** SEMI-RECESSED FIRE EXTINGUISHER CABINET
- **FE-2** WALL MOUNTED FIRE EXTINGUISHER
- EXIT TO GRADE

SPACE USE

- ASSEMBLY AREA
- STORAGE / JANITOR
- EXIT STAIR
- VERTICAL LIFT

MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS

FE-1:
.1 Stored pressure rechargeable type with hose and shut-off nozzle, ULC labelled for A, B and C class protection.
.1 Agent: Ammonium phosphate, powder type
.2 Size: 4.5 kg.
.3 Minimum Rating: 4A80BC
.4 Mounting: Semi-recessed cabinet

FE-2
.1 Stored pressure rechargeable type with hose and shut-off nozzle, ULC labelled for A, B and C class protection.
.1 Agent: Ammonium phosphate, powder type
.2 Size: 4.5 kg.
.3 Minimum Rating: 4A80BC
.4 Mounting: Wall-hung

CABINETS
Semi-recessed Flat Style:

.1 Fully-recessed cabinet constructed of 1.6 mm thick steel, and a 180 degree opening door of 2.5 mm thick steel with latching device. Door fitted with 5 mm clear glass, stainless steel concealed latch, reinforced piano hinges and a 25 mm turnback. *National Fire Equipment Ltd. CE-950-3.*

.2 Finish:
.1 Tub: prime coated.
.2 Door and frame: No.4 satin finish stainless steel or as specified by architect.
.3 Size: to suit extinguisher.
.4 Locations: as indicated.

All cabinets to maintain fire resistive rating of construction in which they occur.

PROJECT

OLD BRICK SCHOOL RE-IMAGINE

ATHABASCA, ALBERTA

PROJECT NO.

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DRAWING TITLE

BUILDING CODE PLANS AND SECTION

DRAWING NO.

A101

DRAWING SCALE	as noted
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
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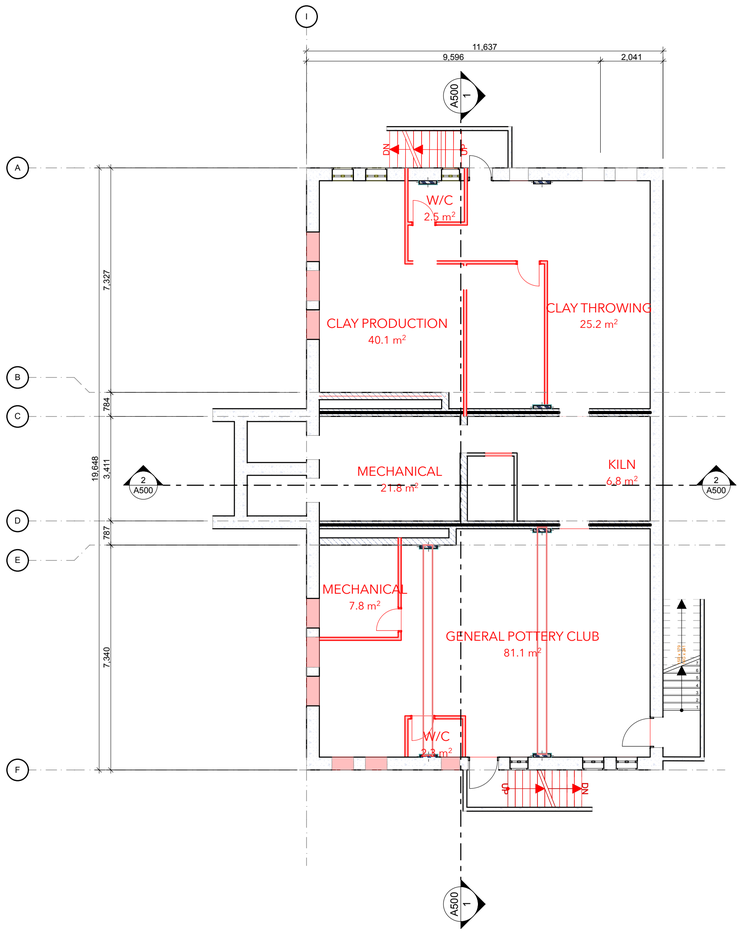
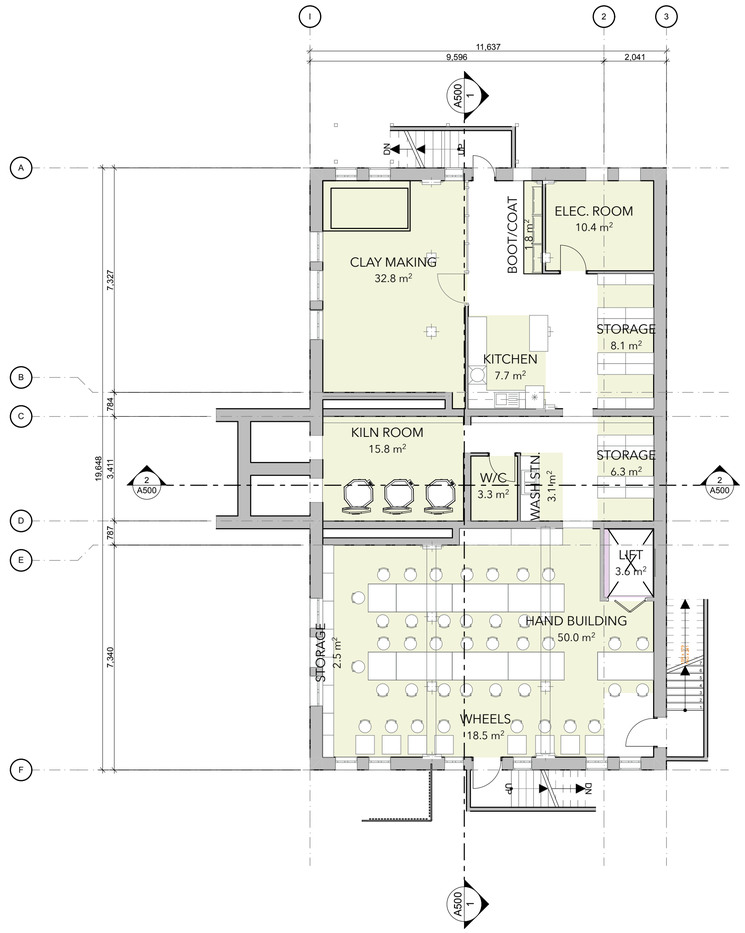


1 A200 DEMO - BASEMENT PLAN

SCALE: 1:100



2 A200 NEW CONSTRUCTION - BASEMENT PLAN

SCALE: 1:100

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BASEMENT FLOOR PLANS

DRAWING NO.

A200

DRAWING SCALE	as noted
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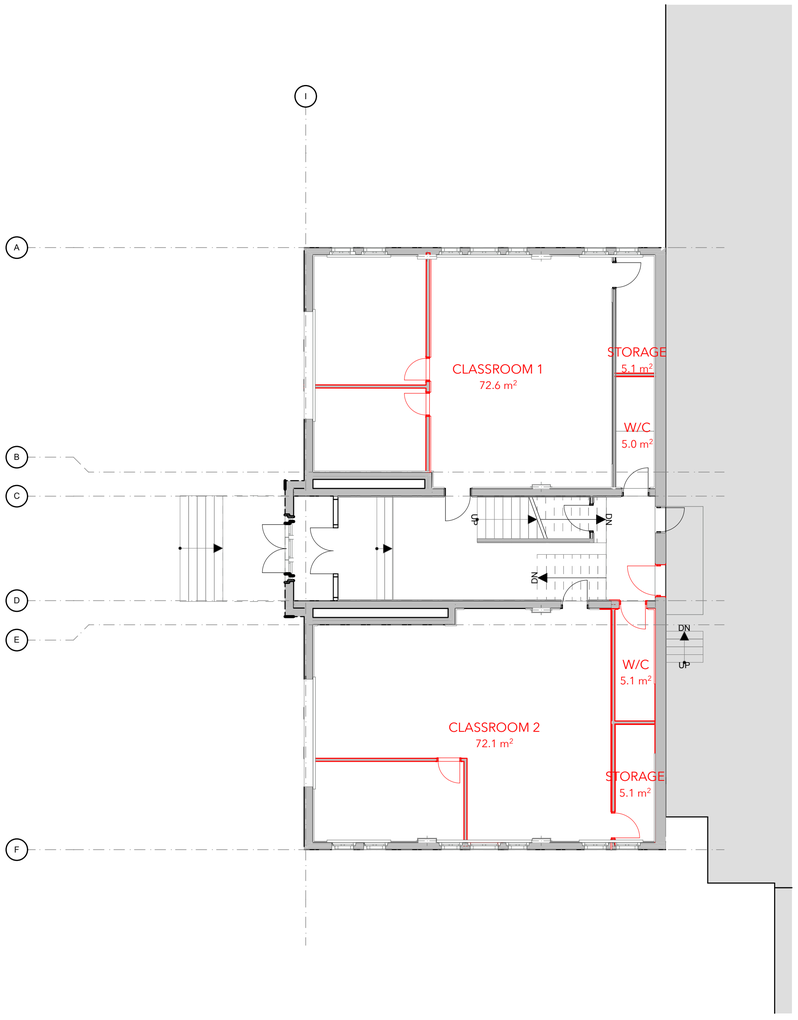
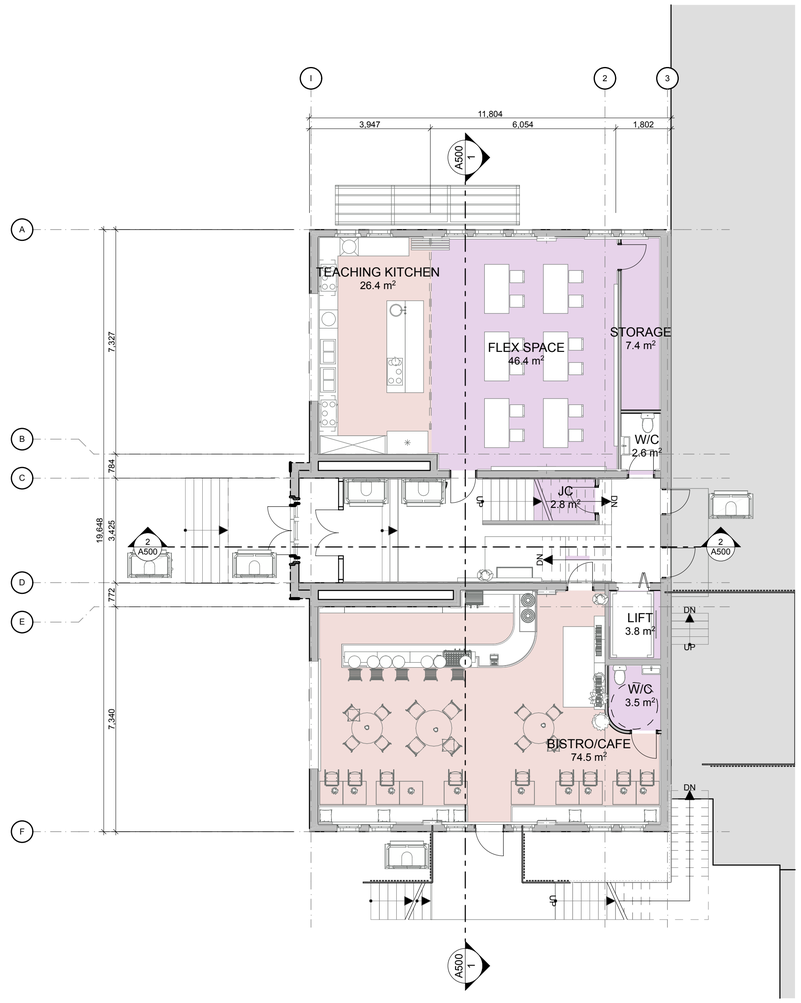
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC



1 A201 DEMO - MAIN FLOOR PLAN

SCALE: 1:100



2 A201 NEW CONSTRUCTION - MAIN FLOOR PLAN

SCALE: 1:100

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MAIN FLOOR PLANS

DRAWING NO.

A201

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DESIGNED BY	VS, ED, CVDZ
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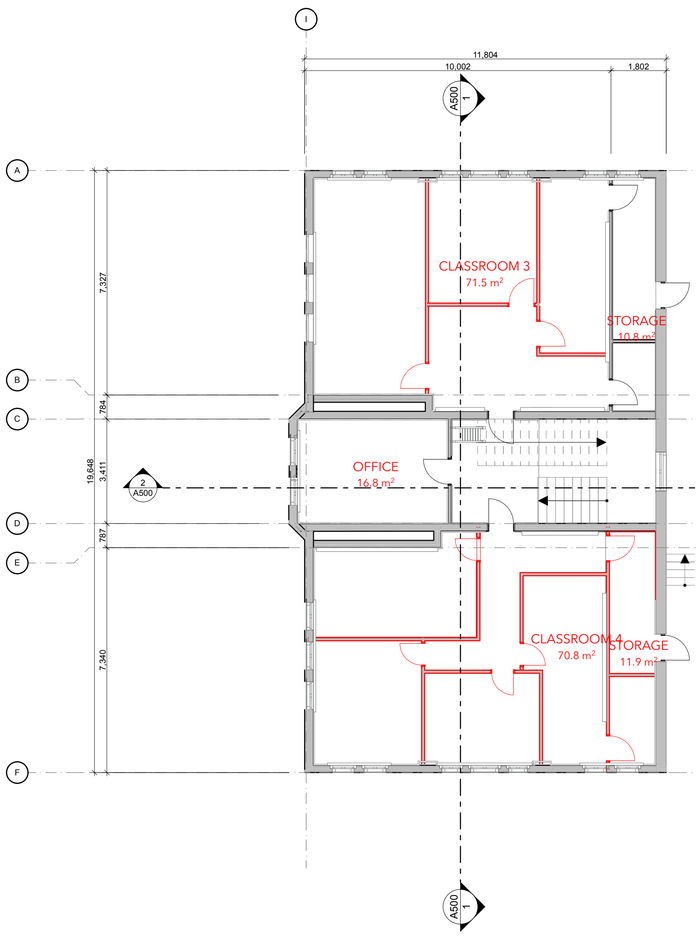
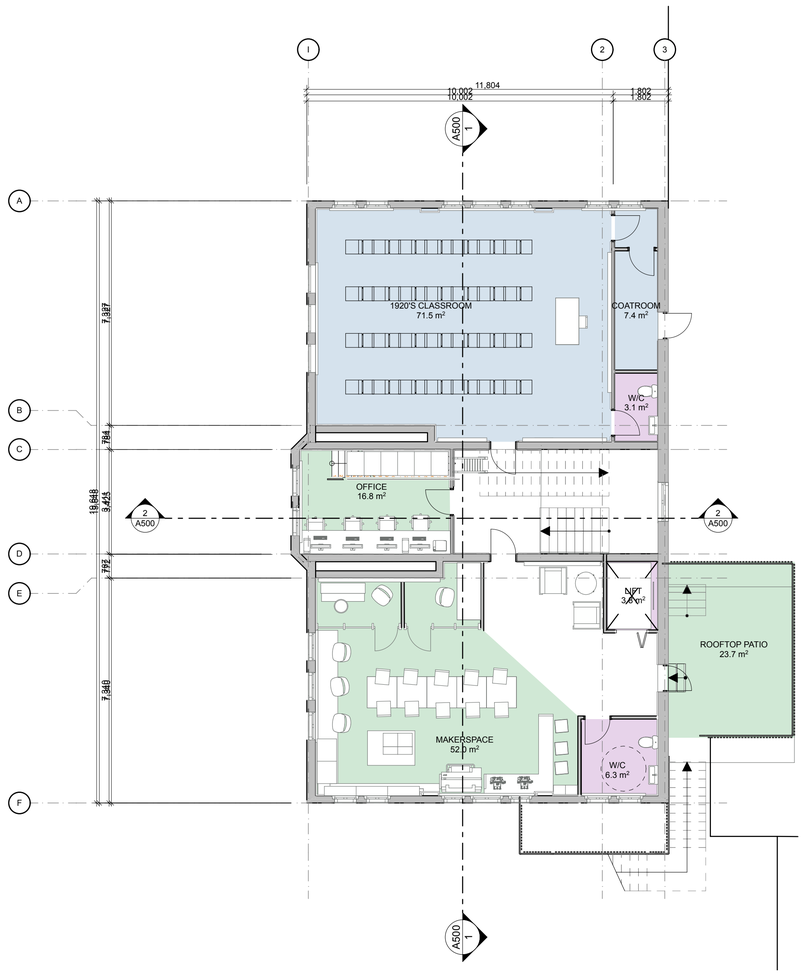


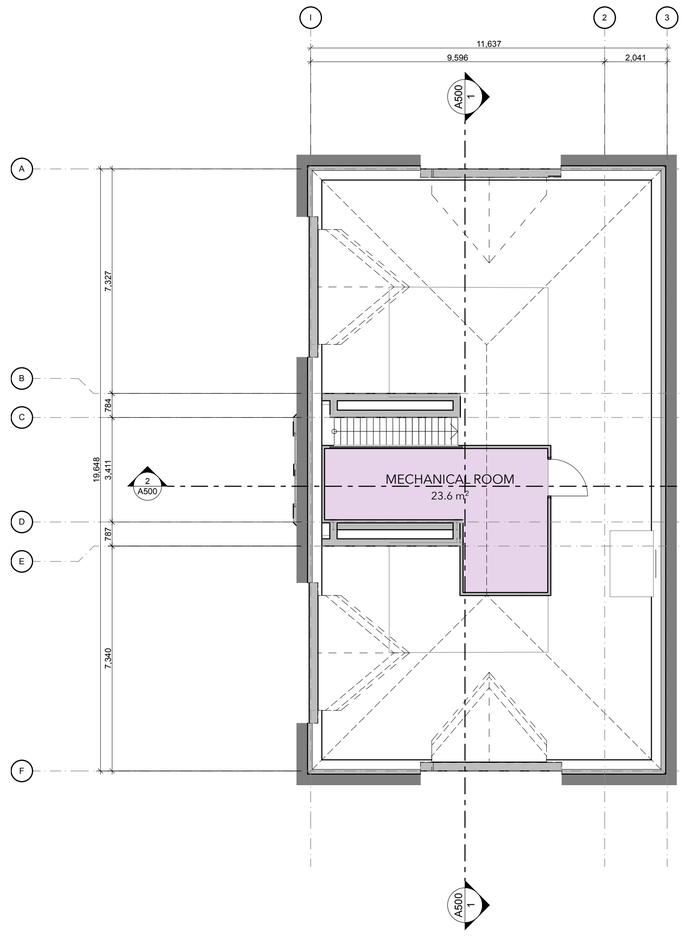
1 A202 DEMO - SECOND FLOOR PLAN

SCALE: 1:100



2 A202 NEW CONSTRUCTION - SECOND FLOOR PLAN

SCALE: 1:100



3 A202 NEW CONSTRUCTION - ATTIC FLOOR PLAN

SCALE: 1:100

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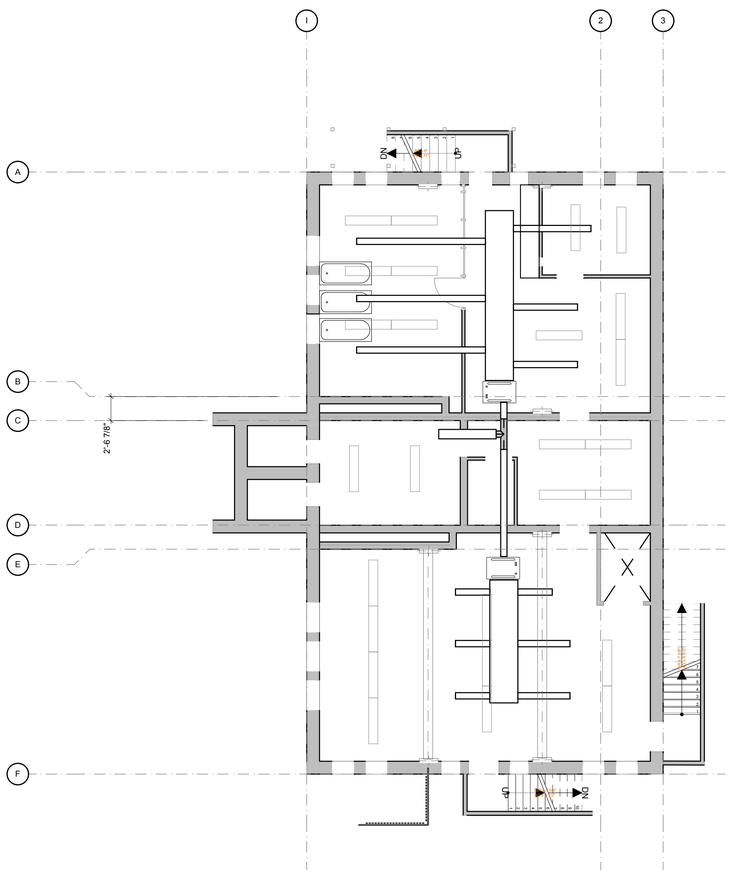
DRAWING TITLE

SECOND AND ATTIC FLOOR PLANS

DRAWING NO.

A202

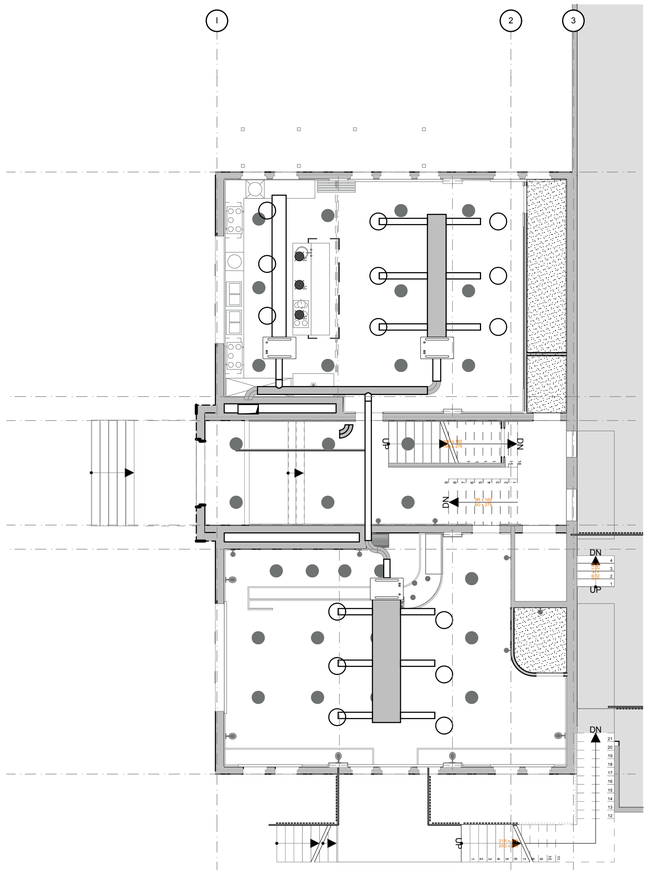
DRAWING SCALE	as noted
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC



1 A300

BASEMENT FLOOR REFLECTIVE CEILING PLAN

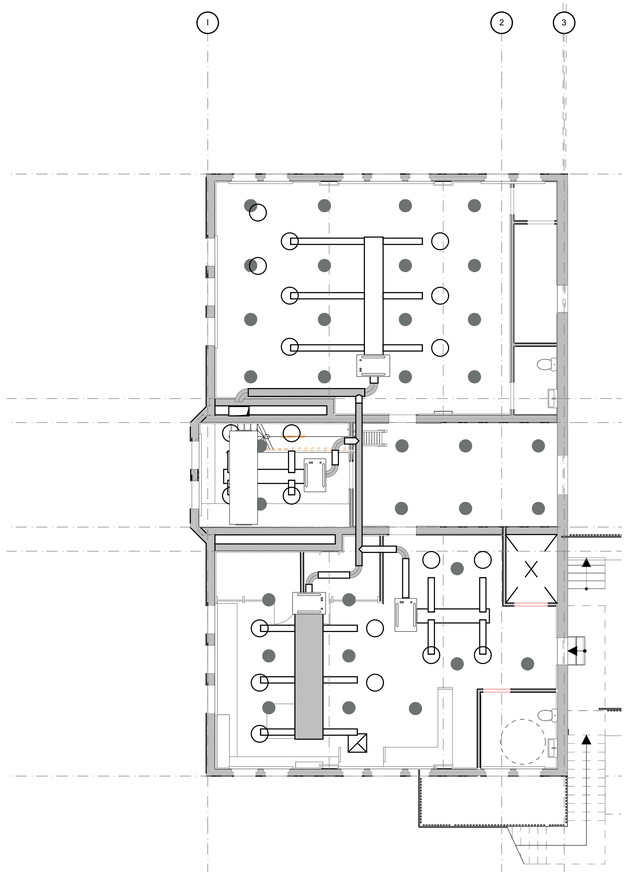
SCALE: 1:100



2 A300

MAIN FLOOR REFLECTIVE CEILING PLAN

SCALE: 1:100



3 A300

SECOND FLOOR REFLECTIVE CEILING PLAN

SCALE: 1:100

NOTES

1. FOR ALL LIGHT FIXTURE TYPES, REFER TO ELECTRICAL LIGHTING SCHEDULE.
2. FOR ALL MECHANICAL DUCTWORK SIZES, REFER MECHANICAL DRAWINGS.

REFLECTED CEILING PLAN LEGEND

GYPSUM BOARD CEILING
(ASSEMBLY TYPE **C2**)
-U/S CEILING @ 2,440mm ABOVE FLOOR,
UNLESS NOTED OTHERWISE.

2,700 ← U/S OF CEILING ABOVE FINISHED FLOOR

XX ← CEILING ASSEMBLY

REFLECTED CEILING PLAN KEYNOTE

- APPLIES TO ALL REFLECTED CEILING PLANS

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REFLECTED CEILING PLANS

DRAWING NO.

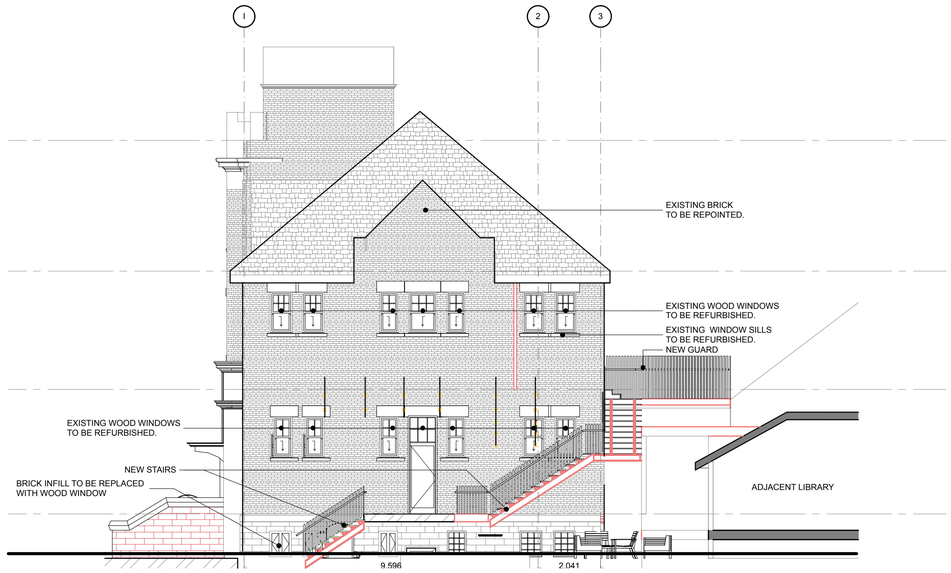
A300

DRAWING SCALE	as noted
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC

1 A400

WEST ELEVATION

SCALE: 1:100



3 A400

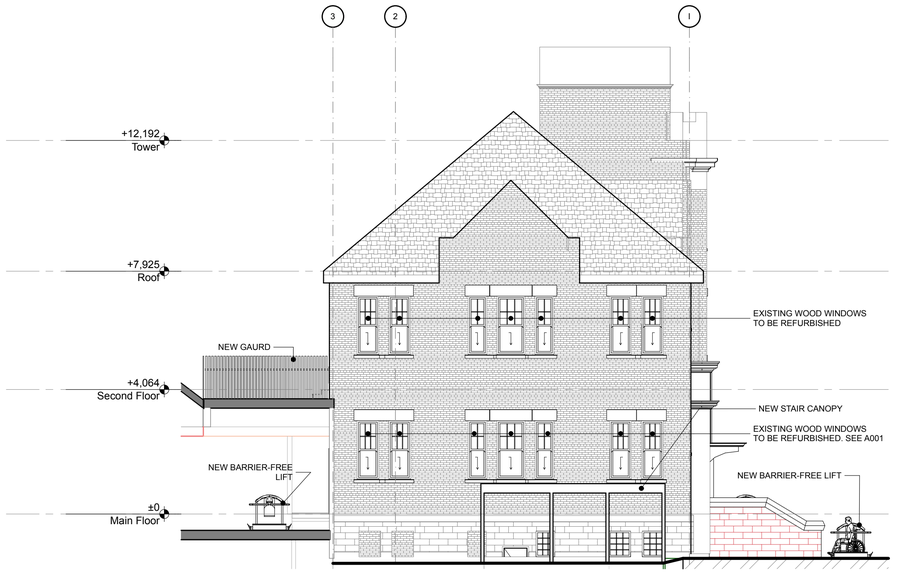
SOUTH ELEVATION

SCALE: 1:100

2 A400

EAST ELEVATION

SCALE: 1:100



4 A400

NORTH ELEVATION

SCALE: 1:100

PROJECT

OLD BRICK SCHOOL RE-IMAGINE

ATHABASCA, ALBERTA

PROJECT NO.

21-8490

CLIENT

ATHABASCA COUNTY

Town of Athabasca

ARCHITECT

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manascisaac.com

SUBCONSULTANT

PERMITS AND SEALS

NOTES

DRAWING ISSUED

no.	d/m/y	description
01	15/11/2019	ISSUED FOR REVIEW
02	29/11/2019	ISSUED FOR DESIGN DEVELOPMENT

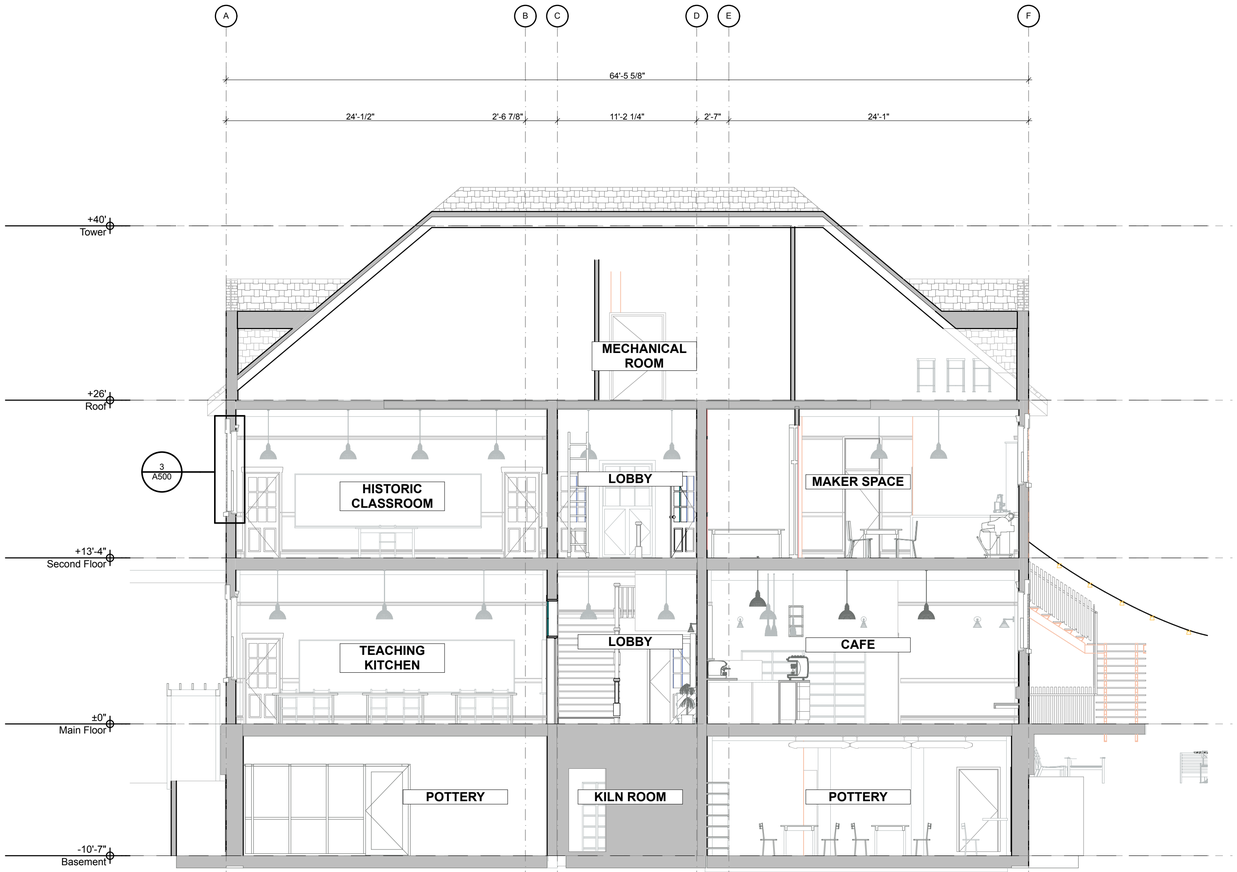
DRAWING TITLE

BUILDING ELEVATIONS

DRAWING NO.

A400

DRAWING SCALE	as noted
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC



1 A500 BUILDING SECTION 1

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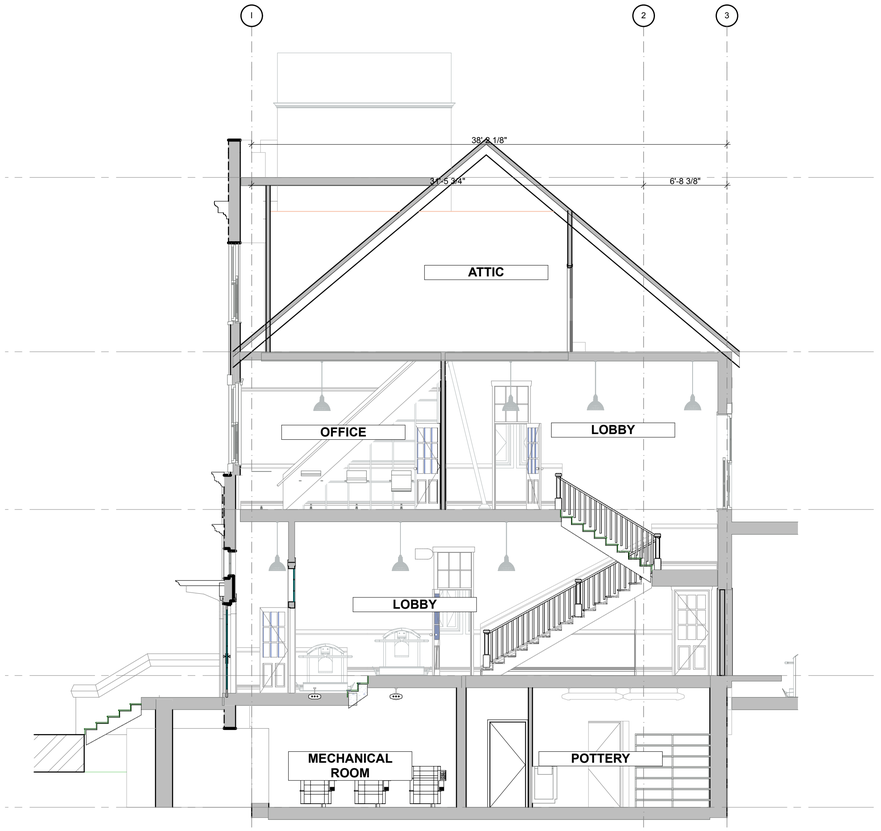

2 A500 BUILDING SECTION 2

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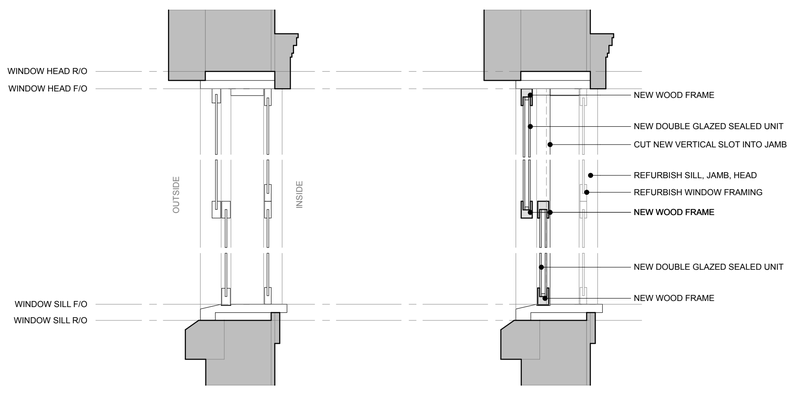

3 A500 PROPOSED WINDOW RECONSTRUCTION DETAIL

SCALE: 1:10

PROJECT

OLD BRICK SCHOOL RE-IMAGINE

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BUILDING SECTIONS

DRAWING NO.

A500

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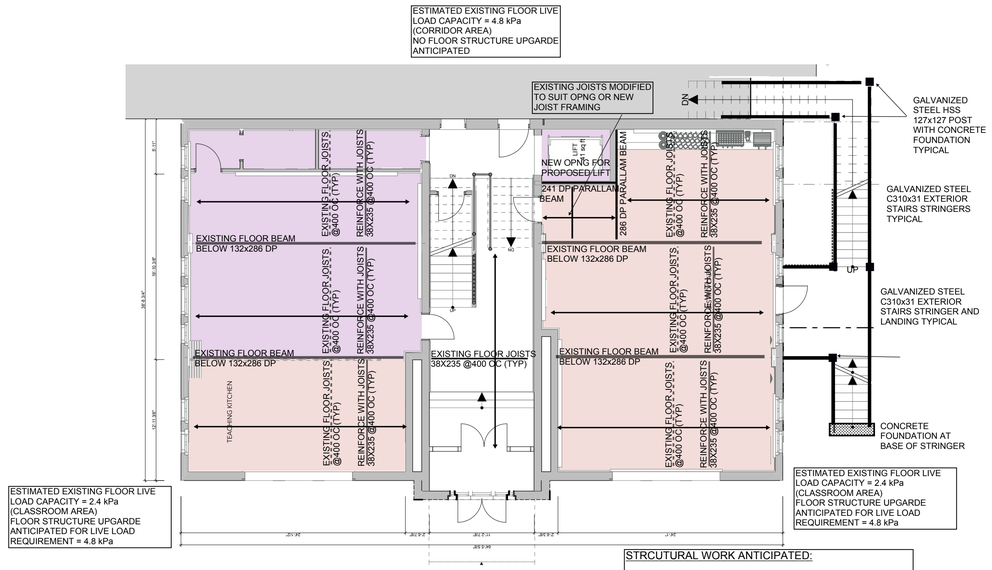
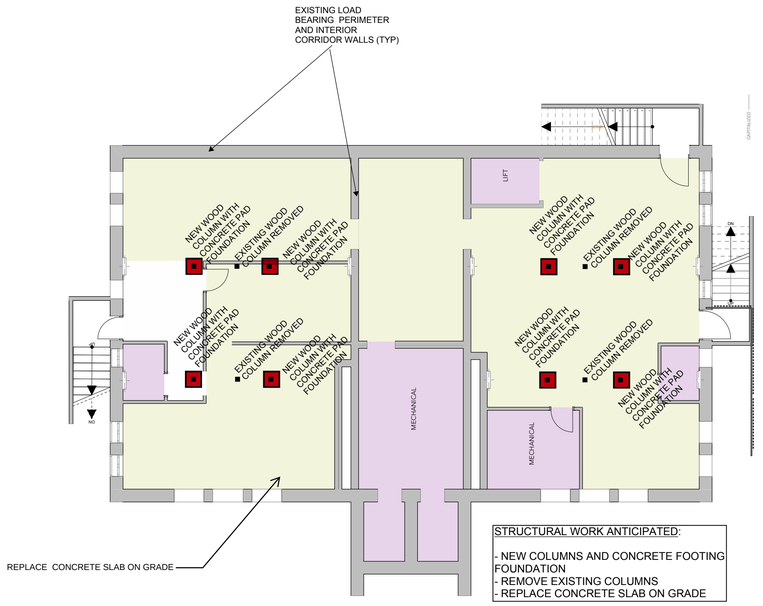
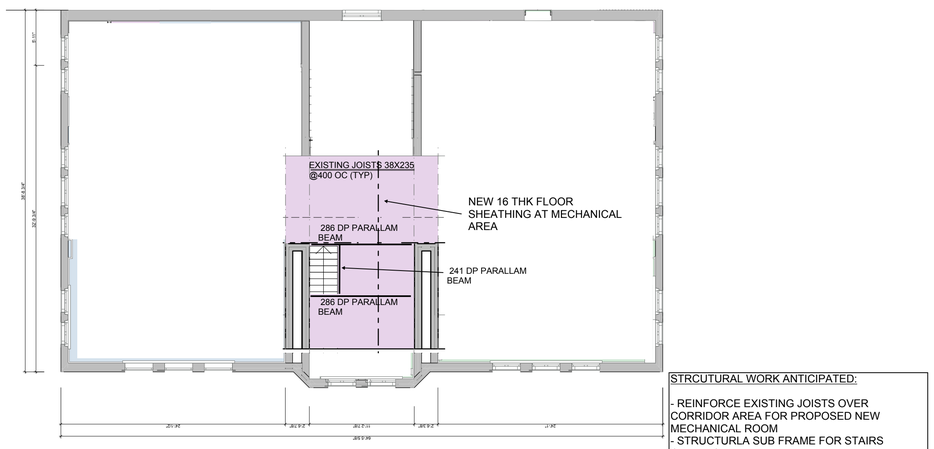
DRAWN BY	YY, ED, CVDZ
DESIGNED BY	VS, ED, CVDZ
CHECKED BY	GC



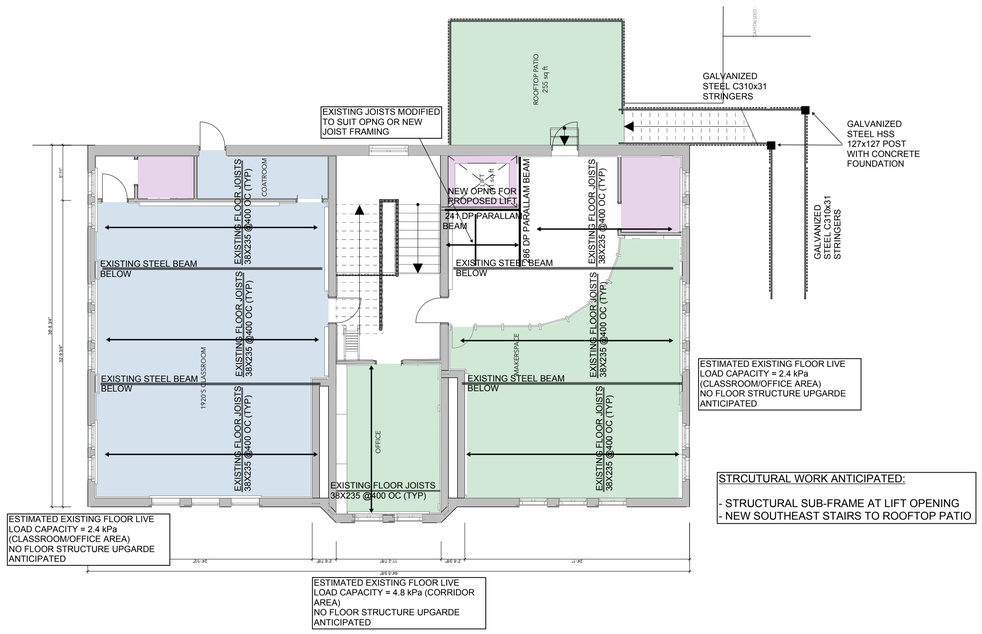
2 S100 MAIN FLOOR PLAN



1 S100 BASEMENT AND FOUNDATION PLAN



4 S100 ATTIC PLAN



3 S100 SECOND FLOOR PLAN

PROJECT

OLD BRICK SCHOOL

ATHABASCA, ALBERTA

PROJECT NO.

21-8490

CLIENT

ARCHITECT

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Engineers

RJC PROJ #:EDM.122561.0001

PERMITS AND SEALS

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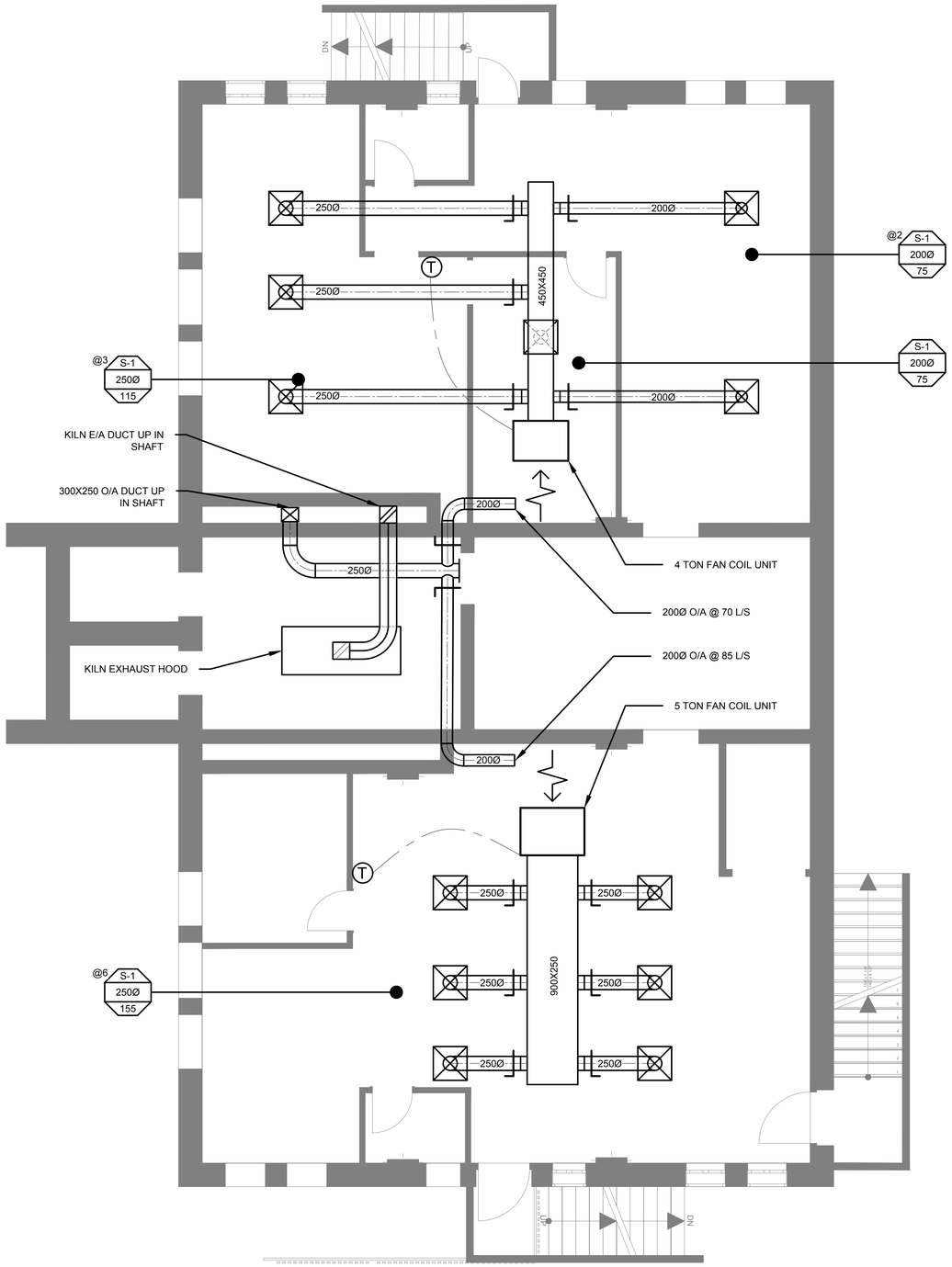
DRAWING TITLE

STRUCTURAL PLANS

DRAWING NO.

S100

DRAWING SCALE	as noted
DRAWN BY	GKL
DESIGNED BY	GKL
CHECKED BY	



N

1 / M101 BASEMENT - VENTILATION PLAN
1:50

GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO CONFIRM LOCATION AND ROUTING OF PIPING PRIOR TO START OF INSTALLATION.
2. CONTRACTOR TO PROVIDE COMPLETE INSTALLATION TO ALL MUNICIPAL, PROVINCIAL AND FEDERAL CODES AND REGULATIONS.
3. ALL DUCT INSTALLATIONS ARE TO BE IN ACCORDANCE WITH SMACNA.
4. COORDINATE WITH ALL OTHER TRADES AS REQUIRED FOR A COMPLETE INSTALLATION.
5. DUCT SIZE TO MATCH DIFFUSER NECK SIZE UNLESS OTHERWISE STATED.

PROJECT

OLD BRICK SCHOOL

ATHABASCA, ALBERTA

PROJECT NO.

19011.01

CLIENT

ATHABASCA COUNTY

Town of Athabasca

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PERMITS AND SEALS

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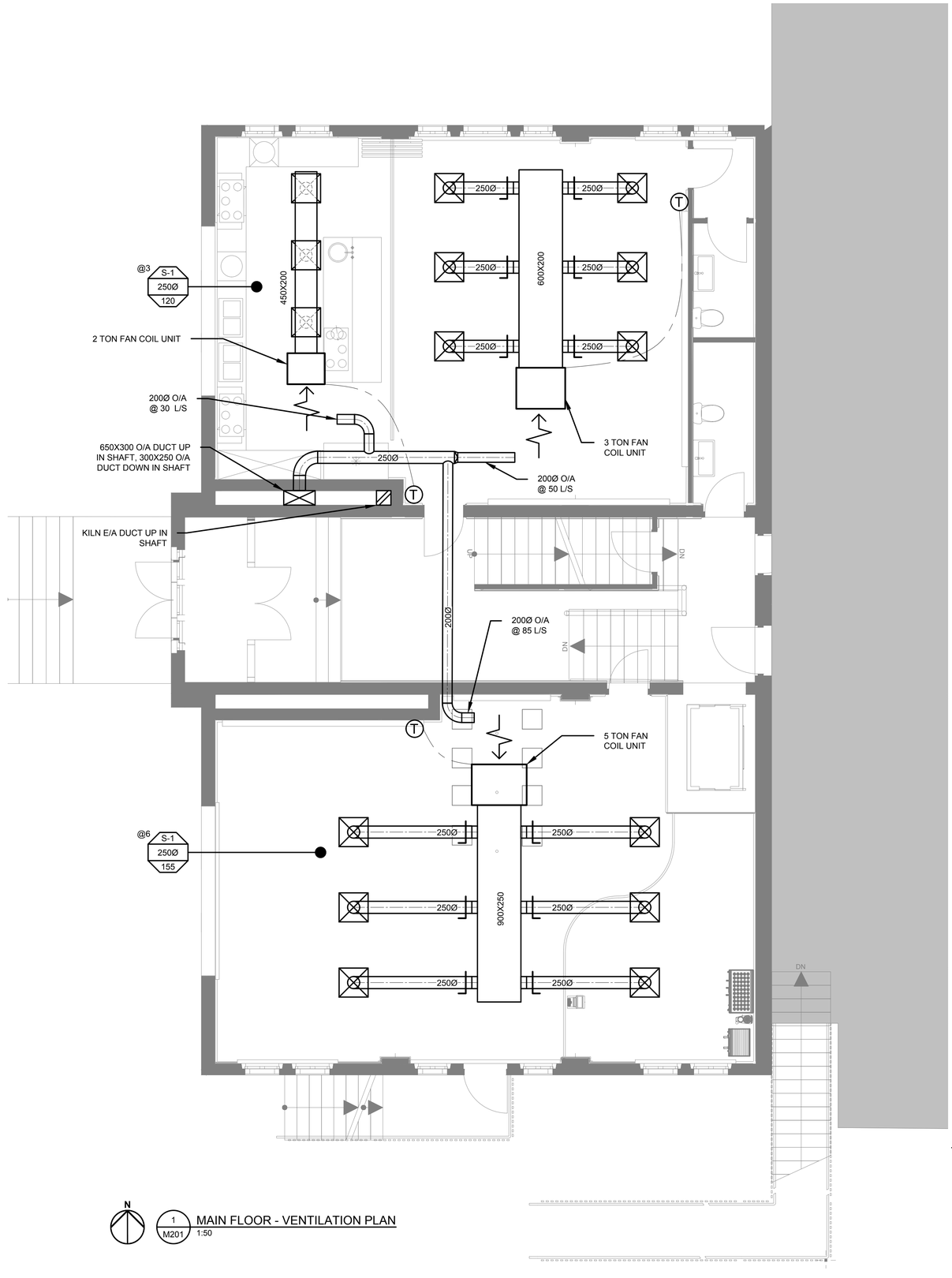
BASEMENT - VENTILATION PLAN

DRAWING NO.

M101

DRAWING SCALE	AS NOTED
DRAWN BY	DA
DESIGNED BY	AT
CHECKED BY	AT



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1 / M201 MAIN FLOOR - VENTILATION PLAN
1:50

GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO CONFIRM LOCATION AND ROUTING OF PIPING PRIOR TO START OF INSTALLATION.
2. CONTRACTOR TO PROVIDE COMPLETE INSTALLATION TO ALL MUNICIPAL, PROVINCIAL AND FEDERAL CODES AND REGULATIONS.
3. ALL DUCT INSTALLATIONS ARE TO BE IN ACCORDANCE WITH SMACNA.
4. COORDINATE WITH ALL OTHER TRADES AS REQUIRED FOR A COMPLETE INSTALLATION.
5. DUCT SIZE TO MATCH DIFFUSER NECK SIZE UNLESS OTHERWISE STATED.

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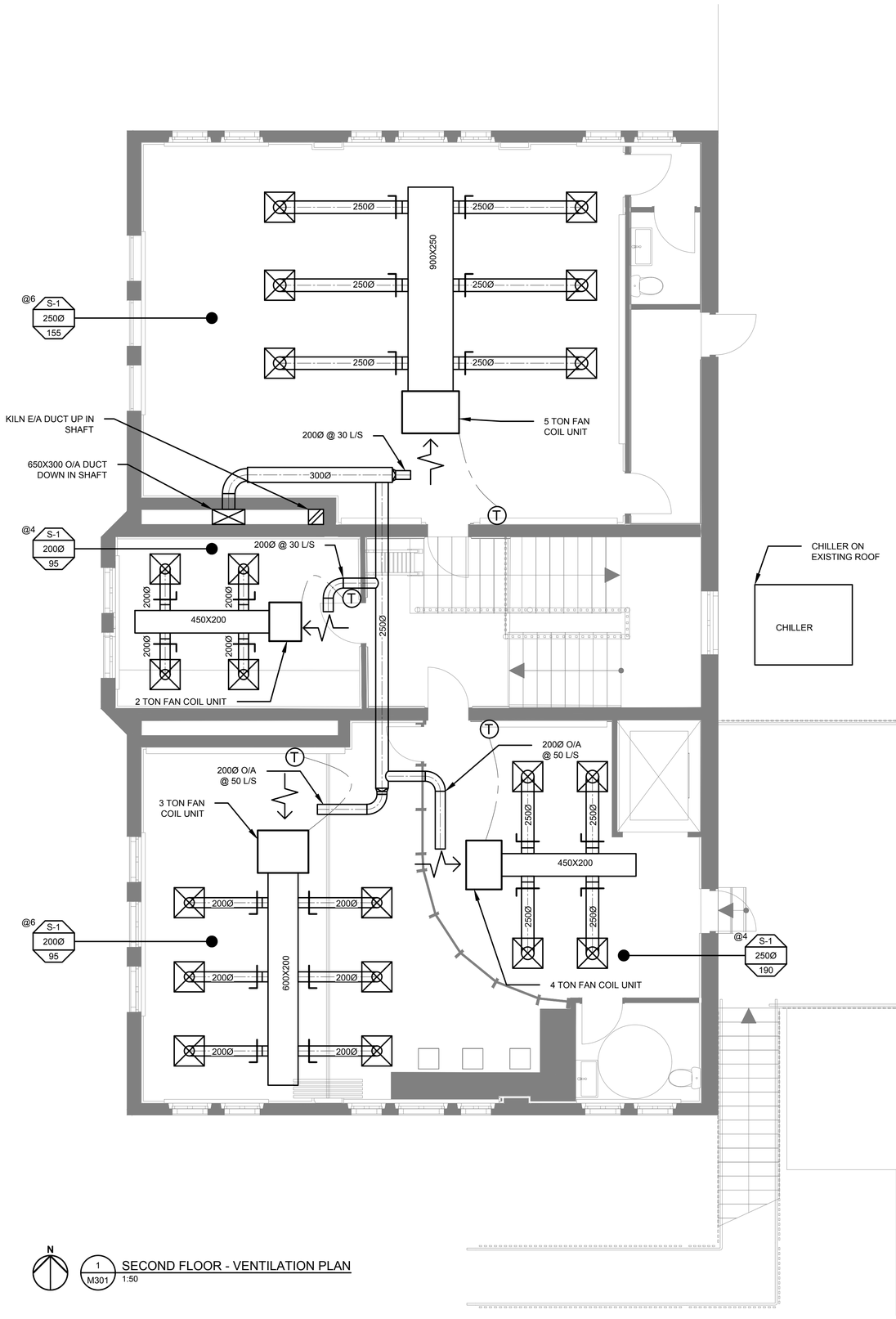
MAIN FLOOR - VENTILATION PLAN

DRAWING NO.

M201

DRAWING SCALE	AS NOTED
DRAWN BY	DA
DESIGNED BY	AT
CHECKED BY	AT



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1 / M301 SECOND FLOOR - VENTILATION PLAN
1:50

GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO CONFIRM LOCATION AND ROUTING OF PIPING PRIOR TO START OF INSTALLATION.
2. CONTRACTOR TO PROVIDE COMPLETE INSTALLATION TO ALL MUNICIPAL, PROVINCIAL AND FEDERAL CODES AND REGULATIONS.
3. ALL DUCT INSTALLATIONS ARE TO BE IN ACCORDANCE WITH SMACNA.
4. COORDINATE WITH ALL OTHER TRADES AS REQUIRED FOR A COMPLETE INSTALLATION.
5. DUCT SIZE TO MATCH DIFFUSER NECK SIZE UNLESS OTHERWISE STATED.

PROJECT

OLD BRICK SCHOOL

ATHABASCA, ALBERTA

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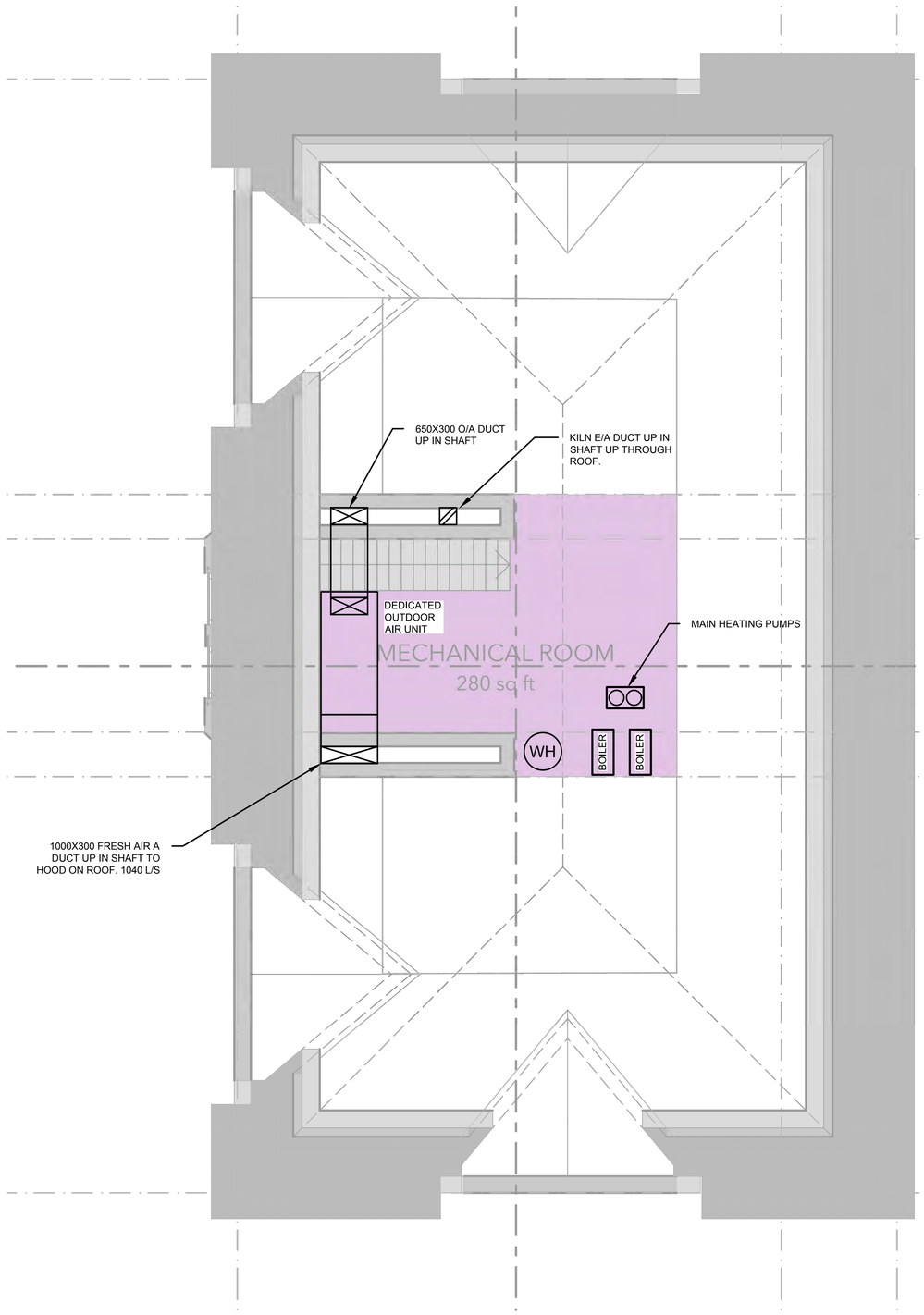
DRAWING TITLE

SECOND FLOOR - VENTILATION PLAN

DRAWING NO.

M301

DRAWING SCALE	AS NOTED
DRAWN BY	DA
DESIGNED BY	AT
CHECKED BY	AT



N

1 / M401 ATTIC - MECHANICAL PLAN
1:50

GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO CONFIRM LOCATION AND ROUTING OF PIPING PRIOR TO START OF INSTALLATION.
2. CONTRACTOR TO PROVIDE COMPLETE INSTALLATION TO ALL MUNICIPAL, PROVINCIAL AND FEDERAL CODES AND REGULATIONS.
3. ALL DUCT INSTALLATIONS ARE TO BE IN ACCORDANCE WITH SMACNA.
4. COORDINATE WITH ALL OTHER TRADES AS REQUIRED FOR A COMPLETE INSTALLATION.
5. ALL PLUMBING INSTALLATIONS TO BE IN ACCORDANCE WITH 2015 NATIONAL PLUMBING CODE.
6. AL NATURAL GAS INSTALLATIONS ARE TO BE IN ACCORDANCE WITH CSA B149.10 NATURAL GAS AND PROPANE CODE.

PROJECT

OLD BRICK SCHOOL

ATHABASCA, ALBERTA

PROJECT NO.

19011.01

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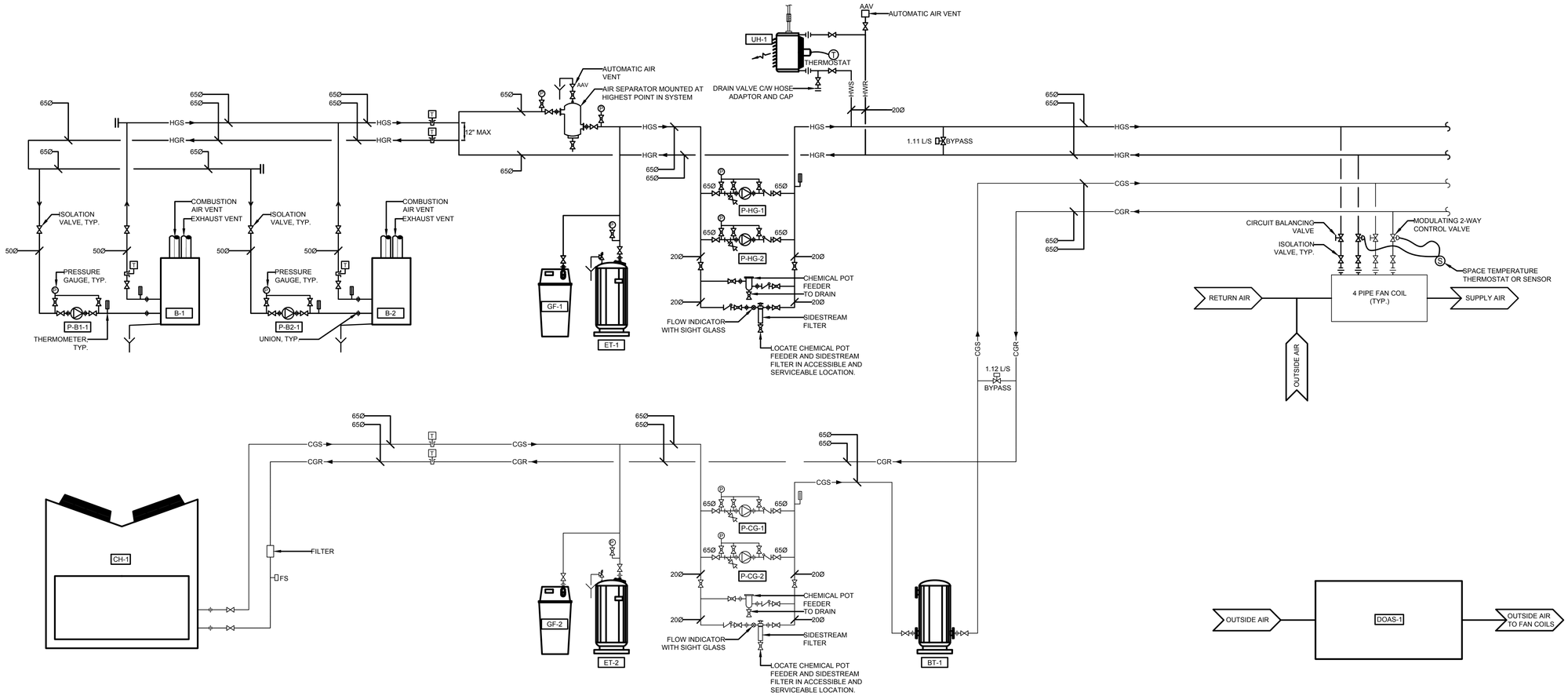
DRAWING TITLE

ATTIC - MECHANICAL PLAN

DRAWING NO.

M401

DRAWING SCALE	AS NOTED
DRAWN BY	DA
DESIGNED BY	AT
CHECKED BY	AT



1 M501 HEAITNG & COOLING SCHEMATIC
NTS

PROJECT

OLD BRICK SCHOOL

ATHABASCA, ALBERTA

PROJECT NO.

19011.01

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PERMITS AND SEALS

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DRAWING TITLE

HEATING & COOLING SCHEMATIC

DRAWING NO.

M501

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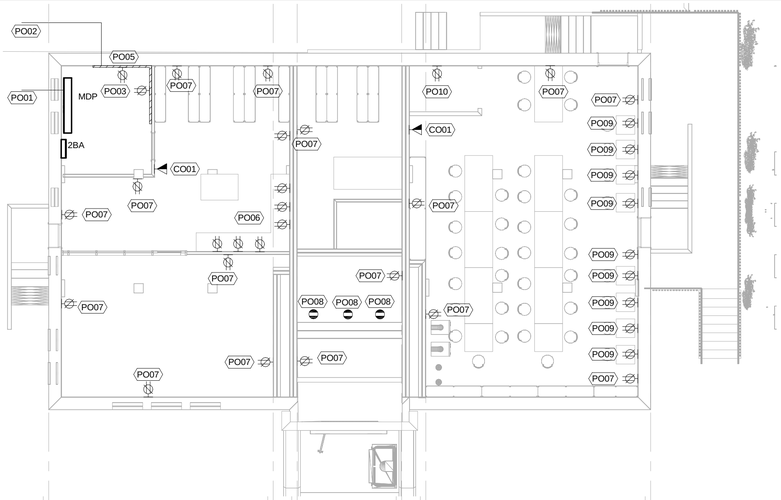
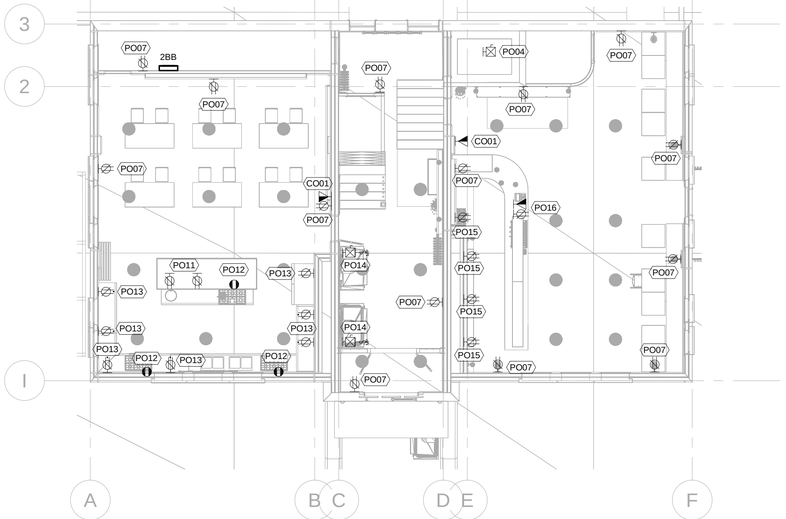
DRAWN BY	DA
DESIGNED BY	AT
CHECKED BY	AT



1 E100

Basement Power & Communication

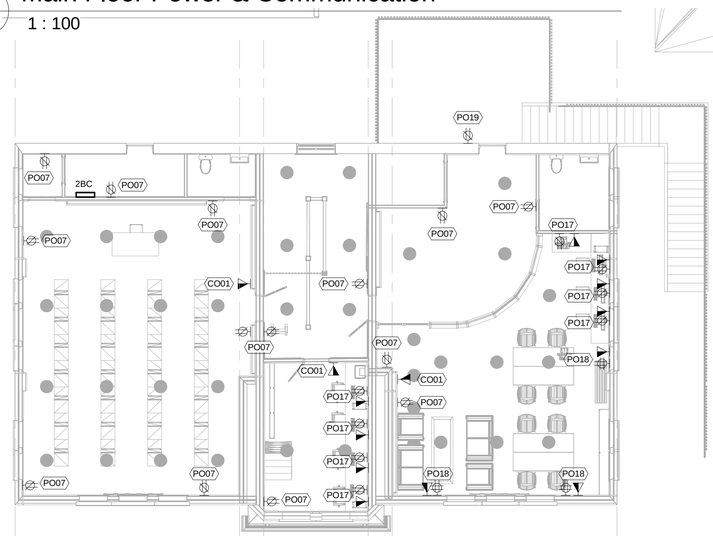
1 : 100



2 E100

Main Floor Power & Communication

1 : 100



3 E100

Second Floor Power & Communication

1 : 100

COMMUNICATION GENERAL NOTES:

1. JUNCTION BOXES CONTAINING COMMUNICATION WIRING SHALL NOT CONTAIN WIRING THAT IS NOT PART OF THE COMMUNICATION SYSTEM.

2. ALL COMMUNICATION CABLE TO BE CAT 6.

3. EACH LOW VOLTAGE SYSTEMS WITHIN THE BUILDING TO HAVE DIFFERENT COLOUR COMMUNICATION CABLING TO CLEARLY IDENTIFY SYSTEMS WITHIN THE COMMUNICATION ROOM.

4. ALL HORIZONTAL CABLING WILL NOT EXCEED 90m FROM PATCH PANEL TO OUTLET PORT.

5. CONTRACTOR IS TO PROVIDE AND INSTALL ALL EQUIPMENT SHOWN ON DRAWINGS AND REQUIRED FROM THE SPECIFICATION. ONLY EQUIPMENT SPECIFICALLY IDENTIFIED WITHIN THE DRAWINGS AND SPECIFICATION AS PROVIDED BY OWNER WILL NOT BE THE RESPONSABILITY OF THE CONTRACTOR.

6. ALL COMMUNICATION TERMINATION POINTS AT THE USER LOCATION ARE TO BE LABELLED, TERMINATED, PROVIDED WITH PROPER FACE PLATE, FEMALE CONNECTORS, AND TESTED. ALL CABLES TO PATCH PANELS ARE TO BE INSTALLED WITH CABLES TERMINATED, TESTED AND LABELLED. LABELLING AND TESTING ARE TO BE COMPLETED TO TIA/EIA-606-A STANDARDS.

POWER GENERAL NOTES:

1. PROVIDE ALL ELECTRICAL CONNECTIONS TO DEVICES REQUIRING POWER WITHIN MILLWORK.

2. REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL CONNECTIONS TO MECHANICAL EQUIPMENT.

3. ALL RECEPTACLE WITHIN 1.5m OF WATER SUPPLIES AND SERVICE RECEPTACLES INSTALLED IN OUTDOOR AREAS ARE TO BE PROTECTED WITH GFCI RECEPTACLES.

4. REFER TO ARCHITECTURAL DRAWINGS FOR ALL POWER LOCATED WITHIN AND AROUND MILLWORK PRIOR TO ROUGH-IN.

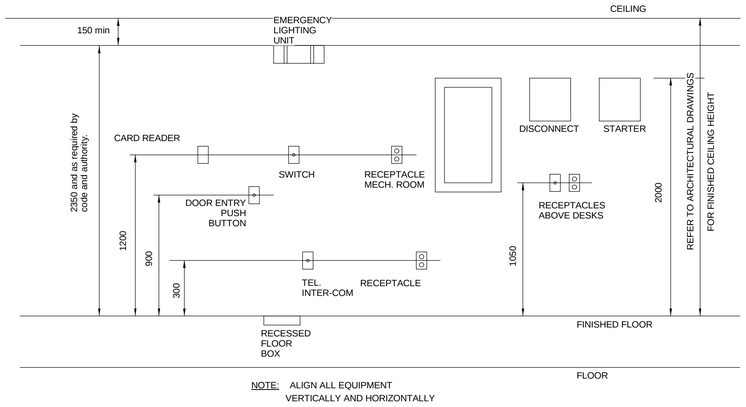
5. REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT LOCATIONS. CONFIRM BREAKER & CONDUCTOR REQUIREMENTS WITH EQUIPMENT NAME PLATES PRIOR TO INSTALLATION.

6. ALL PNLs AND DISTRIBUTION CENTERS ARE TO HAVE 20% SPARE CAPACITY.

7. MAXIMUM VOLTAGE DROP TO BE 3% FOR ANY BRANCH OR FEEDER. CONTRACTOR TO CONFIRM FEEDER SIZES FOR DEVICES AND EQUIPMENT PRIOR TO INSTALLATION.

Keynote Legend	
CO01	WAP connection point. Contractor to provide CAT6 to each location from patch panel. Junction box to be mounted at 2250aff. Supply and installation of the WAP device to be by the owner.
PO01	Secondary ductbank out to utility transformer located in the parking lot. Final transformer location must be coordinated with the utility.
PO02	Communication ductbank out to utility pole located in the parking lot. Coordination required with Telus for exact ductbank requirements.
PO03	Receptacles for communication equipment.
PO04	New lift power connection.
PO05	Contractor to provide 19mm plywood backboard on two walls within the electrical room. plywood to extend 2440mm from floor and be painted with two coats of fire resistant paint (refer to paint specifications).
PO06	Kitchenette receptacles for microwave, fridge and above counter appliances.
PO07	Convenience receptacles.
PO08	Kiln Power.
PO09	Receptacle for pottery wheel.
PO10	Elevator pit GFCI receptacle.
PO11	Receptacles for kitchen island.
PO12	Stove power connection.
PO13	Receptacle for kitchen appliance and above counter.
PO14	Power for wheelchair lift.
PO15	Receptacles above bar counter.
PO16	Power and data for cashier till.
PO17	Work station power and data.
PO18	Fourplex and data for seating area.
PO19	Weather proof receptacle.

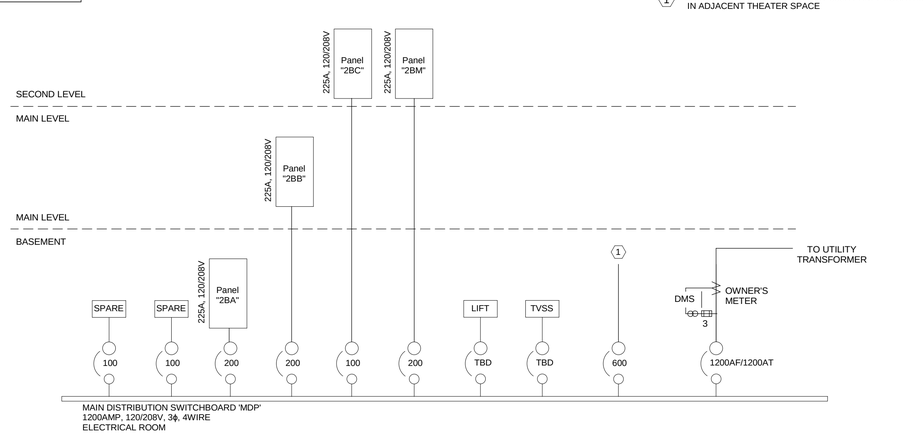
POWER		NOTES / ABBREVIATIONS	
	WALL JUNCTION BOX	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION (LOW VOLTAGE)
	DUPLEX RECEPTACLE MOUNTED +1050 AFF		WALL MOUNT DEVICE
	DUPLEX RECEPTACLE		FLOOR MOUNT DEVICE
	15/20 AMP T-SLOT RECEPTACLE		CEILING MOUNT DEVICE
	FOURPLEX RECEPTACLE	WG	WIRE GUARD
MP	MOTOR PROTECTION SWITCH	MP	MOTOR PROTECTION DEVICE
	DISCONNECT	MG	MAGNETIC PROTECTION DEVICE
		WP	WEATHERPROOF DEVICE
DATA		GF	GROUND FAULT PROTECTED DEVICE
	DATA (xD) (x @ CAT 6)		MOUNT DEVICE AT +1050 AFF
	1-COAX MOUNTED SAME AS ADJACENT RECEPTACLE		



4 E100

EQUIPMENT MOUNTING HEIGHT

NTS



5 E100

POWER SINGLE LINE120/208V,1200AMP

NTS

project

OLD BRICK SCHOOL

Athabasca, Alberta

project no.

218496

client

ATHABASCA COUNTY

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MANASC ISAAC CONSULTING

permits and seals

notes

drawing issued

no.	d/m/y	description
0	07/11/2019	ISSUED FOR DD

drawing title

POWER & COMMUNICATION SYSTEMS

drawing no.

E100

drawing scale	As indicated
drawn by	MM
designed by	MA
checked by	MA

1 / E101

Basement Lighting

1 : 100

LIGHTING DEVICES		LUMINAIRES		NOTES / ABBREVIATIONS	
V	LINE VOLTAGE VACANCY DIMMER SWITCH		STRIP LUMINAIRE	WP	WEATHERPROOF DEVICE
D	LINE VOLTAGE DIMMER SWITCH		CEILING SUSPENDED LUMINAIRE		WALL MOUNT DEVICE
T	4, 8, 12 HOUR TIMER SWITCH		RECESSED POT LUMINAIRE		CEILING MOUNT DEVICE
M	MOTION SENSOR		CEILING SUSPENDED PENDANT	WG	WIRE GUARD
D	DAYLIGHT SENSOR	EMERGENCY FIXTURES			
			EMERGENCY EXIT SIGN		
			EMERGENCY LIGHTING REMOTE HEAD		
			EMERGENCY LIGHTING REMOTE HEAD WITH BATTERY PACK		

Keynote Legend	
LG01	Provide lockable lexan cover for light dimmers and timer switches. Switches within enclosure are to have a timer providing the ability to have the lights on for 4,8,and 12hour time intervals. All switches are line voltage dimmers.
LG10	Dedicated light and switch for elevator pit.

Lighting Fixture Schedule

Type	Count	Description	Lamp
101	58	Suspended Large Round	LED
102	9	Suspended Cylinder	LED
103	32	Suspended	LED
104	6	Pot Light	LED
105	16	Suspended Cylinder	LED
107	22	Strip Light	LED
202	7	Wall Mounted Exterior	LED

LIGHTING GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF A FULLY FUNCTIONAL LIGHTING SYSTEM. THE ELECTRICAL DRAWINGS IDENTIFY INTENT OF SYSTEM AND ITS DEVICES.

2. EXIT SIGN MOUNTING HEIGHTS ARE TO BE COORDINATED ON SITE. EXIT SIGNS MUST BE VISIBLE WITHOUT OBSTRUCTION FROM SUSPENDED LIGHTING OR OTHER BUILDING SYSTEMS.

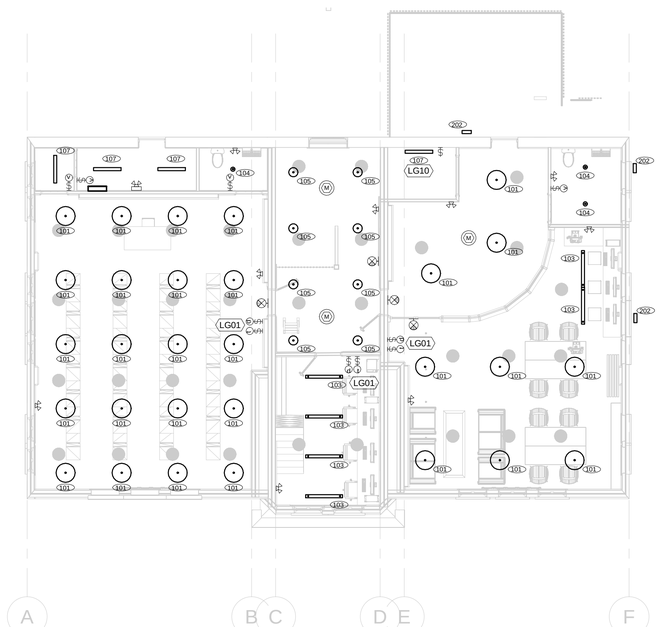
3. SUSPENDED LIGHTING FIXTURE MOUNTING HEIGHTS ARE INDICATED AS "+xxxx", WHERE xxxx IS THE HEIGHT ABOVE FINISHED FLOOR IN mm. WHERE HEIGHTS ARE NOT SHOWN THEY ARE TO BE COORDAITED OR SITE WITH THE ARCHITECTURAL AND ELECTRICAL DESIGN TEAM.

4. WHERE TWO 4 FOOT FIXTURES ARE SHOWN DIRECTLY ADJACENT TO EACH OTHER, AN 8 FOOT FIXTURE CAN BE ORDERED IN THEIR PLACE.

2 / E101

Main Floor Lighting

1 : 100



3 / E101

Second Floor Lighting

1 : 100

project

OLD BRICK SCHOOL

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project no.

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client

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drawing issued

no.	d/m/y	description
0	07/11/2019	ISSUED FOR DD

drawing title

LIGHTING SYSTEM

drawing no.

E101

drawing scale	As indicated
drawn by	MM
designed by	MA
checked by	MA