



PROVENCHER_ROY

DESIGN BRIEF - MIFO

MIFO Cultural Center Mouvement d'Implication Francophone d'Orléans

> 6600, rue Carrière, Orléans ON, K1C 1J4

> > 30-09-2022





SECTION 01 - COMPLIANCE TO OFFICIAL PLAN AND CONTEXT 01

UI	APPLICAT
	1.1 APPLIC
	1.2 VISION
02	RESPONS
	2.1 OFFICIA
	2.2 OFFICIA
03	CONTEXT
	3.1 EXISTIN

SECTION 02 - DESIGN PROPOSAL

01	MASSING AND SC
	1.1 BUILDING MAS
	1.2 BUILDING MAS
	1.3 BUILDING ELEV
	1.4 PROJECT PERS 1.5 PROJECT PERS
	1.6 PROJECT PERS
	1.7 PROJECT PERS
02	PUBLIC REALM
	2.1 RELATIONSHIP
	2.2 RELATIONSHIP
03	BUILDING DESIGI
	3.1 BUILDING ELEV
	3.2 BUILDING ELEV
	3.3 BUILDING ELEV
	3.4 BUILDING ELEV
	3.4.1 BUILDING ELI 3.4.2 BUILDING ELI
	3.5 BUILDING PLAN
	3.6 BUILDING PLAN
	3.7 BUILDING PLAN
	3.8 BUILDING PLAN
	3.9 AERIAL PERSPE
	3.10 MATERIALITY
04	SUSTAINABILITY
	4.1 SUSTAINABLE I

TABLE OF CONTENTS

APPLICATION SUBMISSION

CATION DATAS AND GOALS OF THE PROPOSAL

SE TO CITY DOCUMENTS

IAL PLAN - SECTION 2.5.1 IAL PLAN - SECTION 4.11

PLAN

NG NEIGHBORHOOD CONTEXTUAL ANALYSIS 3.2 EXISTING SITE - PHOTOGRAPHS

SCALE

ASSING - AXONOMETRIC VIEW IN CONTEXT ASSING - RELATIONSHIP BETWEEN THE BUILDING AND THE SITE EVATIONS RSPECTIVE - MAIN ENTRANCE RSPECTIVE - SECONDARY ENTRANCE AND MAIN HALL RSPECTIVE - PARKING AREA AND GYMNASIUM RSPECTIVE - GARDEN AREA

IP TO THE PUBLIC REALM - PLAN IP TO THE PUBLIC REALM - AERIAL PERSPECTIVE

GN

EVATION - WEST EVATION - NORTH EVATION - EAST EVATION - SOUTH LEVATION - GARDEN EAST LEVATION - GARDEN WEST AN - GROUND FLOOR AN - LEVEL 2 AN - LEVEL 3 AN - ROOF PECTIVE - MATERIALITY AND INTEGRATION TO SITE AND FACADE SYSTEMS

Y

E FEATURES OF THE PROPOSAL

SECTION 01 - COMPLIANCE TO OFFICIAL PLAN AND CONTEXT

01. APPLICATION SUBMISSION

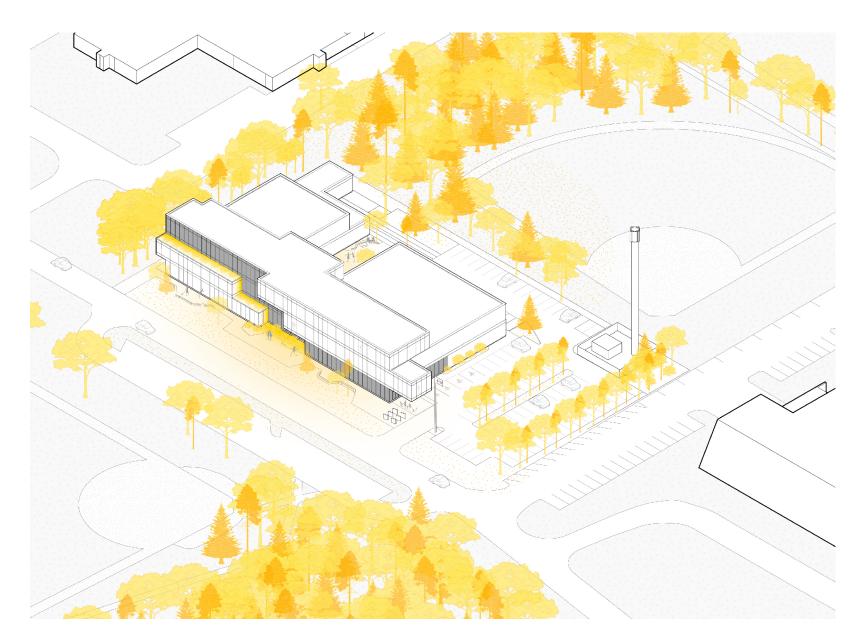
1.1 APPLICATION DATAS

Type of application : Site Plan Control

Legal description : RC PLAN 906 PT LOT 38 RP; 5R-8061 PARTS 1 & 2

Municipal address : 6600 Carrière St, Ottawa, ON K1C 1J4

Purpose of the application : Building permit



1.2 VISION AND GOALS OF THE PROPOSAL

Portrait of the organisation :

MIFO - Mouvement d'Implication Francophone d'Orléans - is a multidisciplinary cultural center that has been offering various services in French in the artistic, cultural and community fields since 1979. Their mission is to promote francophone culture and contribute to its development by offering educational, artistic and community activities and services to the population of Orléans and its surroundings. The community organization currently occupies a 1500m² building built in 1985. Due to the growth of MIFO in recent years, the current cultural center no longer meets the demands and needs of the francophone community of Orléans. This is why MIFO is undertaking the construction of a new building that can meet current and future needs while ensuring the sustainability of the organization.

Overall vision of the proposal :

For over 37 years MIFO has occupied an efficient, introverted, shy building that met the need of the time. Now the organization has grown in experience and maturity, it is stronger, more open and demands elegance. Its architecture must be extroverted, bold, and, while continuing to respond to current needs, must exude a strength linked to its convictions. The new MIFO building must be at one with its site, in terms of spatial composition, aesthetics and landscape. It is not a separate building, but one that is open to the neighborhood and accessible to the greatest number. Its attractiveness must allow it to welcome any public without exception, but also to have the capacity to «retain» its users and to enlarge its clientele.

Goals of the proposal :

- Build, occupy and operate a new centre that fosters the vitality of the MIFO and its community, that ensure an active presence in the community and provide Francophone teens with an opportunity to use their imaginations, create and bring life to the community.

- To create a sustainable and eco-responsible building that aims to reduce its carbon footprint by obtaining the Zero Carbon Building - Design V3 certification.

- To respectfully insert the building into its natural and built environment through its spatial composition, aesthetics and location, while ensuring landscape continuity within the neighborhood.

- To offer a wider range of cultural, sports and artistic activities to the francophone community of Orléans within the same building.

- To create a building that is attractive, neighbourhood-oriented and a catalyst for the Francophile community of Orléans to meet.

02. RESPONSE TO CITY DOCUMENTS

2.1 OFFICAL PLAN - SECTION 2.5.1

DESIGN OBJECTIVES (P.2-48):

1. To enhance the sense of community by creating and maintaining places with their own distinct identity.

The concept of the new MIFO offers the Franco-Ontarian community an open, inviting and extravagant building with a bold stepped massing, a transparent street façade and a design that respects the Orleans context.

2. To define quality public and private spaces through development.

The building's setback from Carrière Street creates an inviting public space in front of the main glazed façade and creates a transition between the exterior and interior, as well as a protected garden in the rear courtyard.

3. To create places that are safe, accessible and are easy to get to, and move through.

Facilities around the site are designed to provide safe pedestrian and cyclist access to the building by providing a drop-off area upon entering the parking lot, bike racks near the entrance and a protected courtyard.

4. To ensure that new development respects the character of existing areas.

The project respects the landscape and built context through its form and landscaping. The stepped massing allows for the integration of vegetation into the building and ensures landscape continuity between the two wooded areas located to the north and south of the site. The 3-storey building is in continuity with the neighbouring school by its characteristic volumetry and height.

5. To consider adaptability and diversity by creating places that can adapt and evolve easily over time and that are characterized by variety and choice.

The program of the new MIFO includes a varied and inclusive service offering. The building can accommodate all types of sports, cultural and artistic activities for all age groups and meets universal accessibility standards. Functions such as multi-purpose rooms, a gymnasium, a studio and a main hall can accommodate many types of activities.

6. To understand and respect natural processes and features in development design.

The design of the site and the building takes into account the management of rainwater on the site by integrating a rain garden in the parking lot. As for the building itself, the integration of vegetated roofs allows the retention of rainwater and the reduction of heat islands. The use of white reflective roofs also contributes to reduce overheating on the site.

7. To maximize energy-efficiency and promote sustainable design to reduce the resource consumption, energy use, and carbon footprint of the built environment.

The new MIFO aims to be a green and inclusive community building. In this sense, it aims to meet the requirements of the Zero Carbon Building - Design v3 (BCZ-Design) standard. The building is strictly electrically powered, with photovoltaic panels integrated into the façade and a geothermal heating/cooling system.











02. RESPONSE TO CITY DOCUMENTS

2.2 OFFICAL PLAN - SECTION 4.11

BUILDING DESIGN POLICIES :

5 (P.4-53). Compatibility of new buildings with their surroundings (height, setback, transition, materials, windows, etc.)

The form of the building ensures a transition in height with the large green spaces surrounding the site as well as with the schools on either side of the site (maximum 3 floors). The materials and the bold volumetry are in continuity with the architecture of the Garneau Catholic High School, which stands out in the neighbourhood. The main glass façade allows the MIFO to open up to the neighbourhood, while reflecting its immediate natural environment.

6 (P.4-53). Building façades and entrances design.

The main façade of the building is oriented towards and parallel to Carrière Street. This façade is mostly glazed to expose the interior activities and its architectural elements (architectural staircase in the main entrance). The entrance is marked by a cantilevered volume that acts as a signal from the public space.

8 (P.4-53). Servicing, loading dock and mechanical equipments location and design in relation with the public realm.

In order to maintain a safe pedestrian environment, a first drop-off is provided directly in front of the building entrance to reduce the number of pedestrians inside the parking lot. A second drop-off, dedicated to deliveries, is concealed and integrated into the massing at the rear of the building. Most of the utilities and mechanical services are integrated into the interior of the building, or concealed in the backyard. Where they are exterior, visual screens conceal them. Sidewalks around the building allow for safe circulation around the building.

9 (P.4-53). Roof-top mechanical equipment, signage, and amenity spaces.

Most of the mechanical equipment is integrated into the interior of the building. One piece of equipment is located on the lowest roof at the rear of the building near the delivery dock and is integrated into the design with visual screens. Signage is integrated into the building design using the same colors.

MASSING AND SCALE POLICIES :

10 (P.4-54). Massing, scale and neighbourhood building typology.

The project respects the landscape and built context through its dynamic form and landscaping that integrates the natural features of the area. The 3-storey building is in continuity with the neighbouring school by its characteristic volumetry, its height and its setback from the street.

12 & 13 (P.4-54). Building height and massing transitions.

The form of the building provides a transition in height to the large green spaces surrounding the site and to the schools on either side of the site (maximum 3 stories) by adopting a stepped massing. The height of the building gradually decreases from 3 stories to the unbuilt green spaces.

PUBLIC ART POLICIES :

21 (P.4-55). Integration of public art.

The integration of public art on the site is achieved through the presence of the Franco-Ontarian flag which will be relocated on the site as well as the commemorative steles (memorial plaques) which will be reintegrated into the front of the site. These elements represent MIFO's pride in the French language and serve as a commemorative space for the history and founders of MIFO.







3.1 EXISTING NEIGHBORHOOD CONTEXTUAL ANALYSIS



210462 - MIFO | DESIGN BRIEF | 30-09-2022

The project site contains the existing MIFO building which will be demolished. The site is located in an institutional neighborhood that is surrounded by single-family residential neighborhoods. Several pedestrian connections to and from these neighborhoods are provided by the parks located to the north and south of the site. These parks also connect to the schools located to the east and west of MIFO. Bicycle access to the site is also provided through these pedestrian accesses as well as through Carrière Street. The site is accessible by public transit from the two boulevards located at the end of Carrière Street (Belcourt and Orleans Boulevards). Garneau Catholic High School, located to the west of the site, distinguishes the area with its bold architecture. Finally, the site offers views to and from the surrounding green parks and has a relatively flat topography.

LEGEND :

- TRANSPORT NETWORK PEDESTRIANS
- TRANSPORT NETWORK CYCLISTS
- TRANSPORT NETWORK CARS
- → PEDESTRIAN WALKPATH FROM BUS STATION
 - 1 BUS TRANSIT STATION
 - ARTERIAL BOULEVARD
 - RESIDENTIAL USE
 - INTITUTIONAL USE
- PUBLIC USE
- PARKS
 - GREENFIELDS

0 5 10 20

- َ َ َ َ َ َ َ َ َ َ WOODLANDS
- LOT LINES
 - VIEWS TOWARD OPEN GREENFIELDS

7

03. CONTEXT PLAN

3.2 EXISTING SITE - PHOTOGRAPHS (\checkmark)





0 - Overall view of the site and surroundings



2 - Carriere St. - Site arrival (West)



4 - View of Carriere Park from Carriere St.



6 - Carriere St. - West side view



7 - View from site towards Garneau Park



8 - View of the site from the parking lot of Garneau High School



9 - View of the site from the parking lot of Saint-Joseph d'Orléans primary school



1 - Carriere St. - East side view



3 - Site view from the parking lot of Carriere Park



5 - Carriere St. - Site arrival (East)



10 - View of the site from Leblanc Dr.

SECTION 02 - DESIGN PROPOSAL

1.1 BUILDING MASSING - AXONOMETRIC VIEW IN CONTEXT



The new MIFO building is at one with its site, in terms of spatial composition and landscape.

It is not a separate building, but one that is open to the neighborhood and accessible to the greatest number. Its attractiveness must allow it to welcome any public without exception, but also to be able to «retain» its users and expand its clientele.

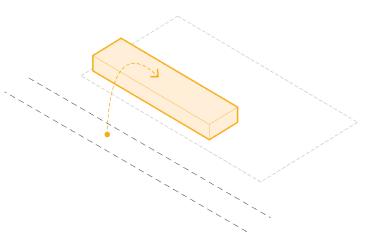
For these reasons, the composition was quickly oriented towards a large active facade on Carriere street and a generous accessible garden to the south.

The stepped volumetry energizes the main facade and marks the breakthrough in the building towards the garden that it delimits in its center. It also ensures the landscape continuity of the site by allowing the vegetation to climb up the building.

This stepped volumetry is also applied to the south facing part of the building allowing a smooth transition towards the green fields. As the building goes from 3 storeys to one, it fades away to make way for the vegetated landscape.

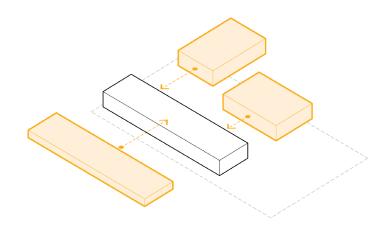
Thus, the building fits respectfully into its environment by its scale, its volumetry and its integration of the vegetation.

1.2 BUILDING MASSING - RELATIONSHIP BETWEEN THE BUILDING AND THE SITE



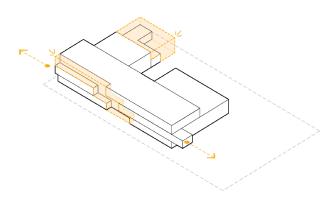
1. Transfer the street to the site to create a «showcase».

The general concept is to provide MIFO with a window on the street in order to externalize and expose their activities to the general public.



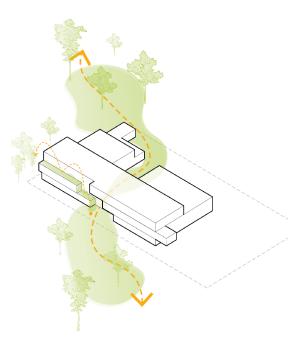
2. Grafting functions to the building's circulation

To this «showcase», which constitutes the main circulation of the building, are grafted the main functional blocks.



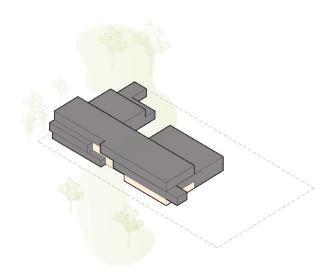
4. Shifting volumes : expression of the «staircase» in the front facade

In the front facade, the blocks slide on either side to open up the volume at its center and establish a connection with the backyard.



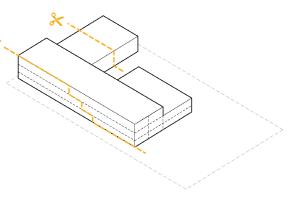
5. Ensure landscape continuity

The site and the building establish the connection between the two wooden areas on either side of Carrière Street. Thus, the «staircase» and the openings in the facade ensure the vegetal transition.



6. Materiality and openings : expression of the masses and the «showcase» area

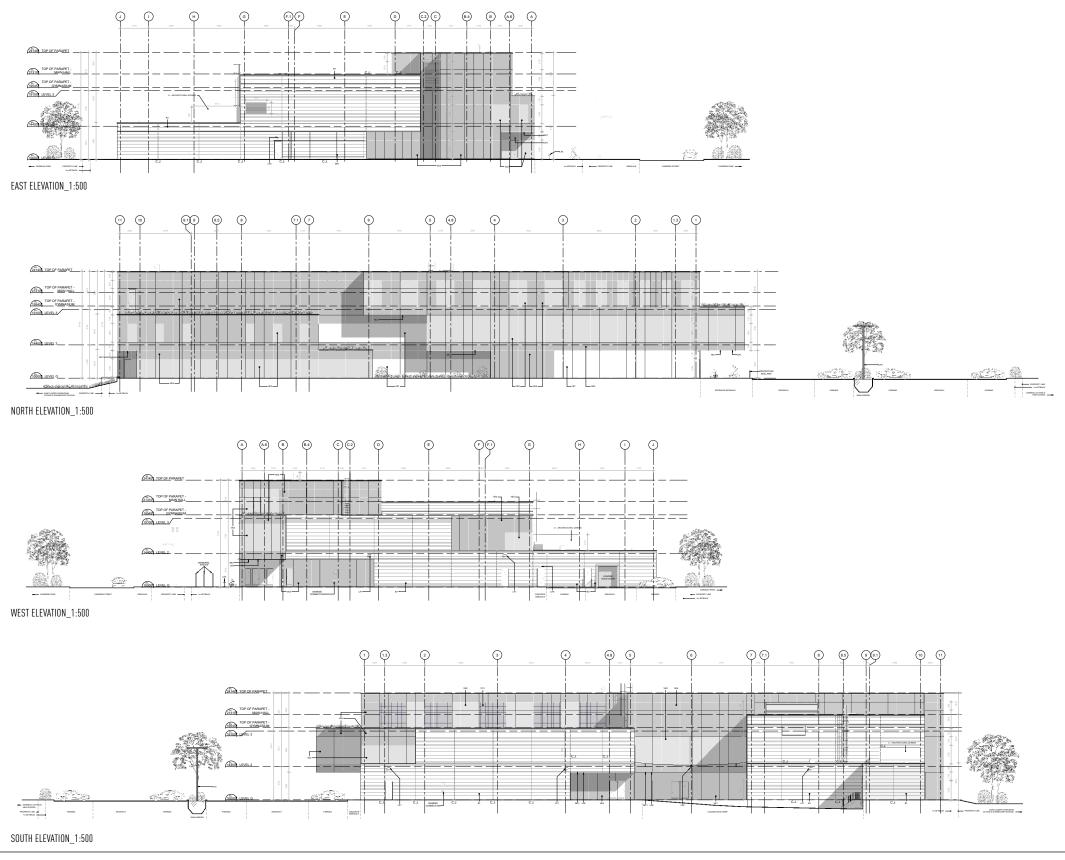
The treatment of materials and openings in large sections allows the expression of the transparent «showcase» and the masses that slide over one another, while allowing the greeneries to shine by contrast with the darker materials.



3. Cutting out the volumes/masses

In order to establish connections with the site, the masses are cut out on the main facade and back of the building

1.3 BUILDING ELEVATIONS





The MIFO site is part of a 3-storey institutional building framework surrounded by residential buildings of up to 2 storeys and green spaces.

Thus, the building fits respectfully into the built and landscape framework by offering a 3-storey height like the Garneau high school and by reducing this height using a stepped volumetry. The building joins the landscape scale by its cut-out form which allows the integration of green roofs.

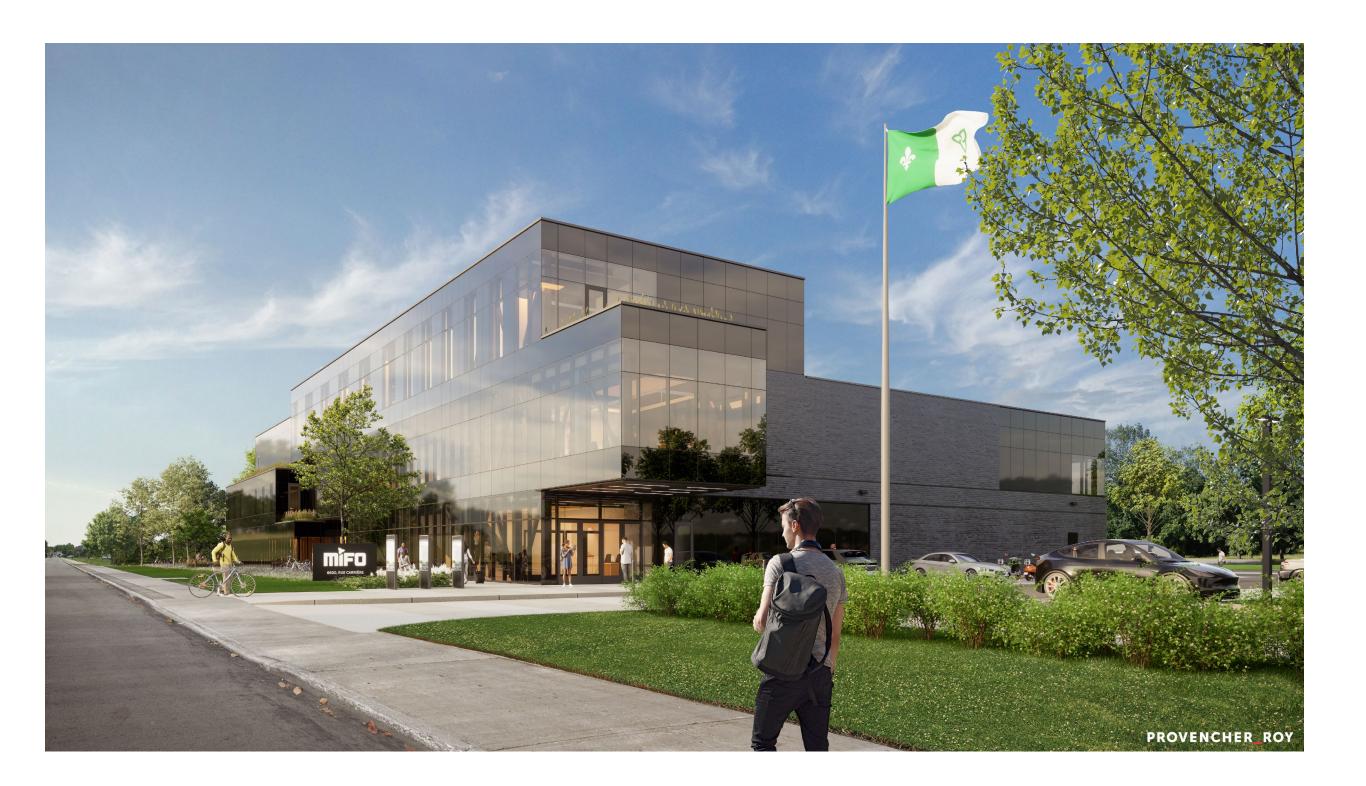
The rear yard benefits from a pleasant sunny aspect due to its southern orientation and the elevation of the building which is limited to two floors on its eastern and western limits.

The building's setback from the street provides a safe buffer between automobile traffic and users inside the building

LEGEND :

- B1 BRICK CLADDING
- VE1 CLEAR TRIPLE GLAZING
- VE2 SMOKED TRIPLE GLAZING
- VE3 OPAQUE BLACK TRIPLE GLAZING
- VE4 BLACK SPANDREL MONOLITHIC GLASS
- PV1 BUILDING INTEGRATED PHOTOVOLTAICS
 - SR1 STEEL ROPES + VINES
 - MC1 METAL CLADDING

1.4 PROJECT PERSPECTIVE - MAIN ENTRANCE



The entrance is marked by an overhang and constitutes the head of the building as a «signal» on the public space, under which a generous forecourt affirms the presence of the pedestrian (drop-off). Vehicles enter briefly in front of the building to go to the parking lot. A multi-purpose room with windows onto the city, occupying the cantilevered space on the second floor, energizes and protects the entrance, inviting the user to stroll through the interior «street» of MIFO.

Black is the color considered to be powerful and strong, and can therefore convey an idea of tenacity, boldness, but also elegance. For more than 37 years MIFO has occupied an efficient, introverted, shy building that met the need of the time. Now the organization has grown in experience, maturity, strength, openness and elegance. Its architecture must be extroverted, daring, which, while continuing to respond to current needs, exudes a strength linked to its convictions.

1.5 PROJECT PERSPECTIVE - SECONDARY ENTRANCE AND MAIN HALL



The main façade on the street is an active service facade. The arrangements of volumes in levels clinging to each other provide transparency and views on the staggered planted spaces. The recesses allow to multiply the opportunities of exchanges on the thresholds of the stairs for example and a new perception of the building at each crossing. The movements constitute soft limits between the interior and the exterior, transitions towards the great landscape.

1.6 PROJECT PERSPECTIVE - PARKING AREA AND GYMNASIUM



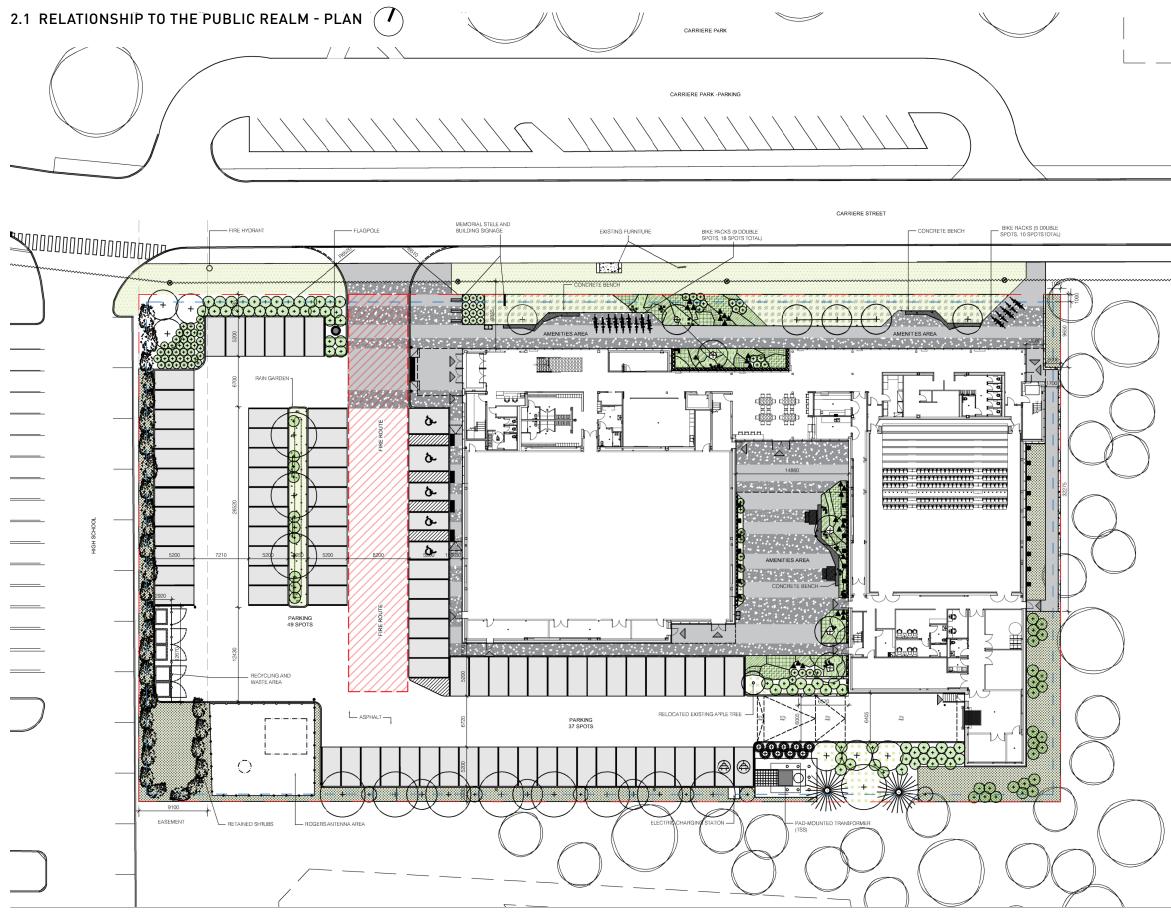
An arrangement of extrusions, recesses and large openings build a rich and dynamic volume. The contrast between the smooth and rough materials allows for the expression of the concept of functions «connected» to the interior street («showcase»), while maintaining continuity in the treatment of the openings in large sections.

1.7 PROJECT PERSPECTIVE - GARDEN AREA



Key element of the project, the garden enclosure provides the MIFO community with a protected and friendly space. Connected directly to the interior functions, it acts as an extension of the program into which the activities of the gym, foyer, studio and café can extend to take advantage of the outdoor space.

02. PUBLIC REALM



LÉGENDE / LEGEND

LEGENDE	LEGEND
	LOT LINE
	SETBACK (1m)
	FIRE ROUTE
+++++++++++++++++++++++++++++++++++++++	PERRENIALS MIX Echinacea purpera Deschampsia cespisota
A	Sporobulus heterolepis
•	Carex appalachica
	Tiarella cordifolia
	Trillium grandiflorum
	Cornus Canadensis
	Verbena stricta
	Penstemon hirsutuss
	Symphyotrichum cordiiolium
•	Climbing plant
	GRASS
· · · ·	MIX OF PERENNIALS AND SHRUBS
	MIX SOD
11 11 11 11	SEEDING
11 <u>1</u> 1 <u>1</u> 1	
	RAIN GARDEN EXPOSED AGGREGATE PORED CONCRETE
542 B	CAST CONCRETE
	REUSED CONCRETE CLADDING
	STONE SCREENING
	PARKING TERMOPLASTIC MATERIAL
	DETECTABLE WARNNG PLATES
	PRECAST CONCRETE RETAINING WALL
NO ISOMONO	CONCRETE BENCH
	PICNIC TABLE
0	FLAG POLE
•	PROTECTION BOLLARD
—	MEMORIAL PLAQUE
~~~&~~~	EXISTING ELECTRIC POLE
60	
	LIGHTING BOLLARD WASTE AND RECYCLING
	FENCE/SCREEN WASTE AND RECYCLING AREA
<b>ŧ</b> ŧŧŧŧ	BIKE RACK (14X2)
$( \cdot )$	EXISTING TREES
	EXISTING SHRUBS
+++	DECIDUOUS TREES
	EVERGREEN TREES
$\odot$	SHRUBS

# 02. PUBLIC REALM

2.2 RELATIONSHIP TO THE PUBLIC REALM - AERIAL PERSPECTIVE



Following the city's requirements (section 4.11), the objectives of the MIFO's functional program as well as the architectural concept, the main façade is oriented towards the north, towards Carrière Street. Although this orientation implies that a major part of the openings are to the north, it responds to the constraints of the development of the site, to the requirements in terms of views on the surrounding green spaces (biophilic relationship), to the visibility of the interior activities from the public road, to the demands of indirect solar gain as well as to the image of openness and transparency that the MIFO community wishes to project.

The building program also motivated this choice. Indeed, the large opaque volumes formed by the gymnasium, the auditorium and the backstage area as well as the loading dock offer blind facades that are less suitable for dialogue with the public realm and for the visibility of the interior activities. This is why these volumes are found at the rear of the site and are used to create a protected garden oriented to the south.

Finally, the materials used contribute to activate the public realm, to dialogue with the neighborhood and to integrate the building into the landscape. The materiality of transparent, smoked and black glass on the main volume exposes the interior activities to the public space and allows to reflect the landscape and the animation of the park that faces the site.

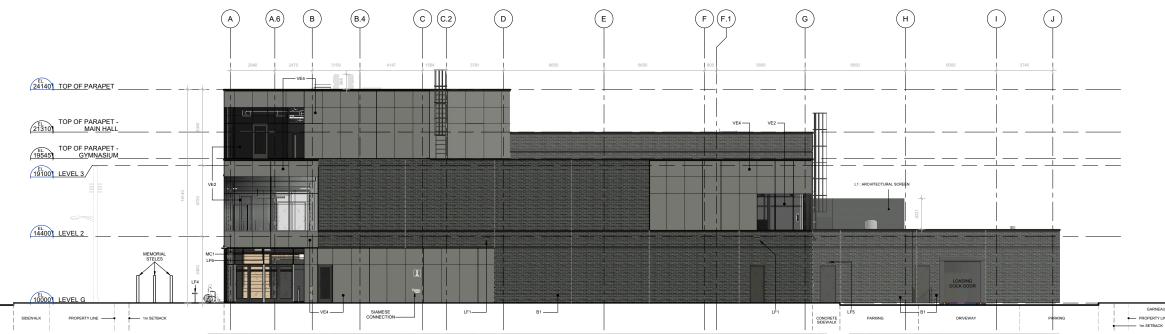
The first floor is organized along a large «street» allowing multiple modes of access to the different functions. A large central visual breakthrough opens views to the garden to the south offering a landscape continuity between the wooded area of Carrière Park and the Garneau Parks' one.

On the main façade, the interior circulation is related to the exterior walkway along the building. This promenade provides amenity areas and waiting areas to the public.

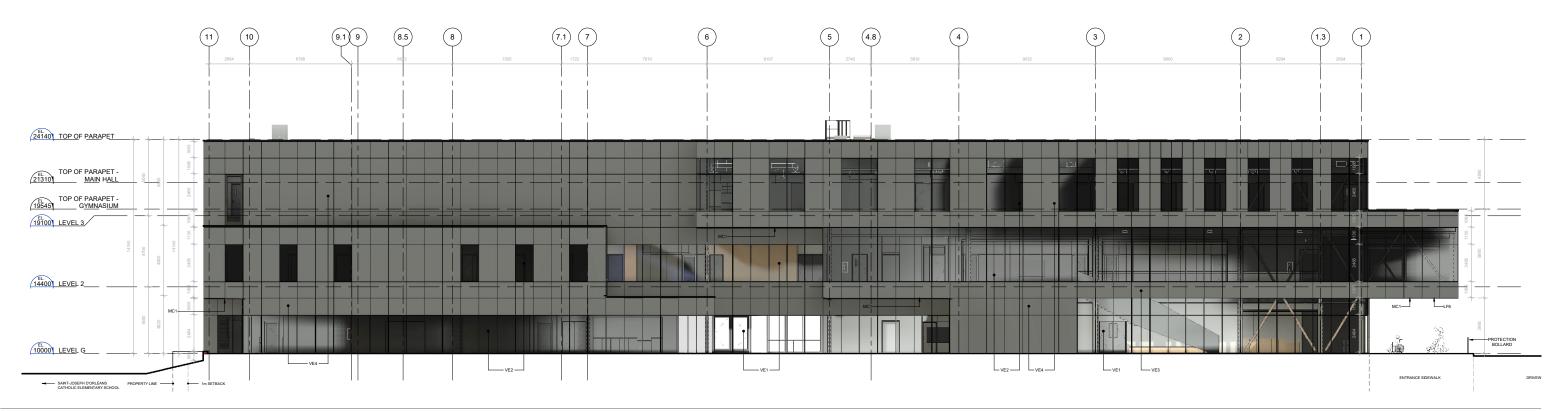
The café and bar, at the center of the building, benefit from a large table area and direct access to the exterior on the garden side.

The Franco-Ontarian flag and the MIFO memorial plaques act as an art installation representing MIFO's sense of ownership and pride in the Franco-Ontarian community.

#### 3.1 BUILDING ELEVATION - WEST_1:250



#### 3.2 BUILDING ELEVATION - NORTH_1:250



^{210462 -} MIFO | DESIGN BRIEF | 30-09-2022

The architectural envelope of the building is made up of two constructive systems : a curtain wall with a steel structure and a brick masonry wall with metallic grey reflections that play with the light in iridescent effects depending on the time of day and the position of the observer.

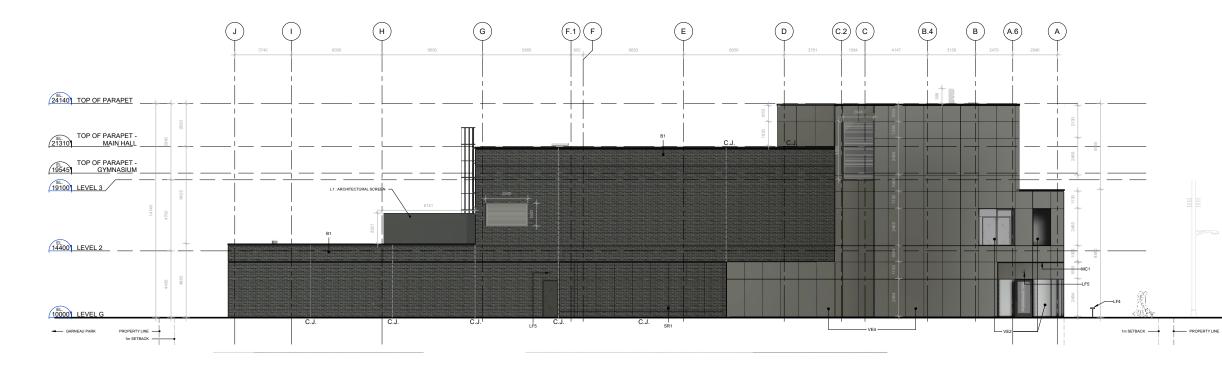
The curtain wall system is expressed in three forms (clear, smoked (grey) and opaque) to adapt to various spaces. The clear and smoked parts consist of triple glazing and the opaque parts are regular insulated wall with an exterior facing mimicking the aspect of black glass.

Thus, the contrast between the smooth/reflective and the rough, the glass and the brick, enriches the perception of the volumes and the catch of the light is varied. The whole is organized in a research of weighting of the masses, of balance and smoothness.

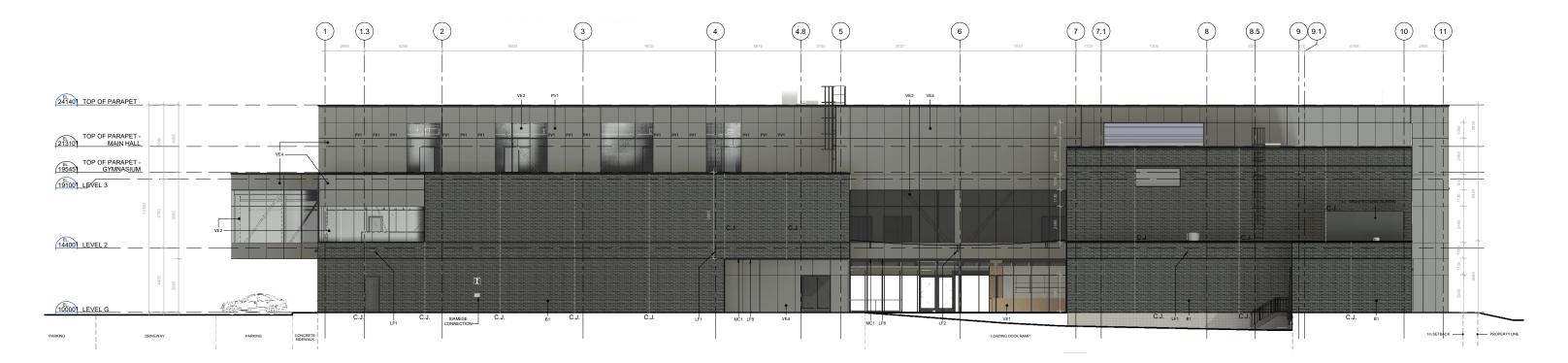
The black and glossy materiality of the volume exposed to Carriere Street reflects the natural components of the landscape, amplifies the public space features and provides an interaction between the building and the movement of passers-by reflected on it.

IEAU PARK -----Y LINE ICK

#### 3.3 BUILDING ELEVATION - EAST_1:250



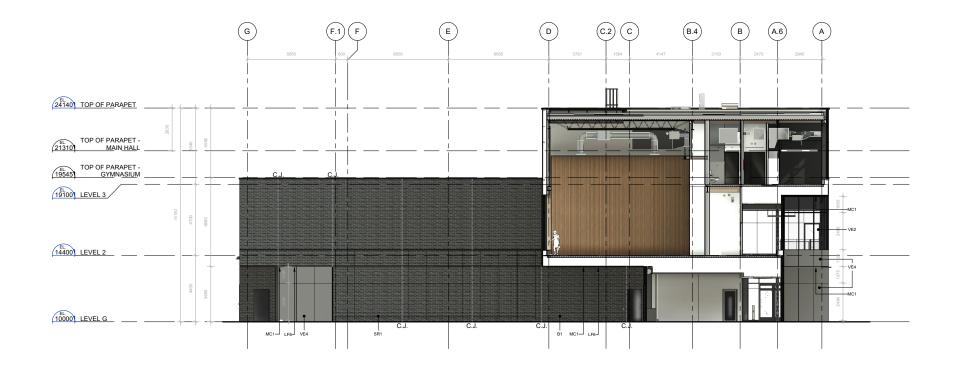
#### 3.4 BUILDING ELEVATION - SOUTH_1:250



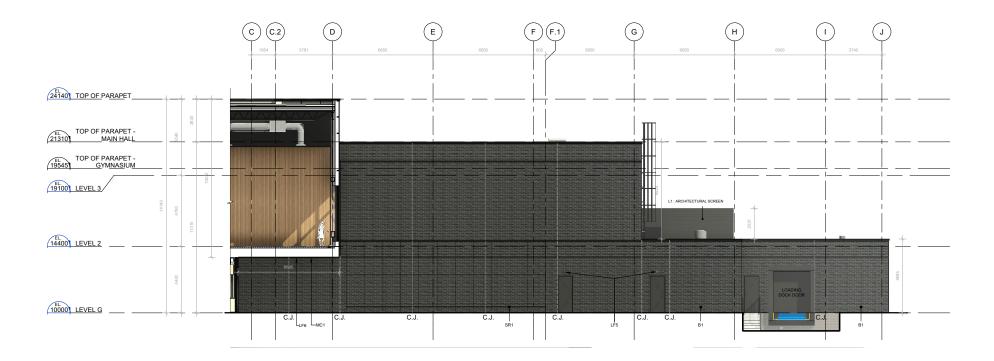


- B1 BRICK CLADDING
- VE1 CLEAR TRIPLE GLAZING
- VE2 SMOKED TRIPLE GLAZING
- VE3 OPAQUE BLACK TRIPLE GLAZING
- VE4 BLACK SPANDREL MONOLITHIC GLASS
- PV1 BUILDING INTEGRATED PHOTOVOLTAICS
- SR1 STEEL ROPES + VINES
- MC1 METAL CLADDING

#### 3.4.1 BUILDING ELEVATION - GARDEN EAST_1:250



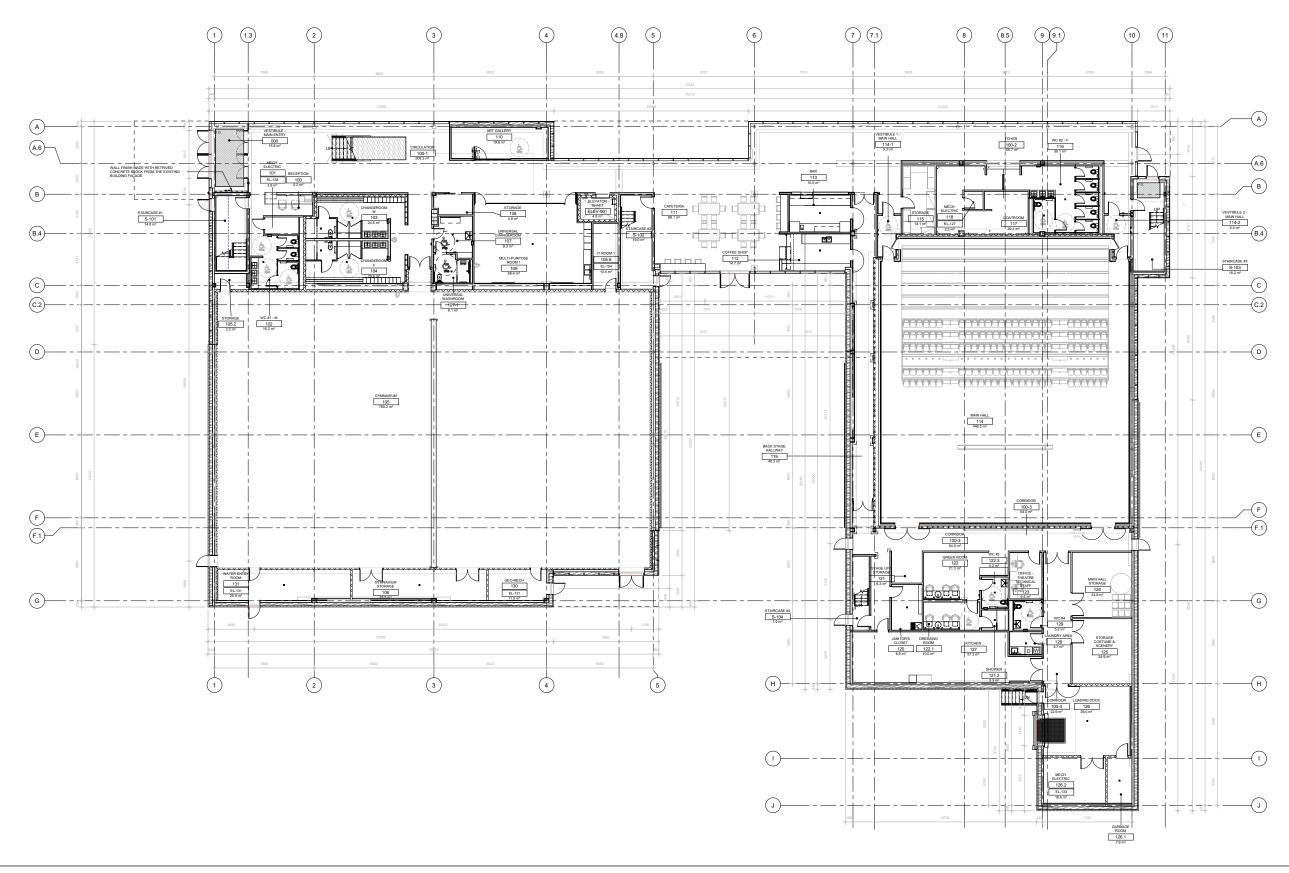
#### 3.4.2 BUILDING ELEVATION - GARDEN WEST_1:250





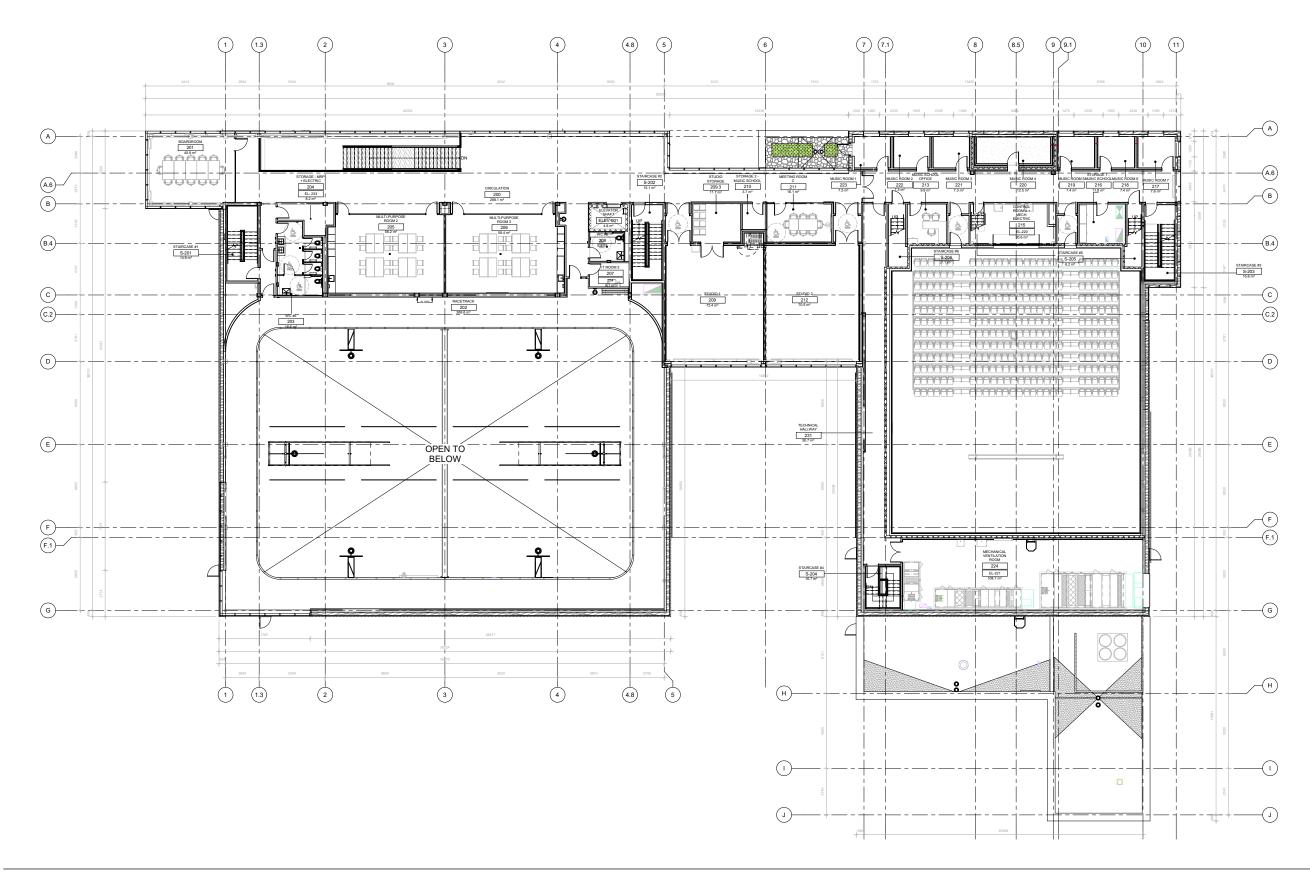
The rear courtyard (garden) created by the volumes of the gymnasium and the main hall is overlooked by the studio. Stainless steel cables (SR1) clad the facades allowing the vegetation (vines) to climb and integrate with the building, creating a warm and welcoming place for the Franco-Ontarian community. Catenary lights create a canopy of light over the garden.

3.5 BUILDING PLAN - GROUND FLOOR_1:300



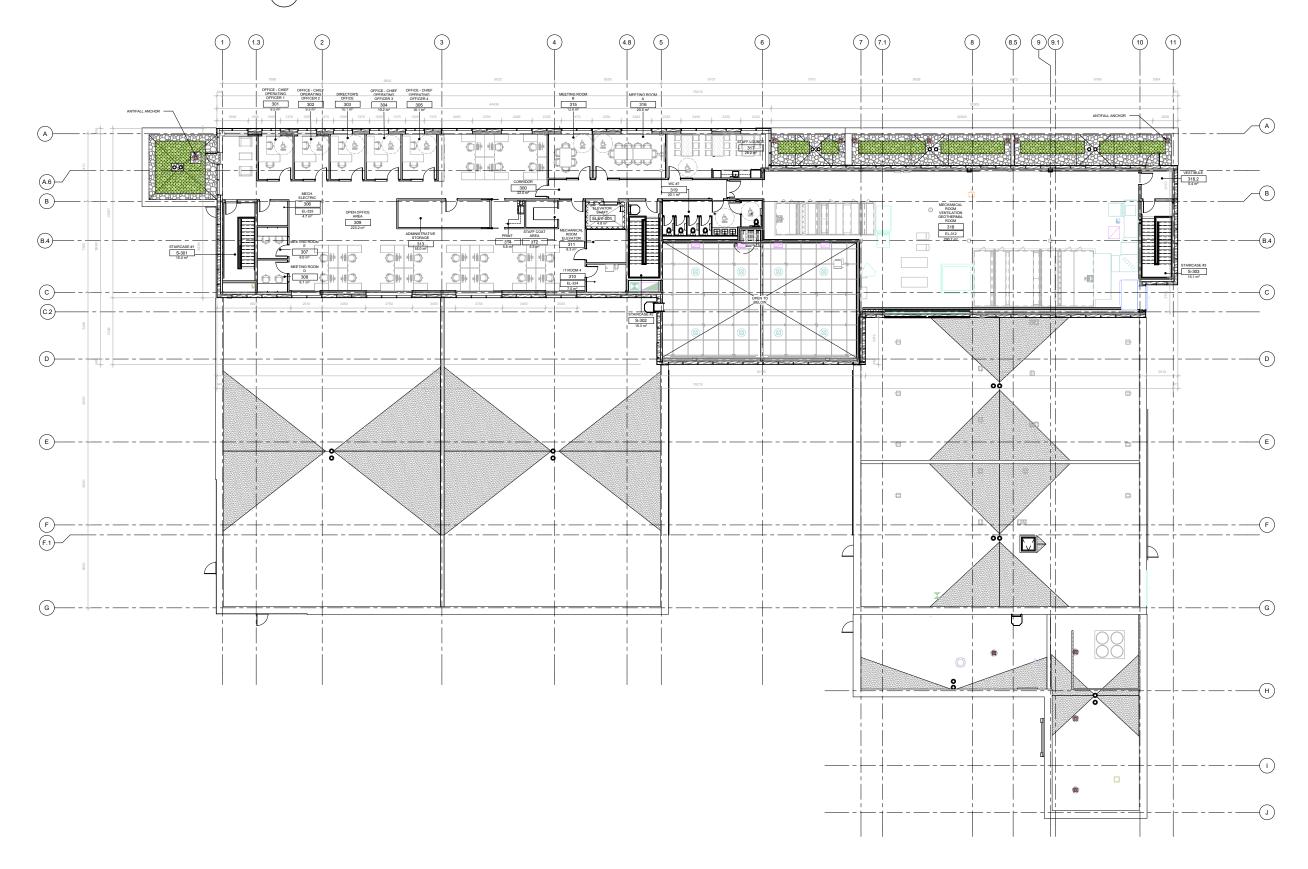
The first floor is organized along a circulation to which are grafted the sports (gymnasium) and artistic (main hall) functional blocks. These two functions are separated by a cafeteria space which is in direct relation with the garden. At the entrance, an architectural staircase is visible from the public space and offers a seatted spot under it.

3.6 BUILDING PLAN - LEVEL 2_1:300 🔿



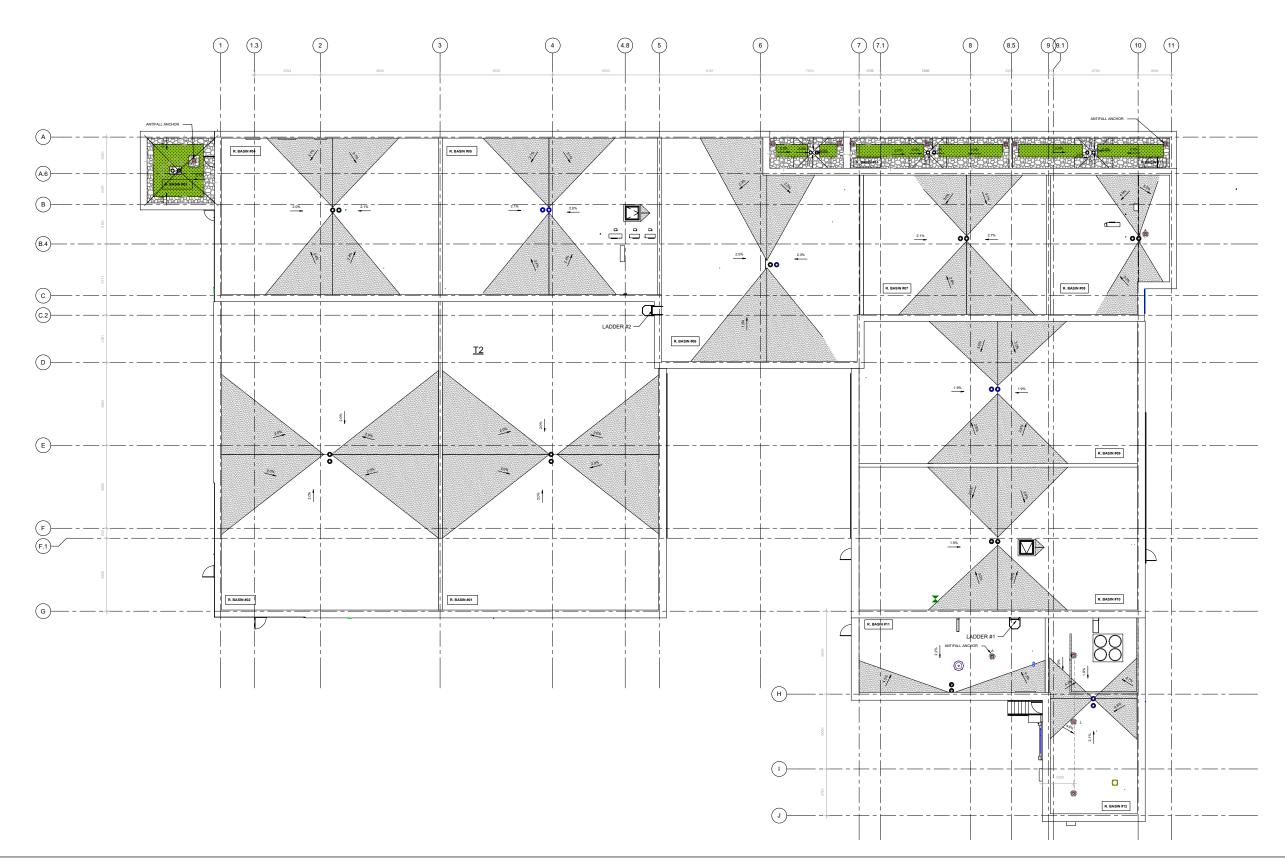
The second floor opens onto the main entrance of the building and features an architectural staircase in a doubleheight space. Cantilevered over the entrance, the second floor houses the executive room that signals the building's entrance. Near the main staircase are two glass-walled multipurpose rooms and the access to the running track in the gymnasium. The cantilevered studio over the garden at the rear of the building transitions to the main hall and music school, separating the arts uses from the sports and community uses.

3.7 BUILDING PLAN - LEVEL 3_1:300 🔿



The 3rd floor houses the MIFO administrative offices and the building's main mechanical room. Some of the meeting rooms are separated from the offices so that they are accessible to the public.

3.8 BUILDING PLAN - ROOF_1:300



Roofs have lifeline anchors in areas that require maintenance near the perimeter and green roofs are accessible from inside the building for maintenance. Mechanical equipment that are visible from the public space are concealed with architectural louver screens.



3.9 AERIAL PERSPECTIVE - MATERIALITY AND INTEGRATION TO SITE



#### 3.10 MATERIALITY AND FACADE SYSTEMS

B1 ENDICOTT BRICK COLOR : MANGANESE IRONSPOT FINISH : SMOOTH SIZE : NORMAN

#### ENDICOTT

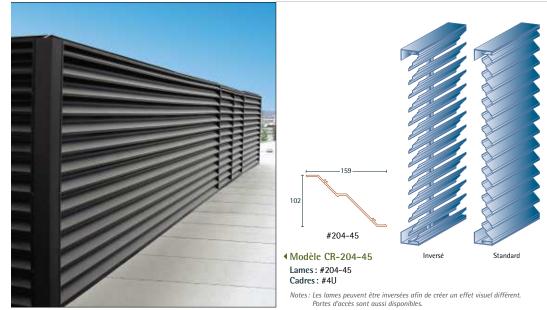
Projects Face Brick Thin Brick Pavers Tile Resources About Careers

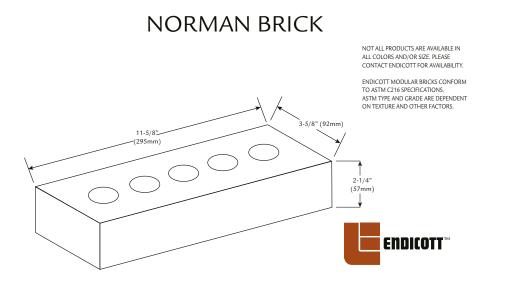
FACE BRICK - MANGANESE IRONSPOT





#### L1 LOUVERS AND SCREENS TO HIDE MECHANICAL EQUIPMENTS ON THE ROOF COLOR : BLACK





210462 - MIFO | DESIGN BRIEF | 30-09-2022

#### 3.10 MATERIALITY AND FACADE SYSTEMS

#### RM1

ROOF MEMBRANE

TYPE : SOPRASTAR GR

SOPRASTAR GR IS A HIGH PERFORMANCE CAP SHEET MEMBRANE COMPOSED OF SBS MODIFIED BITUMEN AND A COMPOSITE REINFORCE-MENT. THE SURFACE IS PROTECTED BY **HIGH REFLECTIVE WHITE GRANULES**.

#### Formerly known as SOPRASTAR HD GR & HD FR GR

# **SOPRASTAR** GR (FR GR)



TECHNICAL DATA SHEET 210705SCAN

#### DESCRIPTION

SOPRASTAR GR is a high performance cap sheet membrane composed of SBS modified bitumen and a composite reinforcement. The surface is protected by high reflective white granules and the underface is sanded.

Fire rated (FR) cap sheet membrane (SOPRASTAR FR GR) is available to increase fire resistance. This membrane allows the roofing system to meet the requirements of the CAN/ULC-S107 Class A standard.

#### INSTALLATION

#### ADHESIVE

SOPRASTAR GR and SOPRASTAR FR GR are unrolled on the adhesive previously applied using a notched squeegee.

Once the membrane is in place, apply pressure over the whole surface using a membrane roller to ensure a complete and uniform adhesion.

Apply adhesive on the first 100 to 125 mm (4 to 5 in) of the end laps with a notched trowel. Complete the installation by welding the last 25 to 50 mm (1 to 2 in) of the end laps, using an electric hot-air welder and a membrane roller.

Welding must also be done on all side laps. The use of SOPRAMATIC automatic hot-air welder will increase the speed and quality of the seal.

#### SEBS HOT BITUMEN

SOPRASTAR GR and SOPRASTAR FR GR are unrolled in a bed of SEBS hot bitumen (SOPRASPHALTE M) applied with a mop.

#### LEED[®] SOLUTION

SOPRASTAR GR & SOPRASTAR FR GR have a SRI of 90 which meets the requirements of the Sustainable Sites LEED® Credit on Heat Island Reduction.

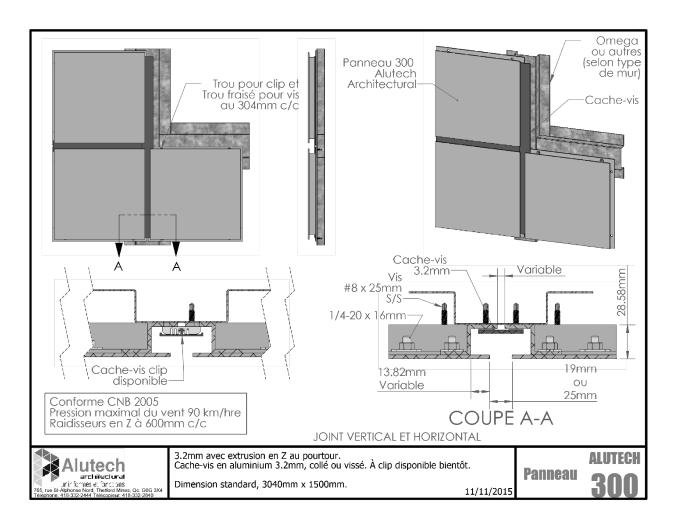
FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR SOPREMA REPRESENTATIVE.

. . . . . .

#### PACKAGING

Specifications	SOPRASTAR GR & SOPRASTAR FR GR
Thickness	3,5 mm (138 mils)
Reinforcement	Composite
Dimensions	8 x 1 m (26 x 3,3 ft)
Weight	4,6 kg/m² (1,0 lb/ft²)
Selvedge width	100 mm (4 in)
Surface	High reflective white granules
Underface	Sanded

MC1 METAL CLADDING SOFFIT COLOR : BLACK RAL 9005



#### 3.10 MATERIALITY AND FACADE SYSTEMS

VE1 CLEAR TRIPLE GLAZING



VE2 : GREY/SMOKED TRIPLE GLAZING (GREY, CLEAR, CLEAR) VE3 : GREY/OPAQUE TRIPLE GLAZING (GREY, CLEAR, CLEAR WITH BLACK CERAMIC COATING) VE4 (MF)





Lite	6mm SuperNeutral 68 on Clear tempered pos. #2 Thickness = 1/4"= 6 mm	#1 #2 SunGuard® SuperNeutral 68
Gap	13.5mm R-Max Bk/Argon Thickness = 0.531" =13.5 mm	
Lite		#3 #4 SunGuard® SuperNeutral 68
Gap	13.5mm R-Max Bk/Argon Thickness = 0.531" =13.5 mm	
Lite	6mm Clear tempered Thickness = 1/4"= 6 mm	#5 #6

INDOORS

V	isible Light	t	Solar l	Energy	Ultraviolet	Winter		Su	mmer		
% Transmit- tance		ectance Out	% Transmit- tance	% Reflect out	% Transmit- tance	U-Value Btu/hr-ft²-F	U-Value Btu/hr-ft²-F	SC	SHGC	RHG Btu/hr-ft²	LSG
51.1	14.3	12.2	21.1	33.1	14.4	0.12	0.12	0.33	0.29	69.0	1.76

NOTICE: Although the information and recommendations (hereinafter "information") set forth herein are presented in good faith and believed to be correct, they are intended as a reference only and Preico Company will not be liable for any use that does not conform thereto. The persons receiving the information contained herein are responsible for determining as to its suitability for their purposes and that they product can be used for the purposes for which it is intended. Said persons are solely responsible for the methods and techniques they use. Preico Company will not be responsible for any wongful use of the product can any use witch departs from the regulations in effect or is made under conditions which are not suitable to the purposes. The persons receiving the information contained herein are responsible for ensuing that said information, as well as the use of the product, do not violate patentiaws. In no event will Preico Company be responsible for any patent infringement by the product user or the information herein. Nothing contained herein is to be construed as a warranty, express or implied. The information is supplied for reference purposes only and is to be read as such by the user.

Ы PRELCO

OUTDOORS

Lite	······································	#1 #2
Gap	13.5mm R-Max Bk/Argon Thickness = 0.531" =13.5 mm	
Lite	6mm SuperNeutral 68 on Clear tempered pos. #3 Thickness = 1/4"= 6 mm	#3 SunGuard® SuperNeutral 68 #4
Gap	13.5mm R-Max Bk/Argon Thickness = 0.531" =13.5 mm	
Lite	······································	#5 SunGuard® SuperNeutral 68 #6

INDOORS

Vi	isible Light	t	Solar Energy		Solar Energy Ultraviolet Winter Summer						
% Transmit- tance		ectance Out	% Transmit- tance	% Reflect out		U-Value Btu/hr-ft²-F	U-Value Btu/hr-ft²-F	SC	SHGC	RHG Btu/hr-ft²	LSG
4.9	10.8	4.0	2.1	4.1	0.4	0.12	0.12	0.08	0.07	18.0	0.70

NOTICE: Although the information and recommendations (hereinafter "information") set forth herein are presented in good faith and believed to be correct, they are intended as a reference only and Preloc Company will not be liable for any use that does not conform thereto. The persons receiving the information contained herein are responsible for determining as to its suitability for their purposes of not pounder so and the purposes for which it is intended. Said persons are solely responsible for the methods and techniques they use. Preloc Company will not be responsible for any wongful use of the product can be any use witch departs from the regulations in effect or is made under conditions which are not suited to the purpose. The persons receiving the information contained herein are responsible for ensuing that said information, as well as the use of the product, do not videa patent laws. In no event will Preloc Company be responsible for any patent (infingment by the product user or the information dherein. Nothing contained herein is to be construed as a warranty, express or implied. The information is supplied for reference purposes only and is to be read as such by the user.



INTRODUCTION

Monolithic spandrel glass is generally heat-strengthened to Monolithic spandrei glass is generally heat-strengthened to make it more resistant to the wind loads and high temperatures normally present in non-vision areas of curtain walls. If breakage occurs, the heat-strengthened glass will break into large sections similar to annealed glass. Heat-strengthened glass is twice as impact resistant as annealed glass of the same thickness, but it cannot be considered as a safety glass.

Tempered glass is usually recommended for more hazardous Tempered glass is usually recommended for more hazardous areas. It is high temperature resistant and is four times as impact resistant as annealed glass of the same thickness. If breakage occurs, fully tempered glass breaks securely in small and dull fragments, thus ensuring publics afety. Fully tempered glass meets safety glazing standards.

#### DESCRIPTION

Prelco offers various standard colours and a large selection of non-standard colours. Non-standard colours are matched to samples provided by the specifier.



olar Bronze PC-9904

PC-9905

#### BLACK SPANDREL GLASS - OPAQUE WALL - MONOLITHIC GLASS

#### SPANDREL GLASS

#### GENERAL INFORMATION

Spandrel glass panels are opaque and generally used in the non-vision areas of curtain walls. These types of glass panels are placed between the vision areas and are used to mask the materials or construction that could be seen from the exterior of the building. Spandrel glass is available as monolithic glass, laminated glass or insulating glass units covered with an opaque coating. Depending on the colour used, spandrel glass can harmonize or contrast with the glass in the vision areas.

#### THERMAL TREATMENT OF GLASS

#### HARMONIZING GLASS SECTIONS

Usually, vision areas of a curtain wall are made of double insulating glass units, while the panels in non-vision areas are made of monolithic glass. To achieve visual uniformity between the vision and non-vision areas, it is best to use glass with a low the vision and non-vision areas, it is best to use glass with a low percentage of visible light transmission (VLI) in both areas. For instance, vision glass units could either be constructed with an exterior intued glass ply or of certain types of reflective glass with pyrolithic coating on surface 2. For the spandrel glass, the same type of glass could be used with the opaque coating on surface 2. This will create a more uniformed look between the vision and the nonvarience more of the currin used! non-vision areas of the curtain wall.

If a medium to high VLT percentage glass is preferred, you can If a medium to high VLT percentage glass is preferred, you can attain a uniformed look by using insulating spandrel units. The opaque coating is then applied on surface 4 of the insulating unit. This adds depth to the spandrel glass and attenuates the differences in opacity between the vision and non-vision areas. In insulating spandrel units, the inner glass must be tempered at all times. all times.

Ceramic frit coating is applied to the glass using a horizontal roller-coater and then heated in an oven at approximately 1150 °F (621 °C). Once this treatment is complete, the ceramic frit fuses to the surface of the glass. Ceramic frit is extremely durable and

resists to cracks, scratches, discoloration and harsh chemicals. It should be noted that Prelco uses lead-free ceramic frit respectful of people and environmentally friendly.

#### AVAILABLE COLOURS

Exact colours can vary from the one illustrated below. Always proceed to the evaluation of a sample placed in its final environment. Please contact us to receive exact colour s



#### 3.10 MATERIALITY AND FACADE SYSTEMS

ES1 ENVELOPE SYSTEM + CURTAIN WALL V1 + V2 + V3

#### **THE STEKAR** MULTIFAÇADES[™] SYSTEM MULTI-MATERIAL FACING SYSTEM PATENTED - UNIQUE TO STEKAR Enables the installation of glass or concrete panels, aluminum, and/or other materials on a single surface with an impeccable and perfectly rectilinear finish. on a single facade type of wall up to 35 ft² System description Improved acoustic control 1 Stekar Multifaçades™ Reduced maintenance costs prefabricated panel for multiple facing 2 Semi-rigid insulation 3 Support panel 4 Air & vapor barrier membrane 5 Membrane flashing 6 Stekar Multifaçades® SM-160 window panels, fixed, or operational Window air pressure equilibrium chamber **™∕_**33 8 Anchoring window seat 9 Sprayed urethane 10 Facade framework 6 11 Air pressure equilibrium chamber 12 Galvanized steel Z-Bar 13 Vertical aluminum rail 14 Horizontal aluminum rail PATENT NO. 2.261.224 AND 2.261.208

## **ADVANTAGES OF THE MULTIFAÇADES™ SYSTEM**

- Ideal for small and medium-scale projects
- Simplifies the integration of a wide variety of materials
- Exceeds strictest requirements for air and water tightness
- Provides a high-end curtain wall appearance with the same thermal performance of a conventional envelope design
- Ideal for the renovation of existing facades, installs over any
- Fenestration of large, frameless, fixed or awning windows

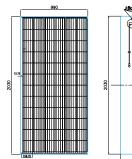
- Satisfies criteria to earn LEED certification points





ENGINEERING DRAWING (mm)

PV1

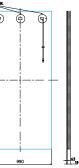


MECHANICAL DATA		
PECIFICATIONS	SOLAR CLADDING ORBIT	
Cell Type	Mono-crystalline	
Cell Arrangement	72 (12x6)	
Dimensions	2030x990mm	
Front Cover	7 mm tempered glass	
Veigh t	29kg	
Back Support	N/A	
l-Box	IP68, 3 bypass diodes	
Cable	4mm 2, 12 AWG (UL)	
Cable Length (Including Connector)	500mm, 1000mm, 1200mm	
Connector	MC4	
Learn More:	Headquarters:	
🖂 info@mitrex.com	+1 (416) 497 7120	

2

#### BUILDING INTEGRATED PHOTOVOLTAICS (BIPV)





+1 (416) 497 7120





#### SOLAR CLADDING

High Efficiency Mono Module 360W 1000V

#### ELECTRICAL DATA | STC*

SPECIFICATIONS	SOLAR CLADDING ORBIT
Nominal Max. Power (Pmax)	360W
MPP Operating Voltage (Vmp)	42 V
MPP Operating Current (Imp)	8.5 <b>7</b> A
Open Circuit Voltage (Voc)	48.8V
Short Circuit Current (lsc)	9. <b>35</b> A
Cell Efficiency	22% - 22.5%
Operating Temperature	-40°C ~ +85°C
Max. System Voltage	1000V (IEC/UL)
Max. Series Fuse Rating	20A
Application Classification	Class A

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m2, spectrum AM 1. and cell temperature of 25°C.

#### TEMPERATURE CHARACTERISTICS

PECIFICATIONS	SOLAR CLADDING ORBIT
emperature Coefficient Pmax	-0.36% / °C
emperature Coefficient Voc	-0.30% / ℃
emperature Coefficient Isc	0.046% / °C
ominal Module Operating emperature	42±3 °C

East USA Location 1 Rockefeller Plaza Fl 11, New York, NY 10020, USA +1 (646) 583 4486

#### 3.10 MATERIALITY AND FACADE SYSTEMS

LF1 EXTERIOR LIGHTING FIXTURES : WALL PACK COLOR : BLACK







Gardco 101 LED wall sconces feature a low-profile design that provides wide flexibility in high performance exterior wall illumination. Full cutoff performance, usable illumination patterns, and powerful wattages combine into a compact and architecturally pleasing design. 101L sconces are available in Type 2, 3, and 4 distributions, and provide output of up to 12,000 lumens. Energy saving control options increase energy savings and offer California Title 24 compliance. Emergency Battery Backup option available for path of egress.

Project:	
ocation:	
Cat.No:	
Гуре:	
amps:	Qty:
lotos:	

^{Prefix}		Number	of LEDs	1	Drive C	Current	LED	Color -			Distribution	Emer	gency		Voltaç	<u>je</u>
	101L LED Wall Sconce	16L 1	- I6 LEDs (1 modul	- - - - -	200 400 530 700 1000 1200	200mA 400mA 530mA 700mA 1000mA 1200mA	CW- NW- WW-	-G2 -G2 G2	Cool White 5000K, 70 C Generation 2 Neutral White 4000K, 70 CRI Generation 2 Warm White 3000K, 70 CRI Generation 2 Warm Yellow 2700K,		2 Type 2 3 Type 3 4 Type 4		Emergenc; Battery Pa Cold Weat e blank to om gency optior	ick her ^{1,3,12} it an	UNV HVU 120 208 240 277 347	120-277V 347-480V 120V 208V 240V 277V 347V
		32L 32 LEDs (2 m		700		700mA		G2   G2	80 CRI Generation 2 ² Balanced White 3500K 80CRI Generation 2 ² Direct Amber (590nm) Generation 2 ²						480	480V
Options Dimming	) Controls	]		Motio	n Sens	sing lens	1	Photo-s	sensing	Ele	ectrical			Finisł	,	Ī
DD FAWS BL <u>DynaDim</u> CS50 CM50 CS30 CM30	sensor ^{4,2,11} mmer: Automa Security 5 Median 50 Security 3	by others it Contro stable Wa nctionali <u>tic Profile</u> 0% Dimmir 0% Dimmir 0% Dimmir	i)4 ol ^{4.5.6.9}	IMRI2	1	ntegral wit #2 lens ¹⁰ ntegral wit #3 lens ¹⁰	h 1	PCB FLRD5 FLRD7 FLRPC	Photocontrol Button ¹³ Twist Lock Receptacls >Pin ⁴⁴ Twist Lock Receptacle 7-Pin ⁴⁴ Twist Lock Receptacle w/ Photocell ¹⁵⁴	F1 F2 F3	Double Canadii (208, 2)	(208, 2 an Dout 40, 480 on (10k	VAC) ⁸ <u>A standard)</u>	Textu BK WH BZ DGY MGY Custo RAL	Blac Whit Bror Dark Med Spec colo (ex: OC- Cust (Mus chip	.e
batte Exter for de Availe Not a	etails. able in 120 or :	3PC) cont es apply. 277V only other dim motion se	figuration. Contact factory r. Iming control op Insor.		8 9 1 1	0. Not avai control 1. Must spe ambient	acify i a with lable option acify i if cor	input vo two mo with DD ns. a motio nbined		ng :o 3(	14. D if 15. N w	imming orderir	ng with other able in 480V.	nnecte contro	ol optio	EMA receptacle ns. cell separately

101L 10/21 page 1 of 5



ida

**LF2** EXTERIOR LIGHTING FIXTURES : CATENARY COLOR : BLACK

Pike Cylindrical LED Luminaire

FIXTURE TYPE: _____



#### SPECIFICATIONS:

**CONSTRUCTION**: Housing comprised of machined custom 6005-T61 extrusion with machined 6061-T61 end caps.

**ELECTRICAL:** Powered by an intergral Class P. 120-277VAC, 0-10V dimmable constant current driver with built in GkV surge protection. Operating temperature of -40°F to 112°F for SO, MO, and HO installations and -40°C to 95°F for VHO installations.

OPTICAL SYSTEM: COB LED has solderless connections for field upgradability. Available in color temperature of 2700, 3000, 3500, and 4000K, >80 CRI. Optical reflectors available in 20°, 30°, 40°, and 60° spot distributions. Covered by UV- and scratch-resistant clear acrylic. Consult factory for additional lumen outputs, color temperatures, or CRIs.

FINISHES: All exterior aluminum parts are polyester powder coat painted to meet AAMA-2604 standards. See Structura's finish options for available standard finishes. <u>Care and Maintenance</u>

LISTINGS & RATINGS: Luminaire CSA listed according to CSA C22.2 No. 250.0-18/UL Standard 1598. Suitable for wet locations. LM-80 test reported L70 > 49,500 hours and calculated L70 > 120,000 hours.

WARRANTY: 5-year warranty on LED and drivers.



152 ©2021 STRUCTURA, INC.

#### **LF3** EXTERIOR LIGHTING F COLOR : BLACK

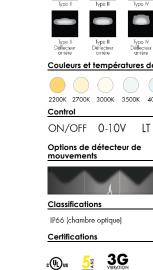
Fiche technique

Nom du projet

structura

Shown with PEN/I/R mounting





lumenpulse [®]								
LMPG Inc. se réserve le droit d'effectuer 2022.06.14 copyright © 2022 LMPG Inc. SA - R2								

210462 - MIFO | DESIGN BRIEF | 30-09-2022

#### EXTERIOR LIGHTING FIXTURES : PARKING LIGHT POSTS

	Qté
ð	89mm -152mm
	Vues de côté e
	Jusqu'à 1324mm
6	00000000000000000000000000000000000000
	XL180 ou XL200 (4 platines DE
Description	
	Le Lumenblade Medium est un luminaire DEL extérieur la technologie d'éclairage Lumencentro sous forme pour créer une ligne de lumière continue. Son design minimaliste discret et distinct est durable; s'intègre à
	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu
Caractéristiques	l'architecture contemporaine et patrimoniale offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu
Montage	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté
Montage Couleur et température de couleur	l'architecture contemporaine et patrimoniale offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Montage	l'architecture contemporaine et patrimoniale offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Montage Couleur et température de couleur Distributions Norme antivibrations	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2000K, 2700K, 3000K, 3500K, 4000K, 5700K Type II, Type III ou Type IV (avec ou sans déflecteur arrié 5 carré Conforme à la norme antivibrations 1.5G ANSI C136.31 pour applications routières standard
Montage Couleur et température de couleur Distributions	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K Type II, Type III ou Type IV (avec ou sans déflecteur arrié 5 carré Conforme à la norme antivibrations 1.5G ANSI C136.31 pour applications routières standard Conforme à la norme antivibrations 3G ANSI C136.31-2 pour les ponts, Revêtement anticorrosion pour environn hastiles, Protecteur de surtensions, Fiche à 3 broches av sans couvercle, Fiches à 5 broches avec ou sans couv
Montage Couleur et température de couleur Distributions Norme antivibrations	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K Type II, Type III ou Type IV (avec ou sans déflecteur arrié 5 carré Conforme à la norme antivibrations 1.5G ANSI C136.31 pour opplications routières standard Conforme à la norme antivibrations 3G ANSI C136.31- pour les ponts, Revêtement anticorrosion pour environr hostiles, Protecteur de surten anticorrosion pour environr hostiles, Protecteur de surten anticorrosion scouver fiche à 7 braches avec ou sans couvercle, Détecteur de Maaptateur pour Straight pole et Muffler pole (mât ron carré): 152 mm
Montage Couleur et température de couleur Distributions Norme antivibrations Options	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K Type II, Type III ou Type IV (avec ou sans déflecteur arrié 5 carré Conforme à la norme antivibrations 1.5G ANSI C136.31 pour opplications routières standard Conforme à la norme antivibrations 3G ANSI C136.31- pour les ponts, Revêtement anticorrosion pour environr hostiles, Protecteur de surten anticorrosion pour environr hostiles, Protecteur de surten anticorrosion scouver fiche à 7 braches avec ou sans couvercle, Détecteur de Maaptateur pour Straight pole et Muffler pole (mât ron carré): 152 mm
Montage Couleur et température de couleur Distributions Norme antivibrations Options Adaptateur pour montage sur mât	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs langu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K Type II, Type III ou Type IV (avec ou sans déflecteur arrié 5 carré Conforme à la norme antivibrations 1.5G ANSI C136.31 pour applications routières standard Conforme à la norme antivibrations 3G ANSI C136.31- pour les ponts, Revètement anticorrosion pour environn hastiles, Protecteur de surtensions, Fiche à 3 braches av sans couvercle, Fiches à 5 braches avec ou sans couver Fiche à 7 braches avec ou sans couvercie, Défecteur de Adaptateur pour Straight pole et Muffler pole (mât ron carré): 152 mm
Montage Couleur et température de couleur Distributions Norme antivibrations Options Adaptateur pour montage sur mât Garantie	l'architecture contemporaine et patrimoniale; offre un de sécurité élevé et s'adapte au milieu environnant. Le Lumenblade Medium est disponible en plusieurs longu offre de nombreux flux lumineux et distributions, en plu fournir une qualité de lumière hors du commun. Montage de côté 2200K, 2700K, 3000K, 3500K, 4000K, 5700K Type II, Type III ou Type IV (avec ou sans déflecteur arrié 5 carré Conforme à la norme antivibrations 1.5G ANSI C136.31 pour applications routières standard Conforme à la norme antivibrations 3G ANSI C136.31-2 pour les ponts, Revêtement anticorrosion pour environn hostiles, Protecteur de surtensions, Fiche à 3 broches av sans couvercle, Fiches à 5 broches avec ou sans couver Kouvereur, Straight pole et Muffler pole (mât ron carré): 152 mm Adaptateur pour Lumentech pole (mât carré et rond):

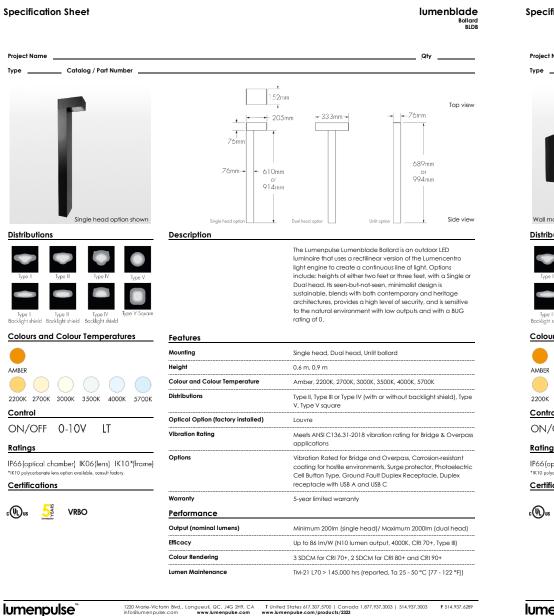
r un changement à ce produit à tout moment et sans préavis, et une telle modification sera en vigueur immédiatement.

1 / 12

#### 3.10 MATERIALITY AND FACADE SYSTEMS

LF4

EXTERIOR LIGHTING FIXTURES : LIGHT BOLLARD COLOR : BLACK

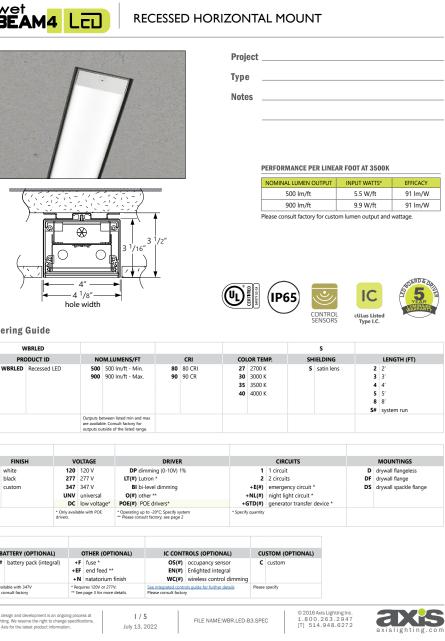


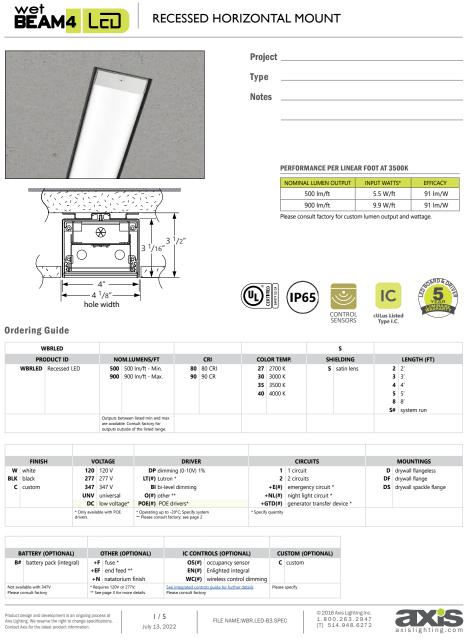
# LF5

EXTERIOR LIGHTING FIXTURES : LUMENPULSE NANO COLOR : BLACK

Project Name			Qty
Type Catalog / Part Number			
		-	
	7	- 'ómm ( 7óm	IM
			Side views
	<b>↓</b> 138mm →	•164mm•	
		52mm [	mm
Wall mount option shown	N02, N03, N05, N07 and N10 outputs	XS03, XS10, XS15, XS20 and XS25 outputs	Bottom views
Distributions	Description	and route series	
Image: Type II Type II Type II Type IV Type V Square   Bocklight shield Bocklight shield Bocklight shield Type V Square	Features	sustainable, blends with both contempore architectures, provides a high level of sect to the natural environment with low outpur rating of 0.	urity, and is sensitive
	Mounting	Side mounting, Wall Mounting	
AMBER	Colour and Colour Temperature	Amber, 2200K, 2700K, 3000K, 3500K, 4000k	
	Distributions	Type II, Type III or Type IV (with or without b V, Type V square	acklight shield), Type
2200K 2700K 3000K 3500K 4000K 5700K	Optical Option (factory installed)	Louvre	
Control	Vibration Rating	Meets ANSI C136.31-2018 vibration rating applications	for Bridge & Overpass
ON/OFF 0-10V Ratings	Options	Vibration Rated for Bridge and Overpass, coating for hostile environments	Corrosion-resistant
IP66 (optical chamber) IK06 (lens) IK10*(frame)	Warranty	5-year limited warranty	
*IK10 polycarbonate lens option available, consult factory.	Performance		
Certifications	Output (nominal lumens)	Minimum 200lm/ Maximum 2500lm	
r∰us <mark>5</mark> ≝ VRBO	Efficacy	Up to 127 lm/W (XS10 lumen output, 4000)	
	Colour Rendering	3 SDCM for CRI 70+, 2 SDCM for CRI 80+ ar	
	Lumen Maintenance	TM-21 L70 > 145,000 hrs (reported, Ta 25 - 5	
	Dark Sky	Dark sky compliant (2200K, 2700K, 3000K o temperatures, BUG rating of U0)	and Amber colour
	Discustor al		
	Physical		

# LF6







WBRLED								
PRODUCT ID								
WBRLED	Recessed LED							

FINISH	VO				
white	120	1			
black	277	ź			
custom	347	1			
	UNV	l,			
	DC	I			
	* Only availa drivers.	зЫ			

BA	ATTERY (OPTIONAL)	
B#	battery pack (integral)	+1 +EI +N
	able with 347V ensult factory	* Res ** Se

LMPG hc. reserves the right to make changes to this product at any time without prior notice and such modification shall be effective immediately 2022.06.14 copyright © 2022 LMPG hc.

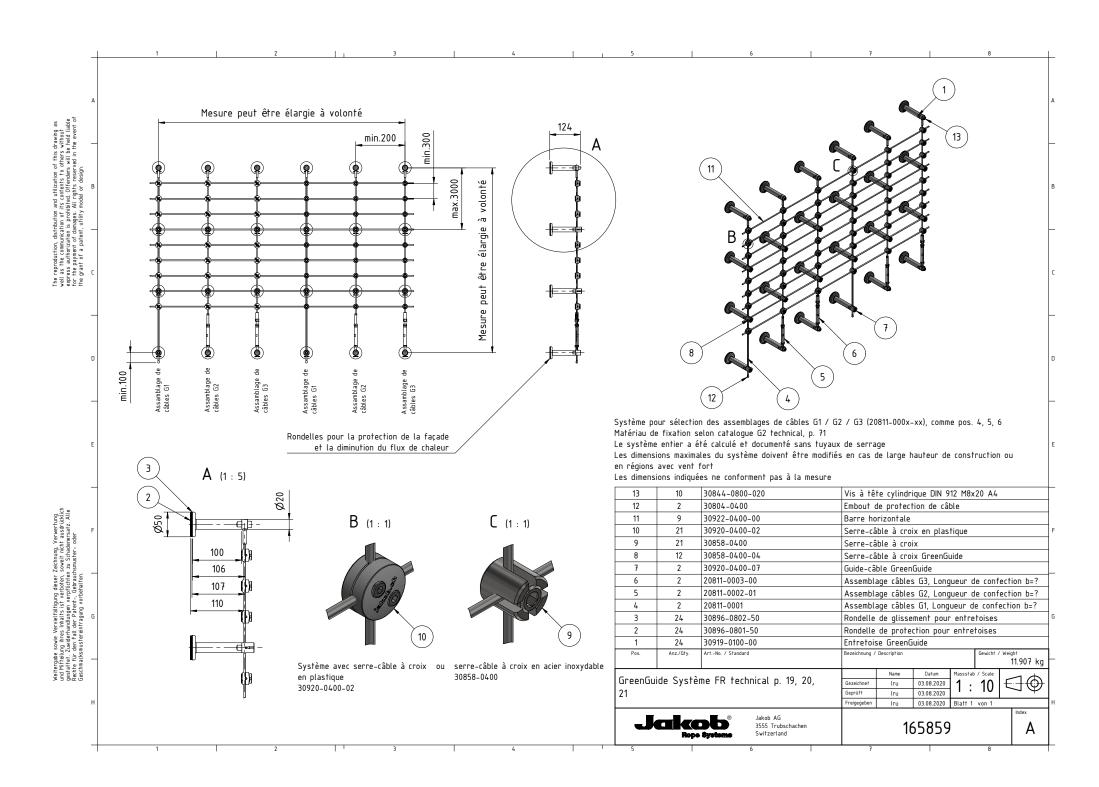
1/9

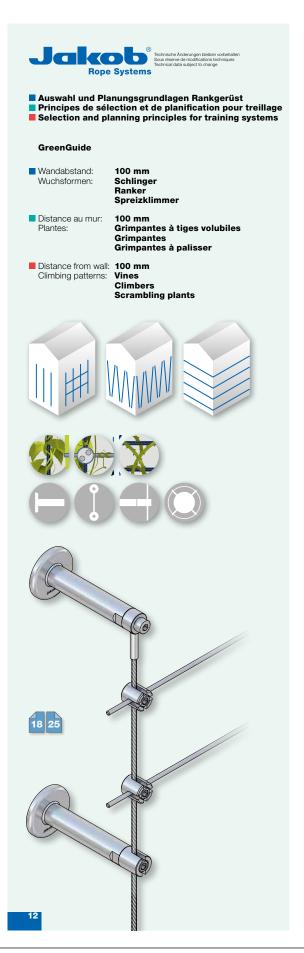
#### EXTERIOR LIGHTING FIXTURES : RECESSED LINEAR LIGHTING

#### 3.10 MATERIALITY AND FACADE SYSTEMS

#### SR1

STEEL ROPES FIXTURES - GREEN WALL





# 04. SUSTAINABILITY

**4.1 SUSTAINABLE FEATURES OF THE PROPOSAL** 



A geothermal system consisting of 15 wells provides the heating and cooling needs of the building.



The triple glazing and the high-performance envelope used on all facades reduce heat loss and energy needs. Photovoltaic panels allow the production of energy from the building itself. The building is entirely powered by electricity.



White reflective roofs reduce heat absorption by the building. Light reflective materials are applied to the parking areas in order to reduce the heat absoption of the asphalt.



Green roofs contribute to the health of the site and the immediate environment as an incubator for biodiversity. They also contribute to water management within the building.



Trees and green spaces act as filters to purify the air by converting CO2 into oxygen. The use of vegetation on the roof acts as an insulator and helps reduce energy consumption for heating and cooling the building.



The green roofs as well as the rain garden ensure rainwater and runoff management on the project site.

The new MIFO aims to be a green and inclusive community building. In this sense, it aims to meet the requirements of the Zero Carbon Building - Design v3 (BCZ-Design) standard. The building is strictly electrically powered, with photovoltaic panels integrated into the façade and a geothermal heating/cooling system.

PROVENCHER_ROY