Building Sections





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East - West Cross Sections

New St.Paul's Hospital





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North - South Cross Sections

Building Envelope

Exterior Insulation and Cladding Systems

Building envelope assemblies will be robust and provide industry-standard durability and quality that meet performance requirements. The building envelope will be designed to meet the climate resiliency requirements for future climate projections and with a predicted service life of 50 years as defined in CSA S478-95.

For wall sections with detailed descriptions of components of typical exterior wall assemblies, please refer to the following drawings that have been included in the Drawings Package provided with this submission:

- A5.0100 Envelope Details; and
- A5.0101 Envelope Details.

Above-Grade Wall Assemblies

The typical exterior walls are being designed with a variety of cladding types (primarily metal) on thermally efficient clips attached through the insulation, spaced to create a 'rain-screen' cavity. The rain-screen cavity mounted cladding and insulation will be attached over an exterior GWB; with an air, vapour and moisture barrier adhered to the outside face, all on steel stud back-up walls with gypsum interior finishes.

The exterior insulation in these walls will be semi-rigid, reflecting Code non-combustibility requirements, as well

as improving long term performance by removing the risk of heat-aging degradation behind the metal claddings. Thermal insulation performance will be to meet energy model requirements. Placing the insulation to the exterior of sheathing and the AVB membrane is preferable from a building science point of view, as it removes the risk of condensation forming in the wall assemblies (and the consequent organic growth risks), in the variable, but often high humidity environments of a hospital. Leaving empty stud spaces in these walls also provides for flexibility in future relocation of services.

In locations where the concrete shear walls are to be located on the building exterior, the assemblies will be similar to the typical wall described above; with membrane, insulation and cladding to the exterior of the concrete. Having the concrete structure all within the insulated enclosure provides for more stable performance, and creates a more thermally efficient enclosure.

Below-Grade Wall Assemblies

Below Grade wall assemblies will be designed to prevent moisture ingress into occupied spaces or habitable areas, including parking levels below grade, and be comprised of a continuous waterproofing membrane. The below-grade waterproofing protection system will meet the requirements of the City Ground Water Management Bulletin effective July 11, 2018, last amended April 20, 2020. Additionally, the waterproofing membrane system will provide a minimum 10-year leak-free performance warranty.

Roof Systems

The 'base' assembly will have a fully adhered SBS modified bitumen membrane applied directly onto the structure, a polystyrene sloped insulation package to create the roof slope, polyisocyanurate insulation (for the primary thermal resistance) applied over that, with protection board and a 2-ply SBS modified bitumen primary waterproofing membrane applied on top. Having a fully adhered membrane as the vapour barrier at the base of the assembly allows for positive lapping upturns at all the edges of the assembly, to seal water from penetrating the insulation, reducing the risk of lowering its insulating value and reducing its service life. The 'typical' polyisocyanurate insulation will be installed as the top insulation layer, as it is the most dimensionally stable insulation product, resulting in less movement stress and wear of the top waterproofing membrane. The choice of a 2-ply modified bitumen membrane is appropriate in our climate, particularly given the numerous roof penetrations that will need to be sealed at the top of this building. Penetrating elements will be sealed using liquid applied modified polyurethane or methyl-methacrylate 'flashing' materials to seal against water penetration.

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The roofs for the building will all have a similar base assembly, with differing additional components installed over top, for the different roof types.



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65 Building Envelope

On top of the base assembly, there will be areas of accessible patios, created by adding concrete pavers on adjustable pedestals over the base roof assembly (where patios are over unheated space below; the base assembly will be modified, removing the 'typical' insulation). Green roof areas will be installed over the 'base' assembly; either as mounded soil for 'intensive' growing, or in tray systems for 'extensive' green roofs; all with drain mats at the base of the systems to protect the roof below, and to act as water reservoirs for the plants.

At exposed Civic Plaza, sidewalk and road surfaces over the parking garage below, there will be uninsulated systems, with 2-ply SBS modified bitumen membranes adhered to the sloped structure, with protection board and drain mat (connected to the lower level of bi-level drainage). The paving system above that (with local steps and/or depressions for planting), will be cast over the protection board.

Roof assemblies will comply with the RCABC Guarantee Corporation's latest standards and requirements for a ten (10) year Guarantee as published in the RCABC Roofing Practices Manual. The PCL Team will perform roofing guality inspections as required by the RCABC to obtain the RCABC warranty.

Exterior Finishes

The selection and configuration of exterior finishes will build on the team's weave concept to create a strong exterior expression to reinforce St Paul's identity, which is inspired by and reflects the healing traditions of Catholic faith-based healthcare and also reflects a commitment to Indigenous reconciliation recognizing that the Facility will be located on the unceded, ancestral and traditional lands of the Musqueam, Squamish and Tsleil-Waututh First Nations.

The expression will create an abstracted guilt that acknowledges the unique, individual Patient weaving them together as a holistic community and in so doing representing St Paul's as one of the foundation stones of Vancouver. Through User Consultation in design development, the selection of pre-finished metal cladding in profile and colour will be refined and finalized.

Soffits:

The 'base' structure for the canopies will be steel structure for long term durability and resilience. The pedestrian level canopies will be clad in metal panel similar to that utilized on the exterior wall assemblies for consistency of appearance. The proposed colour will be light grey to promote light reflectivity. The Main Entrance canopy soffit will be clad in 50 x 50 metal tube slots to signify and reinforce its prominence as the primary access point.

Glazing:

The glazing systems are being specified throughout to typically utilize 'curtain-wall' frame assemblies, even in 'punched window' locations. The advantages with this type of system are numerous. Curtain-wall frames are designed to have almost all of the aluminum structure to the interior (inside the line of the glazing and thermal break); increasing thermal efficiency, but also reducing thermal cycling of the frame, resulting in less movement at the gaskets, thereby increasing the durable service life of the assemblies.

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A variety of glazing types are included in the design, with an overarching goal of providing significant natural light and views to Staff, Patients and Visitors, while providing acoustic mitigation and environmental comfort. Glass Type EXT-1 will be provided for exterior glazing in higher risk areas and Glass Type EXT-2 will be provided for exterior glazing in lower risk areas. Specifications will be provided for exterior glazing in Secure Rooms. Type EXT-1 and EXT-3 will comply with 2000 ft-lb impact test as specified by New York State Office of Mental Health, Patient Safety Standards - Materials and Systems Guidelines and AAMA 501.8 Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications.

Material Board





C-1 PREFINISHED METAL CLADDING, SIMILAR TO AGWAY HF-12, LIGHT BROWN

PREFINISHED METAL CLADDING, SIMILAR TO AGWAY HF-12, CHARCOAL



PREFINISHED METAL CLADDING, SIMILAR TO AGWAY HF-12, LIGHT GREY



PREFINISHED ALUMINUM COMPOSITE METAL CLADDING SIMILAR TO ALUCOBOND, DARK GREY





C-3 PREFINISHED METAL CLADDING, SIMILAR TO AGWAY HF-12 NF, GREY METALLIC





GL-1 CURTAIN WALL SYSTEM / GLAZING



GL-2 CHAPEL GLAZING

LV-1 PREFINISHED METAL LOUVRE, LIGHT BROWN



PM-1 PREFINISHED CORRUGATED METAL SCREEN, DARK GREY



GS-1 GUARD SCREEN

CP-1





PREFINISHED CORRUGATED METAL CLADDING, LIGHT BROWN

PREFINISHED CORRUGATED METAL CLADDING, DARK GREY



CLADDING MATERIAL FOR CHAPEL, SIMILAR TO ECHELON MASONRY TRENDSTONE

Parking, Loading and Bicycle Analysis

The team proposes a different, and highly superior, site access and circulation concept for the New St. Paul's Hospital. Rather than orienting Healthcare Boulevard in an east-west orientation with slip ramps (providing access to underground parking) and roundabouts in the central median, Healthcare Boulevard is oriented north-south with easily accessible lay-by spaces on its eastern side and the Civic Plaza on its western edge.

The resultant is that the proposal will be the equivalent of approximately three lanes wide reducing potential for congestion, conflicts and improving wayfinding and Visitor orientation when compared to the 8-lane width and configuration previously contemplated.

The site access concept completely removes all staff traffic and most Visitor traffic from Healthcare Boulevard which creates a far more pedestrian-friendly frontage directly adjacent to the Civic Plaza.

Public And Staff Vehicle Access

Surface Access

- General public access to the Site will be provided from two locations: on New High Street at a new full movement signalized intersection with Healthcare Boulevard located approximately 95m south of Prior Street and on National Avenue at a new un-signalized full movement intersection located approximately 105m east of New High Street.
- The design ensures that drivers wishing to drop off passengers can do so easily by entering via National Avenue and entering the lay-by zone, then exiting via New High Street. Drivers who want to first drop off passengers before proceeding to park can easily do so by continuing north to enter the public parkade ramp to access the underground parking stalls without having to turn around or use the public roadway system. Drivers entering the public parkade area can do so directly from New High Street, without having to travel through the surface lay-by zone.

Site Access Concept



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New St.Paul's Hospital

- Staff access will be provided from National Avenue, at an ٠ unsignalized full movement driveway located approximately 30m west of New Local Street.
- The Emergency Department (ED) will have one drive by access on New Local Street serving both the ED pick-up/ drop-off zone and surface parking lot.
- The future CSRC building will have a single right-in/out ٠ access on the east-west segment of Healthcare Boulevard.
- The PCL Team's surface access design is easily understandable; all key wayfinding information for the general public to either parking or pick-up/drop-off facilities can be focused at the New High Street entry of Healthcare Boulevard and at the New High Street and National Avenue intersection, before entering the Site. Once turning onto the Site, there is only one other key decision point, at the internal stop-controlled intersection of Healthcare Boulevard and P1 Ramp.

Underground Access

- Two access points to the underground parking Facility are proposed from the surface level; one from the northern end of Healthcare Boulevard providing access for the general public and another from National Avenue, located near the southeast corner of the Site. This will give access for Staff to park on levels P2, P3 and P4. This separation of access is highly beneficial for Staff who are regular Site users, as they can quickly access the lower parkade levels without interfacing with general public users. Also, the general public is not significantly impacted by the high Staff demand periods during shift changes. Staff, who will be very familiar with the Site, will enter on a staff-only ramp shared by loading and service vehicles via the "back door" of National Avenue/New Local Street. In contrast, the "front door" on High Street will be easily identifiable as the primary access for the general public.
- (CSRC).



Healthcare Boulevard



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The Healthcare Boulevard parkade access will connect to Level P1 of the underground parking facility, which is generally planned to be used by the public (although also providing design flexibility to facilitate public circulation to lower parking levels should demand be required). Drivers will enter the P1 level and encounter a 3-way stop. Drivers turning left will be able to access the majority of public stalls with opportunities to turn south into several northsouth drive aisles. Drivers turning right will be able to access the Accessible Stall zone in the northwest corner of the parkade or short-term pick-up/drop-off accessible public stalls located directly next to the parking elevator cores.

• Level P1 also includes a potential future connection, via a concrete knock-out panel, to the underground parking facility for the future Clinical Support and Research Centre



Entrance to Visitor Parking

Parking, Loading and Bicycle Analysis



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Service Vehicles: Below Grade



Surface Access

A Service Yard will be provided at the surface level in the southeast corner of the Site, accessed via New Local Street to minimize conflicts with other traffic generated by the Site. This location also reduces noise and visual impacts on the adjacent residential community. The Service Yard and its driveway has been designed to accommodate the movements of WB-20 tractor-trailer originating from National Avenue that will service the bulk oxygen tank farm and the bulk oxygen connection at the building's exterior wall. In addition to WB-20 truck positions, the Service Yard accommodates various HSU vehicles to service other required facilities. All the service vehicle positions are designed to the required dimensions and do not overlap physically with any other service vehicle position.

The ramp to the underground loading zone is designed with 4.3 metre minimum height clearance for the largest anticipated WB-20 tractor-trailer vehicle and a width of 8.5m to accommodate two-way truck flow. For the upper section of the ramp, entering passenger vehicles turning into Staff Parking at Level P2 will be required to yield to southbound exiting trucks proceeding up the ramp, so that truck drivers will not be forced to stop on the 12.5% maximum gradient ramp.

The underground loading zone will accommodate all Clean and Soiled Dock trucks requirements. The Grease Trap Truck will be in an enclosure. The Sewage Pump Out truck is for emergency only.

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Underground Access

The Staff vehicle driveway on National Avenue. located near the southeast corner of the site and approximately 30m west of New Local Street, will also provide access to the underground loading zone.

The proposed driveway design will permit two-way non-conflicting flow for a WB-20 tractor-trailer and a passenger car. This condition is anticipated to be the most common conflict scenario and, therefore, the most appropriate design condition.

The driveway is proposed to be designed with curb returns rather than a driveway letdown to give positive guidance to drivers as recommended by TAC when higher volumes of large trucks are anticipated (Ref: TAC Geometric **Design Guide for Canadian Roads** (2017), Section 8.9.4)

HSU Grease Trap Truck Parking Energy Centre Service Vehicle Parking

Parking, Loading and Bicycle Analysis



Clinical Support: Below Grade



Surface Access

Healthcare Boulevard will have four designated positions for Hospital Transfer Vehicles, sized to accommodate the largest vehicle type (Accessible Bus) with required side and rear clearances.

Below Grade Access

Two Ambulance and three Hospital Transfer Vehicle (HTV) positions will be provided at the P2 level in an exclusive area. The Ambulance stalls will be sized to accommodate the largest (Type III) Ambulance and the HTV positions will be sized to accommodate an Accessible Bus. These vehicles will use the Staff parkade ramp and access point, after which they will encounter a T-intersection and turn right to enter this exclusive area. When exiting, these vehicles will leave via drive aisles in the P2 level.

The hearse sally port will be located in a discreet area within level P2 of the underground parkade with Direct Access to the morgue. Ambulance or hearse vehicles will be able to access the sally port via the drive aisles within P2.

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Emergency Vehicles Access (including ambulance, fire truck, police and MMU access):

Access to the Ambulance Garage will be from a driveway on Road A. Two police parking stalls and four Ambulance parking stalls will be provided on site immediately south of Road A. Ambulances entering the garage will proceed southbound to the overhead door to the garage. Once the overhead door is opened, ambulance drivers will continue southbound in the one-way drive aisle within the garage, then stop and back into a vacant ambulance stall. Ambulance drivers will exit the Site via a driveway on New Local Street. All six ambulance positions have been designed to accommodate the largest Type III ambulance with required clearances to open side and rear doors. Vertical clearance of 3 meters and 1.2m has been provided between each ambulance position.

A parking position for the Mobile Medical Unit (MMU) is provided to the east of the ambulance garage. Sufficient clearance is afforded to ensure the parked MMU will not impede entering or exiting movements from the ambulance garage.

Two police and two ambulance parking stalls are provided from a driveway on Road A to provide convenient access into the controlled access entry into the Stabilization Unit on the north frontage of the building.

Fire Truck access is accommodated via Healthcare Boulevard to the Main Entrance and should the fire department see the necessity for a second access point one can be provided, via New Local Street to the Emergency Department parking lot.

Emergency Vehicles Access: At Grade



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73 | Parking, Loading and Bicycle Analysis

Parking, Loading and Bicycle Analysis

Pedestrian and Cyclist Access

The design will significantly reduce pedestrian-vehicle conflicts, pedestrian crossing distances, and the visual impacts of the previously contemplated slip ramps within the public realm of Healthcare Boulevard. It will also facilitate much clearer and more legible wayfinding for all Site users.

The design measures already described to mitigate the volume of vehicle traffic on Healthcare Boulevard will mitigate potential conflicts with pedestrian flow from New High Street, National Avenue, the Civic Plaza, Thornton Park, the Main Street Skytrain station and elsewhere.

Access to the Cycling Centre will be via a dedicated bicycle elevator located on the central southern frontage of the Facility. This elevator will allow direct, convenient and high-quality access to the staff Cycling Centre and the indoor, short-term public bicycle parking spaces located on Level P1 of the underground parkade. The proposed bicycle parking access design eliminates the need for cyclists to share the parkade ramps with vehicles to access the underground bicycle parking facilities.

Routes to and from the entrance of the Cycling Centre from the adjacent City of Vancouver bicycle facilities will be well marked/signed on both city streets and within the Site itself. The elevator will be directly accessible to the westbound cycle track on National Avenue, and a marked/signed crossing of the sidewalk/Wellness Walk will be provided to manage conflict between pedestrians and cyclists. A mid-block crossing on National Avenue will be provided to the eastbound cycle track on National Avenue to support eastbound cyclists' entry to/exit from the Cycling Centre. This solution is considered superior to having a two-way cycle track along the south section of the plaza and building, as it will reduce cyclist conflicts with vehicles turning in/out of Healthcare Boulevard at the National Avenue access point.





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After Hours Site Access

After Hours Access

Based on The PCL Team's understanding of the Facility's operations, the Team has provided the following description of the after hours access however, it is expected that these assumptions will be refined through User Consultation post contract award.

Pedestrian Access

After hours, it is anticipated that public will be able to enter the Hospital from two locations; at the Emergency Walk-in entrance and the Main Entrance on Healthcare Boulevard. It is anticipated that the Security area on Level 1 will supervise the Main Entrance as well as any pedestrian traffic accessing the parking elevators.

Cyclist Access

It is anticipated that the vestibule to the Cycling Centre elevator on the south frontage of the building will be a controlled access door enabling staff to utilize the cycling centre after hours.

Public and Staff Vehicle Access

Surface Access

Public vehicles can utilize lay-by spaces on Healthcare Boulevard in order to pick up or drop off passengers using the Main Entrance.

Underground Access

Public vehicles will have access to the underground parking facility at the north end of Healthcare Boulevard. Public entering the Facility via the underground parking will arrive at Level 1 via the parking elevators supervised by the Security area.

From the driveway/ramp from National Ave., Staff vehicles will be able to enter parking levels P2, P3 and P4 via a controlled access gate at P2 level.





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5 New St.Paul's Hospital

Landscape Design

Strategy

The design provides an overall open space vision which support holistic healing – not only at the level of the individual but also through connections to the community and the land, while acknowledging the Site's history, culture, and ecology.

The landscape Design takes inspiration from the Owner's Catholic faith-based healthcare heritage dedicated to supporting and honouring a legacy of compassionate care and social justice.

Past - Relationship with the Land

"This ecologically rich Site was blanketed with thick eelgrass, plentiful clam beds and countless songbirds."

Once an intertidal landscape on the edges of False Creek, the land upon which the Facility will be built has a rich cultural and natural history. As part of a network of tidal fats and marshes, the Site provided a fertile and abundant ecology supporting First Nations. The landscape Design takes inspiration from what was - weaving together the past, present and future to create a healing environment that nourishes the mind, the body, and the spirit.

Present – Disconnect

The original shoreline which skirted the Site was erased just over 100 years ago when the False Creek Flats were infilled. From 1930 to 1986 a portion of the Site served Great Northern Railway's Terminal activities. In 2020, the Site remains locked in chain-link and barbed-wire, as a parking lot, completely disconnected and separate from its ecological history and community.

Future – A Healing Environment

The landscape concept is inspired by nature and seeks to heal the land through making visible cultural and natural history. The Design restores ecological health through embracing permeability in the landscape, creating natural habitat and establishing an urban canopy.

A therapeutic environment is created that not only fosters user health, but also focuses on healing the Site. House posts are prominently located as gateways, representing the four nations, four seasons. Ethnobotanical plantings provide connections to First Nations healing landscapes.

Biophilic design principles have been employed, and access to nature has been maximized to healing gardens for Patients, Visitors, and Staff. Diverse healing environments contribute to the creation of refective and active spaces, promoting wellness and offering therapeutic function at a variety of scales throughout the Campus.

The landscape is designed to be resilient and adaptive to a changing environment. The Design anticipates climate change, rising water levels, and fluctuations in rainfall intensity and events through an on-Site water retention strategy and focuses on landscapes which are drought-tolerant and lowmaintenance.

The landscape is informed by evidence-based research that recognizes the value of access to nature in patient healing.

Physical Support

Movement and exercise are important aspects of rehabilitation and promotion of whole health and wellness. The Campus landscape provides elements that promote movement and exercise, including encouraging the use of sustainable modes of transportation, creation of a Campus with bike and pedestrian friendly streets, and providing opportunities for a range of physical activity, motion and movement.

The Wellness Walk links the entire Campus and promotes pedestrian movement while offering opportunities to rest along the way. The Cycling Centre and separated bike route network makes arrival by bicycle a welcoming experience. In addition, gardens on Level 2 provide opportunities for physical therapy and rehabilitation.

Social and Emotional Support

Social and emotional supports are critical to the health and well-being of Patients, Visitors and Staff. The Campus Design provides opportunities to meet with family and friends in private, and also supports larger social events that contribute to building community connection.

The Civic Plaza can hold events such as the Annual Lights of Hope Campaign and potential farmer's or night markets. The Level 3 Critical Care Garden and Level 8 Mental Health Gardens provide opportunity for patients to find social and emotional support.

Spiritual Support

Spiritual connection is best emphasized through symbolism in the landscape. The Spiritual Garden employs the motif of the labyrinth – to represent the healing journey.

The Traditional Medicine Garden uses ethnobotanical plants to reinforce a connection to the land. The Chapel has a prominent façade directly adjacent to Healthcare Boulevard and the Healing Corridor – serving to link the building and the landscape.

Landscape Plan

A focal point of the Landscape Plan is evident in the expression of a vibrant and welcoming public realm that weaves together the Civic Plaza, Healthcare Boulevard, Healing Corridor and Wellness Walk. While the Civic Plaza reinforces the arrival experience, Healthcare Boulevard creates a central pedestrianized spine for access to the Facility. The Healing Corridor provides opportunities for refection, respite and movement.

PROGRAM LEGEND

2 - HEALTHCARE BOULEVARD 3 - HEALING CORRIDOR

6 - TRADITIONAL MEDICINE GARDEN 7 - MENTAL HEALTH COURTYARD

8 - THERAPY ROOF GARDEN (LEVEL 2) 9 - CRITICAL CARE GARDEN (LEVEL 3) 10 - MENTAL HEALTH INPATIENT UNIT EXTERIOR COURTYARD (LEVEL 8)

PUBLIC REALM

1 - CIVIC PLAZA

4 - WELLNESS WALK

COURTYARDS 5 - SPIRITUAL GARDEN

INTENSIVE ROOFS



Note: East Layby lane on Healthcare Blvd is part of the CSRC Phase 1b Development and only shown for Masterplan review; this portion of Healthcare Blvd is not part of Hospital Phase 1a Development.

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77 | Landscape Plan

Landscape Design

Civic Plaza

The Civic Plaza takes inspiration from the tidal movement of water that once was a part of the natural landscape. The idea of 'ebb-and-fow' is expressed through the form of planted islands creating enclosure along the east edge of the Civic Plaza. The planting palette consists of coastal riparian and foreshore vegetation to support the overall landscape thematic.

The Civic Plaza serves as a gateway to the Campus with a focus on creating an arrivals experience and welcoming to the Campus. The Civic Plaza connects Thornton Park to the southwest, the Future CSRC building, and the Facility. The layout of open space and planting emphasize sight lines towards the main entrance of the Facility and to the Chapel. Four house posts line and mark the journey to the Facility. Paving takes textural cues from basket-weave patterns and raised planter edges provide seating opportunities for social gathering or refection during less busy times.

Features include:

- Adaptable, flexible space for staging events (Lights of Hope,
- fundraisers, food trucks and markets);
- · Weathered steel planters with surface mounted timber seating; and
- South-facing warm space supporting user comfort.

Lights of Hope

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Healing corridor at Healthcare Boulevard

Civic Plaza at Healthcare Boulevard

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FINISH AND CONCRETE	FOOTING)		_	
VEHICULAR BOLLARDS / CROSSING AND DROP-O (GALVANIZED STEEL W/ FINISH AND CONCRETE	AT MAIN ENTRY FF AREAS POWDERCOATED FOOTING)	7	_	
7CM. CALIPER CANOPY 1 CONTINUOUS SOIL TREM	TREE IN 900mm DEPTH			10M
WEAVE PATTERN	L TYP.			
	m DEPTH COMPACTED	GRANULAR		
	EL FRAME (~12M O.C.)	N. M. K. M.	- 1	
	STONE PAVING ON 150m CIP CONCRETE SIDEWAI WEAVE PATTERN COMPACTED SUBGRADI 7CM. CALIPER CANOPY CONTINUOUS SOIL TREN VEHICULAR BOLLARDS / CROSSING AND DROP-C (GALVARZD STEEL.W) FINISH AND CONCRETE	STONE PAVING ON 150mm DEPTH COMPACTED CIP CONCRETE SIDEWALK W/ SAWCUT WEAVE PATTERN COMPACTED SUBGRADE, TYP. 7CM. CALIPER CANOPY TREE IN 900mm DEPTH CONTINUOUS SOIL TRENCH VEHICULAR BOLLARDS AT MAIN ENTRY CROSSING AND DROP-OFF REAS (GALVANZED STEEL W/ POWDERCOATED FINISH AND CONCRETE FOOTING)	STONE PAVING ON 150mm DEPTH COMPACTED GRANULAR CIP CONCRETE SIDEWALK W/ SAWCUT WEAVE PATTERN COMPACTED SUBGRADE, TYP. 7CM. CALIPER CANOPY TREE IN 900mm DEPTH CONTINUOUS SOIL TRENCH VEHICULAR BOLLARDS AT MAIN ENTRY CROSSING AND DROP-OFF AREAS (GALVANZED STELL WY POWDERCOATED FINISH AND CONCRETE FOOTING)	STONE PAVING ON 150mm DEPTH COMPACTED GRANULAR CIP CONCRETE SIDEWALK W/ SAWCUT WEAVE PATTERN COMPACTED SUBGRADE, TYP. 7CM. CALIPER CANOPY TREE IN 900mm DEPTH CONTINUOUS SOIL TRENCH VEHICULAR BOLLARDS AT MAIN ENTRY CROSSING AND DROP-OFF AREAS (GALVANZED STEEL WY POWDERCOATED FINISH AND CONCRETE FOOTING)

Healthcare Boulevard

Healthcare Boulevard is lined with the London Plane Tree - also known as the "Tree of Hippocrates" for its role in providing shade where the "Father of Medicine" taught. Its use symbolizes healing and a nurturing connection between Staff and Patients.

Healthcare Boulevard functions as a primary arrival, pick-up and drop-of area, with public realm connection to the Civic Plaza, Healing Corridor, Wellness Walk and the Facility entry. The Design enriches the public realm through a seamless and integrated vehicle, cycling and pedestrian environment. Measures to slow traffic and ensure pedestrian safety include concrete vehicular paving, bollards at key crossings and curb let-downs, raised pedestrian crossings, universal accessibility, and a clear hierarchy of spaces indicating pedestrian right-ofway.

Features include:

- Adjacency to the Wellness Walk;
- Sight lines towards the north shore mountains; and
- Covered canopy walkway along the Hospital frontage.

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Healing Corridor

The Healing Corridor consists of two distinct spaces that are restorative, offer respite, and allow access to nature. They are inward-oriented, semi-enclosed and provide shelter and privacy for individuals or small groups of people.

The public Healing Corridor is connected to the main Civic Plaza offering places to sit, eat lunch, or gather in small groups or as individuals. The forms of meandering pathways and planted islands are inspired by the intertidal theme. A central space allows for the opportunity for public art placement.

The semi-public Healing Corridor is sheltered by the Facility and directly connected to the Spiritual Garden. It can be accessed from the Main Lobby/Cafeteria and through a secure gated entry from the Wellness Walk of National Avenue. This space offers fixed table seating for 60 people. A shade-forest planting palette reinforces themes of restorative wellness.

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PROGRAM LEGEND

- 1 LABYRINTH-INSPIRED SPIRITUAL GARDEN
- 2 CONTINUOUS LOOPED WALKING CIRCUIT
- 3 SEATING AREA (WOOD TRELLIS WITH STEEL FRAME
- 4 PUBLIC ART OPPORTUNITY (THREE PIECES BY OWNER)
- 5 PLANTED LANDFORM AND ROCKWORK
- 6 OUTDOOR EATING AREA (CAPACITY 60+ PEOPLE)

5

Landscape Design

Wellness Walk

Woven throughout its 800-metre length, the Wellness Walk references the historic shoreline and cultural history of the Site. Key nodes at prominent corners and gateways offer opportunity for public art placement and interpretive installations.

A restorative planting approach inclusive of ethnobotanical plantings provide shade comfort and shelter. The Design encourages movement and social interaction while minimizing pedestrian, bicycle, and vehicular conflict through creating separation between modes of travel.

Concrete paved surfaces are patterned as distinct from the City sidewalks.

The Design connects to the City street boulevard and bicycle path network and provides connections to the entire Campus, including a shared link at Healthcare Boulevard to the west and Trillium Park to the east. The south extension allows for direct access to the Healing Corridor and Spiritual Garden while the north face provides more tree canopy coverage with a planted buffer at the Building edge.

Features include:

- Typical width of 4.9 metres;
- · Meets universal Design standards for accessibility; and
- Seating areas at 12 metre spacing.

Node Concept

5 - BIKE LANE

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6 - POLICE AND AMBULANCE SHARED PARKING

Wellness Walk & Offsite - North

Wellness Walk & Offsite - South

Wellness Walk Concept Diagram

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PROGRAM LEGEND 1 - WELLNESS WALK NODE

- 2 WELLNESS WALK
- 3 BIKE LANE
- 4 SCREENING AT HEALING CORRIDOR
- 5 CYCLING CENTRE ENTRY
- 6 ACCESS TO U/G PARKING

New St.Paul's Hospital

Visual Interactions

Visual distractions take the form of accessible and inaccessible therapeutic gardens which provide connection to nature and offer healing for the mind, body and soul.

The more private Patient, Visitor and Staff-oriented gardens are located on atrium courtyards and roof decks. These spaces provide opportunities for respite and access to natural views and outdoor landscapes. Clare Cooper-Marcus, in her book titled 'Healing Gardens: Therapeutic and Design Recommendations' notes that "connections to nature can provide relief, comfort and hope to patients in even the most difficult of circumstances." This is accomplished by providing refective and active spaces, promoting wellness and offering therapeutic functions of a variety of scales throughout the Campus.

Spiritual Garden

This garden aspires to be the healing of the spirit through creation of calm, tranquil and meditative spaces. The garden aims to be an inspiring, all-faith based space in which people from any spiritual background will feel welcomed. The Spiritual Garden employs a large-scale 'labyrinth', as a metaphor for the journey of wellness. Rockwork and a BC Coastal Forest inspired plant palette create enclosure and separation from the adjacent Healing Corridor.

Traditional Medicine Garden

The Traditional Medicine Garden is about hope and inspiration, providing a connection to the earth through planting that is ethnobotanical. It is a healing garden - filled with emotion and familiarity where taste, scent, and touch are emphasized. The use of rockwork and weathered cedar pickets provide shelter, privacy and enclosure for users.

PROGRAM LEGEND

- 1 WALKWAY CONNECTED TO ALL NATIONS SACRED SPACE
- 2 SEATING AREA WITH TRELLIS
- 3 UNDERSTORY OF TRADITIONAL HEALING PLANTS (SPECIES TO BE FINALIZED WITH FIRST NATIONS CONSULTATION
- 4 FEATURE TREES (SPECIES TO BE FINALIZED WITH FIRST NATIONS CONSULTATION)
- 5 SCREENING
- 6 STORAGE FOR ACTIVITY AND MAINTENANCE EQUIPMENT FINAL SIZE, FINISH AND LOCATION TO COMPLIMENT LONGHOUSE FACAD

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Landscape Design

Landscape Design

Stabilization Unit Courtyard

The Stabilization Unit Courtyard presents lush views toward an archetypal West Coast Forest Floor plant community - seamlessly blending the interior and exterior environments. Rockwork creates outcropping for diverse planting types and evergreen trees add character and reinforce the creation of a forest environment. The courtyard allows filtered light to penetrate the ground plane, inspiring a feeling of awe and magic

Therapy Roof Garden

The Therapy Roof Garden offers outdoor space for Patients with physical challenges to rehabilitate and heal the body through therapeutic exercise and movement. The garden is also accessible to Staff and Visitors. Located on level 2, the roof deck includes a fully accessible, looping path offering views to the Civic Plaza, Pacific Central Station and Thornton Park. A variety of tactile surfaces including artificial turf, stepping stones, sloped resilient safety surfacing, and pavers offering variety and challenge to Patients during the rehabilitation process.

Social interaction is encouraged through outdoor seating for individuals or small groups to gather, rest, eat or just enjoy the view. Enclosed by a continuous security glass screen, low planting is provided along the edges of the roof decks to create enclosure and safety.

PROGRAM - THERAPY

1 - THERAPY ZONE RIETY OF TACTILE SURFACE TREATMENTS

2 - CIRCULATION SPACE (MIN. 1.5M WIDE ROUTE) (CONTINUOUS LOOPING PERIMETER PATH

- 3 COVERED SEATING AREA (FIXED BENCHES, TABLES AND CHAIRS) (ACCOMMODATES GROUPS OF 4-8 PEOPLE
- 4 EXTENSIVE PLANTING (GRASS, BULB: SEDUM MIX
- 5 GLASS SECURITY SCREEN

NOTE: TACTILE SURFACES AT THERAPY ZONES TO BE FURTHER DEVELOPED DURING DETAILED DESIGN WITH OWNER.

HARDSCAPE - ROOF DECKS MODULAR PAVER SLABS RESILIENT SAFETY SURFACE **INCLINED SLOPE, RUE** ARTIFICIAL TURF STEPPING STONES SOFTSCAPE - ROOF DECKS

INTENSIVE PLANTING (WITH METAL EDGING) EXTENSIVE PLANTING (WITH METAL EDGING)

RAISED GARDEN PLANTER

New St.Paul's Hospital

Critical Care Garden

The Critical Care Garden offers an opportunity for Patients and Families to find an escape, refect while walking an oval paving path, and breathe fresh air in the midst of trying and life-changing experiences. The space is sized to accommodate patients on beds and wheelchairs with medical gas connections provided. Seating is oriented towards views of the Traditional Medicine Garden below. The space is enclosed by a continuous glass screen for safety and security.

Mental Health Inpatient Unit Courtyards

The Mental Health Inpatient Unit Courtyards create landscapes that offer calm and nourishment of the mind, body and soul. Located on Level 8, these spaces are designed to build community and social support. Collectively they provide opportunities for horticultural therapy, small gatherings, quiet contemplation, walking loops, exercise and therapeutic activities. Surfaces include artificial turf, level resilient surfaces, and pavers.

The courtyards face west, with views of sunsets across False Creek towards Downtown Vancouver. Planting areas are mounded to provide soil depths for trees and create more visual interest. Raised agricultural planters are designed to allow for universal access and a diversity of seating opportunities are made available throughout the four spaces. A continuous security glass screen provides enclosure.

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PROGRAM - CRITICAL CARE UNIT

- 1 SEATING AREAS (FIXED BENCHES, FEATURE TRELLIS) (ACCOMMODATES GROUPS OF 4-0 PEOPLE)
- 2 CIRCULATION SPACE (MIN, 1.5M WIDE ROUTE) (CONTINUOUS LOOPING PERIMETER PATH)
- 3 INTENSIVE PLANTING
- 4 GLASS SECURITY SCREEN PER ARCHITECTURE

NOTE: MEDICAL GAS CONNECTIONS TO BE PROVIDED.

HARDSCAPE - ROOF DECKS

MODULAR PAVER SLABS RESILIENT SAFETY SURFACE

ARTIFICIAL TURF STEPPING STONES

SOFTSCAPE - ROOF DECKS

	INTENSIVE PLANTING (WITH METAL EDGING)
	EXTENSIVE PLANTING (WITH METAL EDGING)
11	RAISED GARDEN PLANTER (HORTICULTURAL THERAPY)

PROGRAM - MENTAL HEALTH

- 1 FLEXIBLE USE SPACE (USED FOR GATHERING, ACTIVITIES, EXERCISE)
- 2 CIRCULATION SPACE (MIN. 1 5M WIDE SLIP-RESISTANT ROUTE) (CONTINUOUS LOOPING PERIMETER PATH
- 3 SEATING AREA
- (FIXED BENCHES, TABLES AND CHAIRS) (ACCOMMODATES GROUPS OF 1-2 AND 4-6 PEOPLE)
- 4 INTENSIVE PLANTING (GROUNDCOVERS, SHRUBS, TREES)
- 5 GLASS SECURITY SCREEN
- 6 PRIVACY SCREEN (LIGATURE RESISTANT AND NON-CLIMABLE)
- NOTE: ALL SEATING AND PLANTING ELEMENTS WILL BE FIXED. ALL EDGES WILL BE ROUNDED TO A MINIMUM BMM RADIUS.

HARDSCAPE - ROOF DECKS

MODULAR PAVER SLABS (UNIT PAVERS ON PEDESTALS)
RESILIENT SAFETY SURFACE (INCLINED SLOPE, RUBBER)
ARTIFICIAL TURE

STEPPING STONES

SOFTSCAPE - ROOF DECKS

- EXTENSIVE PLANTING
- RAISED GARDEN PLANTER

Landscape Design

Landscape Design

Design Rationale

Connected Public Spaces

Spaces for meeting, socializing and finding respite or escape are provided throughout the Health Campus. Public realm, internal courtyards and roof gardens offer opportunities for patients, staff and visitors to meet, socialize, meditate and find respite. These spaces have been located to provide human comfort, maximize views, and support access to nature.

Health Campus Design

The landscape Design responds to the requirements of the Urban Design Guidelines, by achieving the following Principles for Public Open Space:

- Legibility and Wayfinding;
- Connectivity and Permeability;
- Diversity;
- Uniqueness and Vibrancy; and
- Sustainability and Resiliency.

"The overall public realm...should be based on a legible, integrated, permeable and accessible network of diverse open spaces that provide robust healing functions that create a distinct sense of place while reflecting the unique history of the Site and adjacent community."

Legibility and Wayfinding

The Public Realm vision is based on embracing a connection to the adjacent urban fabric. As the largest public open space, the Civic Plaza provides a welcoming arrivals experience to the Health Campus. It's triangular shape provides southern exposure and offers a place for gatherings and celebration. Edge treatments in the form of raised planters and seating edges provide enclosure on the south-eastern edges. The layout and orientation are designed to intuitively direct people towards the main entry in an effort to make wayfinding easy for Visitors, Staff and Patients. The north-south alignment for Healthcare Boulevard maximizes a corridor for sunlight through the Campus and provides clear sight lines to the mountains, along its entire 150 linear metre run. Finer open spaces are proportioned to their intended use - for example the Healing Corridors are sheltered by buildings and plant massing to provide separation from more active spaces.

Connectivity and Permeability

A hierarchy of public open spaces are provided, which are fully integrated to the surrounding urban fabric. Healthcare Boulevard functions as a dominant primary circulation route for vehicles, pedestrians and cyclists to enter the Facility. The Wellness Walk provides a secondary link around the entire Site and affords more opportunity for calm and shelter in comparison to Healthcare Boulevard. The Wellness Walk responds to urban adjacencies along National Avenue, Thornton Park and Strathcona to the north. A universal and accessible Design throughout the Campus contributes to a strong pedestrian circulation network which is separated

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from vehicles and cyclists. Patients and Visitors can walk to neighbouring parks (Thornton and Trillium), a variety of public open spaces (Civic Plaza, Healing Corridors), or enjoy activity walking the 800 linear metre Wellness Walk. Principles of CPTED are considered – especially with respect to maintaining visibility and sight lines, appropriate lighting, and animation of spaces to encourage use.

Diversity, Uniqueness and Vibrancy

The Public Realm plan creates a diversity of therapeutic landscapes including active and passive uses. Opportunities for quiet refection is provided in the form of sheltered seating. More social spaces are found in the open seating concept of the Civic Plaza. Outdoor dining is provided at the Healing Corridor of National Avenue. Placemaking and identity are expressed through Design elements such as 'woven' surface treatments and estuary-themed plantings. The furniture palette is unified through the use of natural materials such as weathered steel, and wood. Roof Level gardens are Patientoriented but allow for Visitor and Staff enjoyment as well. Views towards the north-shore and False Creek are emphasized and extensive roof gardens are visible from Patient rooms.

Sustainability and Resiliency

Principles of sustainability and resiliency are built into the fabric of landscape Design and reinforce the goal of healing the land. A restored tree canopy not only helps to mitigate the urban heat island effect but also provides shade and shelter for Visitors, Patients and Staff. A coordinated stormwater management strategy improves Site permeability allowing the land to absorb and infiltrate rainwater in reference to its original condition on the edge of the shoreline. The City of Vancouver stormwater management targets are met, including the capture and infiltration of the first 24mm of rainfall per day.

Meaningful planting Design with emphasis on low-maintenance

drought tolerant native plantings; using medicinal and ethnobotanical plants; improving habitat that encourages birds and pollinators; and using plants that provide therapeutic benefits for all. Roof level intensive and extensive green roof gardens provide access to nature contributing to therapeutic and environmental health.

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Landscape Design

Stormwater Strategy

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Vegetative Cover

Extensive Roof Gardens

Extensive roof gardens take the form of a sub-alpine meadow landscape with plants of diverse colour, forms and textures. The extensive roof gardens are located on Levels 2, 5, 6, 8. These inaccessible gardens are strategically sited to maximize healing views towards natural landscapes from Patient rooms. The roof gardens will make use of the LiveRoof Maxx 200 mm depth plant tray (or equivalent) with a custom sedum, bulb and grass mix.

Intensive Roof Gardens

Intensive roof gardens are accessible and programmed for use by Patients, Staff, and Visitors. They are located on Levels 2, 3, and 8. The planting depth varies from 300-900mm to allow for healthy growth of BC coastal groundcover, shrub, and small trees.

Landscape Design

Outdoor Lighting Plan

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Night View Renderings with Lights of Hope Installation

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Circulation & Wayfinding

Wayfinding Concept

Interior Design Theming to support Wayfinding Principles

The team has developed a strategy to break down the hospital into smaller scaled spaces to assist Patients and Visitors in navigating to their final destination. This is achieved by giving each department its own unique identity and/or theme.

There will be four primary themes throughout the Facility - Mountain, Beach, Water, Park/Forest - to reflect the rich, natural views and destinations of Vancouver which will be applied to departments throughout the Facility. Each space/ department will have a specific destination assigned to it, for example, Beach: Kits Beach or Park/Forest: Snug Cove.

The team intends to be creative in developing the naming of departments, for example, the NICU could be name Snug Cove or the Clinical Operations Centre could be named The Chief. These names bring a sense of familiarity and connection to Patients and Visitors making the wayfinding process easier and less daunting to them.

The interior design concept will include vinyl applied graphics that will be selected per department and based on the theming within each space. The graphics will provide texture and context for the space and will be coordinated with the colour palettes which are applied throughout the Facility.

Memorable Architecture

Along with clear and well-designed signage, the wayfinding system also uses the building architecture to help Visitors find their way. For example, memorable landmarks within the design create moments and memories that Visitors will use to retrace their steps.

Similarly, a small moment of an exterior view like the North shore mountains or the Traditional Medicine Garden shown to the right can immediately orient a Patient and Visitor as to their location within the Facility. These sorts of techniques were used throughout the Facility.

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Site Circulation: Vehicles

Vehicle Circulation

Vehicles will arrive on Campus entering through five gateways. Each gateway will be identified based on the four cardinal points of north, south, west and east. Depending on which service is required, all Visitor traffic will be directed towards the east or west side of the Facility only.

Emergency Department Traffic

Anyone requiring a longer than anticipated stay after dropping someone off at the Emergency Department can follow directional signs to Visitor parking located on the west side of the Facility.

All Staff and Non-Visitor Traffic

All Staff, delivery drivers and contractors will be directed to the south side of the hospital to enter Level P2 of the underground parkade. All paramedics and law enforcement will be directed North to where the ambulance garage and MHSU entrances are located.

Site Circulation: Pedestrians

Pedestrian Circulation

A network of pathways for pedestrians provide access around the entire health campus along with vital links to Main Street, Chinatown and the residential neighbourhood of Strathcona. Campus map directories will be strategically positioned at key decision points to help with Site orientation and circulation. Directional signs will offer navigation to major destinations and transit services. A large Civic Plaza creates separation from vehicle circulation for pedestrians and provides a very accessible link from the West Gateway to the Healthcare Boulevard and Main Entrance of the Facility.

Naming conventions to help identify entrances will be based on the four cardinal points of North, South, West and East. This will help pedestrians navigate the campus by referencing the natural geography of Vancouver. The North shore mountains situated North of the city are familiar landmarks for many residents and will help orient people while on the Campus.

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3 Circulation & Wayfinding

Signage Site signage strategy

Campus Gateways

All Campus gateways will be identified by a large, freestanding illuminated pylon. These pylons will have directions to major destinations around the Health Campus, such as Emergency Staff and Visitor parking, and Main Entrances of the Facility. Furthermore, highly visible hospital identification signs (H symbol) mounted on all four sides of the Facility will inform Visitors (vehicular and pedestrian) they are approaching the Facility.

In addition to deliberate wayfinding signage there are also many architectural features that assist in wayfinding such as the Chapel, entrance canopies, and the deliberate direction of paths and walkways.

LEGEND SIGN TYPE

H	Hospital ID (Illuminated Flex Face)
BI	Building Identity (Illuminated Channel Letters)
SE	Campus Gateway / Site Edge Markers (Illuminated Pylon)
E	Building Entrance ID (Illuminated Channel Letters)
E	Emergency Department ID (Illuminated Channel Letters)

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The following features are located on the west side of the campus and will assist Visitors with orientation and navigation towards entrances and services :

- 1. Large, freestanding illuminated pylon identifying Gateway and Campus arrival;
- 2. Civic Plaza provides clear and open sight lines of the Facility's West façade and Main Entrance;
- 3. Illuminated channel letters on the West façade identifying the name of the Facility as well as a cross located visibly on the upper elements of the Facility, which is visible from a distance and promotes the Owner's Catholic Identity.
- 4. Freestanding, illuminated directional signs will guide vehicular traffic to enter the Healthcare Boulevard from the South for convenient access to drop-off locations and entrance to Visitor parking.

Signage

Site signage strategy

Landmarks

Memorable elements visitors use to orient themselves relative to the hospital. The chapel is a memorable landmark for this hospital.

Trailblazer Signs

Hospital identification signage on municipal roads.

Hospital Identification

Identifies the hospital from very long distances.

Gateway Identification

Freestanding pylon identifying the Medical Campus.

Directional Sign Types

Directions to parking, building entrances and access to transit.

Building Entrance Identification

Identifying access points into the hospital.

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ELEVATION VIEW - FACING WEST

ELEVATION VIEW - FACING EAST

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New St.Paul's Hospital

Interior signage strategy

Facility colour code

Colour coded signage to differentiate east zone and west zone of the facility.

Interactive Kiosks

Directions should be provided immediately after registration. Kiosks are located in the Main Lobby and East Entrance.

Digital Signage

From a wayfinding perspective digital signage could display directional, directory, and department ID information and would be placed in public corridors, near building and department entrances.

Static Maps and Directories

Helps visitors understand where they are

within the hospital and find out how to reach their destination These sign types are placed near primary entrances and elevator lobbies.

Directional Signage

Sign type that helps visitors navigate towards a destination. Directional signs are positioned along major paths of travel and junctions.

The final phase of wayfinding consists of identification sign types that confirm a visitor has found their destination.

Destination Identification

Sign types that identify you have arrived at a unit, department or amenity. These can range from standard graphic panels to dimensional letters.

Room Identification

Signs identifying a permanent room or space must be mounted on the wall next to the door.

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New St.Paul's Hospital

Appendix:

- 1. ACOUSTICAL REPORT
- 2. ARBORIST REPORT
- 3. TDM PLAN
- 4. RAINWATER MANAGEMENT PLAN
- 5. GEOTECHNICAL REPORT
- 6. HYDROGEOLOGICAL STUDY
- 7. CLIMATE HAZARDS, VULNERABILITY AND RISK ASSESSMENT REPORT
- 8. CODE REPORT
- 9. HEATING AND CHILLED WATER SCHEMATIC
- **10. PRELIMINARY TRAFFIC OPERATIONS ANALYSIS**
- 11. ZERO WASTE PLAN
- 12. PRELIMINARY SEISMIC BUILDING PERFORMANCE ASSESSMENT REPORT
- 13. ENERGY MODELING REPORT
- 14. THREAT AND RISK ASSESSMENT & CPTED REPORT
- 15. GFL ENVIRONMENTAL HAULING LETTER
- 16. TREE MANAGEMENT PLAN
- 17. PUBLIC ART PLAN
- 18. RTLC LETTER OF UNDERTAKING

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