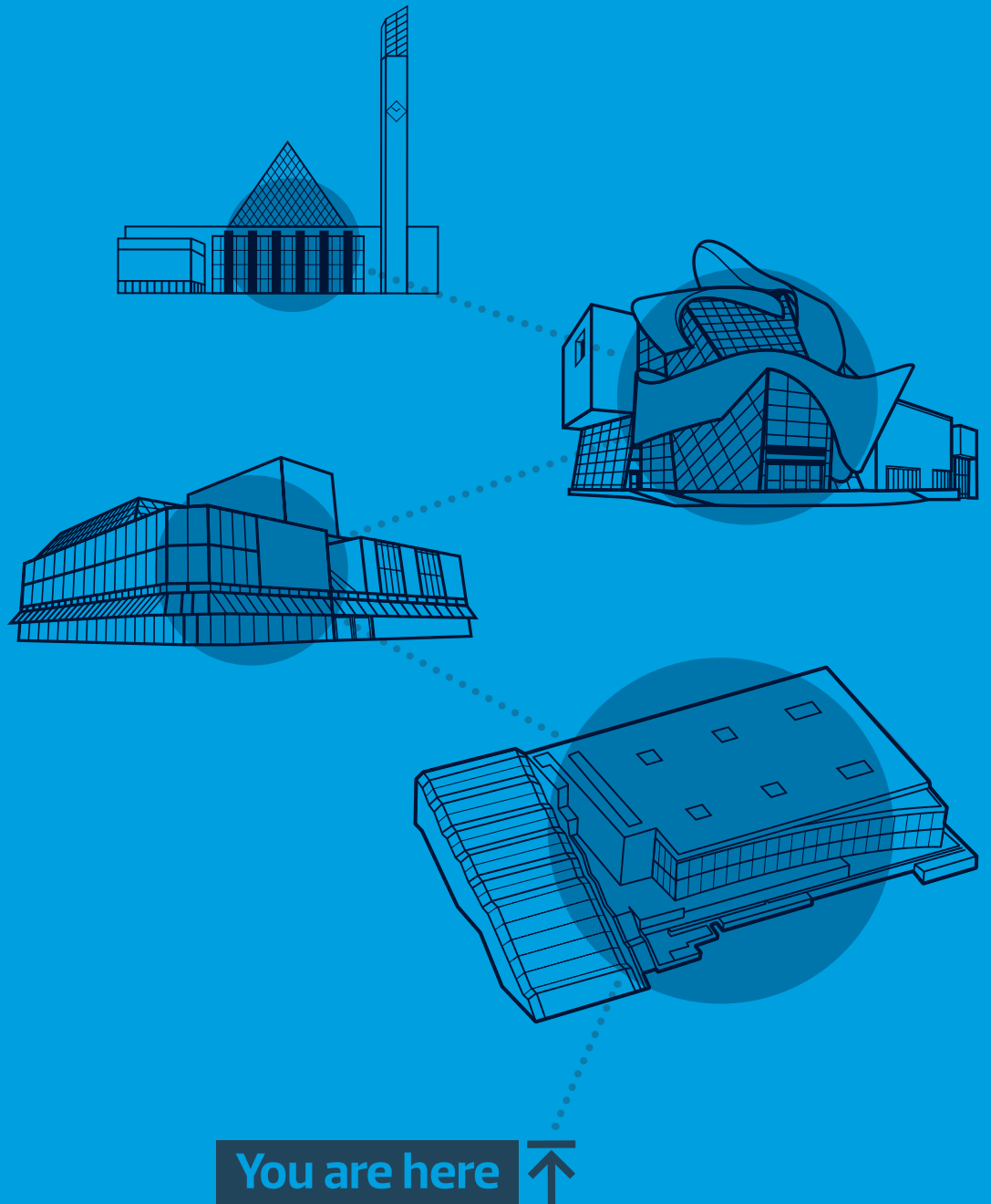


The City of Edmonton
Pedestrian Wayfinding Design Standard

Pedway Concept Plan

January 2016



Contents

1 Introduction	3	7 Product design	24
Overview	4	Existing products	24
		On-street concepts	28
2 Principles	5	Materials palette	29
		Pedway product design	30
3 Typology	6		
Proposed typology	6	8 Wider applications	33
On-street support	7	Printed Pedway map	34
Connecting all the systems	8	Online Pedway map	35
		Pedway smartphone app	36
4 System identity	9		
A single system	9	9 Placement	37
A connected identity	10	Sign quantity estimates	37
One map base, two applications	11		
		10 Proposed next steps	38
5 Mapping	12		
Heads-up vs North-up	12		
Pedway map	13		
Pedway map exploration	14		
LRT Exit maps	17		
6 Signs	18		
Pedway Map sign	18		
Pedway Map sign – orientation options	19		
Pedway Map sign – optional directions	20		
Pedway Map sign – supporting information	21		
Pedway Directional sign	22		
Pedway Directional sign – layout options	23		

1 Introduction

Applied were asked to audit and review the existing Pedway wayfinding and present recommendations for updating the system.

In parallel to this, Applied are developing the Design Standard for an on-street pedestrian wayfinding system.

This document consolidates the strategic approach established in the Interim Pedway Report, and presents concept designs for a revised system that supports pedway connections in Downtown.

1 Introduction

Overview

Edmonton has very little pedestrian wayfinding available in the public realm.

Research and analysis set out in the Pedway Interim Report shows that the existing sign typology of the Pedway is not at fault, but the graphic information design and implementation are. Therefore a dramatic departure is not needed, but an improvement on what exists is.

At the same time, a new on-street pedestrian wayfinding system is being developed for Downtown that will provide a level of legibility of the city that hasn't been available before. On-street maps will show pedway connections between buildings, raising people's awareness. However, basic support is still needed internally.

The pedway connections are an integral part of the Downtown fabric and should be supported. However, similar systems from other cities such as Calgary and Toronto indicate similar problems in terms of wayfinding, but have not benefited from a coordinated approach to both internal and external wayfinding.

The City of Edmonton has a unique opportunity to design both on-street and Pedway systems to work together.

It is recommended that the on-street and Pedway systems dovetail both graphically and physically and that maps use the same base reference, but show different levels of detail depending on the location (interior or exterior).

Big picture

It is important to recognise that there is only so much that wayfinding can fix.

One of the major insights from the research is that the planning and architectural relationships of the pedway connections themselves is inconsistent, resulting in some difficult access points and poor line of sight.

There are opportunities to look at more significant structural reviews and policies on where future pedway connections are built, but this project focusses solely on wayfinding information.

Opening hours

In addition to structural considerations, the success of the pedway connections really lies in their availability.

Opening hours are a fundamental barrier to users. Unless a core opening time can be fixed and advertised consistently, users will be discouraged from accessing the pedway connections outside of the most basic business hours.

This fundamentally affects the graphic solutions and implementation strategy.

2 Principles

Insights from research and consultation have been distilled into the following principles, forming the design rationale:

Links not routes

The 'Pedway' is not a route network, it is a collection of many incidental pedway connections. Emphasise the links, not the routes.

On-street thresholds are not pedways

The current approach uses the pedway brand icon as a flag, indicating the building has one or more pedway connections to other buildings. However, the on-street thresholds themselves are rarely pedway connections and are usually just access to a building lobby. Pedway signs should only be used at pedway connections themselves.

The on-street system will indicate major building entrances, and show pedway connections between buildings. Existing pedway flags will therefore not be needed.

Emphasise the buildings

Emphasise the buildings so that users understand they are having to navigate different environments with multiple entry and exit points.

If user expectations are managed and they know they are entering different environments, then the lack of any heavily signed 'pedway' routes inside each building is not a surprise.

Inside and out

Whether the pedway wayfinding is developed alongside the on-street system or at a later stage, it should dovetail with the city wayfinding typology, graphically and physically.

Provide guidelines

Building owners need to be given consistent guidelines to implement their own wayfinding that connects with the citywide system. Terminology, icons and hierarchy should match, supporting seamless journeys regardless of brand.

It is impractical and undesirable to force heavy pedway 'route' signage through buildings on owners. Owners should be responsible for supporting access through their own spaces, and guidelines will provide the foundation for a consistent approach, providing they are followed.

Provide a sense of scale

The on-street system will use minutes to indicate approximate walking times. It is recommended that the pedway connections also indicate an approximate distance in time, reinforcing the understanding of buildings as stepping stones and distance, which is currently lacking.

Resolve the opening hours

If opening hours are not resolved, advertising access is virtually impossible.

One option is to establish core and secondary buildings that are usefully connected by pedways and whose owners can agree consistent times. For example:

- LRT, 5am–1am
- Core, 6am–11pm
- Secondary, 9am–5pm

In its current state, the only way to communicate the connections would be in a real-time, digital application, developed in tandem with the in-situ static signage.

This would require a complex network of WiFi beacons to locate users indoors, significant funding and ongoing maintenance to communicate changing hours and ensure beacons are functioning in all spaces.

Provide LRT station exit maps

LRT stations are key entry points to Downtown and often provide access to multiple buildings with their own pedway connections.

Stations should provide detailed station exit maps as well as a Downtown Pedways Map at station concourse level.

Improve parkade access

Unless parkade owners are prepared to provide obvious wayfinding for pedestrians moving through parkades, showing them as part of the pedway connections should be avoided. For example, the change in level of comfort between The Westin and the Library Parkade is dramatic and discouraging.

Support user agendas

Research shows that a user's primary motivation for making journeys that include pedway connections is to access a destination. The following elements are not used to make wayfinding decisions:

- Pedway logo / brand
- Compass directions
- Graphic representations of external landmarks whilst indoors
- Level of pedway connections

It is the responsibility of the building owners to identify step free routes within their spaces and towards connections to adjoining buildings.

Support decision points

There are many examples where existing pedway maps are not at key decision points, or not frequent enough. Any new implementation should resolve this.

Support exits

Ensure all building exits are clearly supported, using the street name to confirm the threshold.

Appoint a wayfinding custodian

The City of Edmonton should appoint a wayfinding custodian whose role it is to maintain both on-street and pedway wayfinding. Their role should reflect and manage agreed wayfinding policies.

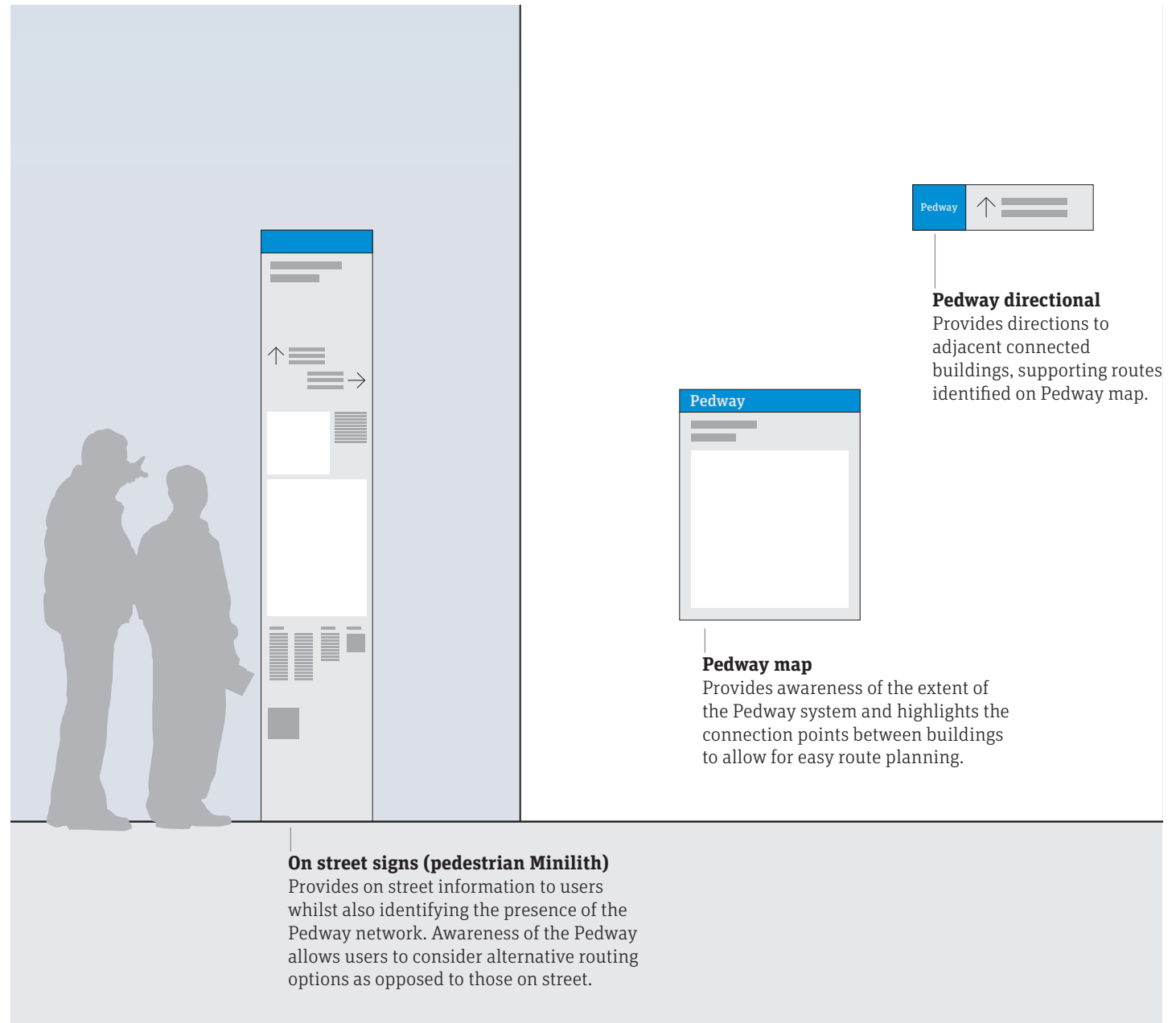
3 Typology

Proposed typology

The typology of Pedway signs is part of the wider typology of city wayfinding signs – a connected system, working both inside and out. It must be viewed in relation to on street sign placement and the information provided at these points (ie. mapping showing the presence of the pedway connections).

The relationship to the on street system suggests that the typology is made up of Pedway map and direction signs – the pedway flag signs should not be required.

As stated before, the existing sign typology of the Pedway is not at fault, but the system's failings come in the graphic information design and implementation.








3 Typology

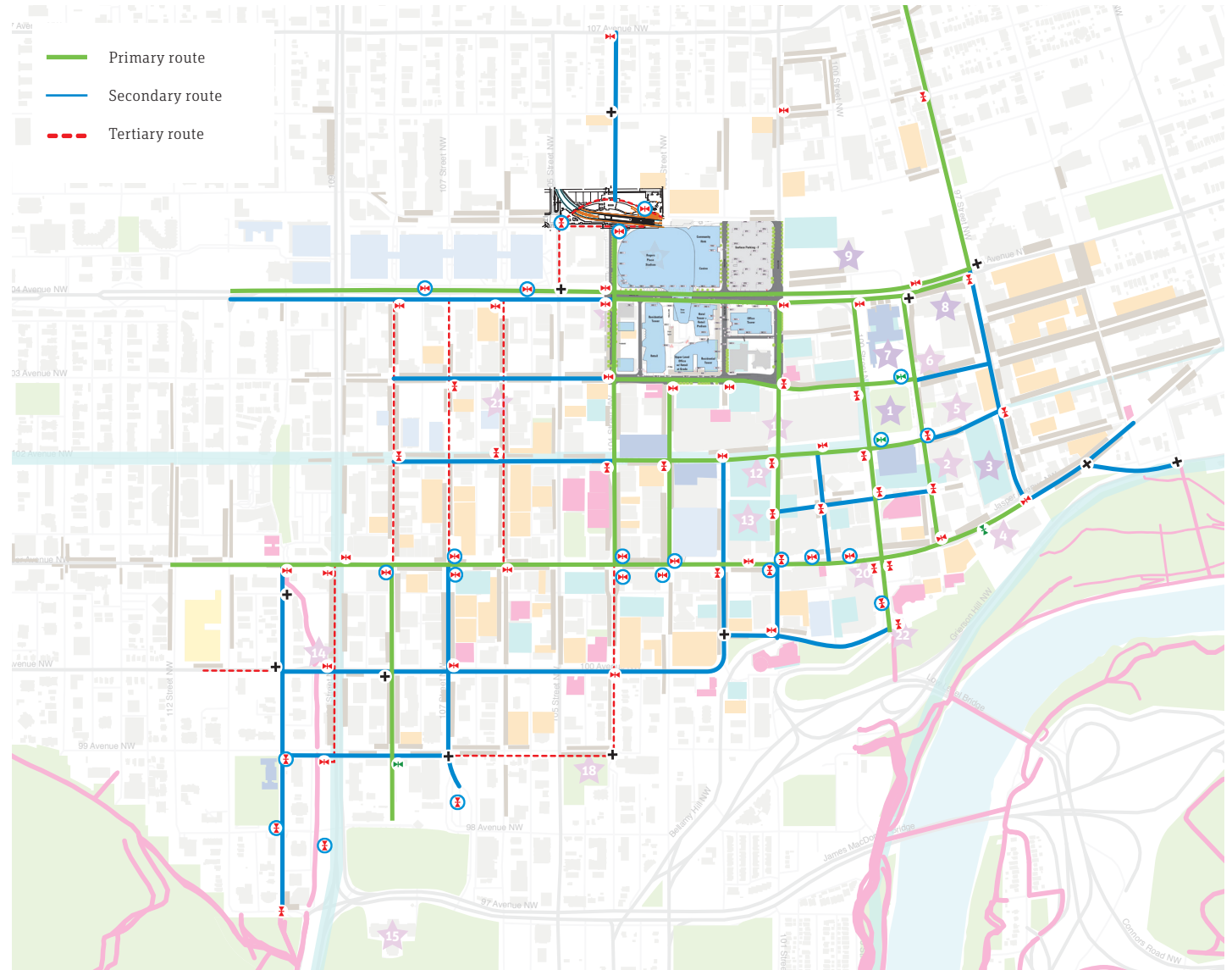
On-street support

Downtown draft sign placement

The draft on-street sign placement shows that thresholds to buildings with pedway connections and LRT access will be well supported, removing the need for the current pedway flag signs at street level.

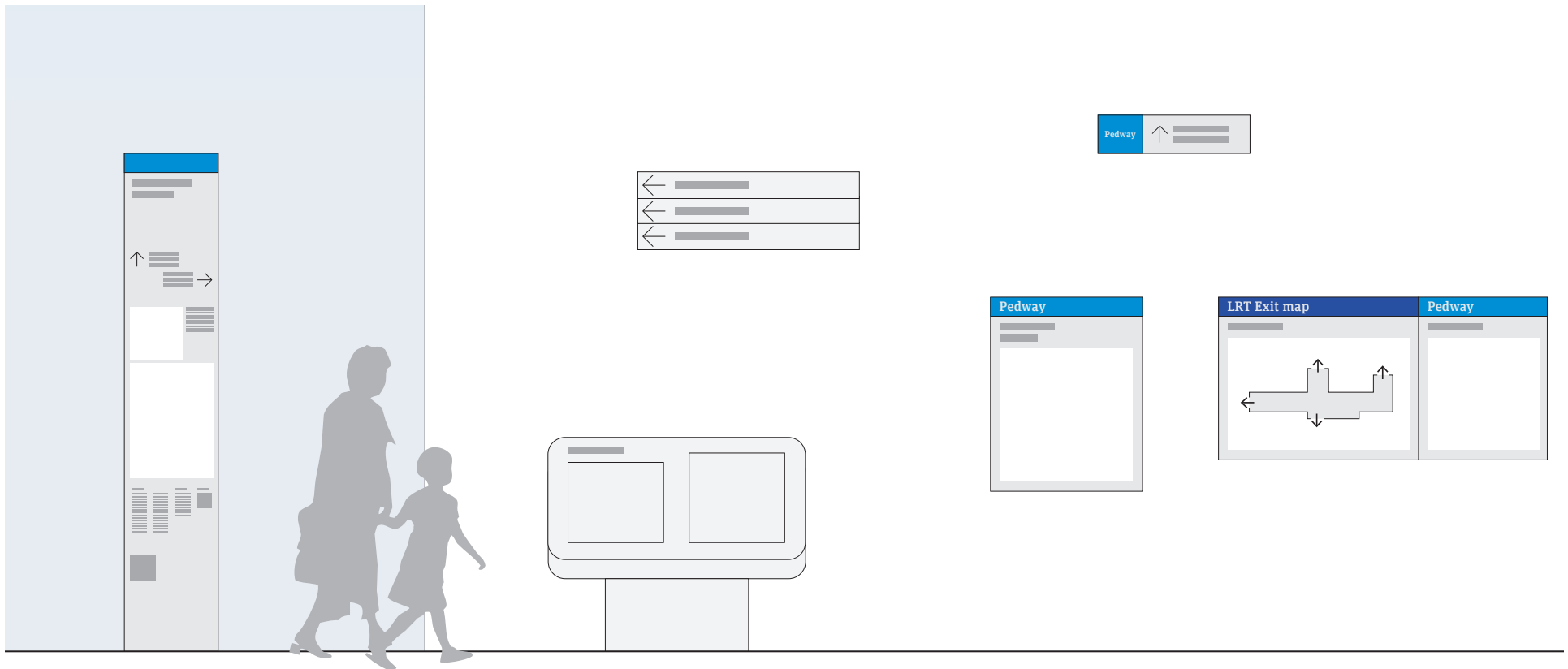
Please refer to the On-street Concept Design Report and System Planning Report for a full background on the on-street priority route network, typology and sign placement.

-  Pedestrian minilith (48, double sided)
-  Pedestrian monolith (2, double sided)
-  Pedestrian minilith + ETS beacon (22, double sided)
-  Pedestrian monolith + ETS beacon (2, double sided)
-  Fingerpost (12, blades TBC)



3 Typology

Connecting all the systems



1

The on-street system provides an awareness of the Pedway network of connected buildings and shows entrances to and connections between the buildings.

2

Inside the individual buildings users should be guided by the third party signage.

Building signage should follow clear guidelines to define the information hierarchy and content that should be included to support connections between buildings that are part of the network.

3

At connection points between buildings Pedway specific signs should be used to confirm connections using directional information and provide an overview of the network through map based signs. This allows users to both plan and confirm their routes.

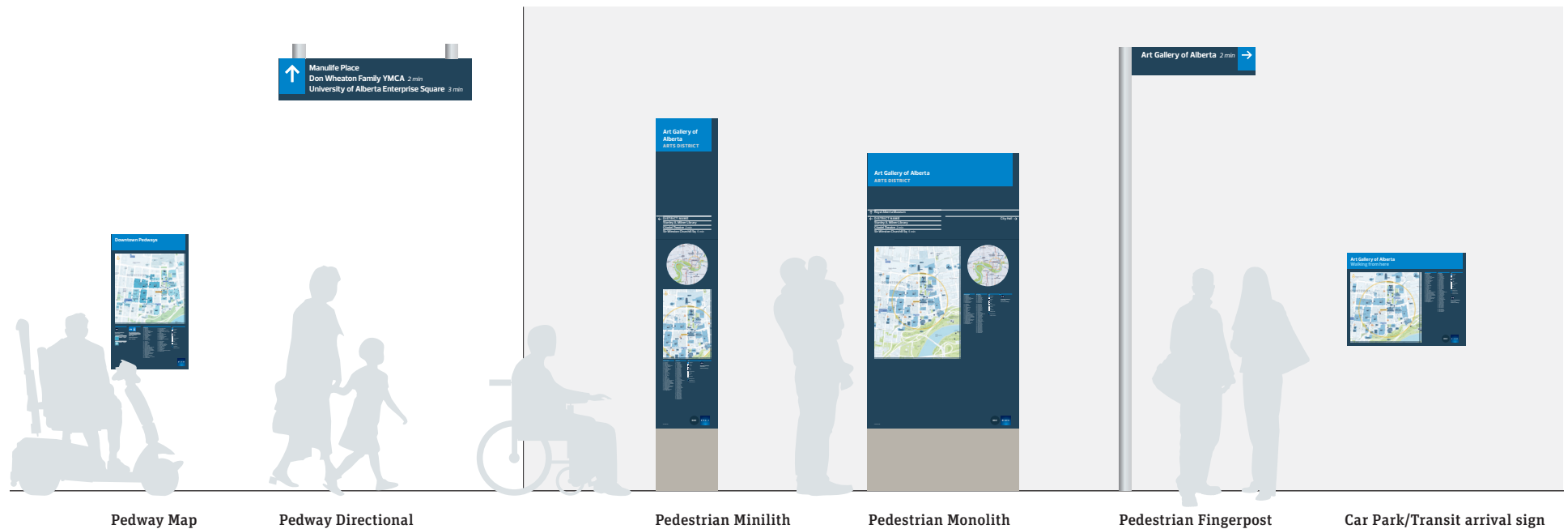
The identity and mapping shown inside relates closely to that used outside on the on-street system.

4 System identity

A single system

The Pedway wayfinding is part of the wider typology of city wayfinding signs – a connected system working both inside and out.

A single system identity should be used across all sign types in order to create a consistent, recognisable, trusted and integrated system.



4 System identity

A connected identity

A connected brand identity should align the on-street with the pedway system.

Currently the identities are individual.



They could be aligned with just the use of consistent system colour.



The established pedway brand could be the starting point for the on-street identity in order to create a connected identity.



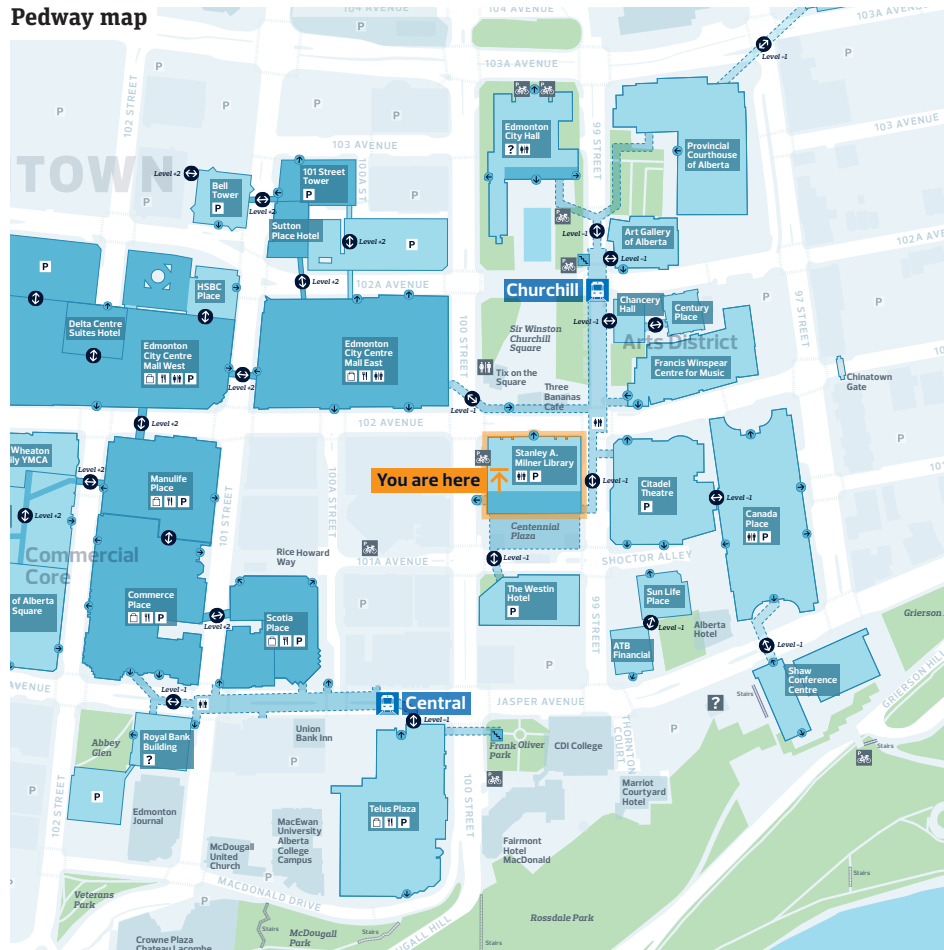
Or elements of the existing brand could be used more subtly to develop individual but connected identities.



4 System identity

One map base, two applications

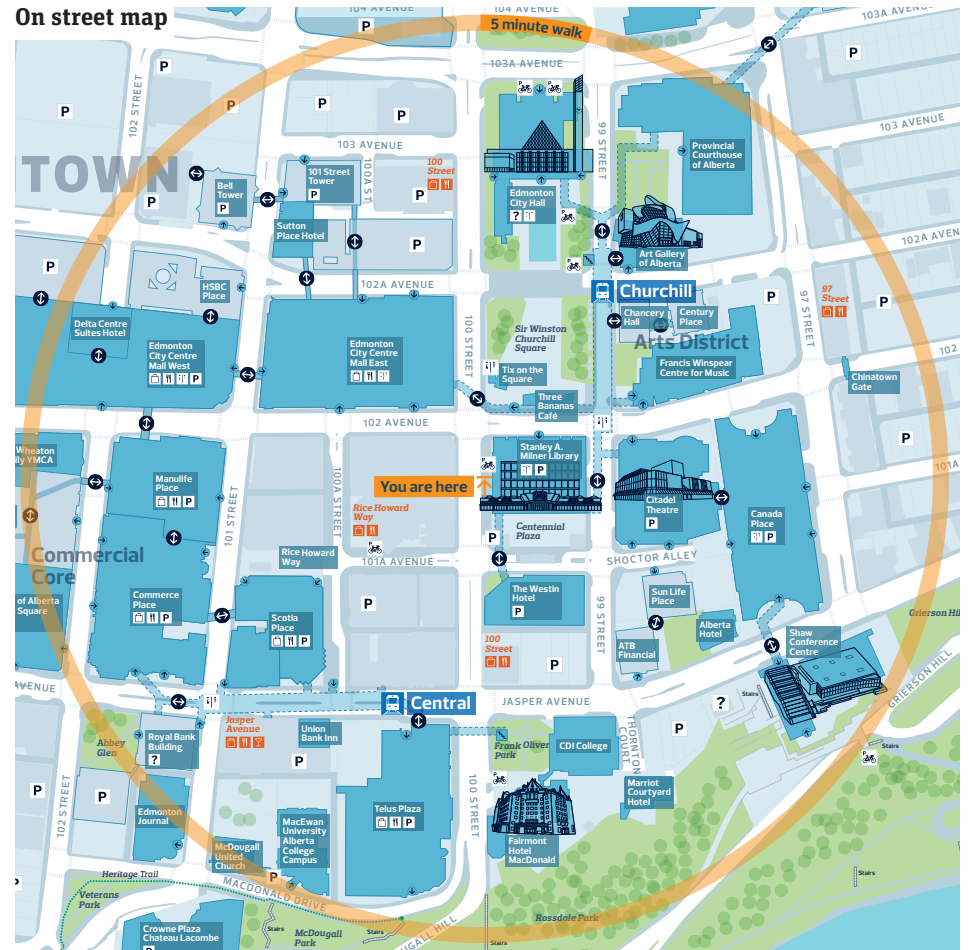
Pedway map



The on-street Finder map is intended to be a base on which different levels of detail and specific information can be layered.

It should be flexible to the demands of different applications. One such alternative application is the Pedway map.

On street map



It is intended that the Finder map will adapt to the different context of the Pedway environment by stripping back on street specific information and emphasising detail that is key to users when viewing the map in the Pedway.

This consistent use of the core map content allows users to build a mental map of the city whether inside or out.

5 Mapping

Heads-up vs North-up

'Heads-up' map orientations refer to a map that aligns to the direction that the user is facing, as opposed to 'North-up' maps that always point north regardless of the user's orientation.

The 'Heads-up' approach works well with detailed, local mapping in situations where the user can reference that detail to their immediate surroundings such as prominent buildings or street name plates.

Heads-up mapping in interior environments

'Heads-up' maps only work for interiors if they show hyper-local detail such as corridors, doorways and vertical circulation (stairs, escalators, elevators). The mapping recommended for the Downtown Pedways map is therefore recommended as 'North-up' and as an overview scale only for the following reasons.

Relating to the bigger picture

In order to connect to an adjacent building, the immediate decision for the user may not always relate to the 'bigger picture'. For example, the user may have to head west internally in order to get to a building that is actually to the north.

Avoiding replacing mall guides

Attempting to map the interiors in any detail will likely confuse the message. A Downtown Pedways map should only be about the pedway connections between buildings, showing the larger stepping stones, and not mislead people by suggesting a mall guide or building specific directory.

A maintainable level of detail

The City will ultimately be responsible for maintaining the maps and cannot be responsible for local detail, such as a shop unit changing.

A consistent, memorable touchpoint

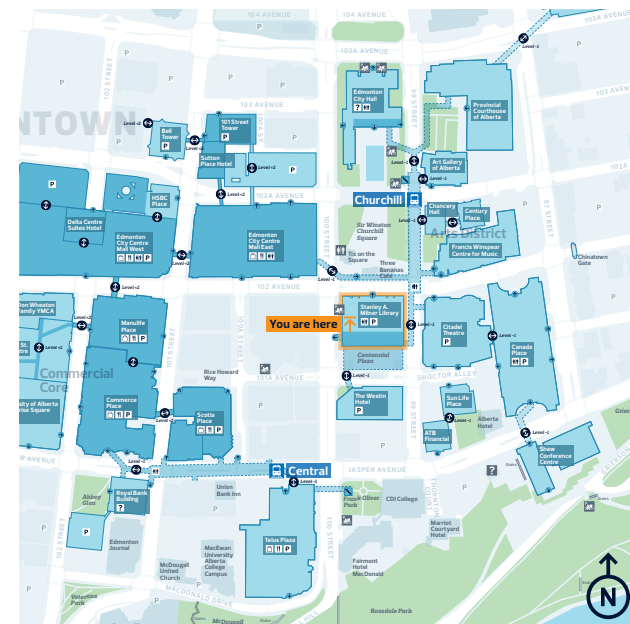
Providing a single, 'North-up' view of the Downtown Pedways supports the research that pedways are connections between buildings, not routes within them. A single, recognisable view of all the pedway connections emphasises this and provides a consistent, memorable touchpoint that can work in any interior space. As recommended, it is up to the specific building owner to provide routing to connecting buildings

LRT Exception

The exception to the above are the LRT station concourses that should, in addition to the Downtown Pedways Map, display a detailed station exit diagram that is 'Heads-up'. The LRT's are subterranean arrival points that users need some initial help in orientation. Providing a station concourse exit map could also help ETS rationalise ceiling mounted signage by focusing on threshold exit signs only.



Heads-up mapping
On street



North-up mapping
in Pedway

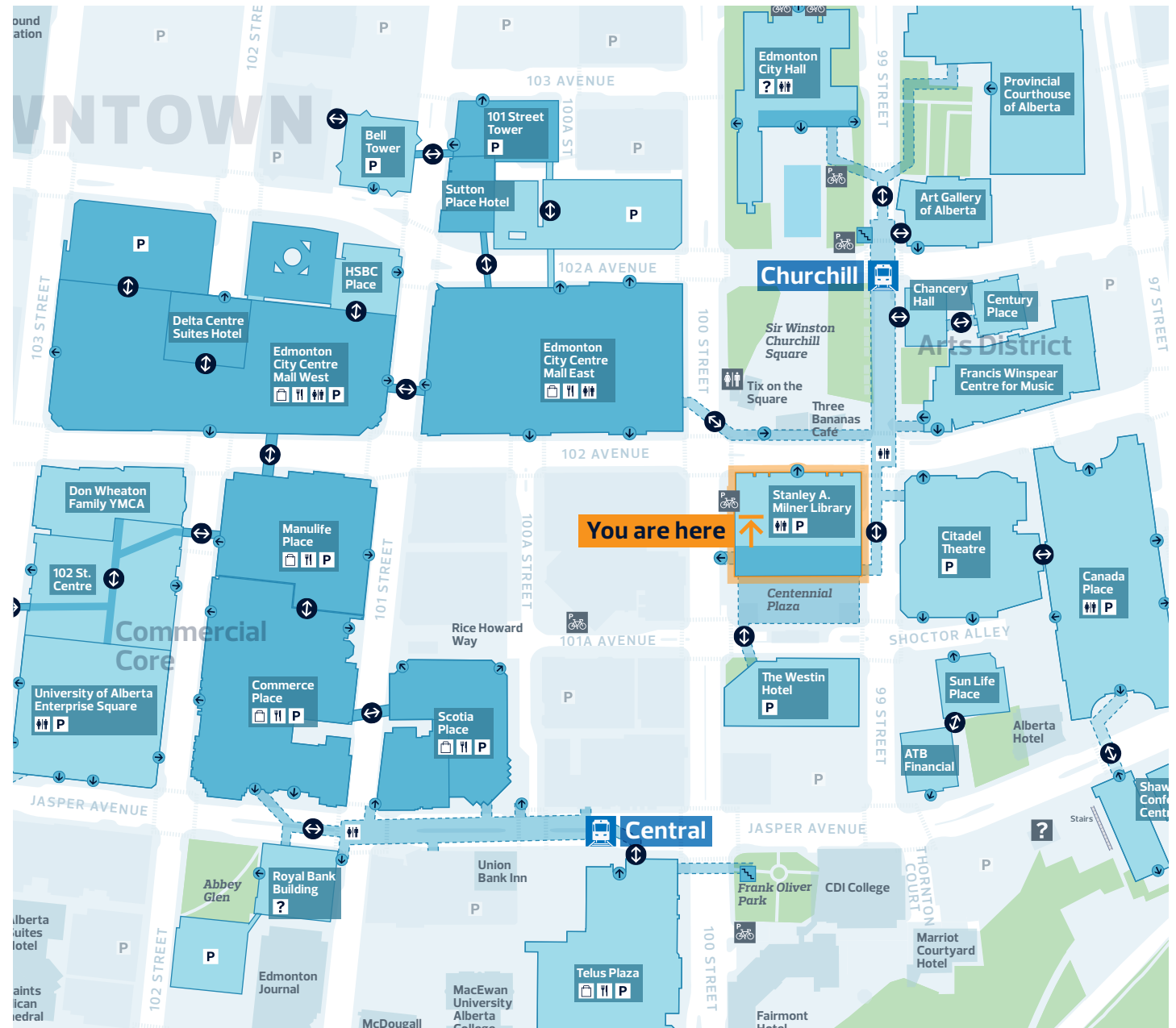
5 Mapping

Pedway map

The Pedway map gives a detailed view of Pedway connections through the city core.

It could include such detail as:

- Hierarchy of core and secondary Pedway buildings
- Clearly defined connections between buildings with level change detail
- Exit icons
- Background detail for building, street, sidewalks and parks for consistency with on street Finder map



5 Mapping

Pedway map design exploration

Pedway connections

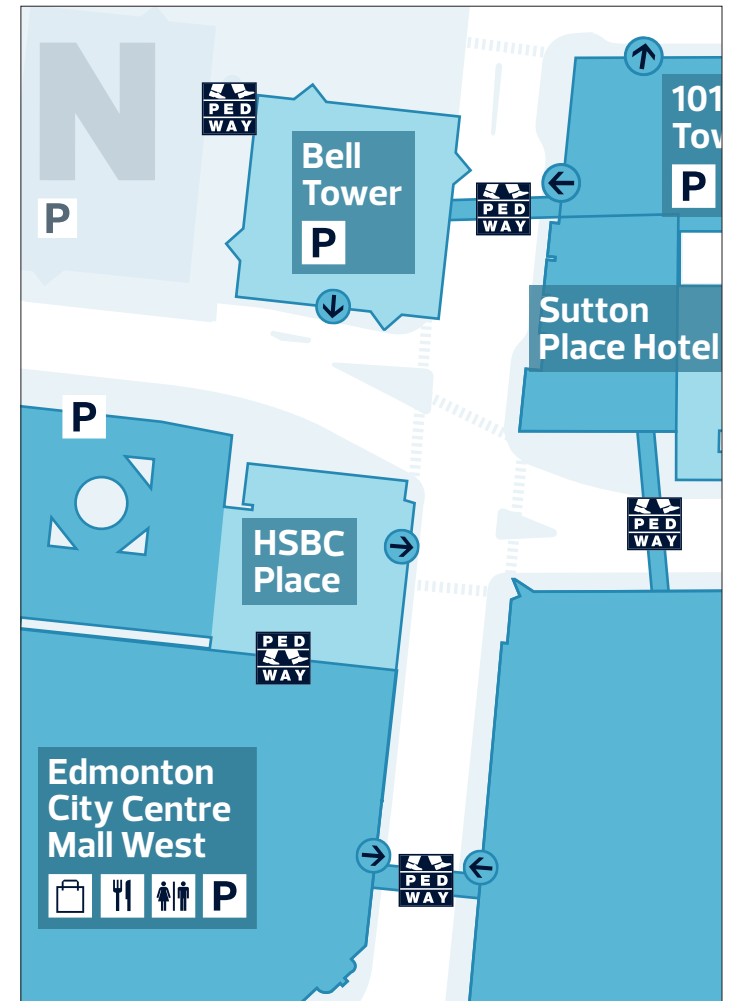
How to depict Pedway connections is a paramount detail in the design of the Pedway map.

Several approaches have been explored.



Double ended arrows

Used to highlight the connectivity of Pedway links between buildings



Pedway brand

Incorporated to highlight connections as well as subtly indicating their level

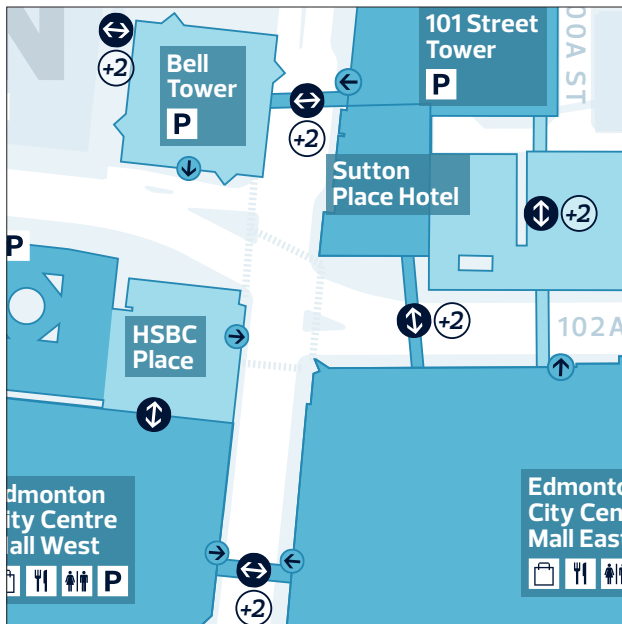
5 Mapping

Pedway map design exploration

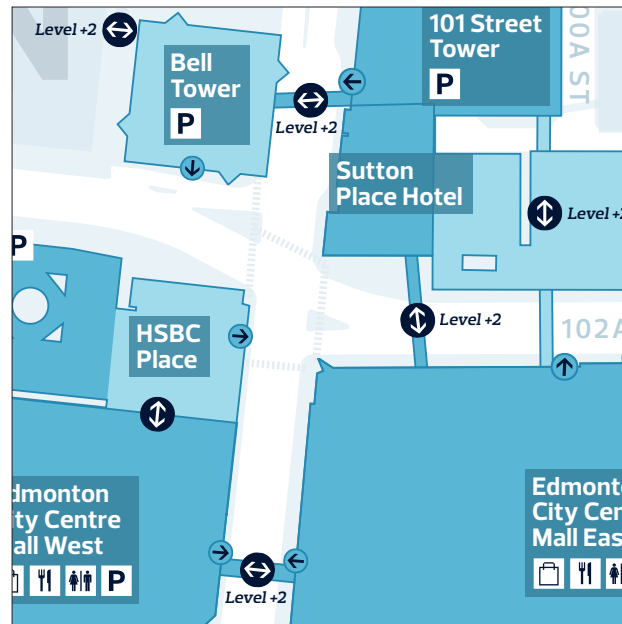
Level of connection

Indicating the level of the connection may be considered important to manage the expectations of users – warning them that they may need to change level during their journey through Pedway connections.

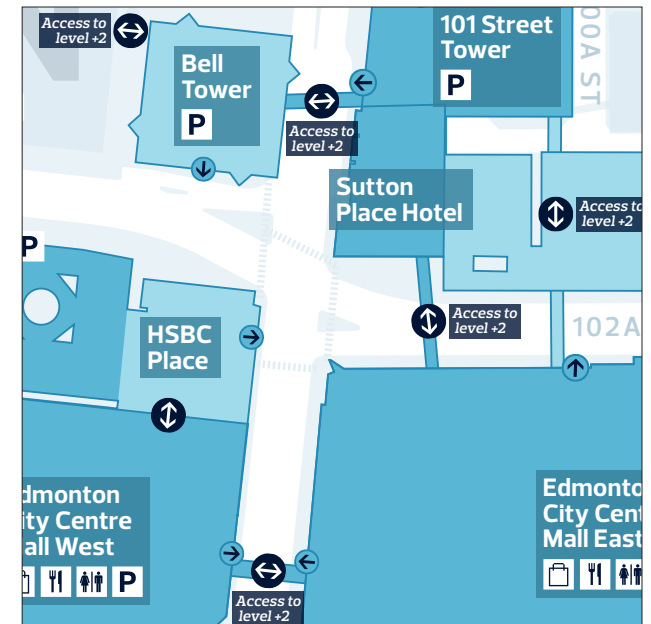
This may be considered too detailed because of inconsistency in level naming between buildings as well as ambiguity as to when a user has changed floor.



Level number only



'Level' qualifier added



'Access to...' qualifier added

5 Mapping

Pedway map design exploration

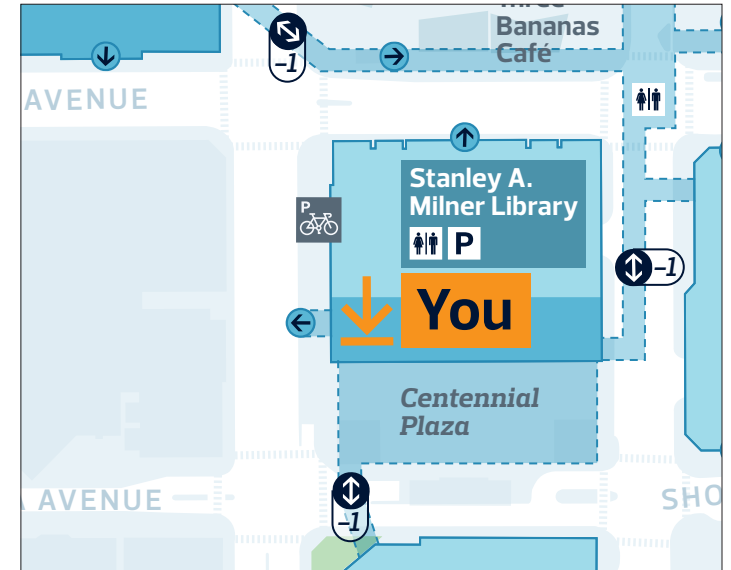
Explorations for showing 'You are here'

How the user's location is indicated is an important consideration in the design of the Pedway map.

Whether just the building is highlighted or the user's exact location and orientation is shown were areas of exploration.



Building identified by You are here marker



Orientation and exact location suggested by You are here arrow



Location within building suggested but not orientation



Orientation and exact location suggested by You are here point

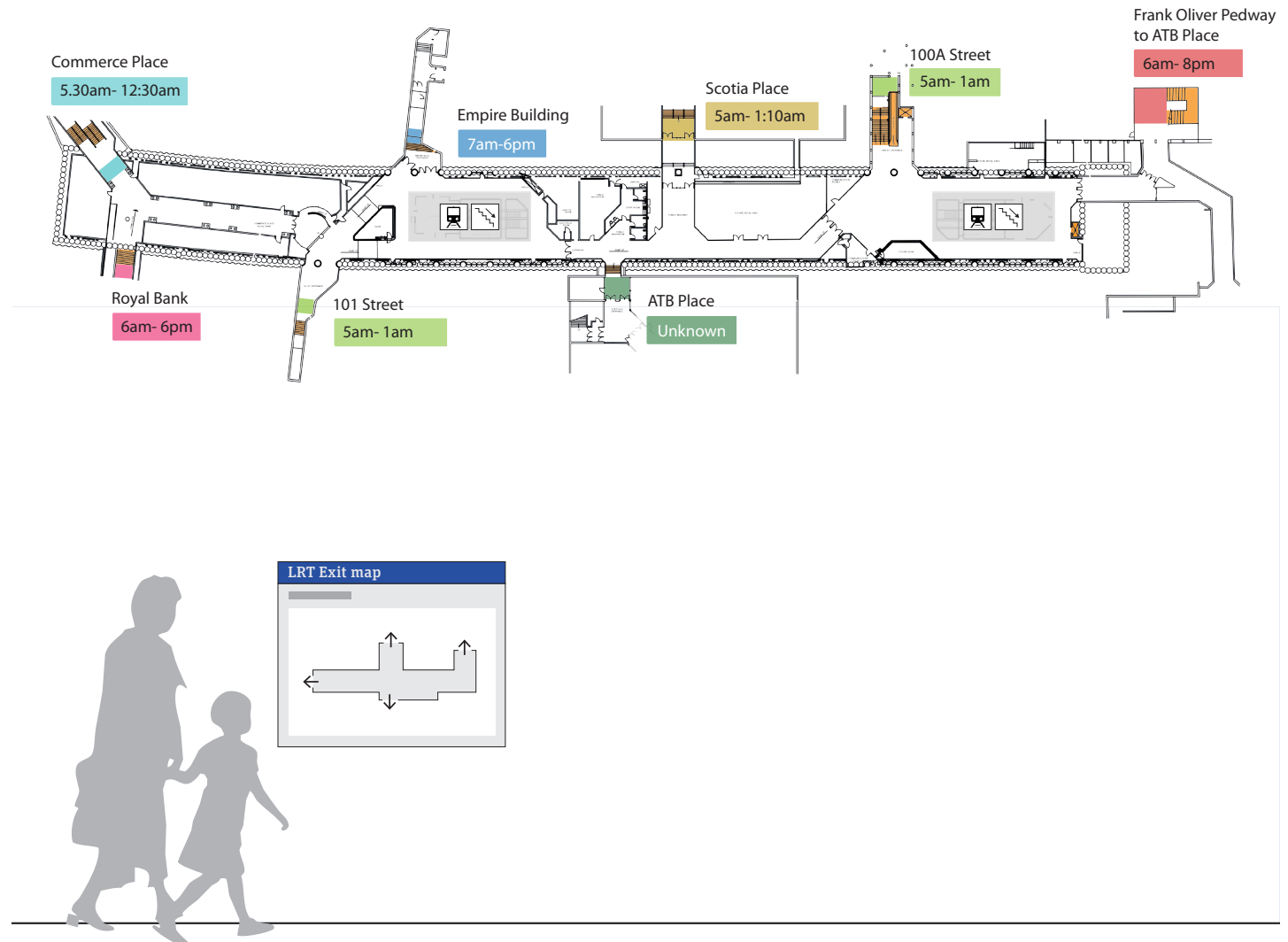
5 Mapping

LRT Exit maps

Exits to LRT stations have unpredictable opening times, lead to a variety of levels and connect to multiple buildings.

It is recommended that LRT exit maps are introduced giving users a clear picture of exit choices.

In addition, the downtown pedway map can be co-located with the station exit maps, since the LRT's are the entry point to downtown for many visitors.



6 Signs

Pedway Map sign

Provides awareness of the extent of the Pedway system and highlights the connection points between buildings to allow for easy route planning.



Beacon
Brands information as being part of the city wayfinding system

Pedway map
Detailed map of Pedway network shows possible routing and destinations via the Pedway

Supporting information
Attractions & street index and map key guide provide additional information. Pedway information, such as opening hours, may also be included to explain the network & connections further.

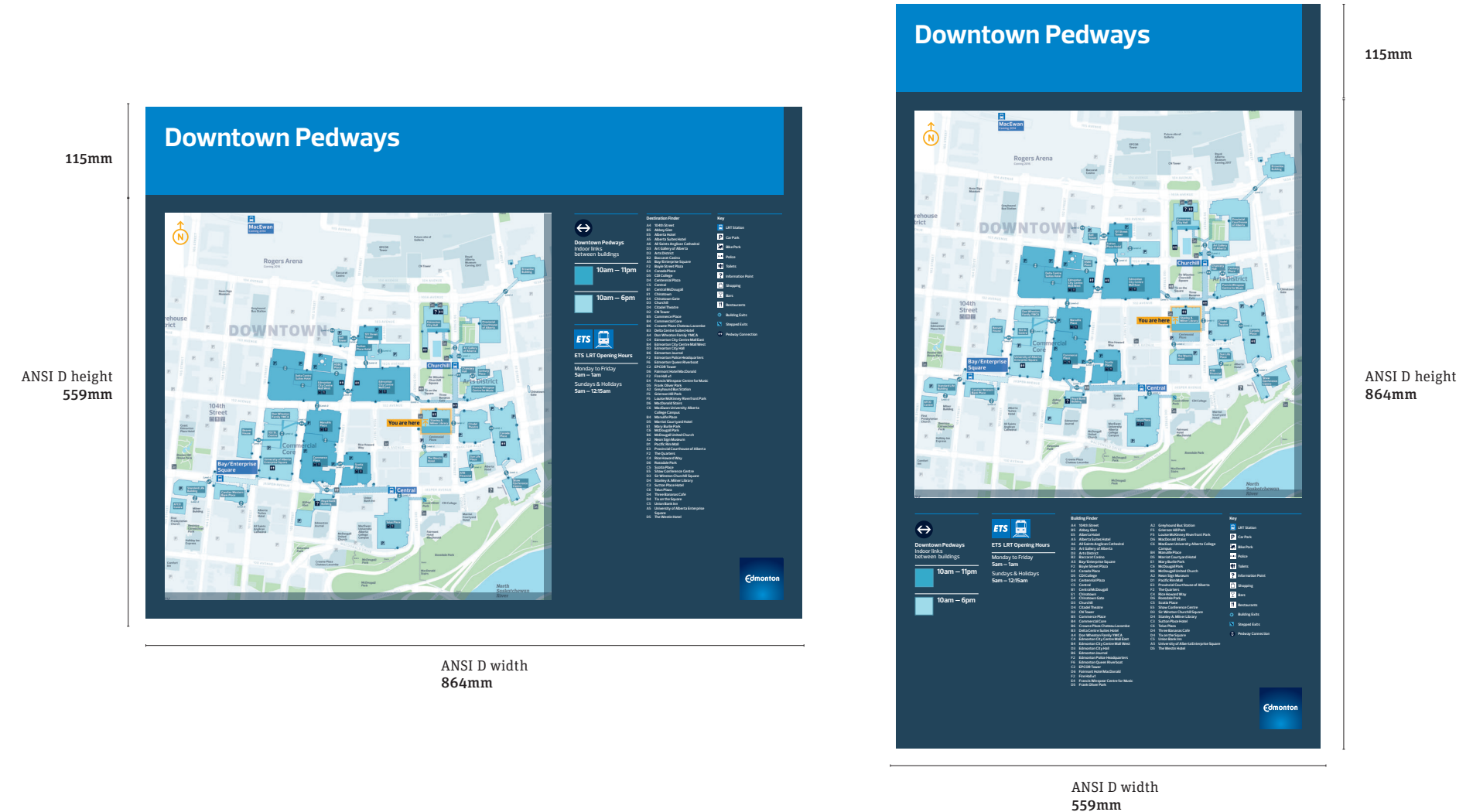
Brand
Edmonton brand provides endorsement to sign information

Pedway Map

6 Signs

Pedway Map sign – orientation options

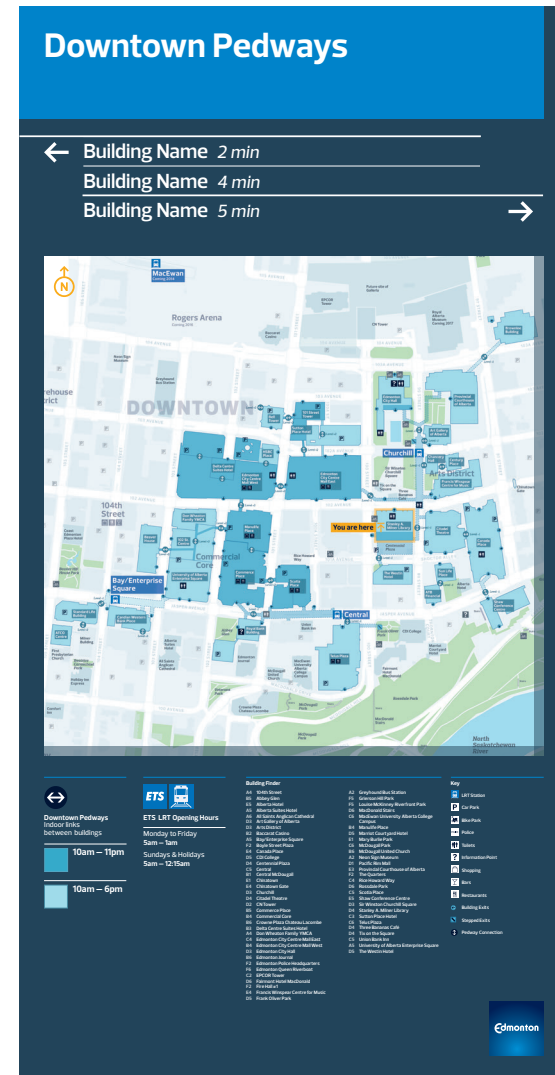
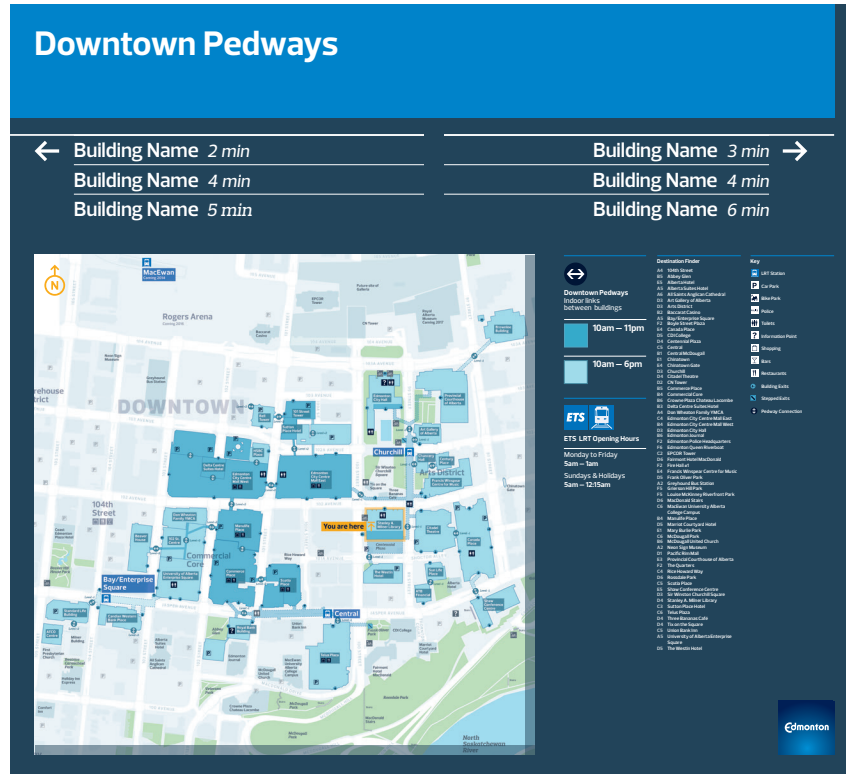
Due to the available space for placement of signs in the Pedway we need a system that can adapt – map based signs are to be flexible to be used in portrait or landscape formats.



6 Signs

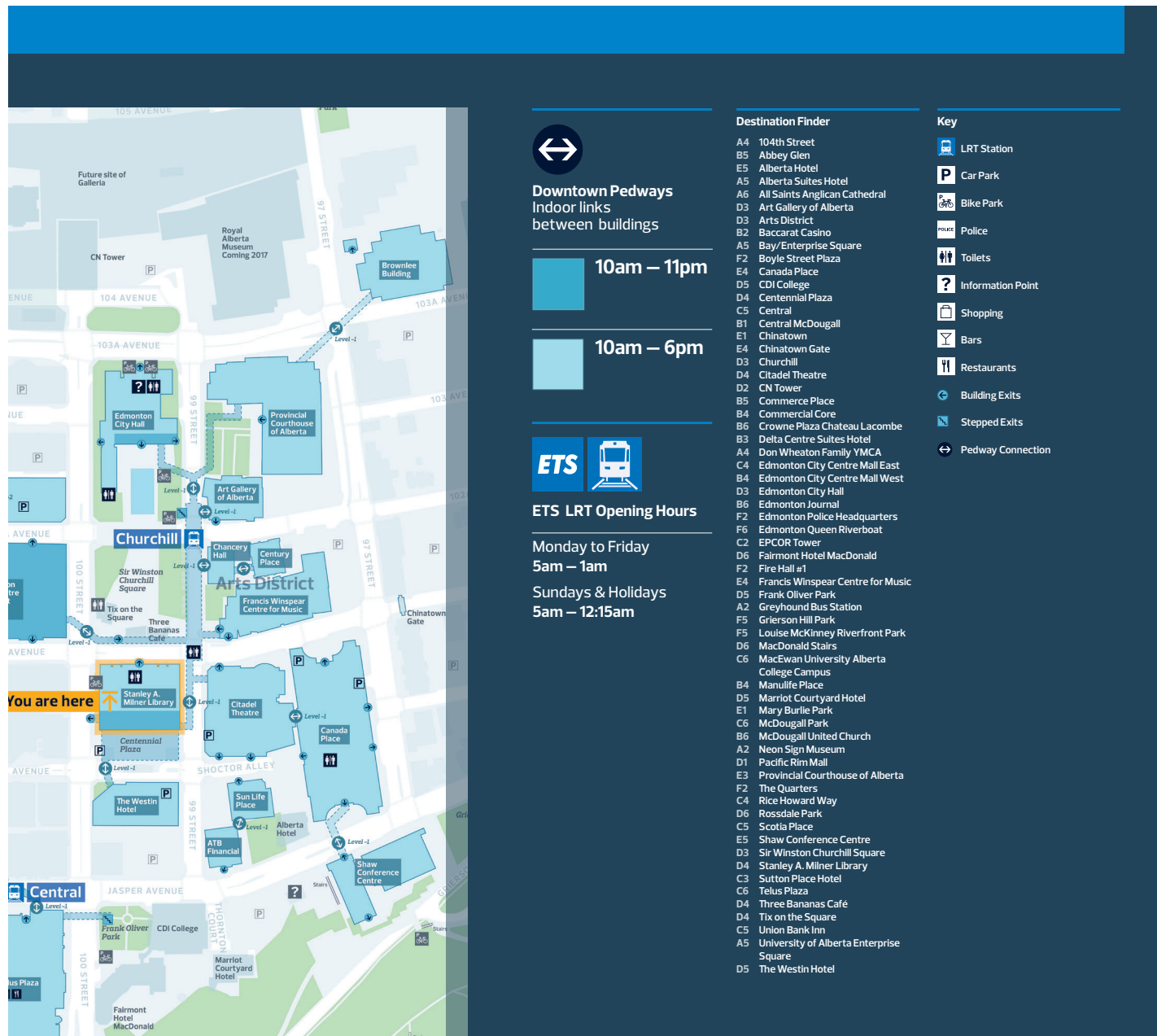
Pedway Map sign – optional directions

Directional information can be added to map based signs for quick orientation in often complex spaces.



6 Signs

Pedway Map sign – supporting information



The Pedway map is supported by a key which differentiates between core and secondary Pedway connected buildings.

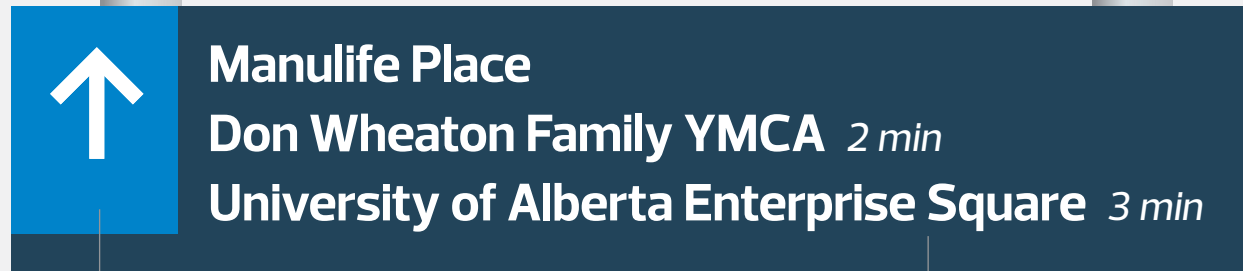
Core buildings are highlighted on the map with a darker shade of blue than secondary buildings.

Also a more general key and destinations index are included on the panel, as well as information about LRT opening hours.

6 Signs

Pedway Directional sign

Provides directions to adjacent connected buildings, supporting routes identified on Pedway map.



Beacon
Brands information as
being part of the city
wayfinding system

Directional
Displays destinations accessible
via Pedway connection

Pedway Directional

6 Signs

Pedway Directional sign – Layout options

The function of the directional signs is to confirm onward destinations. This needs to be done in the simplest way so as not to seem ambiguous in the variety of environments and positions it may need to exist in.

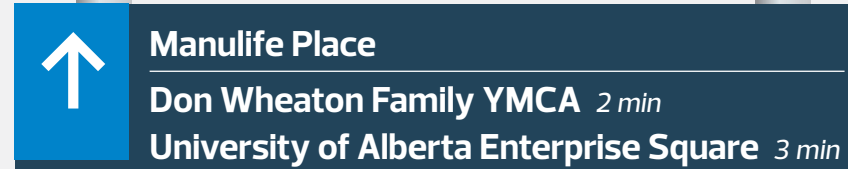
Graphic rules

Graphic 'rules' have been explored to see if the closest connection can be emphasised or even suggest an adjacent building threshold.

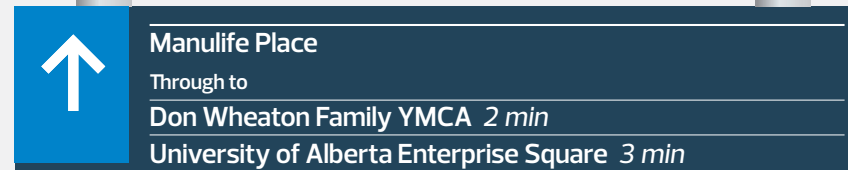
However, the graphic 'rule' is potentially ambiguous and it's not clear if the first destination is the building you are in or about to enter. Adding a 'Through to' qualifier suggests you are about to enter the first destination, with links to the other two.

Keep it simple

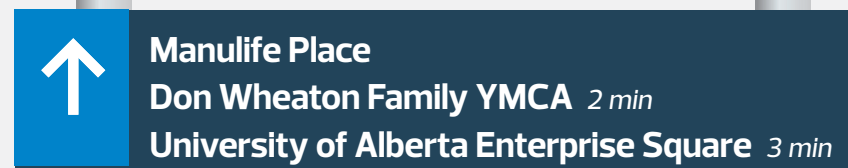
It is recommended that the simplest option is used without a rule. This means that any threshold signage should be installed and managed by building owners, and the pedway directional sign should only be used for directing to locations ahead.



With rule to highlight adjacent building



With 'Through to' text



Directional only

7 Product design

Existing products

The Pedway currently features products that show mapping and directions, including wall mounted and suspended overhead signs and map lecterns.

Though it may be possible to reuse the products, this is not recommended. For continuity of experience and quality it is recommended that Pedway signage is more closely aligned with the aesthetic of the on street system.



Existing overhead sign



Lectern

7 Product design

Existing products

It may be possible to utilise existing overhead products but usable area of these units is not ideal and it could be more costly to retrofit elements rather than installing new units.

The height of the usable graphic area of the existing overhead sign units are approximately 80% less than the proposed new design (247mm as opposed to 300mm). This means reduced height would be reflected in a smaller typesize.



Retrofitting to design fit existing units

7 Product design

Existing products

If conforming to the current graphic area used for the Pedway lectern, the information shown in the proposed concept design would have to be reduced – with the street index taken out in the example shown here.



Retrofitting design to fit to Pedway Lectern

7 Product design

Existing products

However, if it is possible to extend into the aperture frame it would be possible to fit considerably more information into the design.

A greater understanding of the design and limitations of the product is required before a full assessment of their appropriateness can be made.



Retrofitting design to fit to Pedway Lectern

7 Product design

On-street concepts

It is intended that Pedway signage is presented as connected with the on street wayfinding system. As part of this it is important that a single product style – or DNA – should be common across all sign designs.

Three design routes have been developed for the on street system, not all of which would be easy or appropriate to translate across to Pedway signage. The more restrained style of route 3 can be easily reappropriated from an on street setting for use inside mall and private environments. The more overt styling of routes 1 and 2 is less obvious to translate successfully.

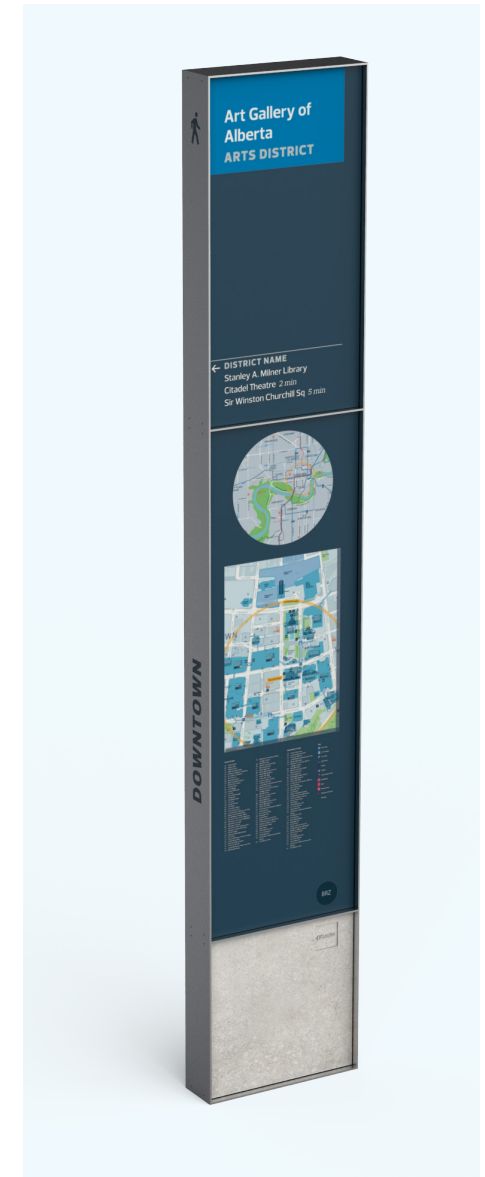
Alternatively an even more simple approach to the product could be taken – with the product being ‘neutral’ in order to integrate into the various environments and allowing just the graphic language to link the systems. An example of this is the type of light box product used in the Edmonton LRT system as shown below.



Option 1



Option 2

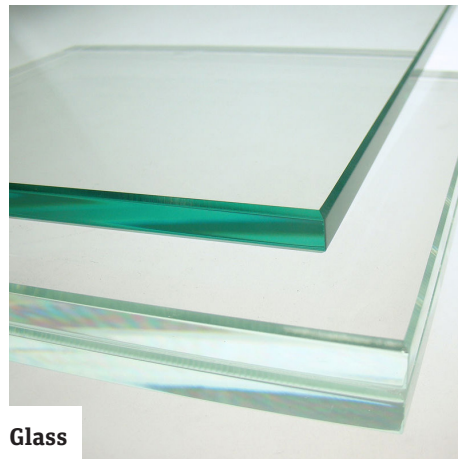
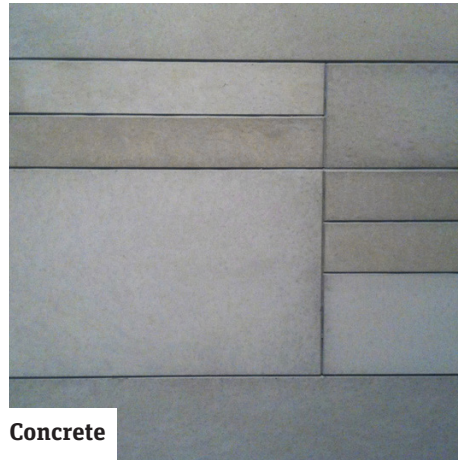


Option 3

7 Product design

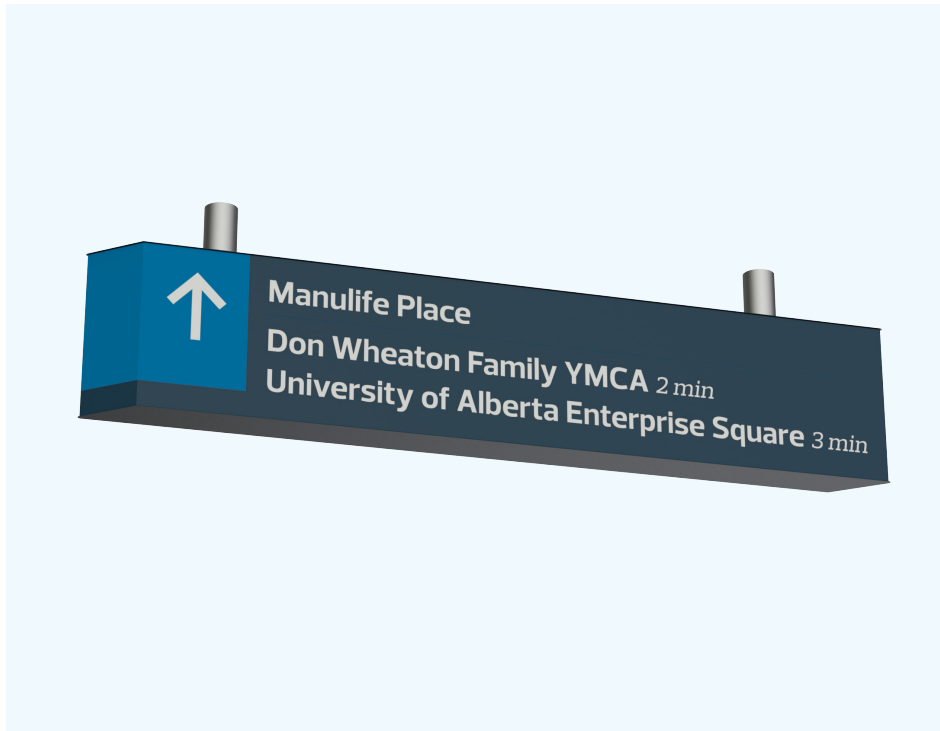
Materials palette

For continuity of system identity the Pedway signs would ideally draw from the same palette of materials as the on street system.



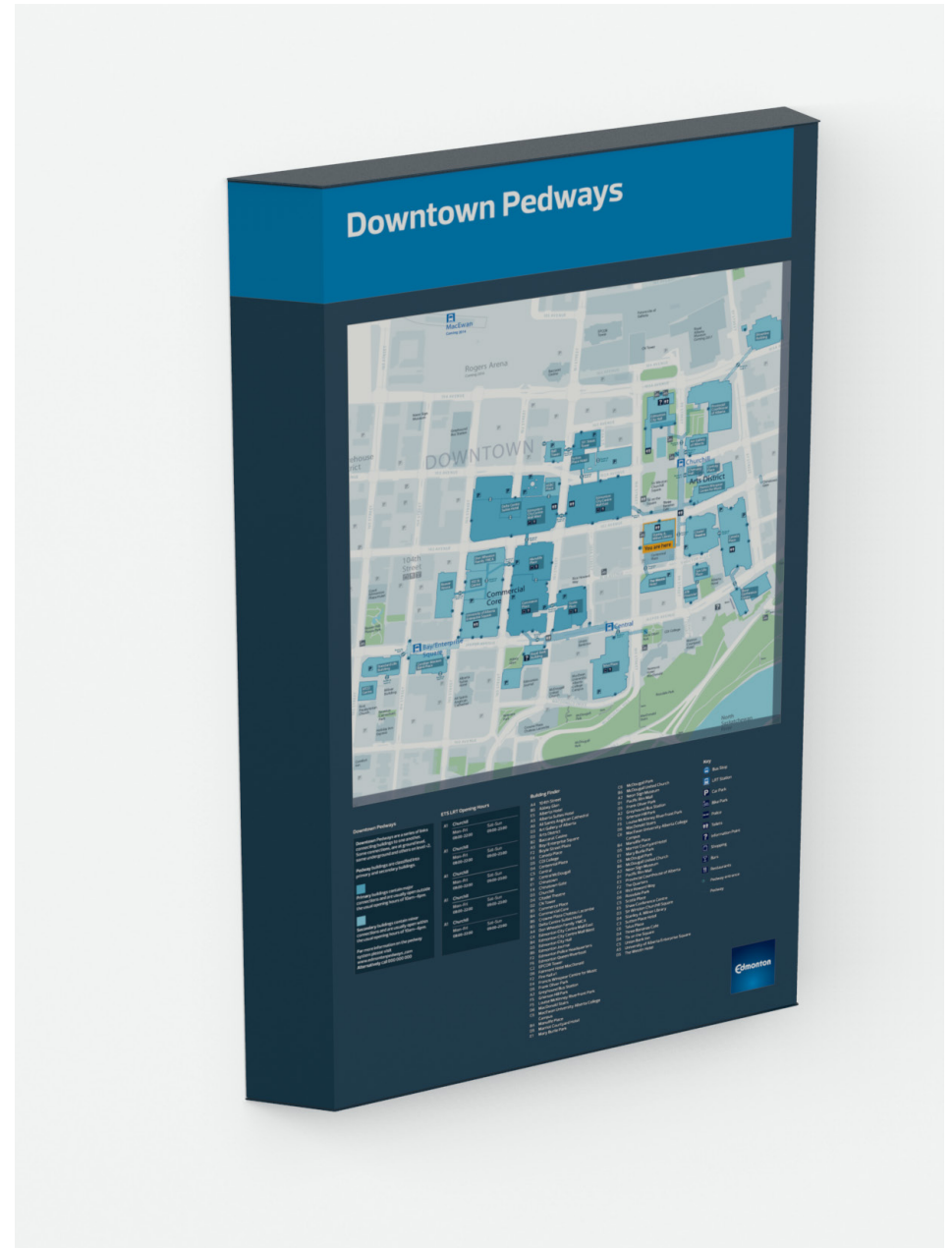
7 Product design

Pedway product design



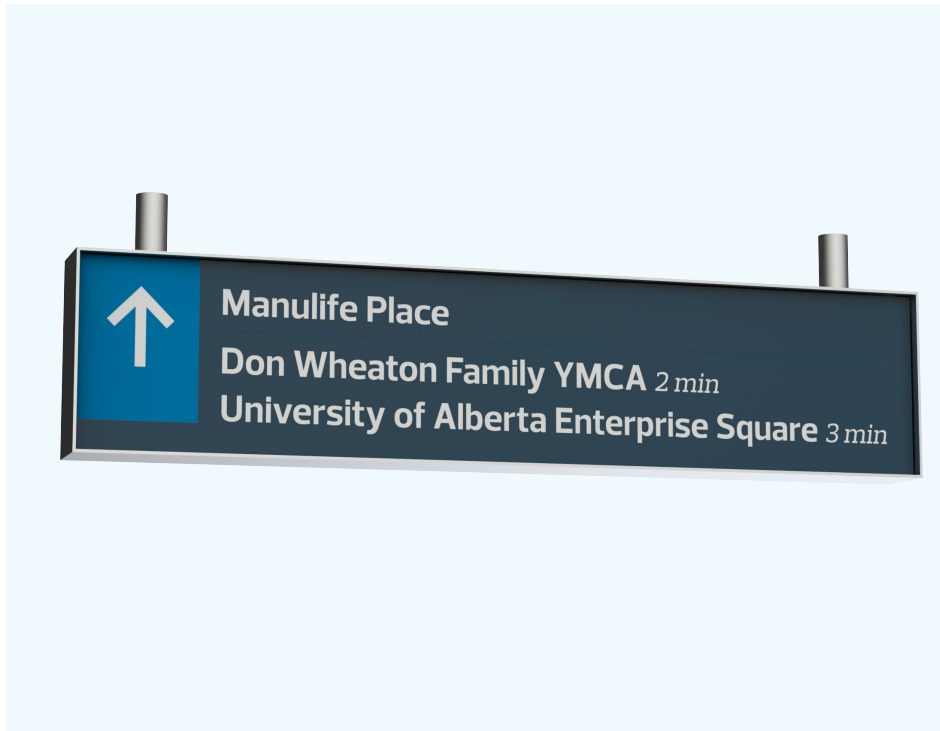
Derived from style of Option 2

- Angled edge
- Powder coated, folded sheet metal panels with screenprinted graphics
- Back-mounted glass panel, LED back-lit on Pedway Map



7 Product design

Pedway product design



Derived from style of Option 3

- Square brushed stainless steel frame
- Full back-lit glass panels with graphics to rear



6 Signs

Pedway product design



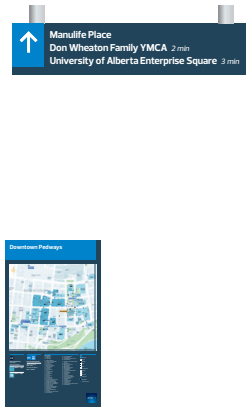
Pedway Map and Directional signs. Product option 3.

8 Wider applications

The Pedway system applications should integrate with on street signage and printed applications but can be identified as discreet elements in their own right. These include Pedway printed maps, smartphone apps and online tools.



On street



Pedway



Pedway map



Online Pedway map



Pedway map as part of
smartphone app

8 Wider applications

Printed Pedway map

It's anticipated there will be a printed visitor map that reflects the on-street system, including an overview map with visitor neighbourhood connections on the reverse.

The value of a pedway specific printed map could be as launch for the new system, allowing detailed opening hours to be explained on the reverse.

This could also become an ETS specific map with detailed plans for below grade LRT stations. Depending on the detail of the core map, the reverse could show station exit plans for Corona and Grandin, or detailed exit plans for all below grade LRT stations.



8 Wider applications

Online Pedway map

The city wide pedestrian wayfinding system is being developed in such a way that it forms the foundation for multiple applications.

The data will be adaptable to a digital database, allowing development for infinite variations on zoom levels and content, such as festivals and live transit.

What's open now?

One of those layer options could be a 'Downtown Pedways' map, with real-time display. The print version of the 'Downtown Pedways' map necessarily needs to draw a line between the core and secondary buildings in order to make some sense of opening times for the user. With digital, it is possible to have a far more intelligent interface that shows 'what is open now'.



8 Wider applications

Pedway smartphone app

If the full digital city wide system is developed, a logical progression is for this to work across a range of portable devices.

In addition, the buildings supporting pedway connections could install iBeacon technology, allowing users to pinpoint their location and level position inside.



9 Placement

Sign quantity estimates

The current scope takes the design recommendations to concept stage only.

Should those recommendations be developed to detailed design and implementation, a comprehensive audit will be required to identify exactly which signs are re-used (if any) and which are removed.

In order to gauge the impact of that exercise, a small group of buildings has been selected to provide an estimate on the average quantity of signs needed per building.

The case study selected includes:

- Bay /Enterprise LRT – complex station
- UoA / Enterprise Square / YMCA – complex composite building
- Manulife Place – Relatively simple / small building
- Edmonton City Centre – most complex building

The case study shows the inconsistency in current sign placement. For example, the interface between the second floor of 102nd Street Centre and Enterprise Square should have map support. The threshold at Edmonton City Centre before exiting into the pedway bridge to Manulife Place should also have a pedway map.

Assuming each decision point is supported by a combination of directional and mapping information, there is a need for an average five signs per building.

Based on the analysis in the Pedway Interim Report, approximately 45 buildings provide pedway connections, which suggests there is a basic need for approximately 200 signs specifically supporting pedway connections.

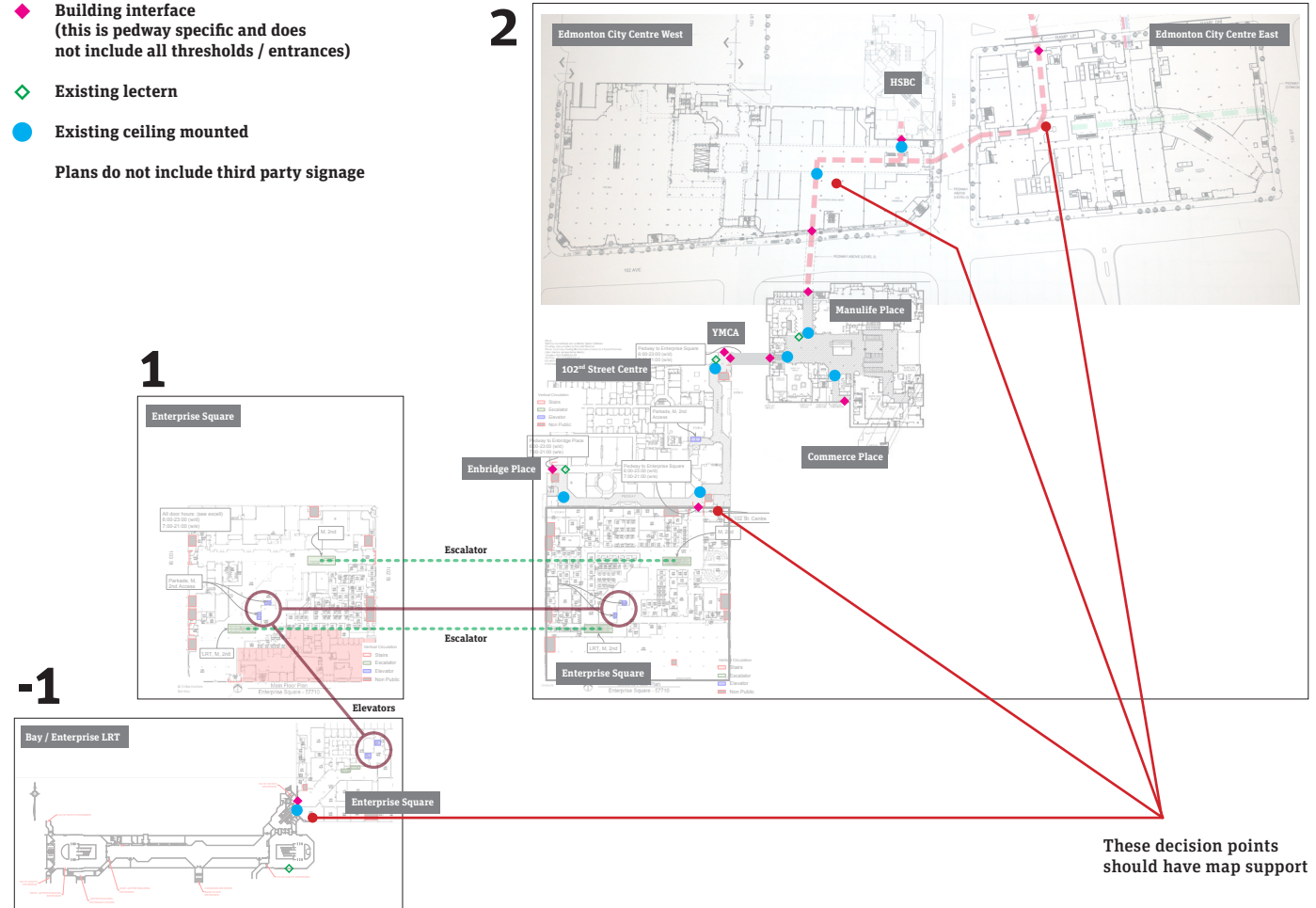
This figure can only be verified once a concept has been agreed and a relevant audit carried out.

◆ **Building interface**
(this is pedway specific and does not include all thresholds / entrances)

◇ **Existing lectern**

● **Existing ceiling mounted**

Plans do not include third party signage



10 Proposed next steps

- **Validation of proposed approach across full extent of Pedway connections**
- **Develop guidelines for 3rd party owner signage to interface seamlessly with Pedway and on-street system**
- **Detailed design development – predominantly mapping development if part of a single system**
- **Possible LRT prototype including Pedway map and station exit diagram**
- **Development of printed/digital map to work alongside temporary on-street elements supporting Arena opening**
- **Phased roll-out of system**

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