

# Edmonton's Exhibition Lands

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## Appendix A: Background Studies

Prepared by  
City of Edmonton  
O2 Planning + Design Inc.

# Introduction

This Issues and Opportunities Brief summarizes the technical analyses completed as part of Phase 2 of Edmonton's Exhibition Lands Transformation (formerly named the Coliseum Station Area Redevelopment Plan). It incorporates the findings from the following project tasks:

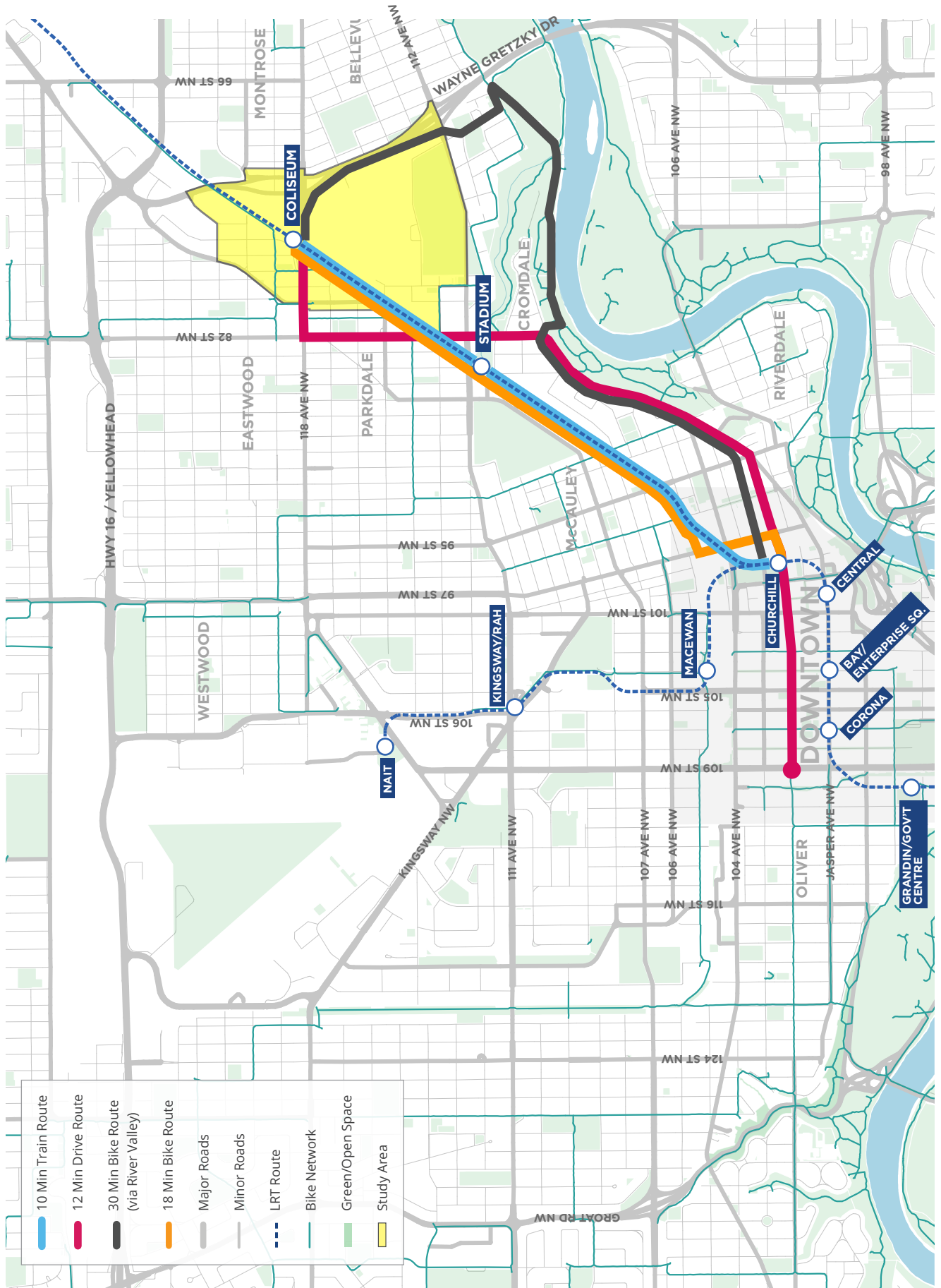
- › Transportation technical analysis
- › Civil infrastructure technical analysis
- › Site visits and analysis
- › Context analysis
- › Public and stakeholder engagement

The summary and discussion provided on the following pages should be supplemented by the more detailed findings of these technical studies, where available, and by the Phase 1 What We Heard Report that describes the results of public engagement to date.

The Exhibition Lands project will study the lands centred on the former exhibition grounds located between the Coliseum and Stadium LRT Stations, including the Coliseum arena and EXPO Convention Centre, and the edges of surrounding communities. The study area boundaries (shown on the following pages) have been designed to encompass neighbourhoods with the highest potential for change in the future, and to enable the project to consider transitions and connections between the City lands and existing residential areas, nearby open spaces and the broader transportation network.

Note that the project is in a stage of transition, with a focus on creating a more collaborative and transformational vision for the future of the Exhibition Lands. The Issues and Opportunities Brief and supporting analyses remain fundamental for the City and its partners to understand the key development opportunities available in the Study Area, and the important issues and development constraints that must be overcome to unlock its ultimate city-building potential.

Map 1: Relationship of Study Area to Downtown Edmonton



# Urban Context

The Study Area is located in the northeast quadrant of the City of Edmonton, adjacent to the existing neighbourhoods of Bellevue and Montrose (on the east), Eastwood and Parkdale (on the west), and Cromdale and Virginia Park (to the south).

## OPPORTUNITIES

### Transportation Connections

The Study Area has excellent transportation connections to Downtown using every mode of transportation:

- › 10 minutes to Churchill Station on the Capital LRT Line
- › 12 minutes' drive downtown via Jasper Avenue
- › 18 minutes' bike ride downtown using the multi-use pathway along the LRT corridor, or 30 minutes via the scenic River Valley

Furthermore, the Study Area is well-connected to other destinations in Edmonton and the greater region due to the proximity of major vehicle thoroughfares: Wayne Gretzky Drive (which forms part of the "inner ring" freeway system of Edmonton), Fort Road (which bisects northeast Edmonton as provincial Highway 15) and the Yellowhead Highway (national Highway 16).

### Open Space and Recreation

In addition to Borden Park, which falls within the Study Area boundaries, the site is close to the River Valley and Ravine System (specifically, Kinnaird Ravine) and the regional multi-use pathway network. Nearby sporting entertainment opportunities include Wally Footz Field (amateur baseball), Commonwealth Stadium (professional football) and Joe Clarke Athletic Grounds (professional soccer).

### Nearby Revitalization

There is the potential for the Study Area to benefit from nearby revitalization and redevelopment plans or projects, including the Alberta Avenue Revitalization Initiative (west of the site); the Norwood Boulevard Corridor Study; neighbourhood renewal (e.g. streetscapes and repaving) in Montrose, Cromdale and Bellevue/Virginia Park; and the recently completed Stadium Station ARP.

## ISSUES

With respect to the surrounding context, the biggest liability of the Study Area is its proximity to several other major redevelopment projects in the city, which may compete for market share or detract attention from the current opportunity. Redevelopment projects likely to be compared with the site include Blatchford, The Quarters, River Crossing and Station Pointe.

# Demographics

Because the majority of the Study Area comprises the former Exhibition Lands, the Edmonton Coliseum, the EXPO Centre and Borden Park, the demographics referred to in this section are those of Parkdale and Eastwood (parts of which are included within the Study Area boundaries), as well as those of immediately adjacent communities: Virginia Park, Cromdale, Bellevue and Montrose.

Understanding the demographic composition of the area is important for a number of reasons. Foremost, it provides context regarding the population who ought to be considered when planning for enhanced services, housing or public realm improvements deriving from redevelopment of the Study Area. Demographics also provide information relevant to planning feasible land uses within the Study Area, and ensuring those land uses are compatible with surrounding neighbourhoods. For example, commercial uses catering to a high-income demographic may prove unsuccessful in lower income areas, while the relative proportion of older adults or young families may influence the provision of seniors' centres or daycares, respectively.

## POPULATION DENSITY

- › Neighbourhoods in and around the Study Area have a range of population densities, reflective of the types of land uses and dwelling types in each, from lower-density single-family dwelling neighbourhoods like Virginia Park to the higher density apartment neighbourhoods like south Parkdale.

## AGE DISTRIBUTION

- › The distribution of different age groups varies throughout the neighbourhoods surrounding the Study Area, with a mix of young families, single people and older adults in each.
- › Virginia Park is the one exception to the generally balanced demographic profiles of the surrounding neighbourhoods, with almost 40% of the population of west Virginia Park over age 65, and 9% over age 85.

This is likely attributable to the Virginia Park Apartments, a retirement community located south of 112 Avenue. By contrast, there are very few youth in the area relative to other neighbourhoods.

## INCOME

- › With the exception of Virginia Park (see below), neighbourhoods around the Study Area have lower incomes than the Edmonton median (just over \$87,000). Between 17% and 35% of the population within the Study Area (i.e. in federal census dissemination areas overlapping with the Study Area boundaries) are living in poverty (i.e. below 50% of the median after-tax income).
- › Median household income is higher in neighbourhoods that have larger households (i.e. more earners per household) and vice versa. Especially in Virginia Park west, the abundance of low-income single-person households (55% of households – possibly accounted for by Concordia students or seniors living in the Virginia Park retirement community) obscures the high median incomes of two-or-more person households (almost \$122,000). Single-person households are also high in Montrose north, helping account for the relatively low household incomes there.

## DIVERSITY

- › The neighbourhoods surrounding the Study Area range from very little ethnic diversity to the south and east, to high diversity west and south of the LRT corridor. The proportion of visible minorities ranges from under 10% in Virginia Park east and Bellevue to almost 45% in south Parkdale and parts of Eastwood.
- › There are relatively high proportions of first-generation immigrants in Parkdale, especially from China, the Philippines and Vietnam. The Municipal Census also shows that Cromdale has a higher than average proportion of refugees.
- › Neighbourhoods near the Study Area also have large populations of Aboriginal peoples compared with the citywide average.

Based on the aggregate of  
**BELLEVUE | CROMDALE | EASTWOOD | MONTROSE**  
**| PARKDALE | VIRGINIA PARK**

**PEOPLE**

**POPULATION**



14,447

**MEDIAN AGE**



33

**WORK**

**HOUSEHOLD INCOME**



< \$60,000

64%

> \$60,000

36%

**MAJOR EMPLOYMENT TYPES**



CONSTRUCTION

13%



HOSPITALITY

9%



HEALTH CARE

10%



RETAIL TRADE

9%

**ACCESSIBILITY**

**MODE OF TRANSPORTATION TO WORK**



BIKE

2%



WALK

3%



CARPPOOL

5%



TRANSIT

21%



CAR

66%

**WALK SCORE**



61

**TRANSIT SCORE**



48

**HOUSING**

**STRUCTURE TYPE**



SINGLE DETACHED

53%



APARTMENT

39%

**DWELLING OWNERSHIP**



RENTED

51%

OWNED

49%

**TERM OF RESIDENCE (YEARS)**

<1

15%

1-3

20%

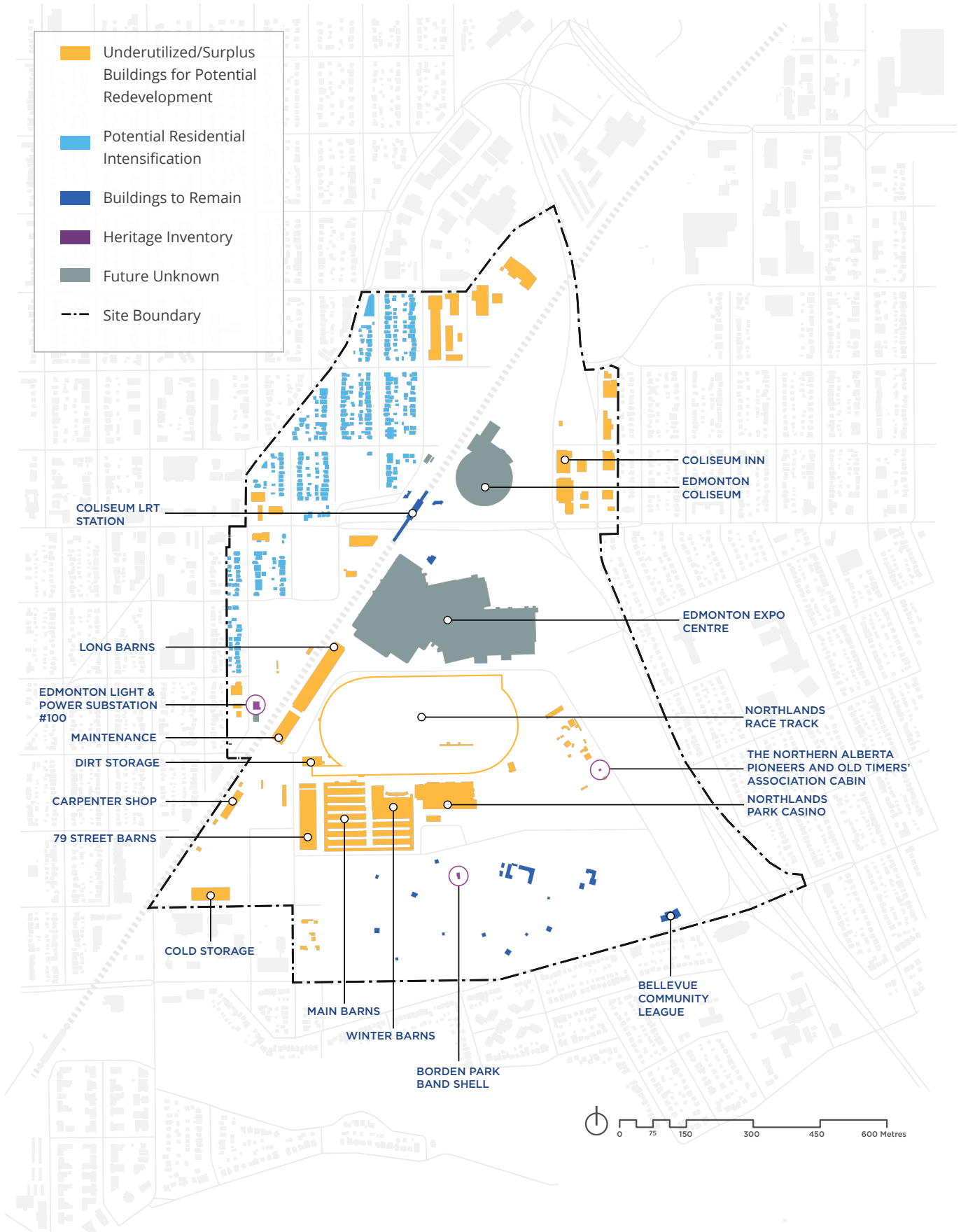
3-5

14%

5+

51%

## Map 2: Building Inventory





# Building Inventory

As an existing urbanized part of Edmonton, the Study Area contains numerous existing structures, in addition to a substantial inventory of vacant lands and surface parking.

Residential structures, largely stable (albeit lower-income) single family dwellings, comprise most of the area to the west of the LRT corridor. Some industrial structures are also present at the northern end of the Study Area, which overlaps the Yellowhead Corridor East industrial area. Some commercial structures can be found in the north-east of the Study Area, within and adjacent to the Wayne Gretzky Drive couplet.

However, the majority of the site is comprised of exhibition, entertainment and support structures on the public lands formerly leased to Edmonton Northlands. The significant components include:

- › Edmonton Coliseum: arena and longtime home to the Edmonton Oilers hockey franchise (permanently closed as of January 2018)
- › Edmonton EXPO Centre: trade and entertainment venue under transfer of operation to Edmonton Economic Development Corporation
- › Northlands Race Track and Casino: due for closure pending the move of Horse Racing Alberta to a new facility south of Edmonton and the expiration of Northlands' site lease

Other important structures include the Coliseum LRT Station, the barns and support structures for Northlands Park, and the heritage and interpretive structures of Klondike Park.

## OPPORTUNITIES

### Removal and Redevelopment

The closure and potential removal of Edmonton Coliseum and the Northlands Race Track and Casino presents an exceptional opportunity for area redevelopment, particularly the opportunity to consider large-format land uses that cannot otherwise be accommodated on typical redevelopment sites.

### Revitalization and Intensification

Many of the private land uses within the Study Area are low-density, and the physical condition of many structures is deteriorating. Given the desirable location of the Study Area in relation to Downtown Edmonton and access to the nearby Coliseum LRT Station, there is an excellent opportunity for residential and commercial intensification, including both incremental infill development and larger-scale redevelopment projects, especially of parcels closest to the LRT Station and larger commercial or industrial parcels. Redevelopment also offers the potential for revitalization of surrounding neighbourhoods.

## ISSUES

### Limited Repurposing Potential

Consultation with various stakeholders confirms that there is minimal potential to repurpose the numerous structures of the Northlands Park Race Track and Casino as they were purpose-built and have limited adaptability to new uses. Similarly, the cost of renovating the Edmonton Coliseum is greater than the cost of demolishing and constructing a new arena or multiplex from scratch.

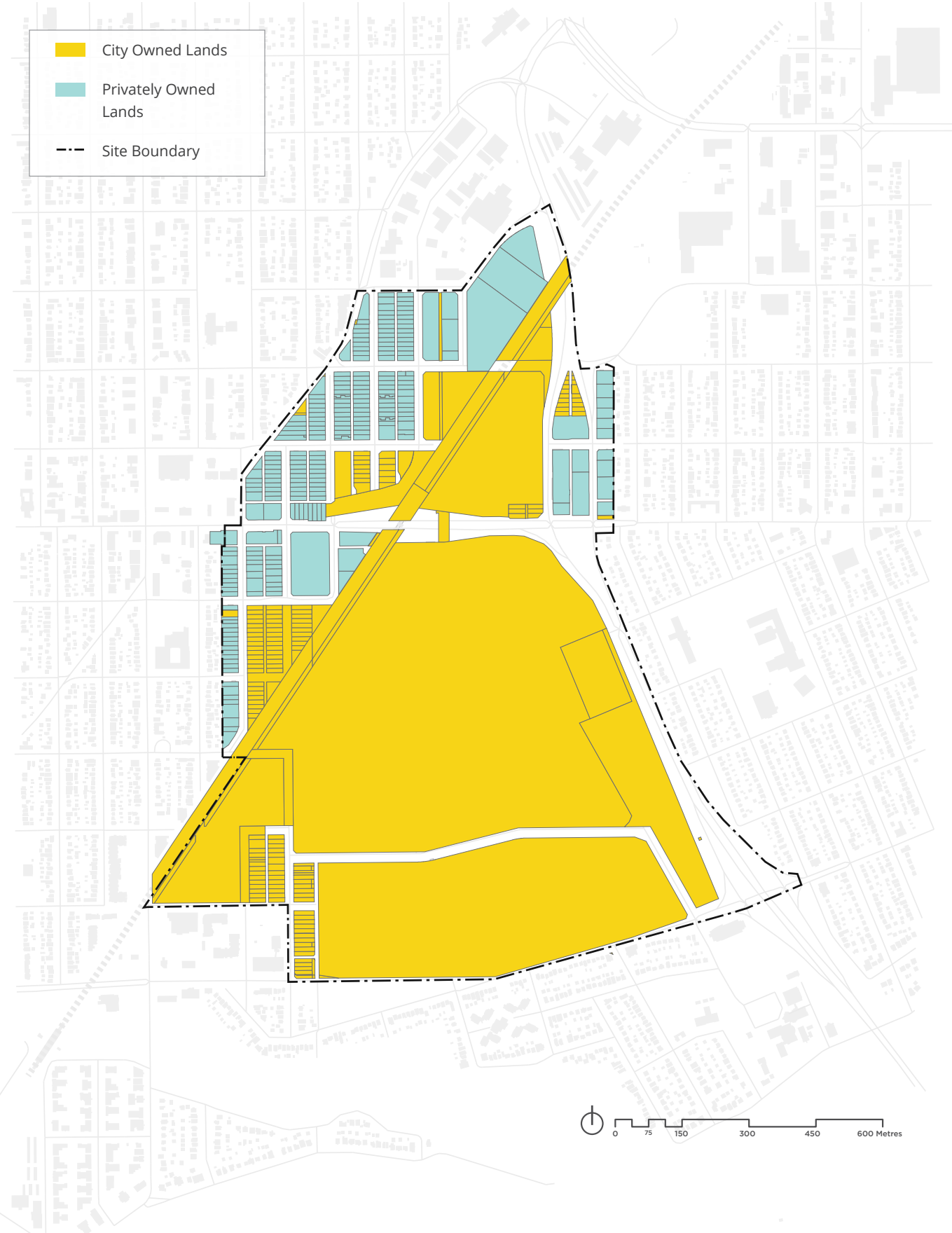
### EXPO Centre

Although this project will consider possible futures without the Edmonton EXPO Centre, its value as an economic generator and the debt still owing on the facility mean the structure will likely remain on site for the foreseeable future. Unfortunately, its size introduces a barrier to movement through the Study Area and precludes other transit-oriented development adjacent to the LRT Station. Its design, massing and operational requirements (e.g. loading) also present challenges for creating attractive edge conditions for adjacent uses.

### Heritage Assets

Several structures are found on the Edmonton Inventory of Historic Resources, and while not registered heritage assets, their destruction should be avoided. More intangible heritage values are also associated with the Study Area, including agricultural and cultural heritage (e.g. K Days and Farm Fair) and hockey heritage / the Coliseum.

Map 3: Land Ownership



# Land Ownership

The Study Area is comprised of both private and public lands, including residential, commercial and industrial uses; parks and open space; public services (e.g. EXPO Centre); and transportation and utility services.

## OPPORTUNITIES

### Large Contiguous Public Parcels

One of the most significant opportunities for redevelopment is the large proportion of the Study Area that is under public ownership, including the Coliseum parcel and former Exhibition Lands. A substantial number of parcels west of the LRT corridor are also City-owned, though the parcels immediately north of the Transit Centre Bus Loop are currently being transferred to the Community Development Corporation, and those south of 117 Avenue have been identified for a LRT storage and cleaning facility. Regardless, with the exception of Borden Park, virtually the entire area between the LRT corridor and Wayne Gretzky Drive is owned by the City, offering a unique opportunity for comprehensive redevelopment with a maximum of public control.

### Large Contiguous Private Parcels

The presence of several large private parcels may also facilitate land assembly to enable redevelopment, including the parcels within the Wayne Gretzky Drive couplet, the commercial parcels and parking lot immediately south of 118 Avenue and west of the LRT corridor, and the industrial parcels near the north of the Study Area.

## ISSUES

In spite of the opportunity presented by largely public ownership of the Study Area, redevelopment of private parcels, particularly smaller residential and commercial parcels, depends on the individual property owners' willingness to develop.

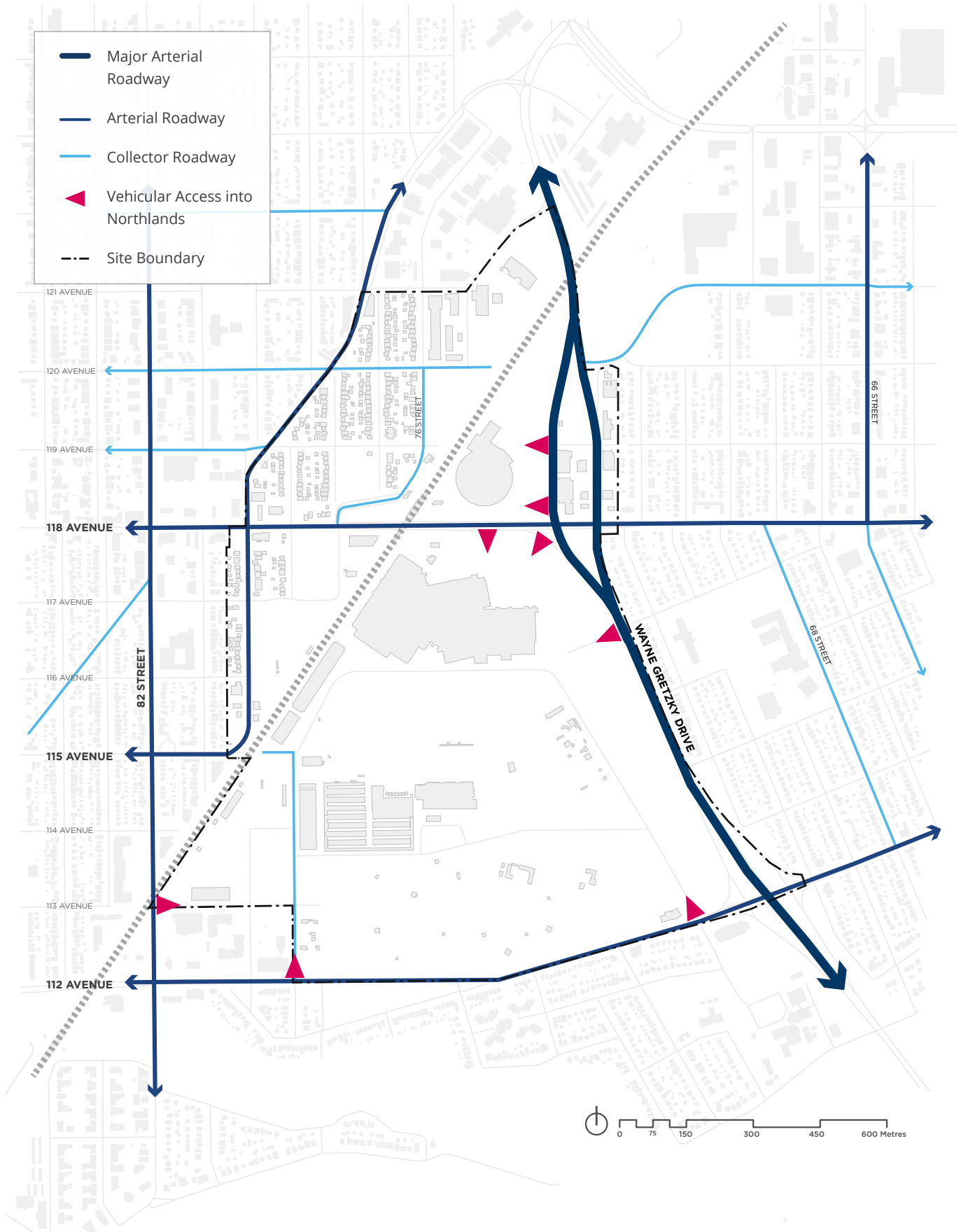
# Servicing

The potable water, wastewater and stormwater systems in and around the Study Area have been developed and upgraded in stages since the early 20th century. As a result, these systems represent a patchwork of infrastructure that only partially satisfies current engineering standards and that may require further upgrade to enable redevelopment. In particular:

- › Over half of the water network in the Study Area is constructed of cast iron, and has reached or exceeded its typical service life.
- › 168 metres of the water network is constructed of pipes too narrow to provide sufficient flow or pressure during fire events or peak demand periods.
- › Combined sewers provide the majority of wastewater and stormwater servicing in the Study Area, a system design that no longer complies with contemporary design and construction standards nor municipal goals around environmental protection.
- › Much of the wastewater and stormwater network is constructed of clay tile or concrete pipes. Some of these pipes have reached or exceeded their typical service life, while many others are expected to reach the end of their typical service life in the next 10-20 years.

Further study is required to make more detailed conclusions about the sufficiency of the existing infrastructure to support redevelopment, the desirable alignment of new infrastructure, and the role of existing municipal revitalization programs in supporting necessary capital improvements.

Map 4: Vehicle Access and Circulation



# Vehicle Access and Circulation

The Study Area is effectively bounded on all sides by arterial roadways, including Wayne Gretzky Drive to the east; Fort Road to the north-west; and 112 Avenue to the south. 118 Avenue (aka Alberta Avenue) bisects the site toward the northern end. A significant acreage of surface parking is available on the former Exhibition Lands; street parking is prohibited on arterial roadways and generally restricted through a Residential Parking Permit program in residential areas.

It should be noted that although certain roadways have been classified by the City as arterials or collectors, in reality their cross-sections and traffic volumes (see Appendix A) are more similar to local streets.

## OPPORTUNITIES

### Good Connections and Parking

Nearby arterial connections, and especially proximity to the “inner loop” roadway network via Wayne Gretzky Drive, makes the Study Area a desirable location for potential businesses and residents seeking good vehicle connectivity to the rest of Edmonton. Likewise, an abundance of surface parking and loading areas facilitates access for visitors and freight delivery, though some engagement respondents remark that the cost of parking (as administered by Edmonton Northlands) has become a barrier.

### Excess Roadway Capacity

Based on average annual daily traffic volumes and average peak hour traffic volumes (see Appendix A), the existing arterial roadway network surrounding the Study Area has sufficient capacity to accommodate some intensification and redevelopment (pending further study).

### Potential for “Big Moves”

Access and circulation issues (see next section) can be improved with minor and major infrastructure interventions. Access to and through the Study Area could be improved by exploring options for extending the surrounding street grid across the LRT corridor and/or Wayne Gretzky Drive. Improvements such as reopening the 115 Avenue LRT crossing (which is currently barricaded)

and enhancing the access points along 112 Avenue are relatively simple to execute, but major redevelopment on the former Exhibition Lands may warrant more visionary improvements, such as burying and/or decoupling Wayne Gretzky Drive, or raising 118 Avenue to grade.

## ISSUES

### Poor Site Access

Although the residential neighbourhoods within the Study Area are well connected through the grid street network, the former Exhibition Lands have no internal roadway system and only limited points of access from the surrounding area. Ready opportunities to add or improve access are also constrained: as part of the urban inner loop roadway, Wayne Gretzky Drive is access controlled, and LRT crossings are similarly regulated. The 118 Avenue trench also limits the potential for further site access either north or site onto the site between Wayne Gretzky Drive and Fort Road.

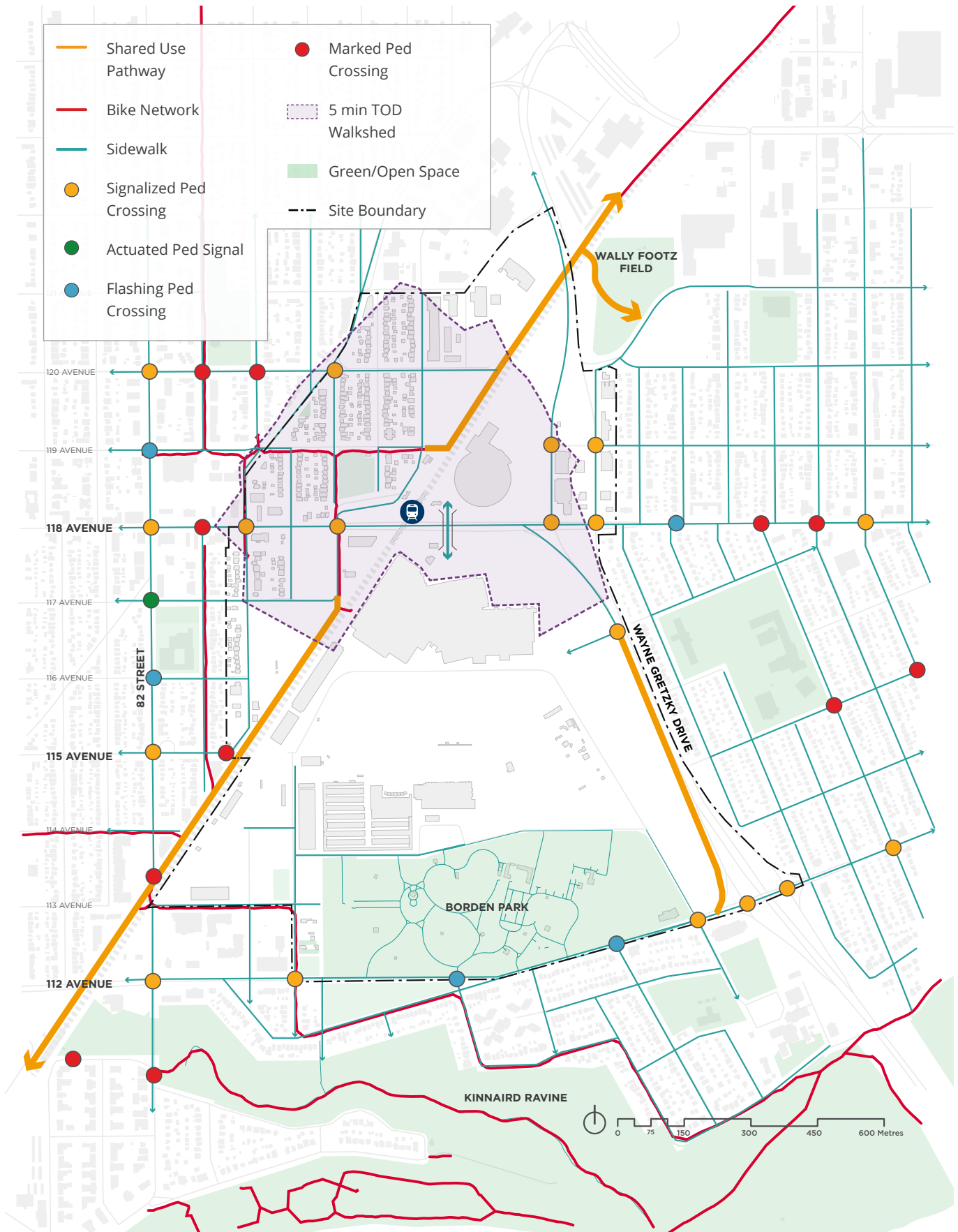
### Challenges with “Big Moves”

In addition to the regulated access restrictions discussed above, any “big moves” to improve access and circulation must consider the substantial capital and operating costs involved, impacts on nearby communities and levels of service, and the physical constraints that may be introduced by structures (e.g. EXPO Centre) or infrastructure (e.g. utility alignments, proposed LRT maintenance yard).

### Wayne Gretzky Drive Couplet

The Wayne Gretzky Drive couplet between 116 Avenue and 120 Avenue impedes access to the Edmonton Coliseum site, especially for northbound vehicle traffic, and complicates any proposition to improve connectivity of the street grid. The couplet creates an isolated, inefficient “island” of development between two busy roadways, and compromises the assembly of a larger, more marketable redevelopment parcel at the Coliseum site.

Map 5: Pedestrian and Cyclist Access and Circulation



# Pedestrian / Cyclist Access and Circulation

The pedestrian network consists of sidewalks along most of the roadways within and surrounding the Study Area, while the bike network consists of on-street cycling routes and off-street shared-use pathways (SUPs). Apart from the SUP to the west of Wayne Gretzky Drive and the pedestrian bridge over 118 Avenue, the former Exhibition Lands have no formal pedestrian or cyclist routes.

## OPPORTUNITIES

### Regional Shared Use Pathway

The Study Area benefits from an excellent cycling and recreational connection to Downtown Edmonton via the SUP along the LRT corridor.

### Better Connections to Green Space

The Study Area contains Borden Park and is located just north of Kinnaird Ravine and through-connections to other River Valley amenities. Enhancing pedestrian and cycling connections to these spaces would benefit future and existing residents.

## ISSUES

### Barriers to TOD Walkability

Transit-oriented development is enhanced walkability near major transit stations. In the case of the Coliseum LRT Station and transit loop, pedestrians and cyclist encounter several barriers to good mobility, including grade changes and prohibited (fenced) crossing at 118 Avenue, and interrupted access across the former Exhibition Lands around the large footprint of the EXPO Centre.

### Discontinuous Bike Routes

Cycling routes through the Study Area are compromised by a two-block rerouting of the SUP (which normally runs alongside the LRT corridor) at 118 Avenue, and the termination of the Virginia Park route at the LRT corridor at 113 Avenue. The SUP would be further rerouted should the LRT storage and cleaning facility be constructed as planned, in the vacant parcel between 115 and 117 Avenues.

### Poor Access from Neighbourhoods

There are limited connections into the former Exhibition Lands from the surrounding neighbourhoods to the west and east. There are only two formal crossings of the LRT corridor (with another barricaded but passable crossing at 115 Avenue). Both a sound wall and fencing prevent any access across Wayne Gretzky Drive between 112 Avenue and 118 Avenue — a distance of approximately 1 kilometre.

### Poor Pedestrian / Cyclist Conditions

With no formal pedestrian or cycling infrastructure and expansive surface parking, the former Exhibition Lands, along with the arterial roads and LRT corridor, present formidable barriers to mobility across the Study Area in every direction. Engagement participants remark that unappealing aesthetics on site and suboptimal conditions in surrounding areas (narrow sidewalks, high traffic volumes and speeds, exposure, safety concerns, unattractive industrial and commercial uses) create uninviting pedestrian and cycling environments.



Pedestrian bridge over 118 Avenue



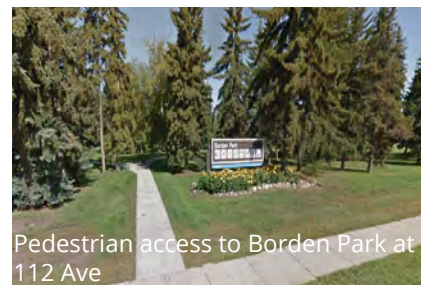
Shared pathway along LRT corridor



EXPO Centre south "back of house"

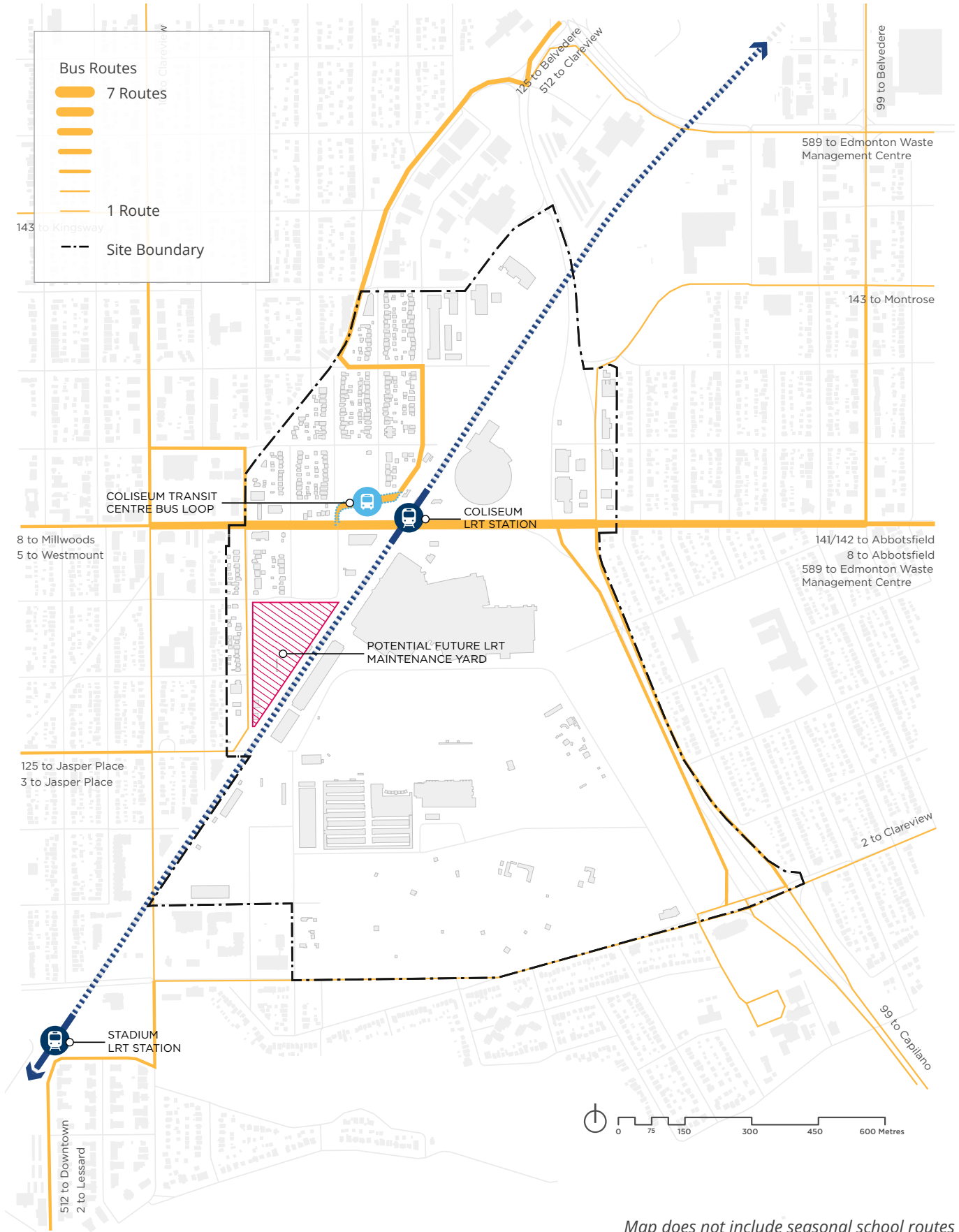


Shared use pathway along WGD



Pedestrian access to Borden Park at 112 Ave

Map 6: Public Transit



Map does not include seasonal school routes



# Public Transit

Given the presence of the Coliseum LRT Station and associated bus loop immediately to the west of the Station, the Study Area is an important centre for public transit, including citywide, community and seasonal bus services, as well as LRT connections to south and northeast Edmonton.

## OPPORTUNITIES

### Good Transit Connectivity

One of the most important opportunities to be realized from the Study Area is the Coliseum LRT Station, which offers excellent connections to major destinations. Travel surveys show that 30% to 40% of existing transit users boarding LRT at Coliseum Station during the morning peak period travel Downtown, while an additional 40% to 50% travel to the University of Alberta or the Hospital. The area is also well served by numerous bus routes, especially along 118 Avenue, whose routes often terminate or intersect with the Coliseum Transit Centre Bus Loop. The Edmonton Transit Strategy also recommends high-frequency service along 118 Avenue and 82 Street (pending further study). The proximity of the LRT station and the abundance of bus routes results in a higher transit mode share in Eastwood and Parkdale than the city average.

### Multi-Modal Connectivity

There is a potential to enhance the multi-modal connectivity associated with the transit system. Currently, both bike routes and the shared-use pathway alongside the LRT corridor offer good access to the bus loop and (to a lesser extent) the Coliseum LRT Station.

## ISSUES

### Coliseum LRT Station and Transit Centre

During the first phase of public engagement, numerous participants pointed to the poor design and condition of the LRT Station, bus loop and surrounding environment. Inadequate lighting, the dangerous accumulation of ice during winter, fast-moving traffic along 118 Avenue, dated and unwelcoming aesthetics, accessibility issues moving from the 118 Avenue trench up to grade, and safety concerns create an unpleasant transit experience in the

station and discourage people from using the LRT. A shortage of good waiting spaces and unrealized potential of James Kidney Park were also cited as issues with the bus loop. The recently completed redesign of the Transit Centre Bus Loop, and the ongoing work for the Coliseum LRT Station Redesign, should help address some of these issues moving forward.

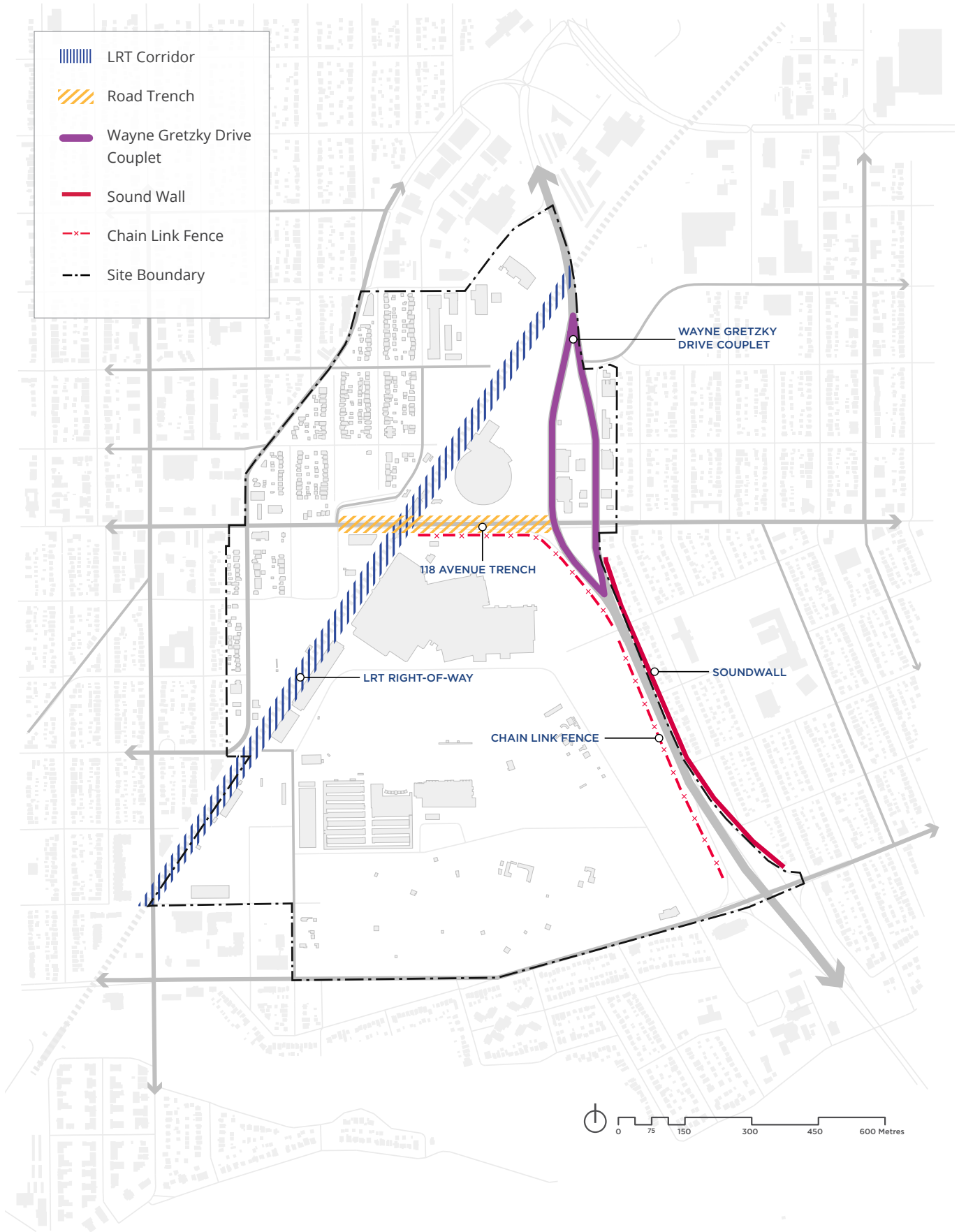
### Transit on Exhibition Lands

There are currently no transit routes within the former Exhibition Lands, and the majority of the site (including Borden Park) falls outside the walkable catchment of the Coliseum and Stadium LRT Stations. Should substantial employment or residential uses be introduced through redevelopment, new or extended transit routes may be desirable on the site to serve an increased population. At the same time, extending transit routes suffers the same challenges as extending the roadway network – namely, the access challenges associated with the LRT corridor, Wayne Gretzky Drive and the 118 Avenue trench identified above.

### Potential LRT Storage and Cleaning Facility

The City has been exploring the potential for an LRT storage and cleaning facility on the Capital LRT Line. The triangle west of the LRT corridor and south of 117 Avenue is currently used by Edmonton Transit for storage uses, and is the preferred location for the future storage and cleaning facility. The facility should have little influence on existing transit services, but it would interrupt the shared-use pathway (requiring a rerouting onto the local roadway network) and may introduce constraints on new cross-corridor connections between Parkdale and the former Exhibition Lands, or the potential for a new or moved LRT station south of the existing Coliseum Station (see the Development Potential section). Should this triangle prove more suitable for other development options, the facility could be located elsewhere within the study area, provided the site is adjacent to the LRT corridor and can equally address operational needs.

# Map 7: Major Site Barriers



# Major Site Barriers

As a summary of the previous sections, the following major site barriers, collectively, present the greatest constraint to redevelopment in the Study Area:

## 1. LRT Corridor

There is currently no formal access directly across the LRT corridor into the Exhibition Lands or Coliseum parcel. The only formal crossing points are 112 Avenue, 82 Street and 118 Avenue, all of which require a subsequent turn to access the site. Additional access points across the corridor are highly desirable (e.g. at the barricaded 115 Avenue) but access restrictions (e.g. security fencing) and absence of active programming along the corridor create a significant physical and visual barrier impeding integration of the site with the Parkdale and Eastwood neighbourhoods to the west.

## 2. 118 Avenue Trench

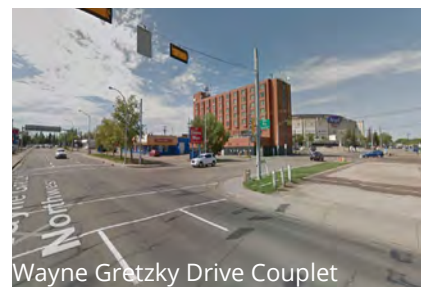
The trenching of 118 Avenue beneath the LRT corridor between Wayne Gretzky Drive and Fort Road likewise presents a physical and psychological barrier, making north-south connectivity and site integration, and access to the Exhibition Lands and Coliseum parcel, particular challenges. In addition, a poor pedestrian and cycling environment through the trench discourages east-west travel across the Study Area and compromises the potential for the benefits of recent Alberta Avenue revitalization to spread further east.

## 3. Wayne Gretzky Drive Couplet

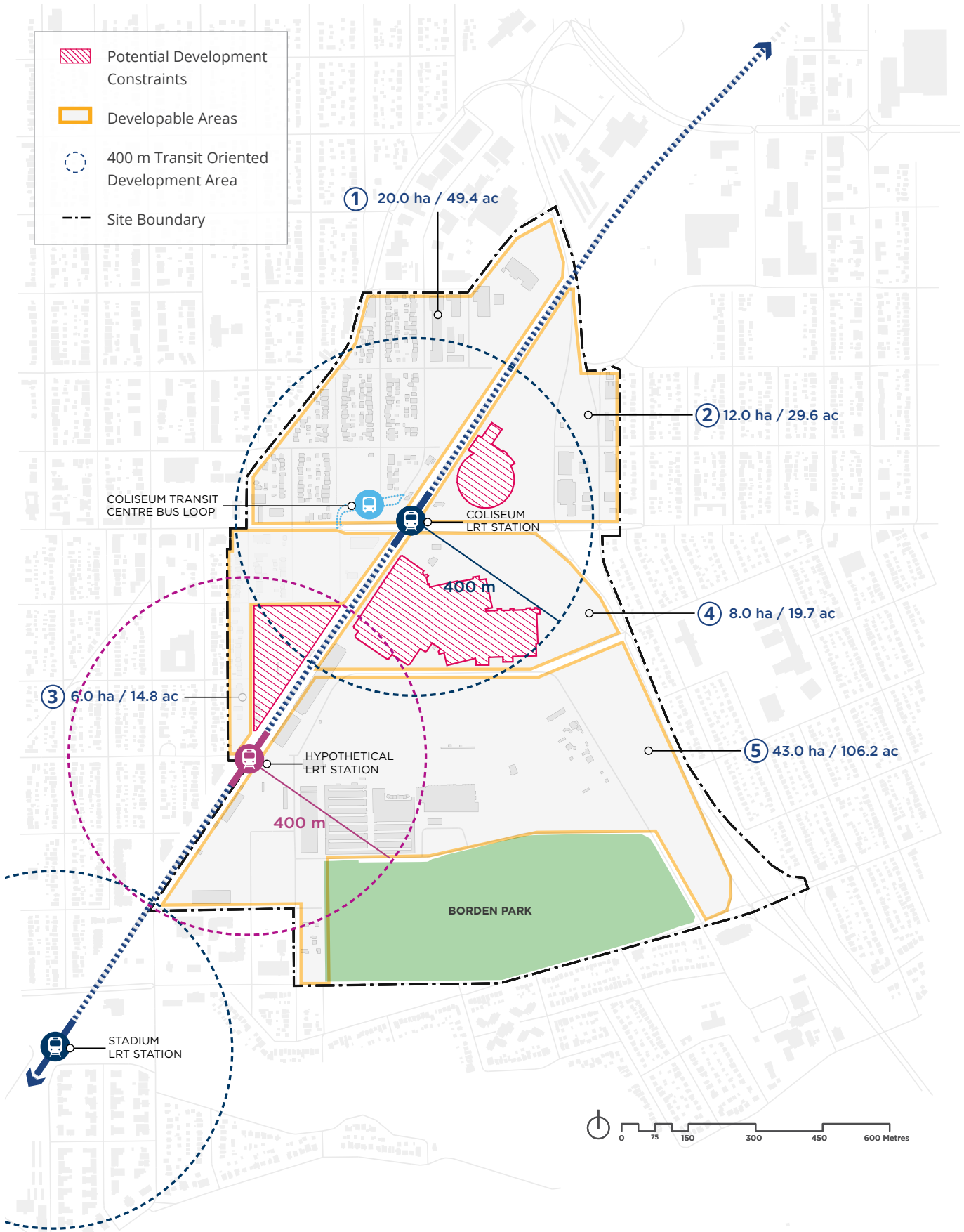
The splitting of Wayne Gretzky Drive into a couplet between 116 Avenue and the LRT corridor overpass effectively creates several hectares of “wasted land” from a redevelopment perspective. The parcels inside the couplet are isolated from both the Coliseum site and Montrose, limiting their redevelopment potential. The couplet reduces crossing distances and improves intersection frequency for pedestrians, but it also complicates vehicle signaling at 118 Avenue and impedes east-west connectivity across the Study Area. Additionally, the size and shape of the two triangles of green space at the northern and southern junctions make them unusable for development.

## 4. Wayne Gretzky Drive

Although Wayne Gretzky Drive is classified as an arterial roadway – the same class as 112 Avenue – it is also part of the “inner ring” freeway system that carries over 57,000 vehicles past the Study Area per day. This means that not only are there restrictions on the number and design of vehicle access points into the Exhibition Lands, but there is also a sound barrier on the east side of the roadway that separates the Study Area from Bellevue, interrupting east-west connectivity of the roadway grid and compromising integration of the Study Area with neighbourhoods to the east. Wide intersections and busy traffic volumes also provide poor accommodation for pedestrians and cyclists.



## Map 8: Development Potential



# Development Potential

Taking into account the opportunities and issues identified above, five major zones or districts can be identified for redevelopment, each with its own strengths and weaknesses arising from the unique opportunities and issues in that area.

DISTRICT	OPPORTUNITIES	ISSUES
<b>DISTRICT 1</b>	<ul style="list-style-type: none"> <li>› Proximity of the Coliseum LRT Station is an amenity for residents and employers seeking good access to Downtown and other major destinations</li> <li>› Some City-owned parcels and larger private parcels can facilitate land assembly and redevelopment of some blocks</li> </ul>	<ul style="list-style-type: none"> <li>› Private ownership through most of the area makes land assembly and redevelopment more challenging and unpredictable</li> <li>› Existing land use patterns are predominantly low-density and residential, increasing the likelihood of resistance to large-scale and/or higher-density change</li> </ul>
<b>DISTRICT 2</b>	<ul style="list-style-type: none"> <li>› Decoupling Wayne Gretzky Drive could expand redevelopment options by increasing the contiguous redevelopment area north of 118 Avenue and supporting marketable land assembly</li> <li>› Proximity of the Coliseum LRT Station is an amenity for residents and employers</li> </ul>	<ul style="list-style-type: none"> <li>› The future of the Edmonton Coliseum remains unclear, especially in relation to its proposed heritage assessment and public costs to demolish or preserve</li> <li>› Access and connectivity challenges caused by the LRT corridor, Wayne Gretzky Drive (and couplet) and 118 Avenue trench limit redevelopment potential without infrastructural “big moves”</li> </ul>
<b>DISTRICT 3</b>	<ul style="list-style-type: none"> <li>› Proximity of the Coliseum LRT Station is an amenity for residents and employers</li> <li>› Opening 115 Avenue crossing of LRT corridor presents an opportunity for better access and connectivity to and through the former Exhibition Lands, and improved integration with Parkdale</li> <li>› The large private parking lot south of 118 Avenue has high near-term redevelopment potential</li> </ul>	<ul style="list-style-type: none"> <li>› The proposed LRT storage and cleaning facility would preclude revenue-generating and city-building development west of the LRT corridor, and potentially introduce a nuisance to adjacent blocks</li> <li>› Awkward parcel configurations may make redevelopment projects less feasible or desirable</li> </ul>
<b>DISTRICT 4</b>	<ul style="list-style-type: none"> <li>› Proximity of the Coliseum LRT Station is an amenity for residents, employers and visitors to the site</li> <li>› The EXPO Centre draws visitors from across Edmonton and beyond</li> <li>› Abundant surface parking supports destination uses or presents the potential for redevelopment</li> </ul>	<ul style="list-style-type: none"> <li>› The EXPO Centre represents an extensive footprint that precludes other redevelopment options and interrupts north-south connectivity across the site</li> <li>› The ongoing needs of visitors and freight require the preservation of parking and loading areas</li> </ul>
<b>DISTRICT 5</b>	<ul style="list-style-type: none"> <li>› The large, unencumbered public parcel presents a unique opportunity for comprehensive redevelopment</li> <li>› Borden Park is an amenity for residents and visitors</li> <li>› Potential “big moves” such as a new LRT station or burying Wayne Gretzky Drive could improve access, connectivity and integration with surrounding neighbourhoods</li> </ul>	<ul style="list-style-type: none"> <li>› Exposure to EXPO Centre’s back of house operations requires careful planning of land use transitions</li> <li>› Distance to the Coliseum and Stadium LRT Stations reduces access to transit options</li> <li>› Large parking lot and Wayne Gretzky Drive impedes integration and connection with Bellevue neighbourhood</li> </ul>

# Conclusion

As this Issues and Opportunities Brief shows, the former Exhibition Lands represent an exceptional city-building opportunity for the City of Edmonton, its residents and partners. However, this opportunity is not without challenges and constraints on development that will have to be considered as the project moves forward. Importantly, as a redevelopment scenario, any concept for the future must account for existing structures, servicing capacity, community dynamics and legacies of former uses (both physical, as in land contamination, and intangible, as in embodied culture and heritage).

## **NEXT STEPS**

As indicated in the Introduction, the Exhibition Lands project is in a state of transition. Progress is anticipated to continue with the approval of the proposed revised project process by City Council in December 2017, during which time the Project Team will engage with internal and external stakeholders and with the public to share the results of the Issues and Opportunities analyses, and to collect feedback about other aspects of the project. The issues and opportunities discussed here will be considered in greater detail as the project team and other project participants begin to build a vision for the future of the Exhibition Lands, with the near-term goal of informing the Terms of Reference for an open call for ideas in early 2018.

# Appendix A

## Background Studies

## TECHNICAL MEMORANDUM

DATE: October 27, 2017  
PROJECT NO: 3503.02  
**PROJECT: Coliseum Station ARP**  
**SUBJECT: Existing Mobility Conditions Summary**

TO: Brian Horton, O2 Planning + Design Inc.  
FROM: Nicole Farn, Bunt & Associates

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### MOBILITY ASSESSMENT

A connected community must consider safety, connectivity, environment, street crossings, and user comfort. Mobility accommodation should be considered from both an area-wide and a site-specific level. The ability to navigate through an area as well as safely cross individual intersections by all transportation modes including walking (as well as mobility impaired users), cycling, and transit should be considered in developing the Coliseum ARP.

**Exhibit 1** identifies the Coliseum Station ARP study area. In general the study area is bounded by Wayne Gretzky drive to the east; 112 Avenue to the south; the LRT corridor, 81 Street and Fort Road to the west; and Mount Lawn Road to the north.

### WALKING

#### Existing Conditions

**Exhibit 2** identifies the existing pedestrian infrastructure within and in proximity to the study area. Sidewalks (a combination of both mono-walks and boulevard sidewalks) exist on both sides of most streets and avenues in the study area, with the exception of the blocks in the northwest sector of the study area, including the industrial area. Pedestrian accommodation is provided on the west side only of the Wayne Gretzky Drive corridor between 112 Avenue and 118 Avenue (shared-use path 112 Avenue to 116 Avenue, sidewalk between 116 Avenue and 118 Avenue).

The grid roadway network provides for high connectivity to the plan area from the west. Pedestrians may cross roads at intersections unless otherwise signed, and a number of marked crosswalks are provided across busier collectors and arterials immediately west of the plan area (i.e. 82 Street, 120 Avenue, 118 Avenue).

It is of note that historically, the grid system of streets and avenues, including sidewalk development, existed in the southeast sector of the plan area prior to the displacement of this area to accommodate an expanded parking lot for Northlands Park, the Expo centre and the Northlands Coliseum.



With respect to neighbourhood connectivity, the sound wall on the east side of Wayne Gretzky Drive disconnects the Bellevue neighbourhood from the plan area and impedes pedestrian connectivity to the Coliseum ARP area.

Although pedestrians can cross legally at most intersections, enhanced pedestrian crossings within and in close proximity to the plan area include marked crosswalks (pavement markings and signage), pedestrian-actuated amber flashers, pedestrian-actuated traffic signals, and full traffic signal controlled intersections.

With respect to the movement of pedestrians through the ARP area, the following challenges are of note:

- East-west and north-south pedestrian linkages are discontinuous through the ARP plan area other than along 118 Avenue;
- The Wayne Gretzky Drive noise wall represents a significant obstacle for extending east-west sidewalks into the plan area from Bellevue;
- No formal opportunities to cross the LRT tracks at grade (east-west); although pedestrians may cross at the bollarded 115 Avenue crossing. At-grade crossing north-south on 82 Street north of 113 Avenue;
- Few opportunities for pedestrian to cross Wayne Gretzky Drive;
- Pedestrian access to and from Borden Park from the Coliseum LRT platform is long and circuitous; and
- The Wayne Gretzky Drive couplet across 118 Avenue represents a barrier to pedestrian movements.

Notwithstanding the challenges identified, opportunities exist for enhancing pedestrian connectivity to adjacent green spaces and neighbouring communities.

## CYCLING

### Existing Conditions

The existing bicycle network serving the ARP area includes signed on-street bicycle routes, on-street bike lanes, a shared-use path network, and the river valley trail system. At this time, cycling facilities located within the plan area are limited. A segment of the Shared-Use path is located on the west side of the LRT corridor in the southwest sector of the plan area while there are a couple of on-street bicycle facilities in the west central sector of the plan area. **Exhibit 3** identifies the existing bike network.

Challenges identified with respect to the existing cycling accommodation and its expansion include the following:

- The shared use path on the west side of the LRT corridor is discontinuous;
- There are no east-west bicycle linkages through the ARP plan area;
- The Wayne Gretzky Drive noise wall represents a significant obstacle for extending east-west bicycle routes into the plan area from Bellevue;
- No opportunities to cross the LRT tracks at-grade east-west; and
- Few opportunities for cyclists to cross Wayne Gretzky Drive;

## TRANSIT

### Existing Conditions

The Coliseum LRT Station and the Coliseum Transit Centre are both located within the plan area. It is an approximate 10-minute train ride from Coliseum Station to Churchill Station downtown. The LRT's Capital Line bisects the plan area from the southwest to the northeast. It is also noted that the Stadium LRT Station, located to the southwest of the plan area is located within an approximate 800m distance of the very southwest corner of the Coliseum Station ARP area.

**Exhibit 4** identifies existing transit routes and LRT infrastructure. In addition, a 400m radius and an 800m radius circle is identified with the Coliseum Station at its centre, representing a 5-minute walk and 10-minute walk catchment area. As presented, the 400m catchment area captures only a small proportion of residential area, which is within the Eastwood neighbourhood; while the 800m catchment includes more residential within Eastwood, and a small sector of residential development within the Parkdale, Montrose, and Bellevue neighbourhoods. It should be noted that Borden Park is located outside the 800m walking distance from the LRT Station and Transit Centre.

**Exhibit 4a/4b/4c** illustrate the existing transit routes through and in close proximity to the Coliseum ARP area.

The City of Edmonton's 2016 Municipal Census indicates that the mode split to transit for commuters from Eastwood and Parkdale approaches 25%, which is significantly greater than the City-wide average of 14%.

Based on a review of origin-destination outputs from the City of Edmonton's 2015 regional household travel survey regarding movement around both the Coliseum and Stadium LRT stations, the following is of note:

- Between 70% and 90% of those boarding at the Coliseum LRT Station during the AM peak period window (6AM to 9AM) travel to the downtown core (30% to 40%) and University and Hospital area (40% to 50%).
- With respect to Stadium Station during the AM period, between 40% and 50% of those boarding at Stadium travel to the downtown core, with a significant percentage (20% to 30%) travelling to the University and Hospital area and the downtown fringe (10% to 20%).
- Of those boarding during the AM peak period at the Coliseum and Stadium LRT Stations, the majority of riders (40% to 50%) are generated from the area bounded by the Capital Line to the west, the North Saskatchewan River to the south and east, and Yellowhead Trail to the north. Areas to the immediate north and west of the LRT stations also generate ridership to a lesser extent.

It is noted that the development of two LRT stations within the ARP area, one south of the Expo Centre and one further north would capture more of the plan area and adjacent neighbourhoods

There is currently limited transit within the ARP area itself; however, with multiple transit stops on 118 Avenue, 112 Avenue, 82 Street, and Fort Road, opportunities exist to extend existing adjacent transit routes within a redeveloped ARP area.

Challenges and opportunities with respect to transit can be summarized as follows:

- Most of the area residential development is outside a 400m radius walking distance of the LRT platform;
- Multiple transit stops on 118 Avenue, 112 Avenue, 82 Street and on Ft. Road;
- Currently limited transit within ARP area; Opportunities to extend existing adjacent transit routes within redeveloped ARP area; and
- Borden Park outside of the 800m walking distance from LRT and Transit Centre.

## DRIVING

### Existing Conditions

The majority of roadways surrounding the Coliseum Station ARP area are local roadways within neighbourhoods well-served by arterial roadways. **Exhibit 5** identifies the existing road network hierarchy in the plan area.

Wayne Gretzky Drive forms part of the City's inner loop roadway system. As part of the system, the corridor inherently has a certain level of access control associated with it. The current access control plan would suggest that there are limited opportunities to establish new at-grade intersections along the corridor.

Challenges and opportunities with respect to roadways and area access can be summarized as follows:

- A single roadway, the 118 Avenue arterial, bisects the plan area;
- The geometric design of 118 Avenue between Wayne Gretzky Drive and 78 Street represents a depressed roadway system, underneath the existing LRT tracks. This geometric design characteristic would limit opportunities for access into the Exhibition Lands from the south should the coliseum building be demolished and the area be redeveloped;
- The Wayne Gretzky Drive couplet system through the 118 Avenue intersection also limits the area available for redevelopment and inherently creates islands of development.
- Limited opportunities existing to extend the local roadway network into the Coliseum ARP plan area given the access control plan associated with Wayne Gretzky Drive (east side) and the LRT alignment (west side);
- Notwithstanding the above, opportunities exist to extend 115 Avenue into the redeveloped plan area. Historically, 115 Avenue was an at-grade crossing of the LRT tracks into the plan area, but this connection is currently closed (barricaded);
- Additionally, there are opportunities to enhance access from 112 Avenue on either side of Borden Park; and
- Based upon a review of available traffic movement information (Average Annual daily Traffic and AM and PM Peak Hour Traffic volumes), it would appear that there is some capacity on the adjacent arterial roadway network to accommodate increased development activity within the Coliseum station ARP area. **Exhibit 6** identifies Average Annual Daily Traffic (AADT) volumes in the study area.

As presented in Exhibit 6, 112 Avenue currently carries in the order of 25,000vpd adjacent to the ARP area; 118 Avenue carries in the order of 20,000vpd; and 115 Avenue carries in the order of 12,000 vpd. With respect to the capacity of these arterial roadways to accommodate increased activity, it is noted that the typical daily volume threshold for roadways with a similar role and function and cross-section as 112 Avenue and 118 Avenue is in the order of 30,000 vpd. An appropriate daily volume threshold for 115 Avenue is anticipated to be in the order of 20,000 vpd. It should be noted, however, that a more detailed level of analysis will be required in more refined stages of planning as the capacity of roadways can be constrained by the capacity limitations of intersections located along their length.

## ON-STREET PARKING

### Existing Conditions

In much of the Coliseum Station ARP area, on-street parking is either not permitted or is restricted. There is limited unrestricted parking in the ARP plan area. Only in the northwest sector (Eastwood Neighbourhood) of the plan area are there streets and avenues which allow for 2-hr parking opportunities (except for residents with permits).

Given the proximity of the Exhibition Lands in relation to residential development, a Residential Parking Permit (RPP) program is in place along the majority of roadways within the residential precincts. However, opportunities exist to remove the Residential Parking Program depending on redevelopment associated with Edmonton Coliseum building.

Parking is not permitted on arterial roadways, and only pockets of parking provided along Borden Park Road. Parking is generally permitted on one side only of the residential streets located in the northwest sector of the plan area.

**Exhibit 7** identifies existing parking restrictions within the plan area, as well as the extent of existing RPP program areas.

## CONNECTIVITY/USER EXPERIENCE

There are a number of intangible aspects associated with the propensity for the use of alternative modes. Some of these intangibles would include the adjacent land use, lighting environment, adjacency of high volume roadways which are also truck routes, presence of street furniture/street planting, width of pedestrian crossings, level of control at pedestrian crossings, noise exposure, availability of safe and appropriate pedestrian infrastructure (i.e. missing links in the sidewalk and cycling network, provision of curb ramps), the directness of pedestrian corridors to transit stops/centres, passenger experience (i.e. comfort of bus transit), and beginning-of-trip facilities (i.e. bike racks, concessions).

A number of examples include:

- Within the study area, there are a number of land use development nodes that do not lend themselves to the development of a robust pedestrian/cycling environment. Within the plan area, there are a number of areas where sidewalks are either not provided or are provided on only one side of a roadway. Given the location of major arterial roadways such as Wayne

Gretzky Drive and 118 Avenue in combination with the LRT tracks, there are a number of sidewalks and cycling facilities that are discontinuous in nature.

- The pedestrian experience along arterial roadways in the plan area is impacted by high volumes and their designation as major truck routes in the City. Increased noise exposure is experienced by vulnerable users along these corridors.
- The absence of a coordinated landscape plan which would include such assets as trees, park furniture, play spaces, walkways, trails, sports fields all contribute to dampening the use of alternative modes as a primary means of transportation within and through the plan area.
- The development of a more 'complete street' system is preferable over the current design standard of collector and local roadways in the area.
- From an overall plan connectivity perspective, extending 115 Avenue through the plan area and developing a grid network of roadways between Borden Park and the Edmonton Expo Centre based on a 'Building Great Neighbourhoods'/'Complete Street' philosophy, would enhance the opportunity for alternative mode transportation movements.

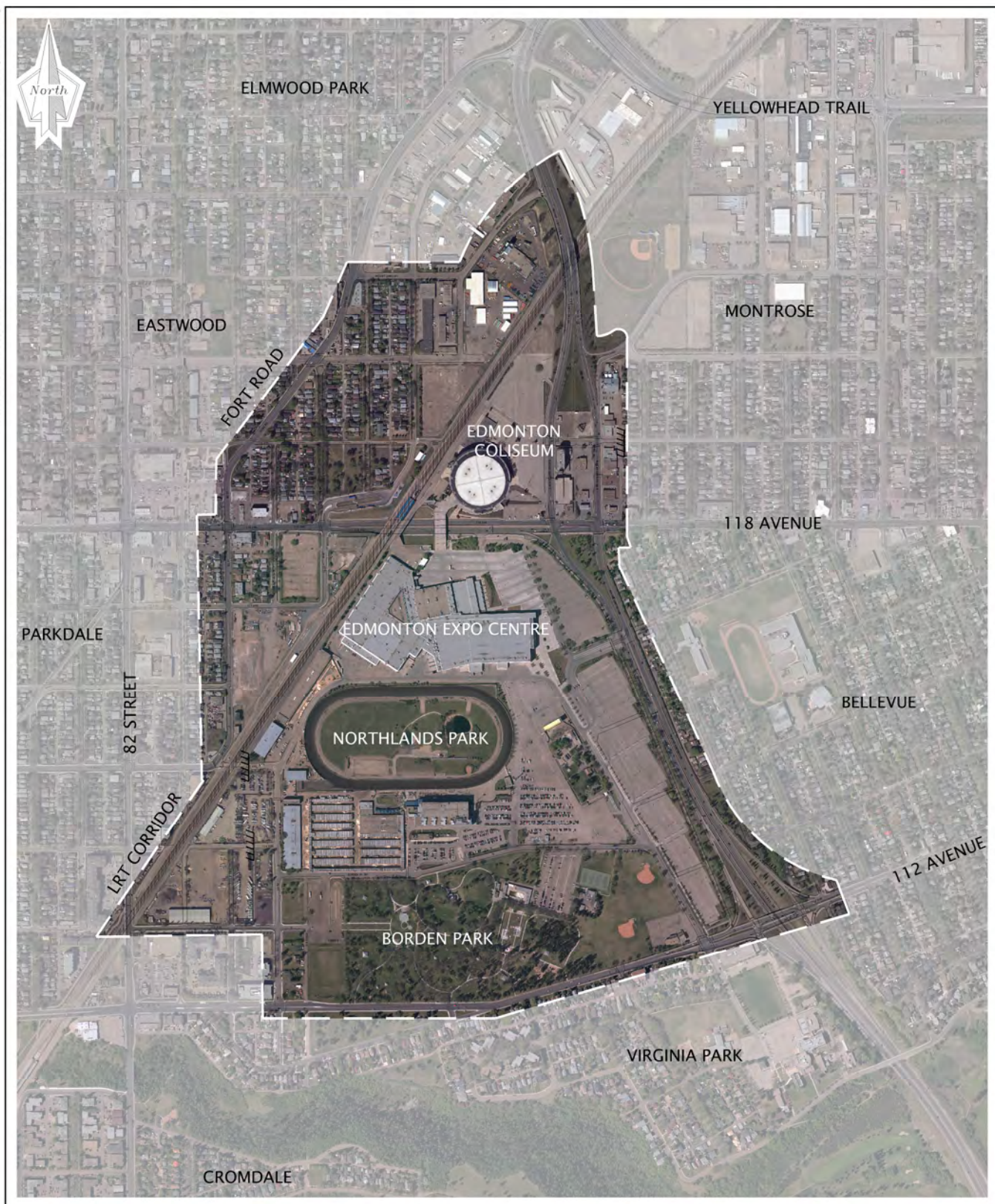


Exhibit 1

# Coliseum ARP Study Area



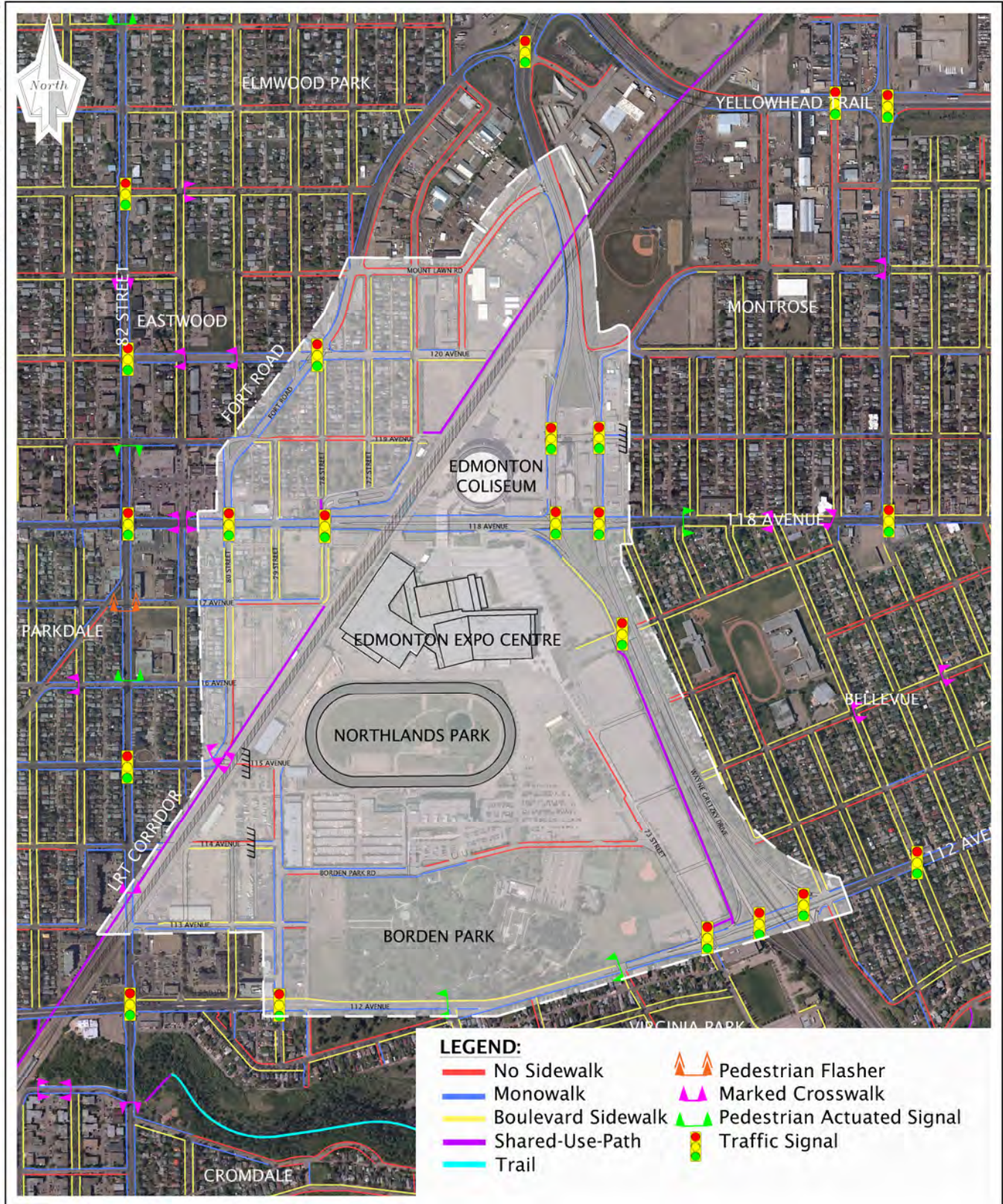


Exhibit 2

# Existing Pedestrian Infrastructure

**DRAFT**





Exhibit 3

# Existing Bike Network

**DRAFT**





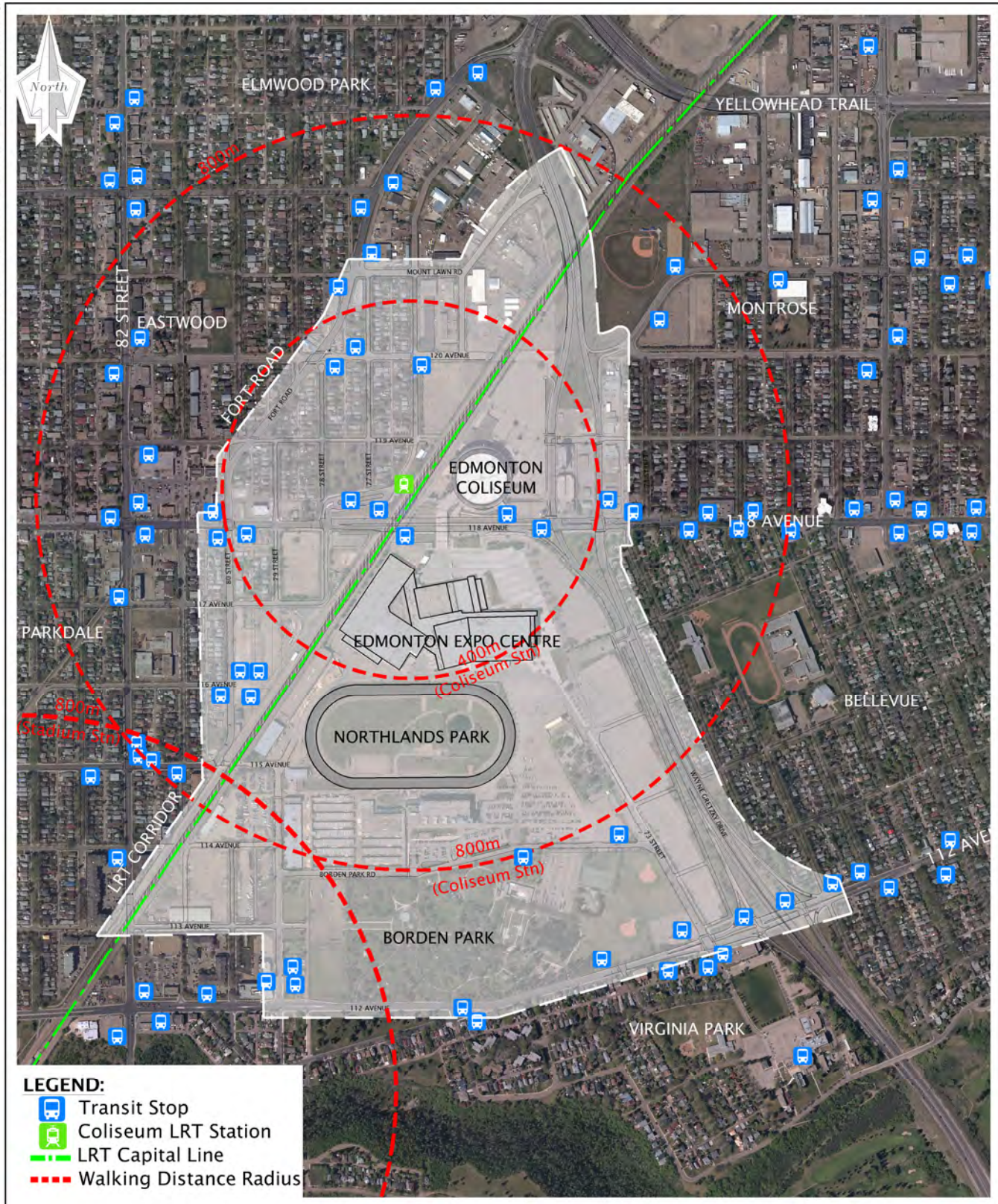
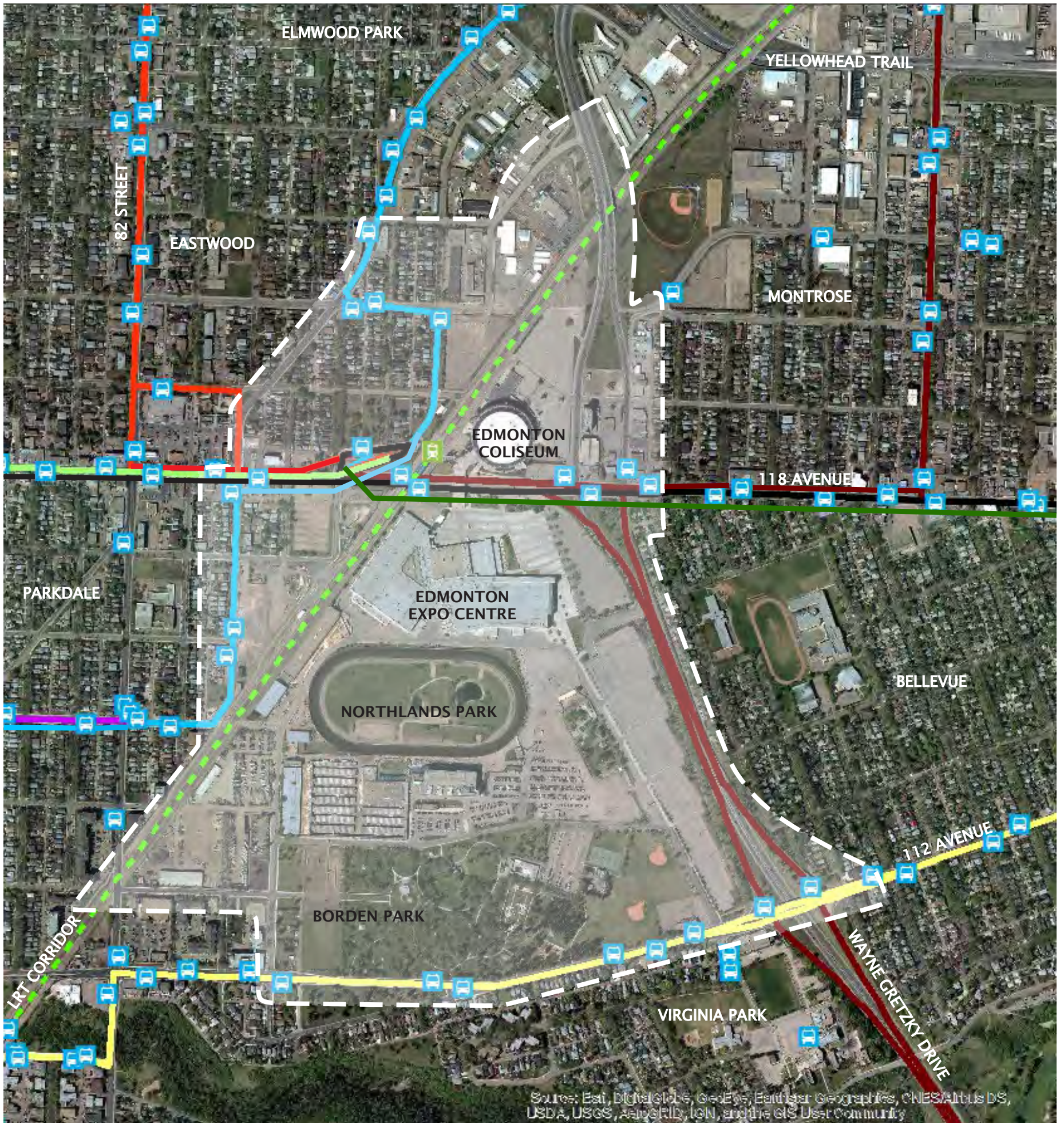


Exhibit 4

# Existing Transit

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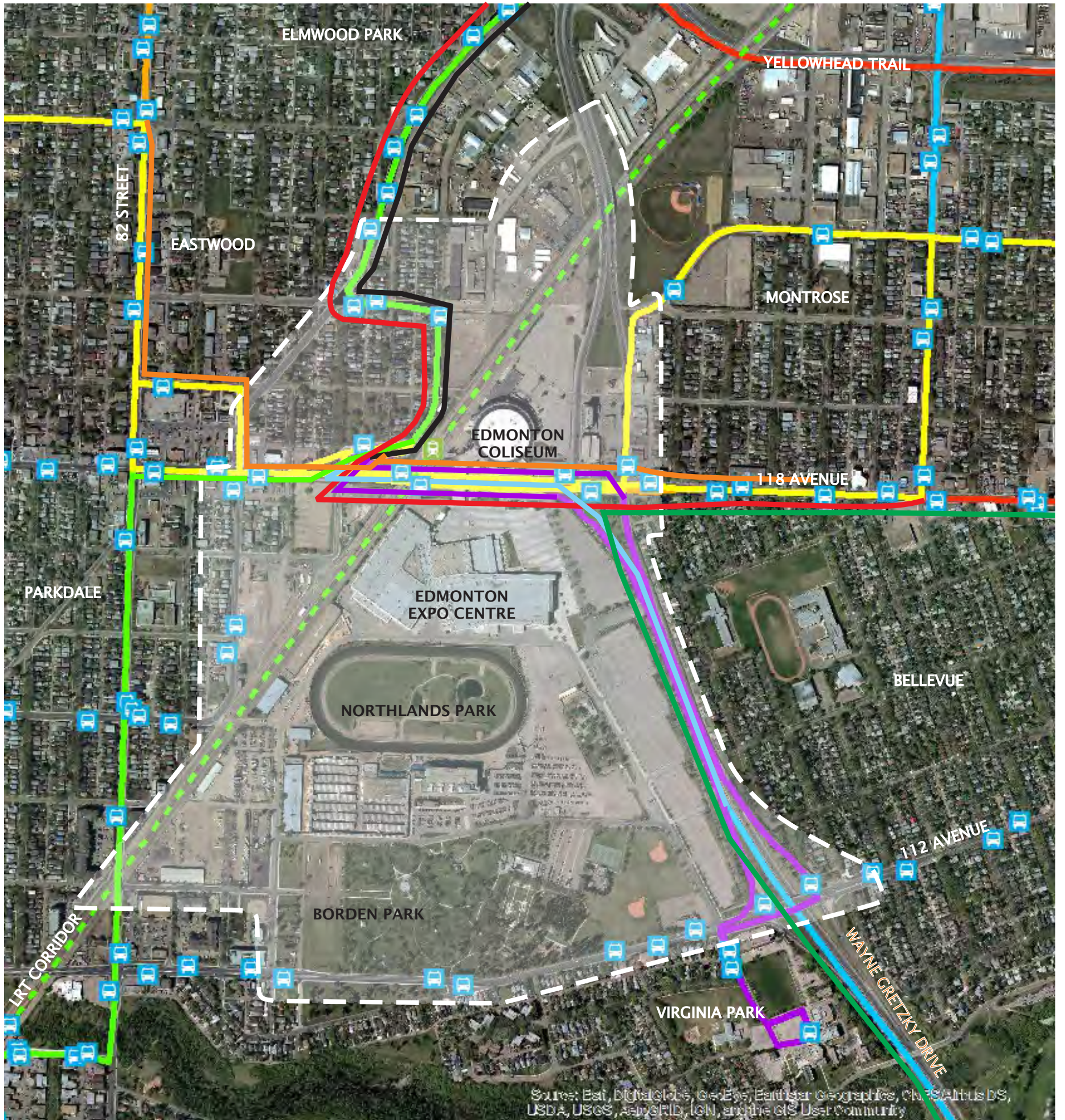




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community












### Legend

- |   |  |
|---|--|
| Coliseum LRT Station                          | Bus #8 - Mill Woods TC-Downtown-Abbottsfield |
| Bus Stops                                     | Bus#10 - Clareview-Belvedere-LON-Coliseum    |
| LRT Capital Line                              | Bus #99 - Capilano-Coliseum-Belvedere        |
| Bus #2 - Lessard-Downtown-Highlands-Clareview | Bus #125 - Belvedere-Westmount-Jasper Place  |
| Bus #3 - Jasper Place-Downtown-Cromdale       | Bus #141 - Coliseum-Abbottsfield             |
| Bus #5 - Westmount-Coliseum                   |  |



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

### Legend











-  Coliseum LRT Station
-  Bus Stops
-  LRT Capital Line
-  Bus #143 - Kingsway-RAH-Coliseum-Montrose
-  Bus # 399 - Coliseum-Concordia College
-  Bus #512 - LRT Late Night Service
-  Bus #517 - Coliseum-Clareview
-  Bus #589 - Edmonton Waste Management Centre
-  Bus #620 - Belvedere TC-Austin O'Brien
-  Bus #621 - Abbottsfield-Austin O'Brien
-  Bus #750 - NGTE-Queen E-Leary-Eastglen

## Exhibit 4b Existing Transit Stops and Routes - Continued



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Legend

- |   |                            |   |  |
|---|----------------------------|---|--|
|  | Coliseum LRT Station       |  | Bus #909 - Eastglen/Queen E-Eaux Claires     |
|  | Bus Stops                  |  | Bus #919 - Eastglen-Abbottsfield             |
|  | LRT Capital Line           |  | Bus #940 - Amiskwacy-Kingsway-Stadium        |
|  | Bus #796 - Fraser-Eastglen |  | Bus #941 - Austin O'Brien-Abbottsfield       |
|  | Bus #908 - Eastglen-Fraser |  | Bus #943 - Austin O'Brien-Coliseum-Belvedere |

## Exhibit 4c Existing Transit Stops and Routes - Continued

Coliseum Station ARP  
October 2017

3503.02

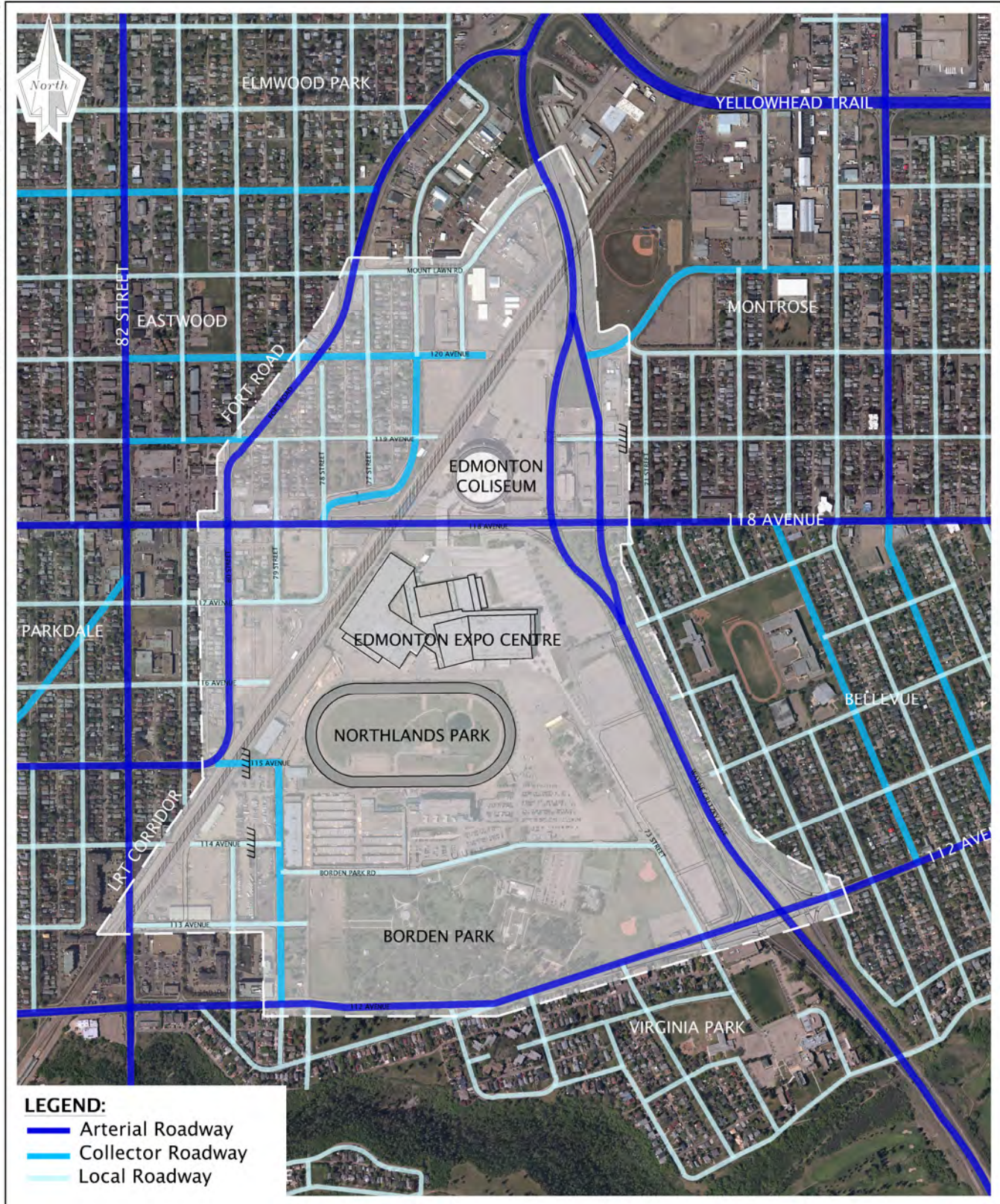


Exhibit 5

# Existing Road Network





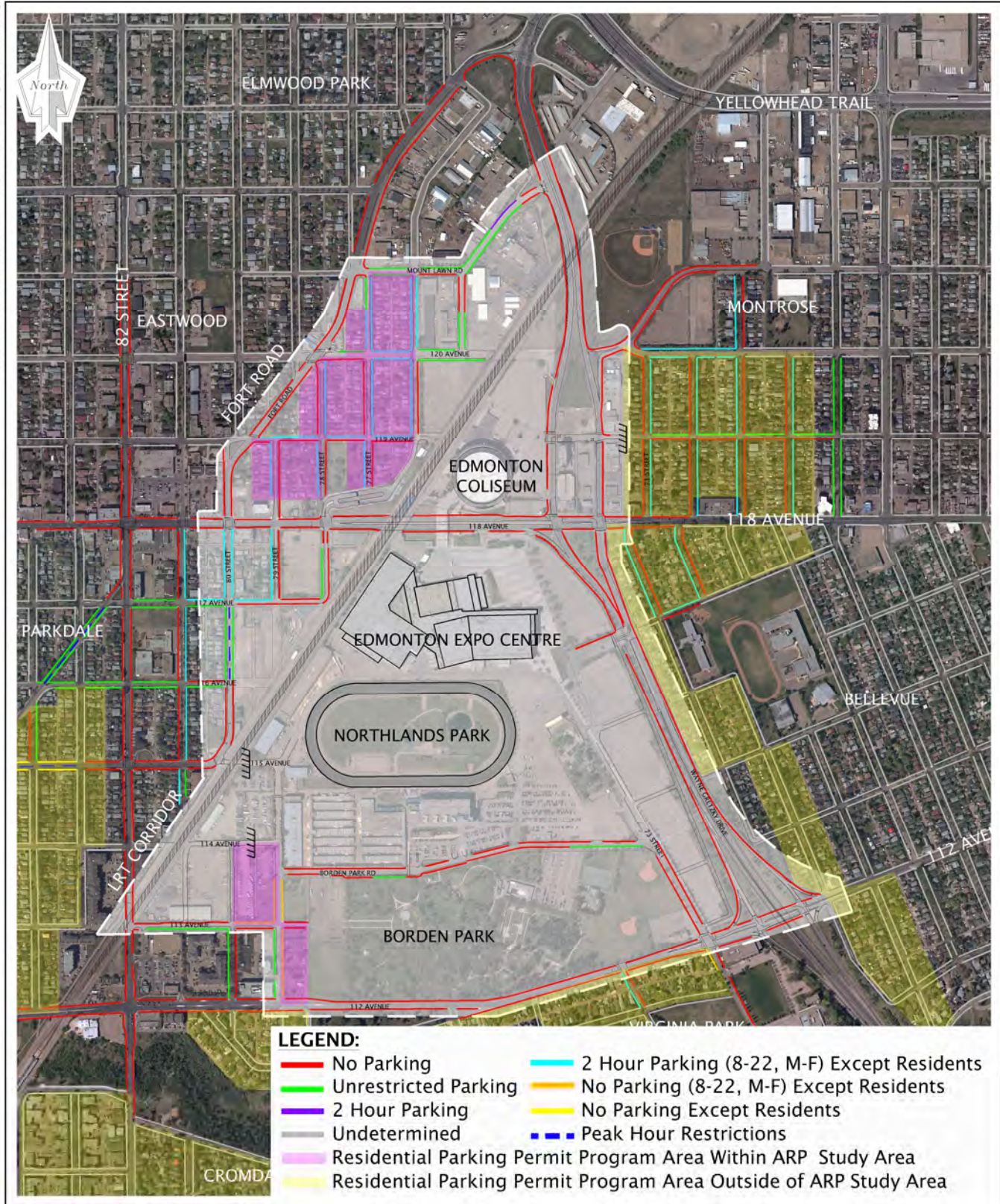


Exhibit 7

# Existing Parking Restrictions

