



STREETSCAPE DESIGN VISION

STRATEGY PHASE SUMMARY REPORT

NOVEMBER 2019



EXECUTIVE SUMMARY

In 2015, the City, in response to recommendations outlined in the **109 Street Corridor Area Redevelopment Plan (2013)**, initiated the **Envision 109** project to develop a streetscape design that would revitalize 109 Street from Saskatchewan Drive to 61 Avenue over the next 20+ years.

The **109 Streetscape Design Vision** report concludes the Strategy Phase of the project and identifies transformational opportunities for 109 Street to make it more walkable, improve aesthetics, promote environmentally sustainable development, and to support local businesses and provide connectivity options for all modes of transportation. It identifies long-term opportunities that require full road reconstruction to be feasible; and interim opportunities that can be implemented prior to road reconstruction within the existing curb alignment and road geometry, through city-initiated projects or private developments as they occur along 109 Street.

All opportunities identified in the **109 Streetscape Design Vision** will require further exploration during the concept design phase, and the Vision will act as a guide for other redevelopment projects as they arise.



Strategy Phase (2015-2019)

Preliminary Inventory & Analysis 2015-2016:

An inventory and analysis of the corridor provided a review of the current state of 109 Street and identified opportunities and constraints. Public input from the January 27, 2016 Open House, along with advice from the Community Integrated Committee, provided local knowledge and helped build understanding of area needs and concerns. Project themes and goals emerged and contributed to the development of project design goals.

Options Development (2016)

Three distinct design approaches - **Walkability**, **Transportation**, and **Environmental Sustainability** were developed and presented at an open house on May 12, 2016. Public feedback favoured the **Environmental Sustainability** approach that introduced a boulevard with trees, and a four lane road cross-section with bike lanes and a median. The project was put on hold (2017-2018) due to concurrent infrastructure studies such as the Centre LRT Route Selection, the Southside Core Neighbourhoods Bike Network and the ETS Bus Network Redesign, as they could potentially have significant impacts in the Streetscape Design Vision. A Transportation Impact Analysis (2016) and a 109 Street Bike Feasibility Analysis (2018) were completed.

Streetscape Design Vision (2019)

In 2019, The project recommenced when City Council ruled out the possibility for a bike facility on 109 Street, with 110 Street selected as the preferred north-south route based on the policy to develop it for "all ages and abilities".

The 109 Streetscape Design Vision identifies the long and short-term implementation opportunities and provides a high level cost estimate. A public information session was held on September 14, 2019. Roadway configurations were not identified in the Vision as reconstruction won't be due for 20+ year, when a more current evaluation of transportation patterns will be required.

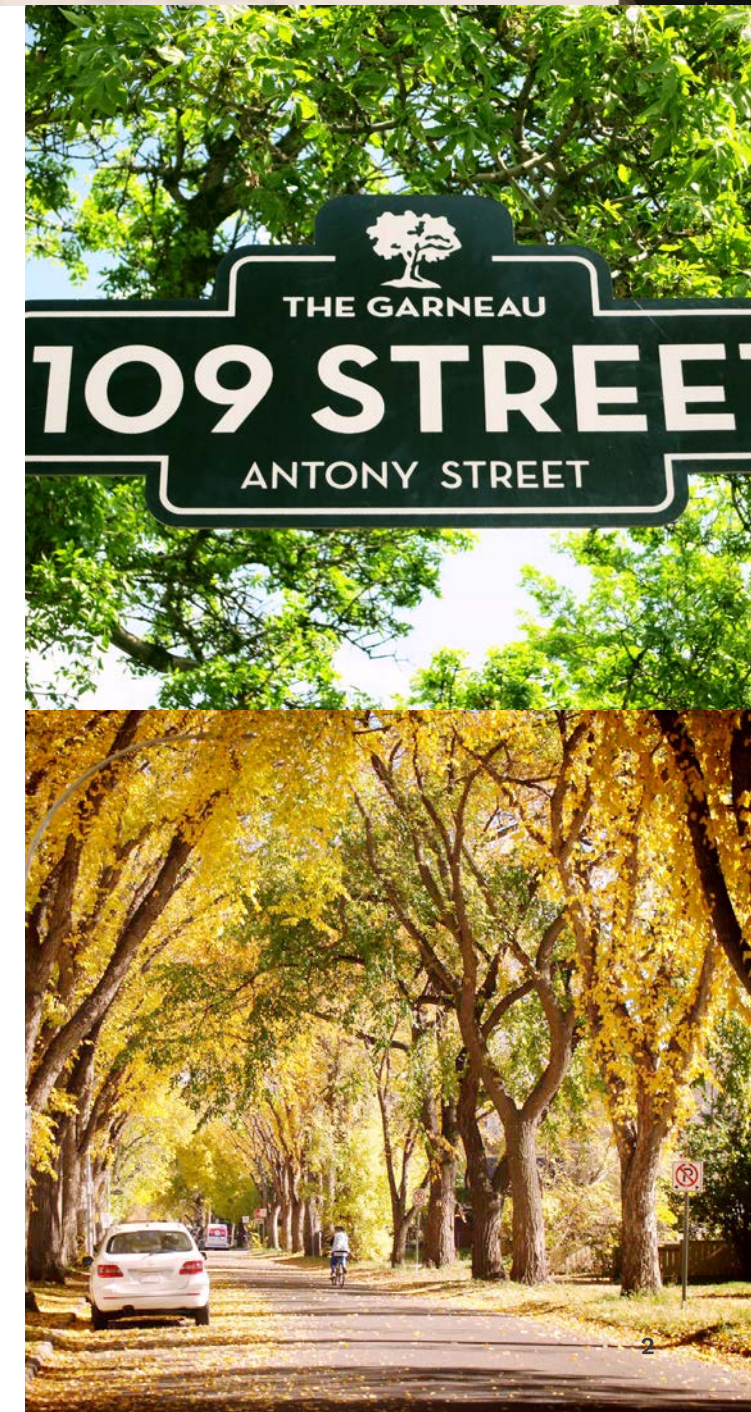


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3.1 EVOLUTION OF THE DESIGN: PROJECT TIMELINE

Introduction (How We Got Here) The Strategy Phase of this project began in 2015 with undertaking a Preliminary Inventory and Analysis, followed by Options Development in 2016 and concluded with the Streetscape Design Vision report in 2019. The 109 Street Corridor Area Redevelopment Plan, City Policy, various analytical studies (Urban Design Analysis, Transportation Impacts Analysis, Bike Feasibility Analysis) and public input together influenced the final 109 Streetscape Design Vision.



3.0.1 Summary of Strategy Phase Public Engagement

As stakeholders and the public play a key role in providing local/community level input, a public engagement process was developed to coincide with the Strategy Phase to gather perspectives and experiences and test ideas and options. Engagement activities included stakeholder interviews, public events and workshop meetings with a Community Integrated Committee consisting of members of the six community leagues adjacent to the project area (Allendale, Garneau, McKernan, Pleasantview, Parkallen, Queen Alexandra), as well as the Old Strathcona Business Association. Input received helped inform the development of the 109 Streetscape Vision Design.

Preliminary Inventory & Analysis 2015-2016:

- » Open house January 27, 2016 (138 attendees).
- » Comment forms (111)
- » Stakeholder Interviews (3)
- » Community Integrated Committee Workshop - December 10, 2015

Input was received from all users and identified opportunities to improve pedestrian, cyclist and transit experiences, maintain the arterial function of 109 Street, consider traffic and signal management, develop place-making destinations, improve aesthetics and connections, and recommend new development guidelines

Options Development (2016)

- » Open house May 12, 2016 (109 attendees)
- » Comment forms (112)
- » Stakeholder interviews (3)
- » Community Integrated Committee Workshop - April 25, 2016
- » Insight Survey (2533)

Input received indicated a design focused on environmental sustainability is desired and active mode transportation is important.

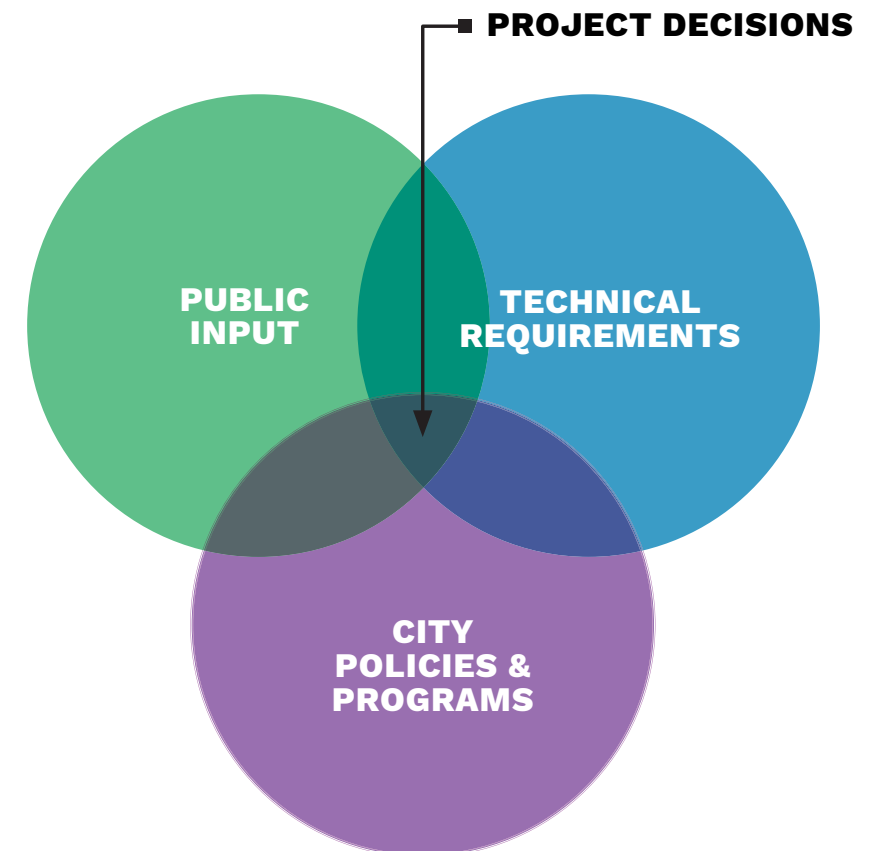
Streetscape Design Vision (2019)

- » Open House September 14, 2019 (210 attendees)
- » Community Integrated Committee Meeting (September 10, 2019)

The Streetscape Design Vision was shared as information with the public and the Community Integrated Committee.

3.0.2 How Project Decisions Were Made

Project decisions were made based on an analysis of what is desired by the public, what is technically feasible, and its alignment with broader planning goals as identified in policy documents.



3.1 EVOLUTION OF THE DESIGN: PRELIMINARY INVENTORY & ANALYSIS 2015-2016

At the inception of **Envision 109**, the project team met with the public and stakeholders to gather local knowledge, understand area issues and concerns, and develop project objectives. A Community Integrated Committee (CIC) was established with representatives from six community leagues (Garneau, Queen Alexandra, McKernan/Belgravia, Parkallen, Allendale, Pleasantview) and the Old Strathcona Business Association. A public open house was held on January 27, 2016. Developing design objectives was a priority task during the initial phases of the project, and were refined over the Strategy Phase guided by the **109 Street Corridor ARP**, what we heard from the public, and project principles.

3.1.1 109 Street Corridor Area Redevelopment Plan (2013) Guiding Principles

Enhance the public and private realm to provide for a safe, visually appealing streetscape for all users

Create a safe, attractive, comfortable and welcoming roadway for all users

Create a vibrant residential and commercial mixed-use street

Encourage appropriate high quality medium-scale development to increase the vitality of the corridor

Encourage future development in the corridor to demonstrate a high quality of landscaping, building materials and design quality to minimize adverse impacts.

Encourage environmentally sustainable development practices

Establish a high standard of design for an important high profile entranceway

3.1.2 Streetscape Design Principles (Established By the Project Team and Public Input, 2016)

Transition to a Complete Street

Improve the pedestrian experience while providing travel options for all users and trip purposes in a safe, welcoming, accessible, and context sensitive way.

Create Destinations Through Place-Making

Provide vibrant and attractive people-places in all seasons that contribute to an improved quality of life.

Improve the Visual Appeal of the Street

Enhance the public realm by establishing a high standard of design to provide visually appealing streetscape for all users.

Be Forward Thinking

Be adaptable by accommodating the needs of the present and future through effective space allocation for the many functions of the street

Provide an Economic Catalyst

Consider both direct and indirect costs, as well as the value of the roadway and the adjacent real estate.

Be Sustainable

Contribute to the environmental sustainability and resiliency of the city.

3.1.3 What We Heard Themes (Public Input, July 2016)

Improve Aesthetics

Make 109 Street more visually appealing with the addition of greenery including trees and additional landscaping including planter boxes and flowers. Consider including parklets in the new design and encourage rooftop gardens, community gardens and edible gardens, perhaps located at bus stops. Incorporate public art and historic information in the form of building plaques, photo boards or elements such as historic/heritage decorative lamp posts.

Maintain Connections and a Range of Transportation Options

Consider the corridor as a key connector to downtown, Edmonton's south side and the University of Alberta for vehicular traffic. Also consider its connection to Whyte Avenue, downtown and the river valley for pedestrians and cyclists.

Encourage New Development

Encourage new mixed-use, higher density pedestrian-oriented development along 109 Street. Include a variety of local (not chain) businesses including restaurants (with patios), cafes, unique shops and services. Refurbish or remove deteriorating buildings. Create guidelines that include historic/character architecture, setbacks, landscaping and rear parking.

Improve Traffic and Signal Management

Road size: The width of 109 Street with many lanes feels unsafe and too fast, with suggestions to narrow the lanes as opposed to reducing the number of lanes. Speed/Volume: There is a desire to reduce traffic speed and volumes, but maintain traffic flow as an arterial corridor. There is a general feeling that traffic flow be maintained and/or improved. There are suggestions to better synchronize traffic signals and to add left turn signals/lanes.

Improve Cycling and Transit Experience

The current bike lane configuration (mixed with vehicular traffic) feels unsafe. Cyclists desire a separated, dedicated bike lane with safe crossing opportunities and connections. Adding bike racks to the area may encourage more cyclists and fewer cars. Increase frequency and service of transit to encourage less driving. Make transit more comfortable with enhanced bus shelters and area lighting.

3.1.4 Envision 109 Design Objectives (2019)

D.01

Enhance the Pedestrian Experience With a Focus on Protection, Comfort, Connectivity and the Public Realm.

D.02

Create an Identifiable, Welcoming, Streetscape that Unites a Unique Range of Neighbourhoods Using a Visual Blend of their Historic Character and Current Strengths

D.03

Provide a Range of Transportation Options to Serve the Needs of Local Residents and Commuters

D.04

Encourage Environmentally Sustainable Development Practices

D.05

Support Local Business

3.1 EVOLUTION OF THE DESIGN: OPTIONS DEVELOPMENT 2016

Guided by the preliminary technical studies and public input, three distinct design approaches - **Walkability**, **Transportation** and **Environmental Sustainability** - were developed and presented at an open house on May 12, 2016 for public input. Public feedback favoured the **Environmental Sustainability** approach which introduced a boulevard with trees, a four lane road cross-section, bike lanes, and a median.

3.1.5 Phase 2: Development of Design Approaches

Design Approach #1: a Focus on Walkability

- » Wider pedestrian space
- » Boulevard with trees
- » Space for ancillary zone (parking, patios)
- » Two vehicle lanes in each direction
- » Transit shares lane with traffic
- » Cyclists use vehicle lane
- » Turn lanes at major intersections
- » Shorter pedestrian crossing distances
- » Spaces for sidewalk patios
- » A street for people



FIGURE 1 - DESIGN APPROACH 1 SECTION: WALKABILITY

Design Approach #2: a Focus on Transportation

- » Slightly wider pedestrian space
- » Boulevard with trees
- » Possible off-peak parallel parking
- » Three vehicle lanes in each direction
- » Transit shares traffic lanes
- » Cyclists use vehicle lane
- » Maintains street as Predominantly automobile function
- » Longer distances for pedestrian crossings



FIGURE 2 - DESIGN APPROACH 2: VEHICLE TRAVEL

Design Approach #3 (Preferred During 2016 Engagement): a Focus on Environmental Sustainability

- » Wider pedestrian space
- » Boulevard with trees
- » No parallel parking
- » Two vehicle lanes in each direction
- » Central median with trees and left-turn lane
- » Transit shares traffic lanes
- » Separated lane for cyclists
- » A street for people



FIGURE 3 - DESIGN APPROACH 3: SUSTAINABILITY & HEALTH

3.1 EVOLUTION OF THE DESIGN: OPTIONS DEVELOPMENT 2016 - TRAFFIC IMPACT ANALYSIS

The Transportation Impact Analysis studied a combination of road configurations to determine opportunities for the 109 Streetscape Vision. Different corridor designs were evaluated for the existing (2015) and future (2047) horizon years for weekday morning and afternoon peak hours. Based on modeling of future traffic scenarios, key recommendations were made in the 2016 study along 109 over both the short and long term. As the road is not scheduled for reconstruction for 20+ years, further study will be needed in subsequent phases to determine functional roadway design.

3.1.6 Transportation Impact Analysis (2016)

Several road configurations were explored during options development in terms of traffic impact on the corridor. Based on modeling of future traffic scenarios, key opportunities were identified for the corridor including:

Improve the 109 & Saskatchewan Drive Intersection

Improve the pedestrian and bicycle environment, including reducing the number of pedestrian crossings and their lengths.

Improve Signal Spacing and Pedestrian Crossings

Introduce signal control at regular intervals (approximately 200 metres) south of Whyte Avenue where it does not currently exist to provide safer more frequent pedestrian crossings.

Incorporate Active Modes

Identification of the opportunity to repurpose part of the shared bike / bus / taxi lane for other modes such as bicycles or pedestrians.

109 Street and 61 Avenue Improvements

Optimization of this intersection that better accommodate pedestrian and bicycle modes, the potential for land use reconfiguration, and a reduction of shortcutting into Pleasantview.

Addition of Parking

With land redevelopment and intensification, consider adding on-street parking facilities at existing and emerging commercial nodes.

Laneway Connections

With land redevelopment and intensification, replace east-west public lanes with north-south lanes to facilitate consolidation of development blocks and reduce the number of curb cuts on 109 Street.

4 Lane Cross Section

A 4-lane cross-section with auxiliary turn lanes at key intersections was studied for accommodation on the 109 Street corridor; subject to further study of transportation function closer to the time of road reconstruction

3.1.7 What the Analysis Informed

While the vision being developed for 109 is long-term, roadway reconstruction has a timeframe of 20+ years away. For this reason a decision was made not to define lane and curb geometry in the Streetscape Design Vision, as much could change in terms of transportation requirements and technological advancement in intervening years. Further study and assessment will occur nearer to construction.

3.1 EVOLUTION OF THE DESIGN: PARALLEL PROJECTS

During development of the 109 Streetscape Design Vision, a number of independent City planning studies with City-wide impacts began or were underway. These studies, including the Centre LRT Route Selection, the Southside Core Neighbourhood Bicycle Network and the ETS Bus Network Redesign, would require the vision design development to be put on temporary hold until an understanding on how these projects would influence 109 Street became clearer.

3.1.8 Project Alignment With Other Plans: The Southside Bike Network, Centre LRT, & Bus Network

Southside Core Neighbourhoods Bike Network

In August of 2018 City Council received for information the Southside Core Neighbourhoods Bike Network Feasibility Analysis, which made recommendations supporting the bike lane on 110th Street as opposed to 109th. A key policy supporting the decision included building the network for 'all ages and abilities'. City Council requested that further study on the impacts and trade offs of bike lanes on 109 versus 110 Street be developed (see 3.1.9).

Centre LRT

The Centre LRT Study was started in 2017 and in its examination of preferred routes considered crossings or alignments along parts of 109 Street. The project eventually chose a preferred route west of 109 Street with a crossing at Whyte Avenue.

Bus Network Redesign

109 Street is a well used bus corridor with route #9 running every 15 minutes in a north-bound prioritized lane north of 72 Avenue. Once LRT was extended south of the river, fewer bus routes run along 109 Street when compared the past. Changes to bus routes and transit demand will significantly affect the design and function of 109 into the future.

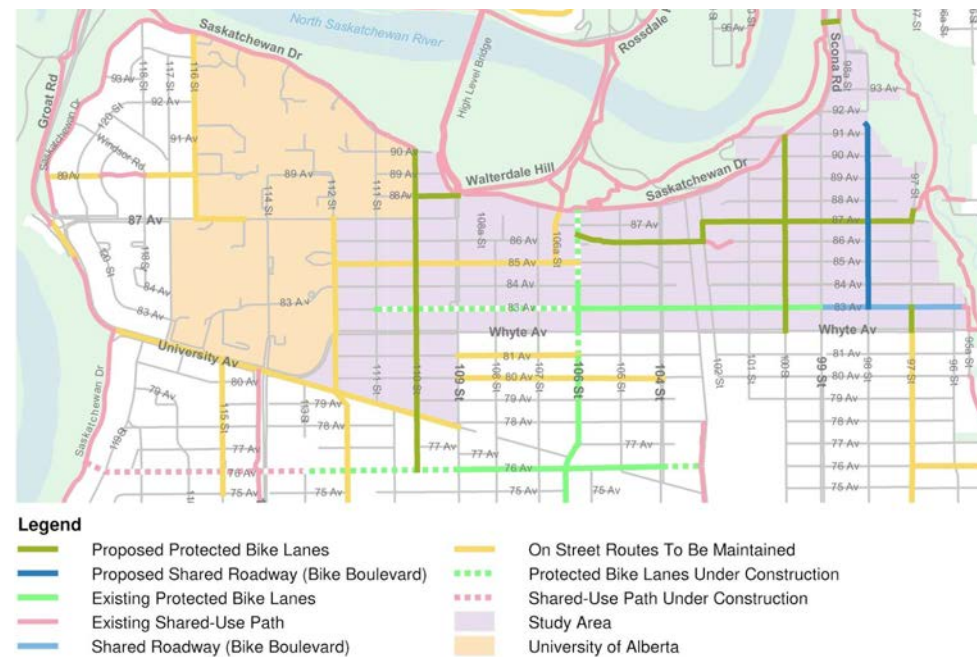


FIGURE 4 - RECOMMENDED SOUTHSIDE BIKE NETWORK, JULY 2018

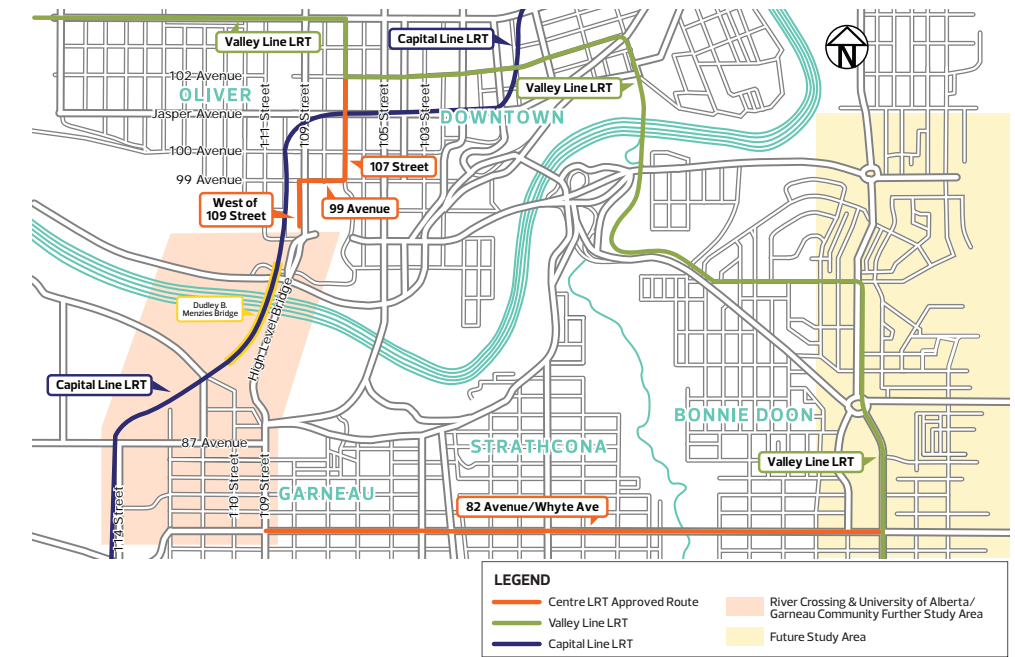


FIGURE 5 - PREFERRED CENTRE LRT ROUTES, OCTOBER 2018



FIGURE 6 - LOGO - EDMONTON TRANSIT STRATEGY - BUS NETWORK REDESIGN

3.1 EVOLUTION OF THE DESIGN: ADDITIONAL STUDIES (2018 - 2019)

In August 2018, further studies were requested by City Council's Urban Planning Committee (UPC) to understand the options and trade-offs for locating bike lanes in the project study area. Findings were presented to City Council's UPC in April of 2019, who subsequently voted in favour of a separated bike facility on 110 Street.

3.1.9 Cycling Facilities and Cycling Connections 109 Street Report (2018-2019)

*In April 2019, Administration presented to Council's Urban Planning Committee council report CR_6322 Cycling Facilities and Cycling Connections on 109 Street. The report provided further analysis on policy alignment and implications of having bike lanes on 109 Street, and compared the benefits and tradeoffs of providing the bike lane on 109 Street versus 110 Street (recommended in **Southside Bike Network**)*

A Protected Bicycle Lane on 109 Street

Analysis showed that from a vehicle perspective, protected bicycle lanes can be accommodated on the 109 Street corridor, though this would result in a significant reduction of corridor capacity, increased vehicle travel times and congestion due to turning movements at key intersections such as Whyte Avenue.

Vehicle Traffic

Bike lanes on 109 Street would reduce vehicular capacity, potentially resulting in traffic shortcutting on residential roadways.

Public Transit

The introduction of bike lanes on 109 Street would eliminate the northbound bus-only lane resulting in transit operating in mixed traffic with no priority. The loss of the bus lane may add delay and/or reduce reliability for transit.

Policy Mis-Alignment

The 2009 Bicycle Transportation Plan included city wide engagement and resulted in recommendations to develop bike routes parallel to main streets rather than on main streets. Edmonton's Main Street Guideline builds on that recommendation, outlining that bike lanes should be provided on routes parallel to main streets with bicycle parking provided on the main street.

3.1.10 2019: Bike Facility Conclusion

In April 23 2019 Council voted in favour of 110 Street over 109 Street as the north-south bike connection, as initially recommended by the Southside Core Neighbourhood Bike Network Feasibility Analysis. The 110 Street option was favoured by Council for having less impacts, greater alignment with existing policies and emphasized the priority for an "all ages and abilities" bicycle network.

Following this decision, the Envision109 project continued its work in completing the Streetscape Design Vision

3.2 PROJECT DESIGN OBJECTIVES: VISION HIGHLIGHTS

Streetscape Design Objectives were developed using guiding principles from the **109 Street Corridor ARP**, principles developed by the project team, and themes that emerged from public input and City policies. **Streetscape Design Objectives** were used to identify and evaluate opportunities along the 109 Corridor, as listed in the following table.

D.01

Enhance the Pedestrian Experience With a Focus on Protection, Comfort, Connectivity and the Public Realm.

- » Landscaped boulevards with trees in the furnishing zone to serve as a buffer between the roadway and sidewalk to create a welcoming environment for pedestrians
- » Wider sidewalks with no obstructions to improve comfort and walkability
- » Benches and seating at frequent locations to encourage resting and spending time in the public realm
- » Pedestrian-oriented lighting to improve evening wayfinding abilities and feelings of security
- » Curb extensions at key north/south crossing locations to narrow roadways thus shortening time pedestrians are on the road and making them more visible to vehicle traffic. (eg. 85 and 86 Avenues)
- » Signalized pedestrian crossings across 109 Street at approximately every 200m (every 2nd intersection) to provide safe, convenient crossing options
- » Saskatchewan Drive/109 Street Intersection redesign to improve connectivity, flow, safety and comfort. (eg reduce the number of pedestrian crossings and waiting time)
- » New and enhanced public spaces to offer a network of interesting destinations and encourage people to walk and explore 109 Street: River Terminal Viewpoint (Northern 109 Street), City Arts Centre bus turnaround, Joe Morris Park
- » Pedestrianized alleyways (east/west where they intersect with 109 Street) to reduce walking interruptions, and to provide comfortable connections and interesting, useable public spaces
- » Ancillary zones that multi-function as parklet spaces for patios and parking spaces

D.02

Create an Identifiable, Welcoming, Streetscape that Unites a Unique Range of Neighbourhoods Using a Visual Blend of their Historic Character and Current Strengths

- » Unique materials and decor that identify the character of commercial, residential and public nodes as memorable and inviting destinations to work, shop and live. (eg. street furniture, lighting, landscaping)
- » Gateway nodes to identify key entry/exit points with welcoming and interesting visuals such as public art, scenic viewpoints and paving materials. Locations for gateway opportunities along 109 Street: Saskatchewan Drive, Whyte Avenue, 61 Avenue

D.03

Provide a Range of Transportation Options to Serve the Needs of Local Residents and Commuters

- » Saskatchewan Drive/109 Street Intersection redesign to improve connectivity, flow, safety and comfort of all users. (eg. reduce the number of pedestrian crossings and waiting time)
- » East/west bike connections between 109 Street commercial destinations and the 110 Street north/south bike route. (Note: 110 Street was chosen by the Southside Bike Network over 109 Street as it is a quieter, local road with less conflict points making it a safer location for a protected “all ages and abilities” bike facility)
- » Bike parking on 109 Street
- » Bus stop locations with seating, shelters, and welcoming aesthetic treatments that may include small scale artwork, planting, etc. to enhance the transit experience
- » On-street vehicle parking near commercial destinations to encourage drivers to stop and stay in the area
- » Study optimization of the 61 Avenue area to improve transportation and future land-use opportunities

D.04

Encourage Environmentally Sustainable Development Practices

- » Deciduous boulevard trees to reduce: air pollution, cooling and heating energy by shading buildings in summer and by allowing sunlight penetration in winter
- » Low Impact Development measures to capture stormwater reducing sidewalk and road pooling (eg. landscaped boulevards and curb extensions, and structural soil cells for trees north of 82 Avenue)
- » Parks and public open spaces designed to support urban wildlife habitats and plant species diversity to ensure landscape sustainability
- » Active transportation facilities to support walking, wheeling, or public transit use and reduce private automobile trips along 109 Street

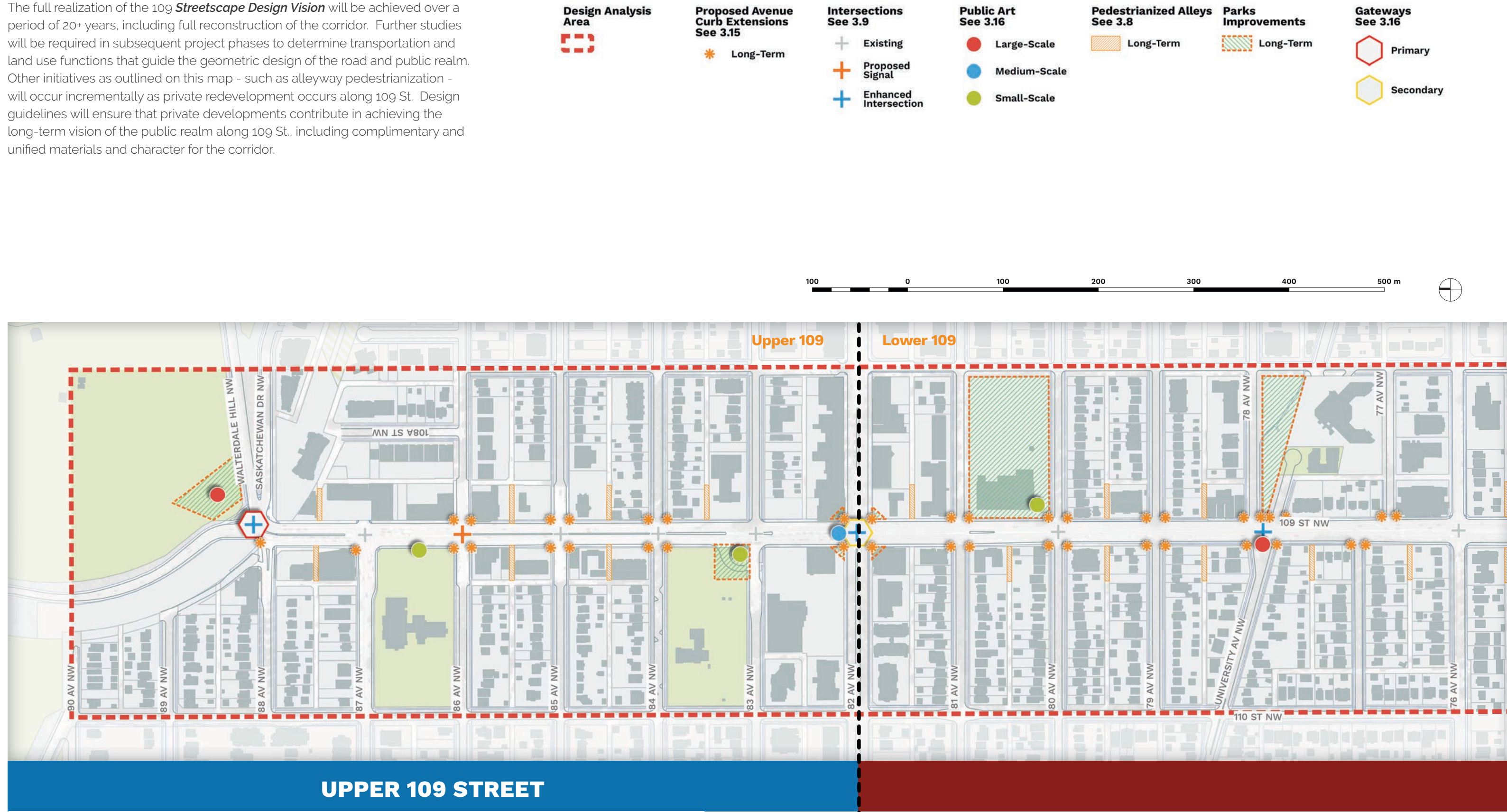
D.05

Support Local Business

- » Enhanced pedestrian realm and unique visual identity near business locations along 109 Street, to encourage citizens to visit it as a key commercial retail destination (north of Whyte Avenue)
- » East/west bike connections to 109 Street commercial destinations
- » Bike parking near commercial destinations to encourage those who bike to stop and stay in the area
- » On-street vehicle parking near commercial destinations to encourage drivers to stop and stay in the area
- » Pedestrianized east/west alleyways (supplementary to commercial structures) to serve as patios or gathering spaces and to complement local business offerings

3.3 STREETScape DESIGN VISION - LONG TERM (ROAD RECONSTRUCTION)

The full realization of the 109 *Streetscape Design Vision* will be achieved over a period of 20+ years, including full reconstruction of the corridor. Further studies will be required in subsequent project phases to determine transportation and land use functions that guide the geometric design of the road and public realm. Other initiatives as outlined on this map - such as alleyway pedestrianization - will occur incrementally as private redevelopment occurs along 109 St. Design guidelines will ensure that private developments contribute in achieving the long-term vision of the public realm along 109 St., including complimentary and unified materials and character for the corridor.



UPPER 109 STREET

FIGURE 7 - 109 STREET LONG-TERM VISION (POST-ROAD RECONSTRUCTION) OPPORTUNITIES MAP

Design Analysis Area



Proposed Avenue Curb Extensions
See 3.15



Intersections
See 3.9

- Existing
- Proposed Signal
- Enhanced Intersection

Public Art
See 3.16

- Large-Scale
- Medium-Scale
- Small-Scale

Pedestrianized Alleys
See 3.8

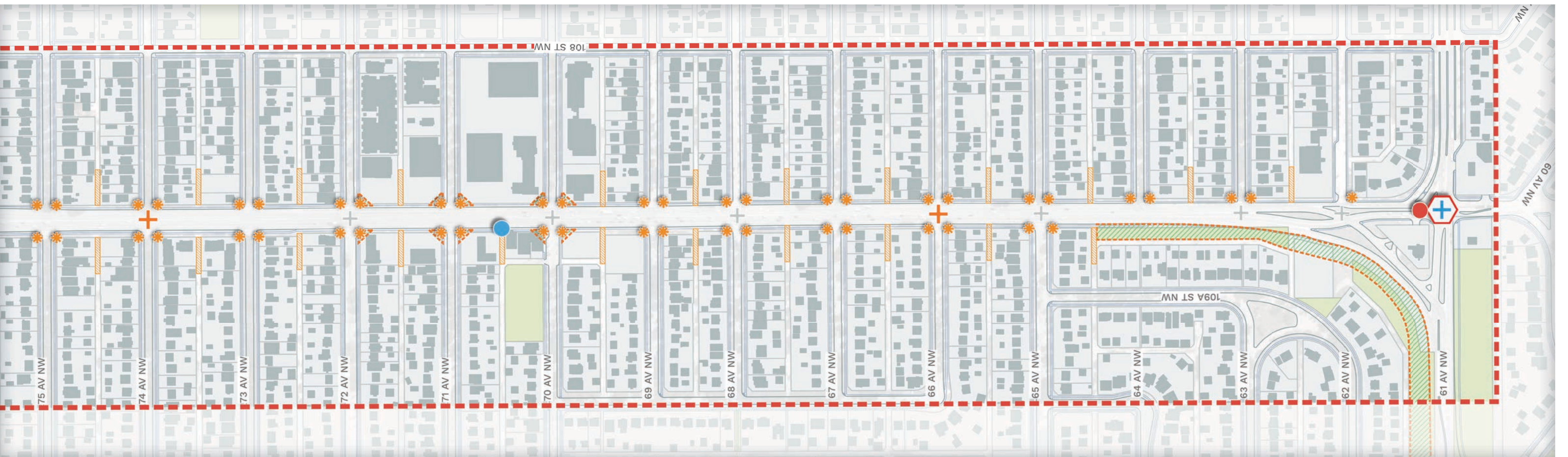
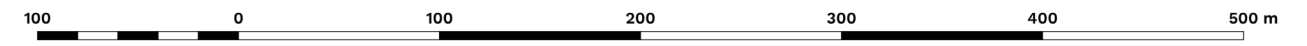


Parks Improvements



Gateways
See 3.16

- Primary
- Secondary

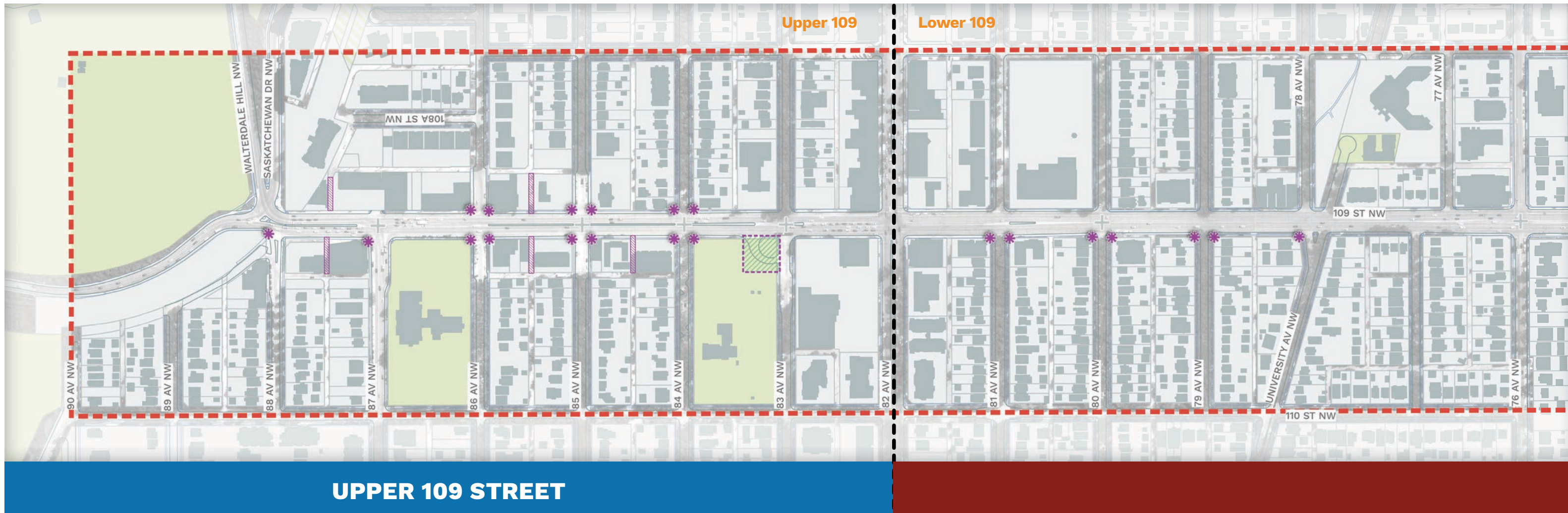
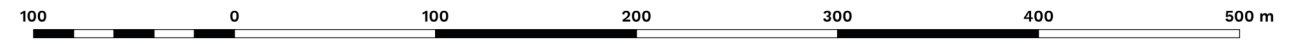


LOWER 109 STREET

3.4 STREETScape DESIGN VISION - SHORT TO MID-TERM (PRE-ROAD RECONSTRUCTION)

Short-term improvements contribute to the long-term vision developed for the corridor. As neighbourhood renewal is scheduled for construction in Garneau in 2022, many opportunities north of Whyte have been identified as short-term to coincide with the Garneau renewal time line. Coordination of these 109 initiatives with *Neighbourhood Renewal* construction will minimize future disruption and minimize costs. Short-term improvements south of Whyte primarily include intersection upgrades recommended in the transportation analysis, to improve overall east-west pedestrian connectivity across 109 St. These improvements will be considered by the City when redevelopment happens along 109 Street, and are subject to further evaluation and prioritization by the City Operation and Traffic Signals Group.

Design Analysis Area 	Proposed Avenue Curb Extensions See 3.15  Short-Term	Intersections See 3.9 + Existing  Proposed Signal	Pedestrianized Alleys See 3.8  Short-Term	Parks Improvements See 3.11  Short-Term
--	--	--	---	---



UPPER 109 STREET

FIGURE 8 - 109 STREET PRE-ROAD RECONSTRUCTION OPPORTUNITIES MAP

Design Analysis Area



Proposed Avenue Curb Extensions
See 3.15



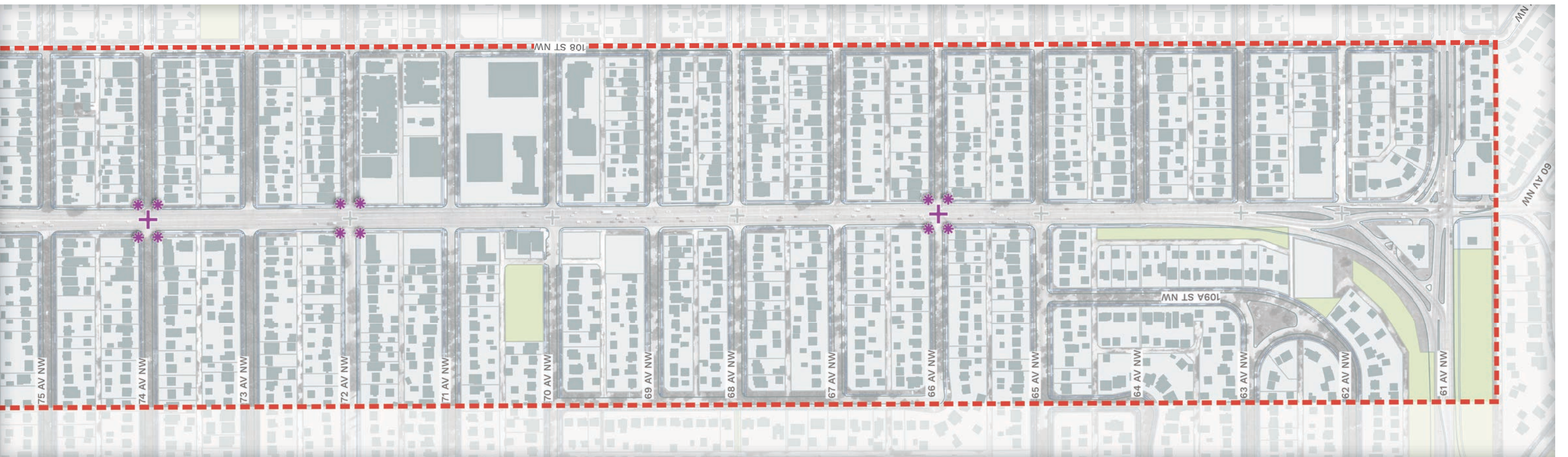
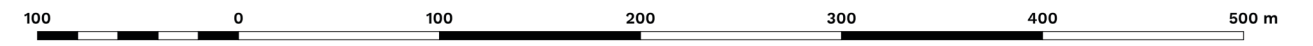
Intersections
See 3.9



Pedestrianized Alleys
See 3.8



Parks Improvements
See 3.11



LOWER 109 STREET

3.5 STREETScape ZONE: PROPOSED MATERIALS & FURNISHINGS

At its north end, the 109 Street corridor represents some of the earliest colonially settled lands in the first survey of Edmonton. At its south end, neighbourhoods were developed into the modern mid-twentieth century. Consequently, 109 Street geographically spans an eclectic mix of design styles and eras. Contemporary materials and design treatments that are complimentary to the past are recommended.

3.5.1 A Contemporary Streetscape that is Complimentary to Past

The neighbourhoods between Saskatchewan Drive and 61 Avenue span eras including the City Beautiful movement, the City Efficient movement, periods of world war and depression, with continuation right through the mid-20th century era of high modernism, and into our contemporary era.

Careful design and selection of furnishings and materials is required. It is important to not overtly evoke a particular historic era or specific heritage theme. A fine balance must be struck with the selection of elements that are contemporary or modern interpretations of heritage, or simply complimentary to heritage themes, and existing elements in Garneau and Strathcona.

Street furniture and materials will be analysed and designed in more detail in subsequent design phases.

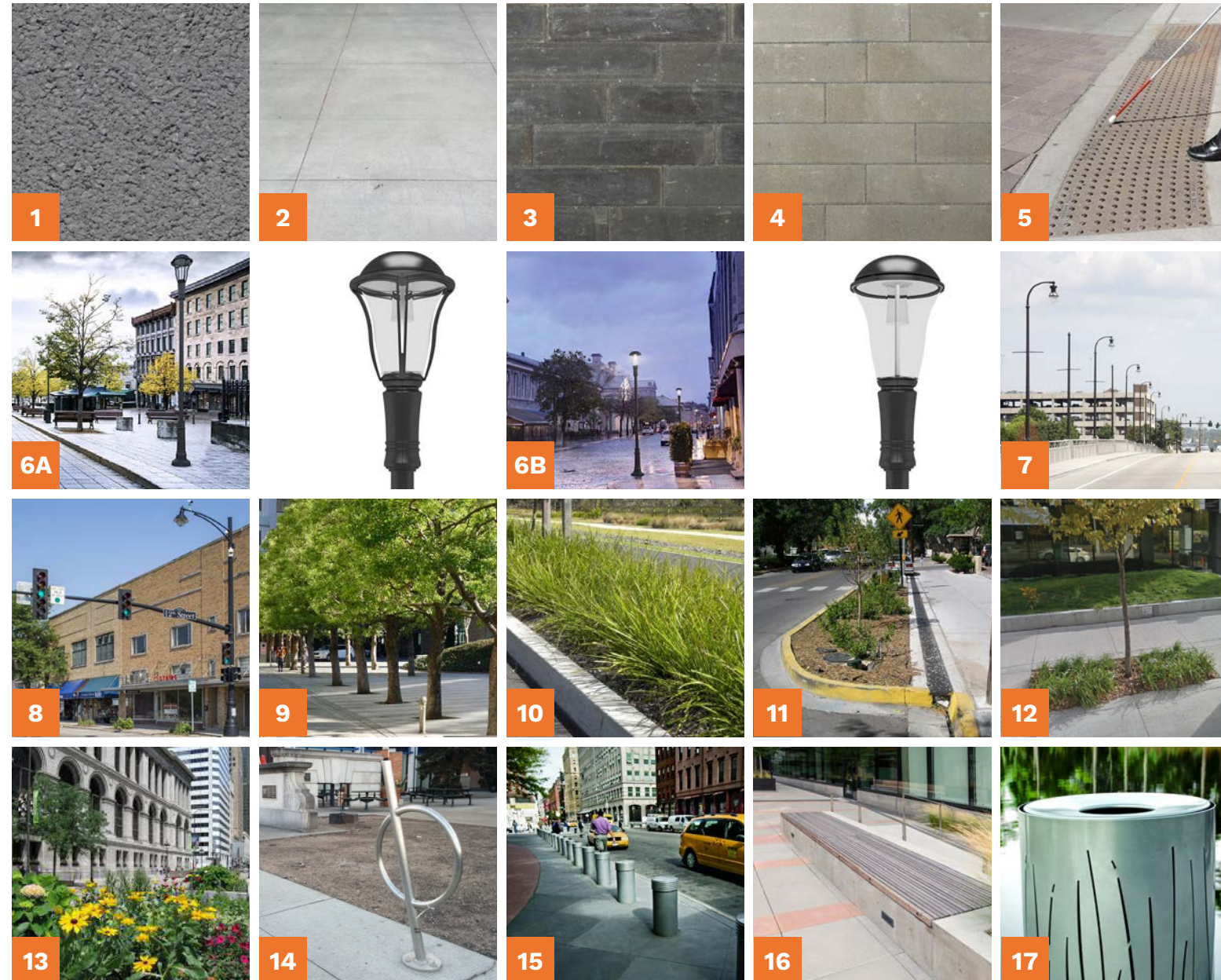


FIGURE 9 - REPRESENTATIVE STREETScape ELEMENTS & MATERIALS

LEGEND

- 1 ASPHALT ROADWAY
- 2 SAW-CUT CONCRETE THROUGH ZONE & CROSSWALKS
- 3 PAVERS - DARK FURNISHING & ANCILLARY ZONE
- 4 PAVERS - LIGHT FRONTAGE ZONE AND PEDESTRIAN MEWS
- 5 TWSI - TACTILE WARNING SURFACE INDICATOR AT ALL CROSSWALKS
- 6 PEDESTRIAN LIGHT
- 7 ROADWAY LIGHTING
- 8 TRAFFIC SIGNAL
- 9 BOULEVARD TREES IN STRUCTURAL SOIL CELLS (NORTH OF WHYTE ONLY)
- 10 RAISED BED BOULEVARD PLANTINGS
- 11 PLANTED CURB EXTENSION
- 12 AT GRADE PLANTING BED
- 13 PERENNIALS IN RAISED PLANTING BEDS
- 14 Q BIKE RACK - CITY OF EDMONTON
- 15 LIT BOLLARDS
- 16 BENCHES & SEATING
- 17 LITTER RECEPTACLE

3.6 UPPER 109 STREETSCAPE CONCEPT

Upper 109 is more prominent and of greater importance as a civic place and commercial mixed-use destination. When compared with the designs for Lower 109, Upper 109 features more hardscape urban features to provide for spatial flexibility and urban appeal among the many functions and people it serves. The streetscape should acknowledge and strengthen the "main street" character of 109 north of Whyte.

3.6.1 Upper 109 Street Concept Plans

Improvements Through Neighbourhood Renewal

As Garneau Neighbourhood Renewal occurs, curb extensions on the east-west avenues will be considered for further feasibility at the proposed locations on the concept map.

Improvements Through Redevelopment

Over the next 20+ years, implementation of the 109 Streetscape will rely mainly on redevelopment of properties, with the developer making public improvements to sidewalks and streetscape in conjunction with the development of mixed use commercial buildings along Upper 109. Where east-west alleys are redundant, or can be reconfigured along a north-south axis, pedestrian mews are to be created utilizing the reconfigured alley space.

Improvements With Full Road Reconstruction

In the long-term Upper 109 Street will undergo roadway reconstruction when due. At this point in time the roadway will be reviewed again for its multitude of transportation, community, environmental, and business development functions of the 109 corridor. Future curb extensions may also extend out into the 109 roadway as opposed to just along the avenues. Additionally, ancillary zones that multi-function as parking or parklet spaces for patios may be gained in the current outermost lane, subject to traffic impact evaluation over the next design phases.

LEGEND

- | | |
|-----------|--|
| 1 | ASPHALT ROADWAY |
| 2 | SAW-CUT CONCRETE THROUGH ZONE & CROSSWALKS |
| 3 | PAVERS - DARK FURNISHING & ANCILLARY ZONE |
| 4 | PAVERS - LIGHT FRONTAGE ZONE AND PEDESTRIAN MEWS |
| 5 | TWSI - TACTILE WARNING SURFACE INDICATOR AT ALL CROSSWALKS |
| 6 | PEDESTRIAN LIGHT |
| 7 | ROADWAY LIGHTING |
| 8 | TRAFFIC SIGNAL |
| 9 | BOULEVARD TREES IN STRUCTURAL SOIL CELLS |
| 10 | RAISED BED BOULEVARD PLANTINGS |
| 11 | PLANTED CURB EXTENSION |
| 12 | AT GRADE PLANTING BED |
| 13 | PERENNIALS IN RAISED PLANTING BEDS |
| 14 | Q BIKE RACK - CITY OF EDMONTON |
| 15 | LIT BOLLARDS |
| 16 | BENCHES & SEATING |

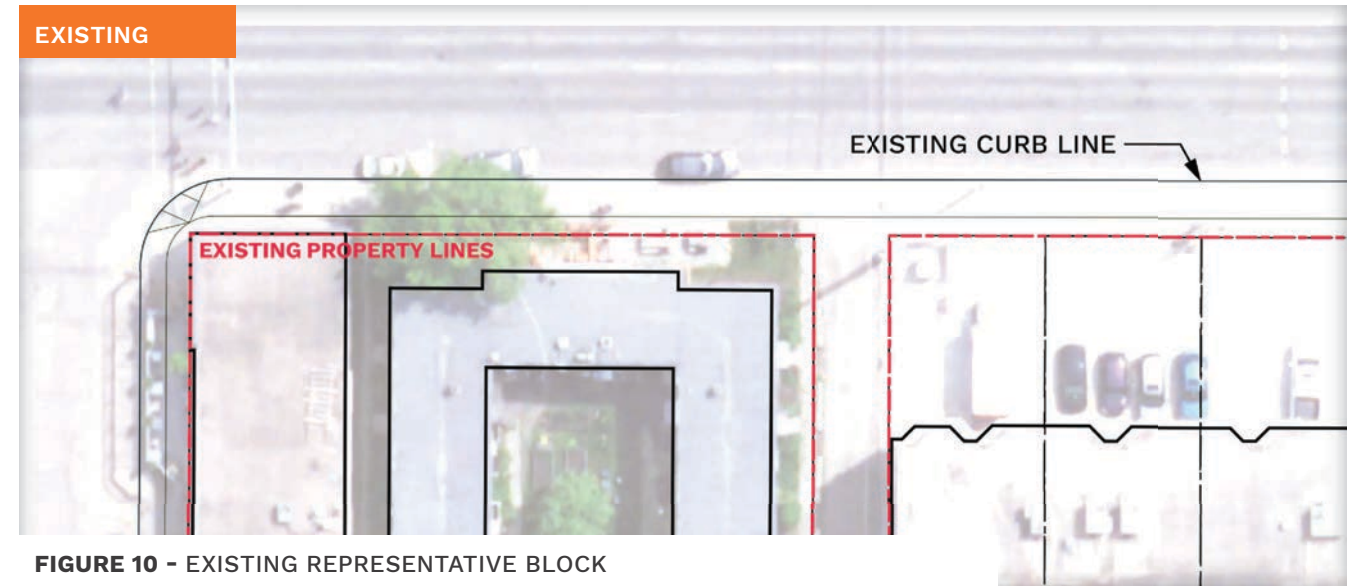


FIGURE 10 - EXISTING REPRESENTATIVE BLOCK

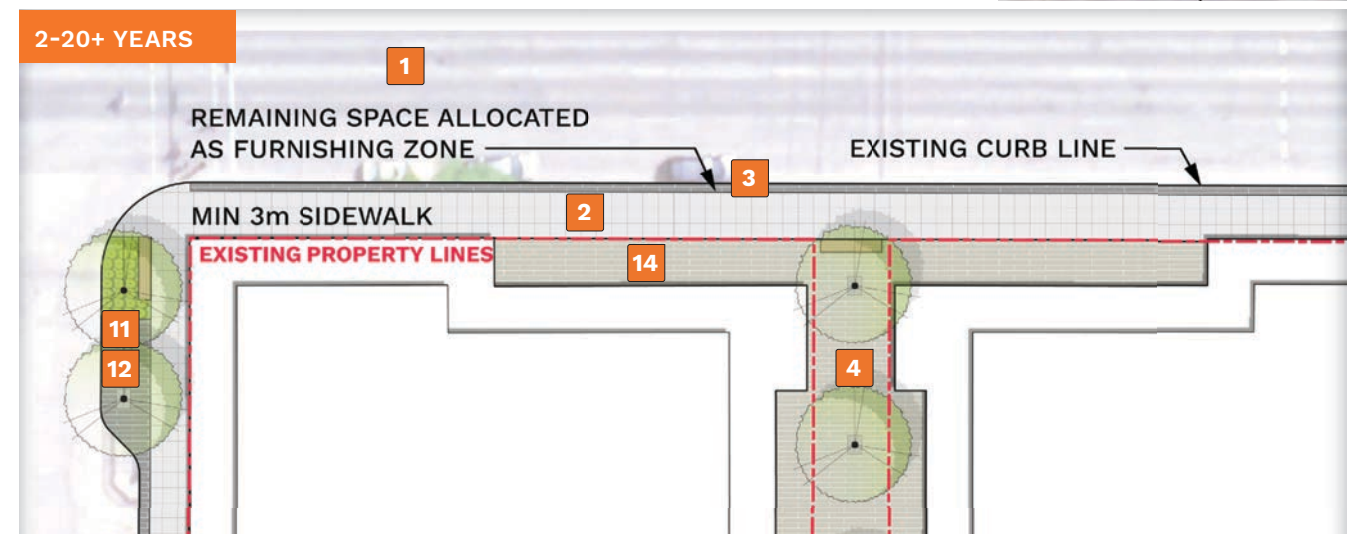


FIGURE 11 - REDEVELOPMENT IMPROVEMENTS: PRE-ROAD RECONSTRUCTION

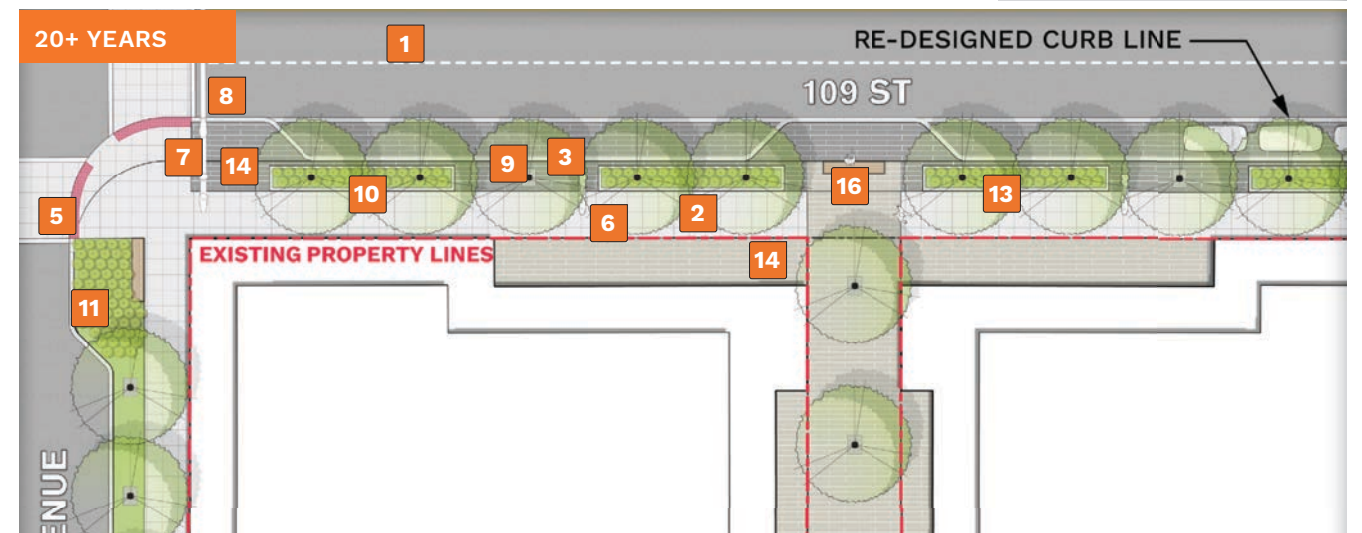


FIGURE 12 - STREETSCAPE IMPROVEMENTS: FULL ROAD RECONSTRUCTION

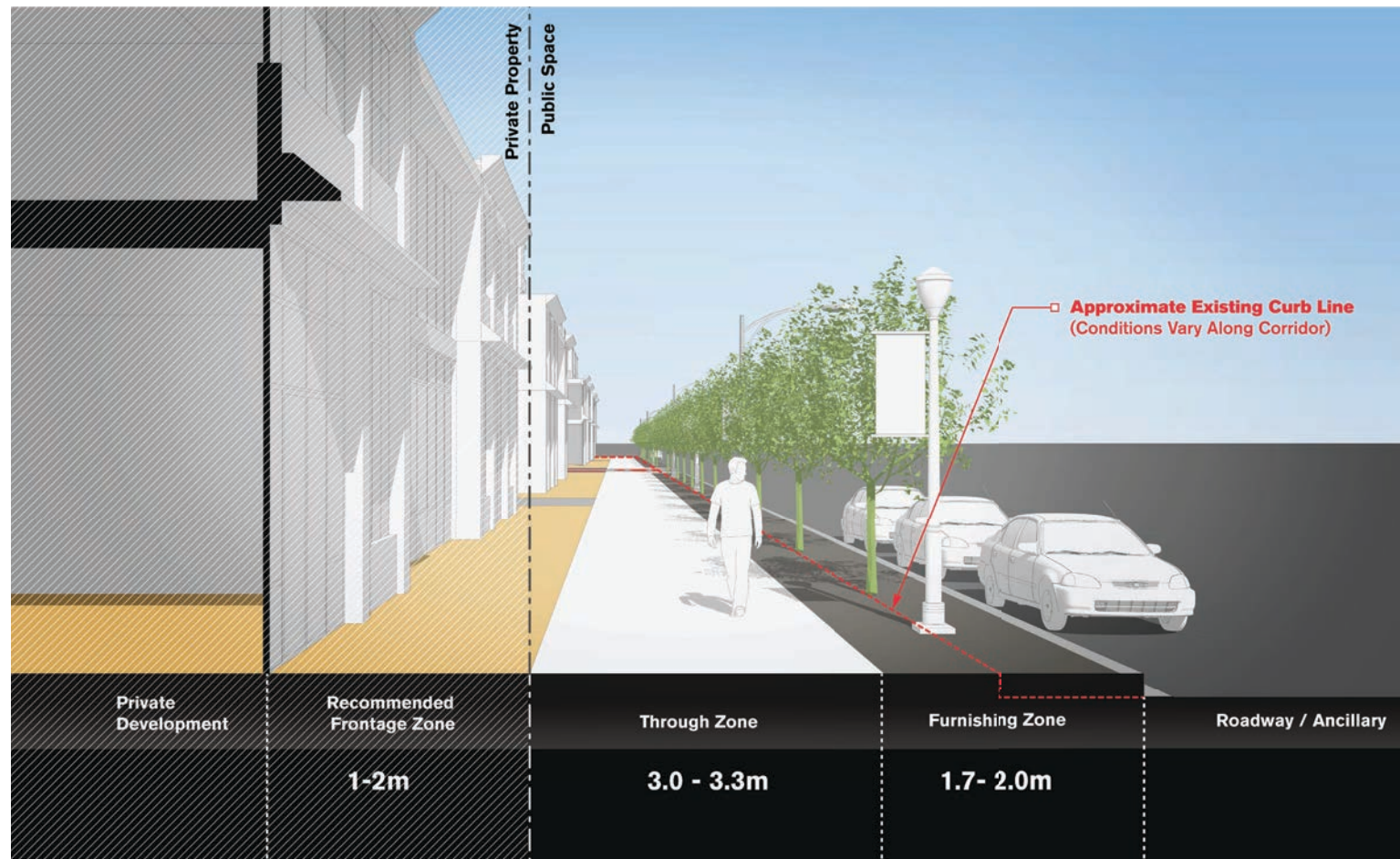
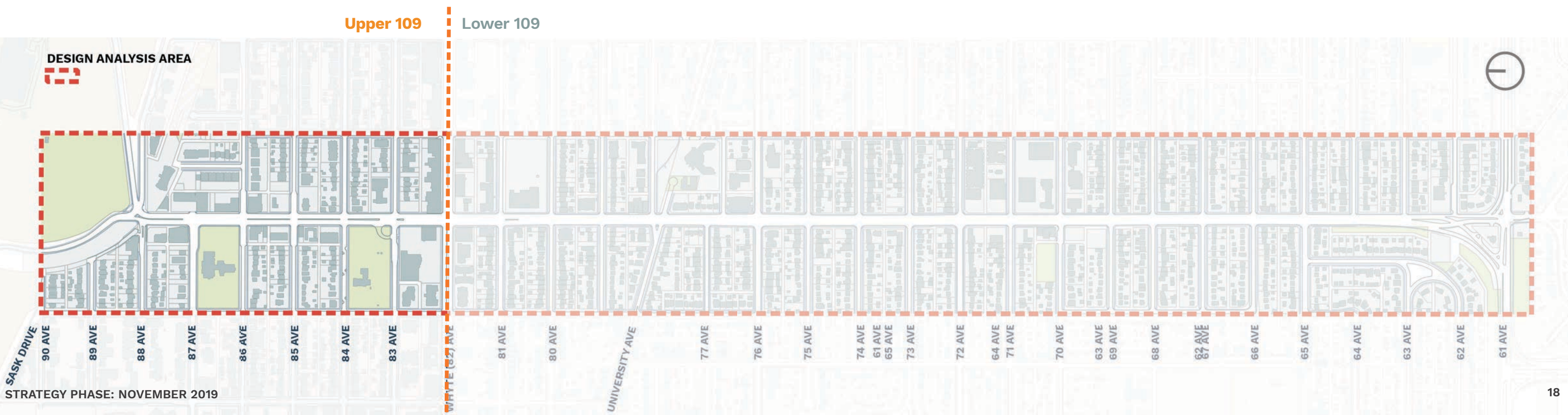


FIGURE 13 - COMPLETE STREETS DIAGRAM OF UPPER 109 STREETSCAPE ZONES



FIGURE 14 - ILLUSTRATIVE IMAGE OF A PROPOSED UPPER 109 STREETSCAPE TREATMENT



3.7 LOWER 109 STREETSCAPE CONCEPT

Lower 109 is less prominent as a City-wide destination, and predominantly residential in comparison to Upper 109. While the design proposal shares many characteristic similarities with Upper 109, Lower 109 features more softscape plantings in its boulevard (furnishing zone) and in its increased development setback (3m). The desired outcome is an attractive yet more softened public-private street interface.

3.7.1 Lower 109 Street Concept Plans

The major difference between Lower and Upper 109 is with recommended front yard setbacks. Lower Garneau should feature minimum setbacks of 3m, within which the development of small scale gardens and plantings, front stoops and porches, and limited mixed-use retail and patio spaces should be accommodated.

Improvements Through Neighbourhood Renewal

As Garneau Neighbourhood Renewals occur along Lower 109, curb extensions will be considered for further feasibility at the proposed locations noted on the concept map.

Improvements Through Redevelopment

Over the next 20+ years, implementation of the 109 Streetscape will rely mainly on redevelopment of properties, with the developer making public improvements to the streetscape in conjunction with the development of mixed use or residential buildings along Lower 109. Where east-west alleys are redundant or able to be reconfigured along a north-south axis, pedestrianized laneway spaces (mews) are to be created with the reconfigured alleys.

Improvements with Full Road Reconstruction

In the long-term, Lower 109 Street will undergo roadway reconstruction when due. At this point in time the roadway will be reviewed again for its multitude of transportation, community, environmental, and business development functions of the 109 corridor. If and when additional pedestrian space is gained in the future, curb extensions may also extend out into the 109 roadway as opposed to just along the avenues. Additionally, ancillary zones that multi-function as parking spaces or parklet spaces for patios may be gained in the current outermost lane, subject to traffic impact evaluation over the next design phases.

LEGEND

- | | |
|----|--|
| 1 | ASPHALT ROADWAY |
| 2 | SAW-CUT CONCRETE THROUGH ZONE & CROSSWALKS |
| 3 | PAVERS - DARK FURNISHING & ANCILLARY ZONE |
| 4 | PAVERS - LIGHT FRONTAGE ZONE AND PEDESTRIAN MEWS |
| 5 | TWSI - TACTILE WARNING SURFACE INDICATOR AT ALL CROSSWALKS |
| 6 | PEDESTRIAN LIGHT |
| 7 | ROADWAY LIGHTING |
| 8 | TRAFFIC SIGNAL |
| 9 | BOULEVARD TREES |
| 10 | RAISED BED BOULEVARD PLANTINGS |
| 11 | PLANTED CURB EXTENSION |
| 12 | AT GRADE PLANTING BED / BOULEVARD |
| 13 | PERENNIALS IN RAISED PLANTING BEDS |
| 14 | Q BIKE RACK - CITY OF EDMONTON |
| 15 | LIT BOLLARDS |
| 16 | BENCHES & SEATING |

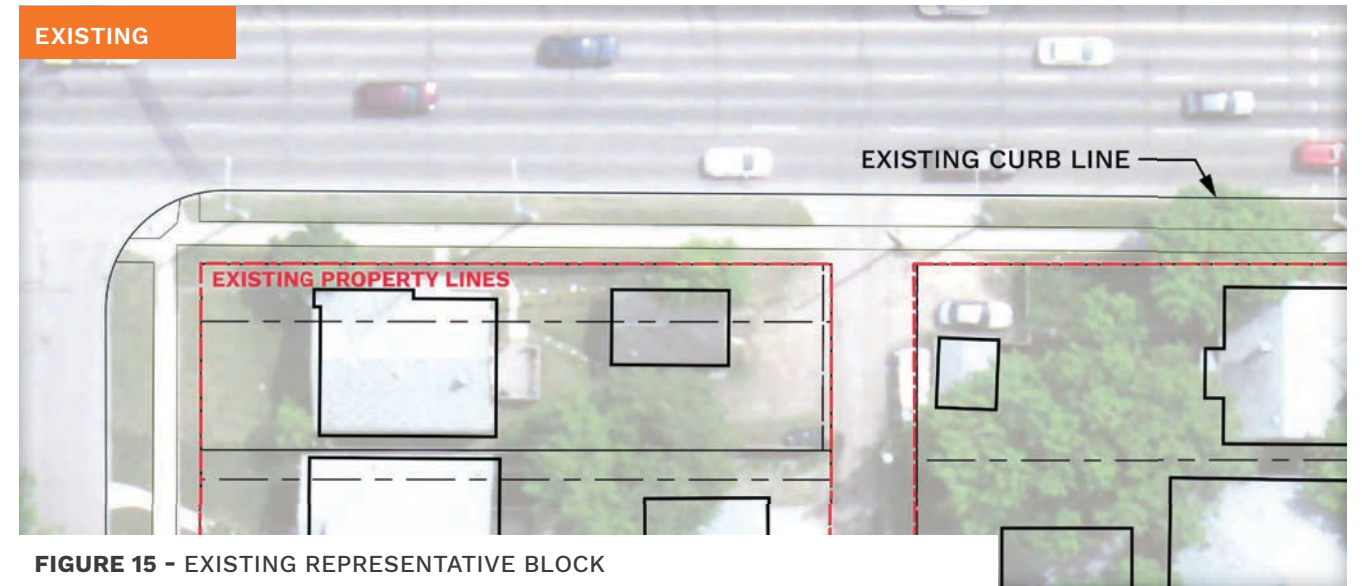


FIGURE 15 - EXISTING REPRESENTATIVE BLOCK

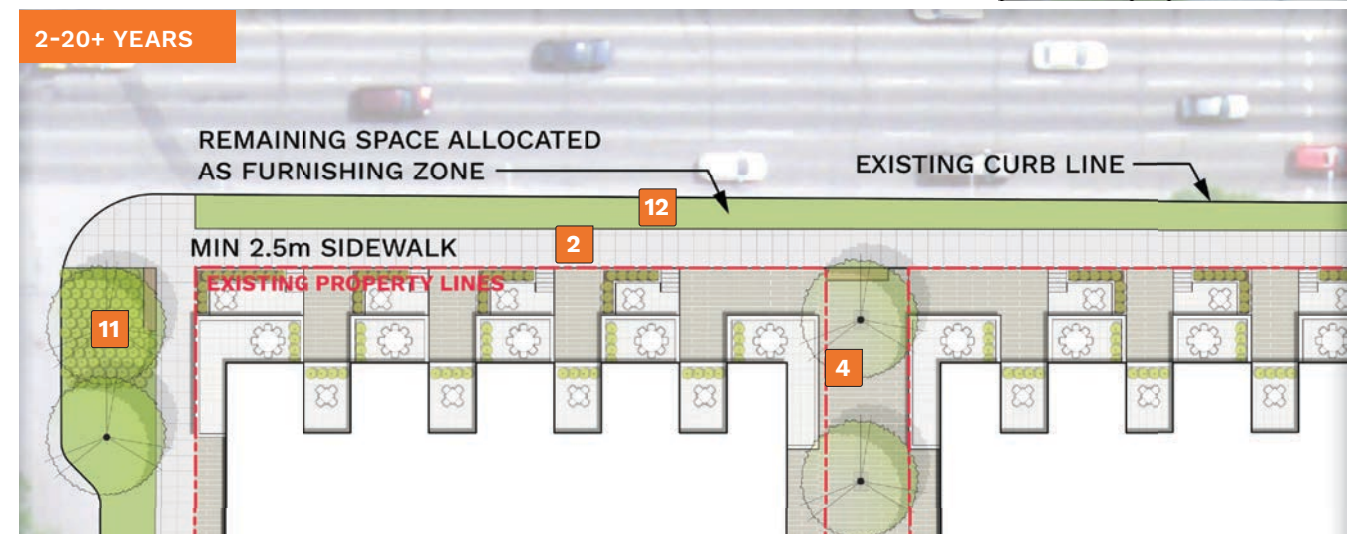


FIGURE 16 - REDEVELOPMENT IMPROVEMENTS: PRE-ROAD RECONSTRUCTION

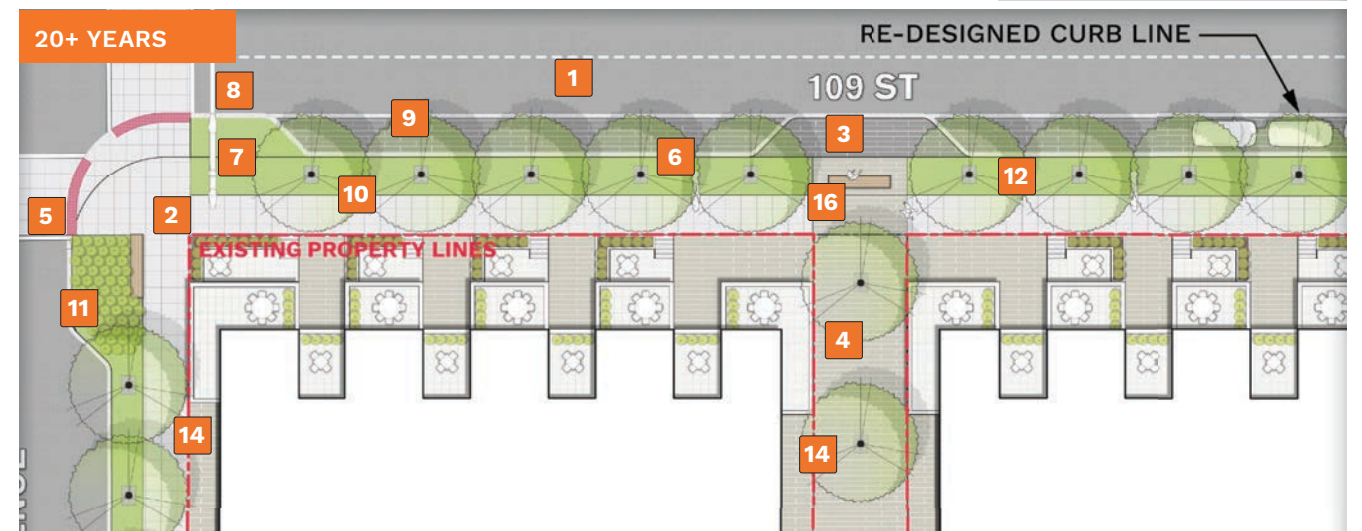


FIGURE 17 - STREETSCAPE IMPROVEMENTS: FULL ROAD RECONSTRUCTION

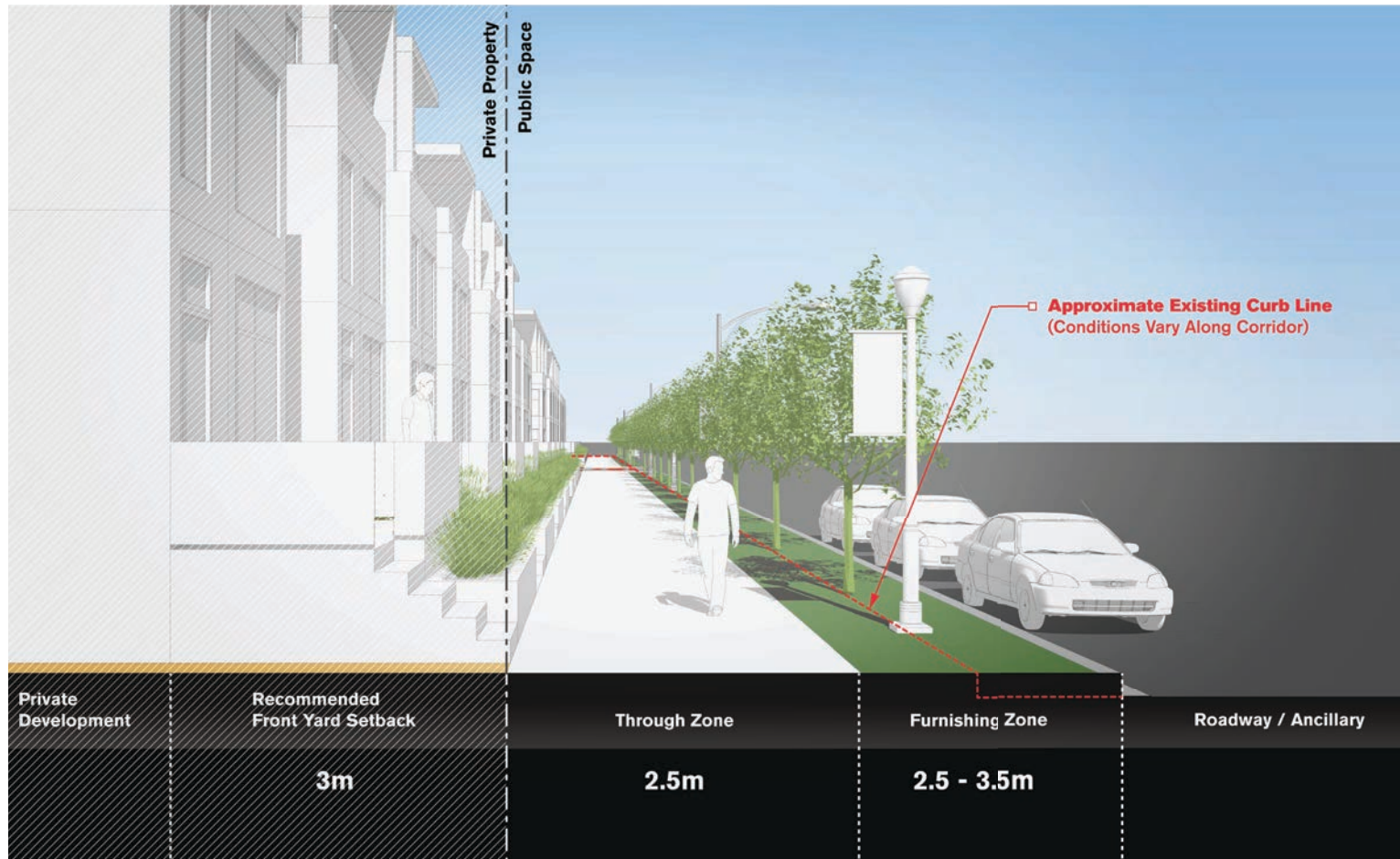
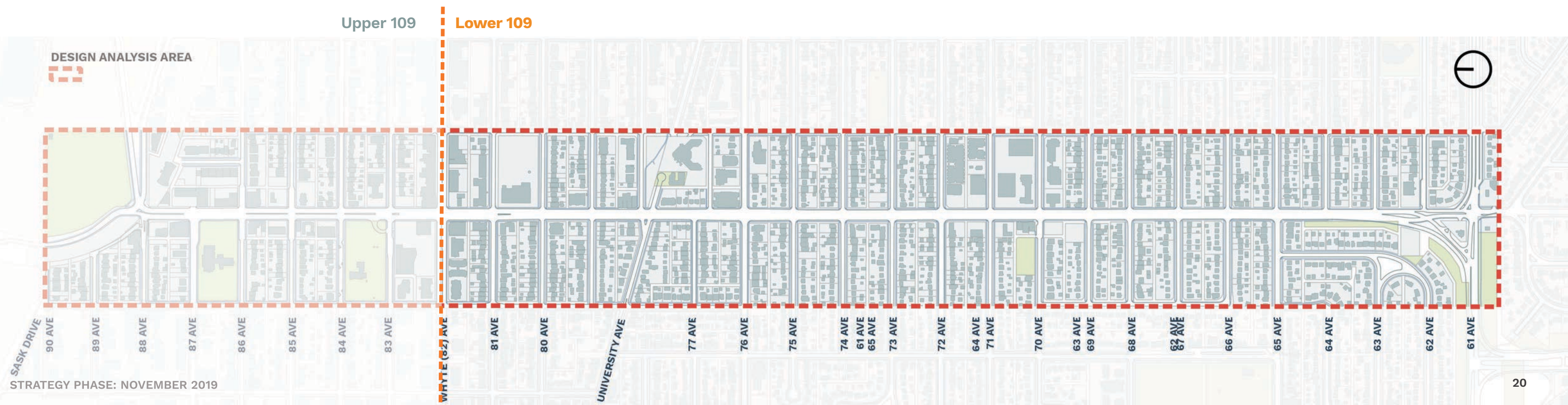


FIGURE 18 - COMPLETE STREETS DIAGRAM OF LOWER 109 STREETScape ZONES



FIGURE 19 - REPRESENTATIVE IMAGE OF A PROPOSED LOWER 109 STREETScape



3.8 PEDESTRIANIZED ALLEYWAYS

3.8.1 Back Lanes Reconfiguration

As redevelopment occurs alleys that are oriented east-west and connect to 109 are candidates for pedestrianization through full closure or restricted vehicle access. Where existing east-west alleys are already backed by north-south alleys parallel to 109 Street, closures or shared pedestrian spaces can be considered as part of Garneau Renewal analysis.

Where parallel north-south alleys do not exist yet, pedestrianization can happen over a longer time frame as redevelopment of private property occurs. Private developments may provide north-south alley connections toward the rear of 109 facing developments, incorporating the closed east-west alley for pedestrian gathering use as patios or courtyards.

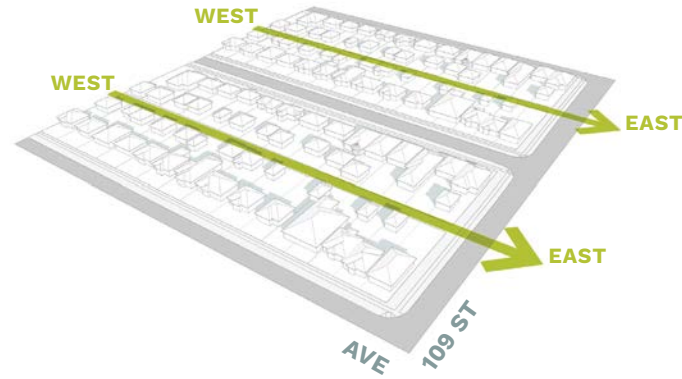
Lane closures are inspired by the English concept of a mews, defined as: *“a lane or street of houses or apartments that have been converted from stables”*

During the era of horse and carriage, mews in England were generally narrow lanes off of which stables were provided, with living quarters developed above. In contemporary England stables were been converted to housing, and mews became charactered narrow streets and courtyards that are cozy, comfortable, sheltered pedestrian environments.

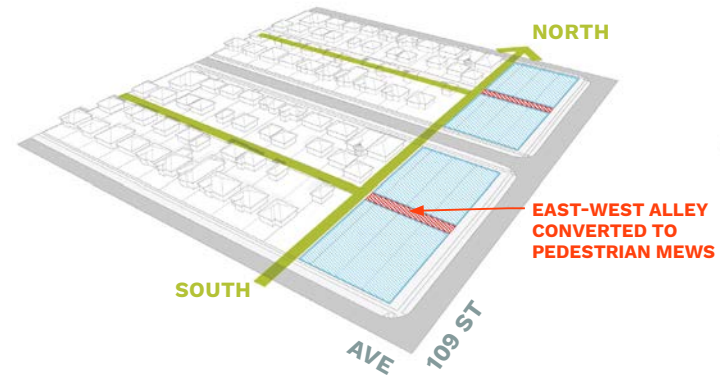
Closing the east-west lanes has the benefit of adding public pedestrian and gathering spaces, while optimizing road efficiency and reducing conflict points of vehicles that turn onto and off of 109 Street using its alleys.



MANY EXISTING ALLEYS RUN EAST-WEST AND CONNECT WITH ACCESS TO 109 STREET



RECONFIGURE ALLEYS ALONG NORTH / SOUTH AXIS AS REDEVELOPMENT OCCURS



REDEVELOPED PROPERTIES THAT INCORPORATE PUBLICLY ACCESSIBLE PEDESTRIAN SPACE (MEWS)

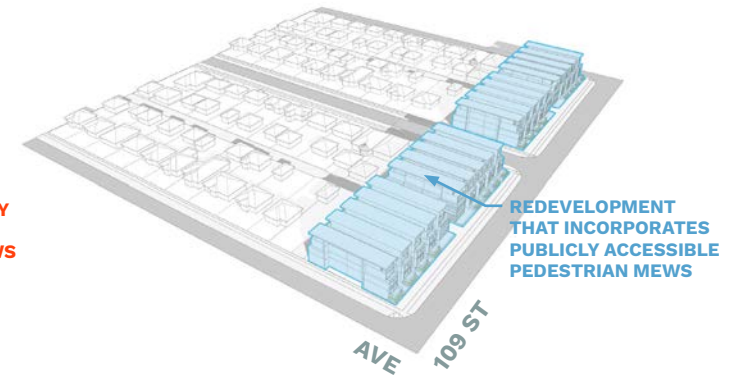


FIGURE 20 - ILLUSTRATIVE DEVELOPMENT INCORPORATING CONVERTED EAST-WEST ALLEY AS PEDESTRIAN & GATHERING SPACE

3.9 TRAFFIC SIGNALS & CROSSWALKS

3.9.1 109 Street and Saskatchewan Drive Intersection Reconfiguration

Undertake a reconfiguration of the Sask Drive intersection to optimize its efficiency for vehicles, pedestrians, and cyclists, aiming at improved pedestrian and cycling experience and safety.

The 109 Street and Saskatchewan Drive intersection is of significance to the *Streetscape Design Vision* as a confluence of many elements; it is 109 Street's most important gateway, at the edge of the River Valley with downtown view opportunities, a major point of entry and exit to the High Level Bridge and the River Valley, for vehicles, cyclists, and pedestrians. The intersection also features the underground crossing point of the rail line and its High Level Streetcar, and is adjacent to a significant mixed use node of commercial retail and residential high-rise development. Apart from its function as a major connector, the Saskatchewan Drive intersection requires enhancements that raise its prominence and stature as a memorable civic space and place.

3.9.2 Add New Signals with Pedestrian Crossings at Key Intersections

Transportation review noted that signalized pedestrian crossings are inconsistently spaced on the corridor, with extended distances between safe pedestrian crossing opportunities. In the southern sections, pedestrian crossings are callable and are poorly signed / illuminated. The transportation study made recommendations for signal control at approximately every 200m along the residential portion (Lower 109), and more frequently along the commercial portion north of Whyte Avenue (Upper 109). During the next design phase signalized pedestrian crossings are recommended for consideration at 86, 74, and 66 Avenues along 109 Street.

3.9.3 Enhance Key Intersections

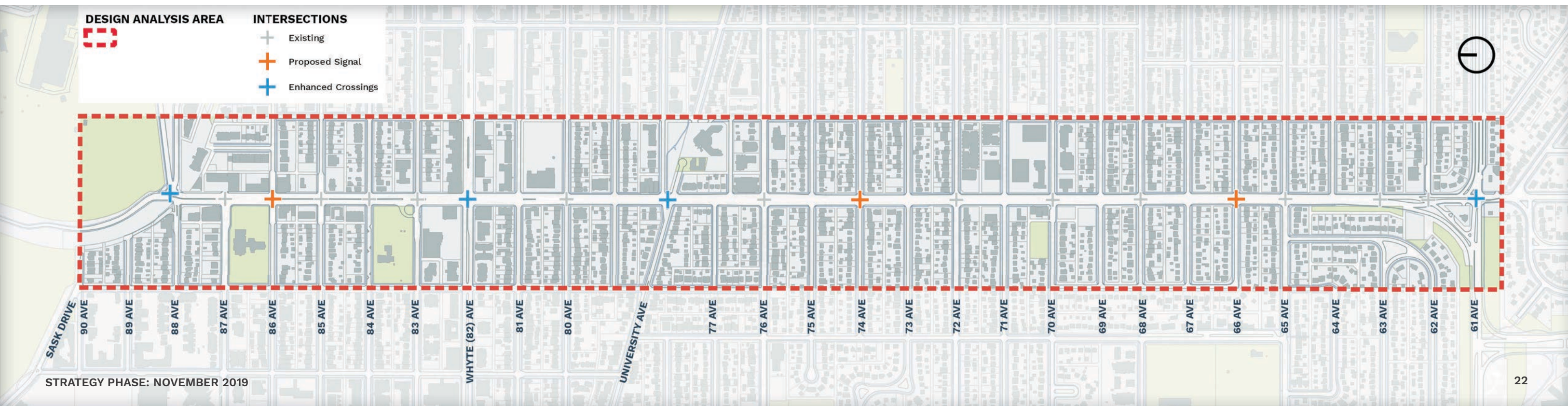
Key intersections are recommended for enhanced design treatment including special finishing materials such as pavers, special lighting, seating, and small scale public artwork, for example. Key intersections align with those that are gateways or are deserving of special recognition, and include: Saskatchewan Drive, Whyte (82) Avenue, University Avenue, and 76 Avenue. In the long-term the 61 Avenue intersection is deserving of a prominent gateway treatment, but the timing is more suitably aligned with any potential comprehensive reevaluation of transportation and land use functions in this area that make it more pedestrian friendly.



ENHANCED MATERIAL TREATMENTS



ENHANCED MATERIAL TREATMENTS



3.10 RIVER TERMINAL VIEWPOINT

109 Street's northern terminus is one of its most defining locations along the corridor; as a major entry and exit point to and from 109 from downtown and beyond, and its location adjacent to River Valley with views and connections to downtown. A major opportunity exists to create a place and moment of pause and reflection at a major entry and exit point to and from Edmonton's south side.

3.10.1 Create a Small Viewpoint Plaza and Park at Northern 109 Terminus

Create a clear view of the downtown skyline across the river at the northern terminus of 109 Street, as a small viewpoint park with an unobstructed or elevated vista. Vegetation currently obscures this view, and future designs for this should consider an elevated pedestrian view deck as a significant architectural structure and terminal gateway of 109 Street.



FIGURE 22 - ILLUSTRATIVE SASKATCHEWAN DRIVE INTERSECTION

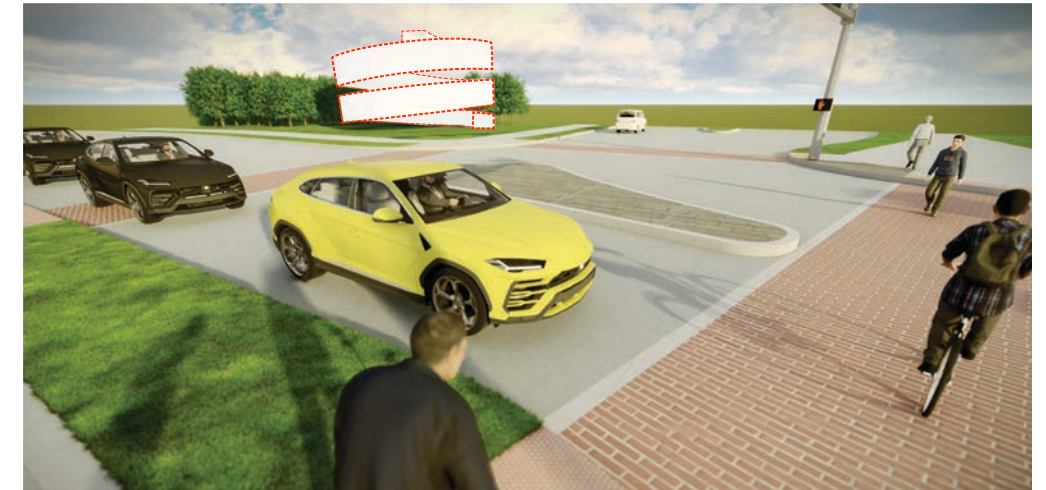
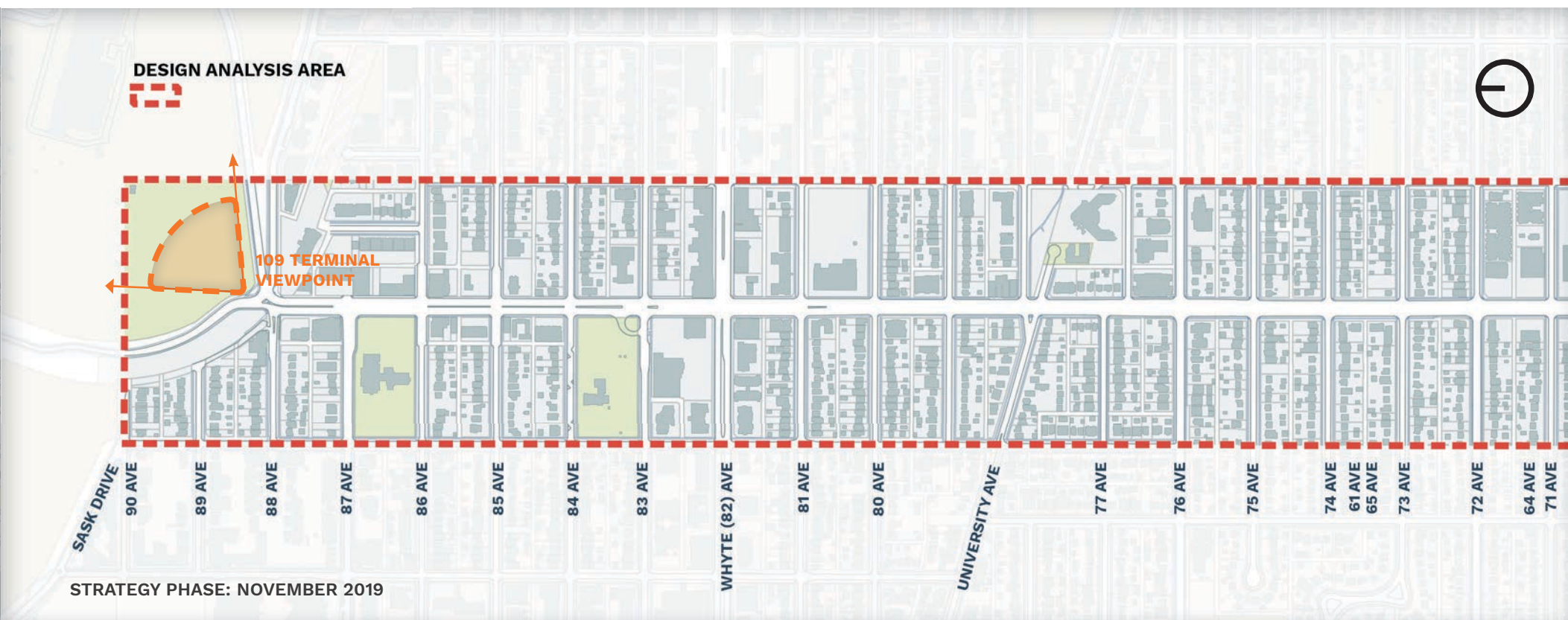


FIGURE 21 - (ABOVE AND BELOW) ILLUSTRATIVE RENDERING OF AN ARCHITECTURAL TERMINUS OF 109 AS AN ACCESSIBLE RAISED VIEWING PLATFORM



STRATEGY PHASE: NOVEMBER 2019



3.11 REPURPOSE BUS-TURNAROUND

At the corner of 83 Avenue and 109 Street there is a former bus turnaround, that is currently used as parking. This space should be repurposed as increased parks and open space as part of the 109 Streetscape Vision.

3.11.1 Repurpose the Former Bus Turnaround at Garneau Park (City Arts Centre)

This site, which may include nearby parking spaces, should be re-configured and enhanced as parks and open space, and may accommodate elements such as landscaped public seating, similar to seating at the northeast corner of the park.

It appears feasible to gain additional parks & open space through a reconfiguration and optimization of parking with the City Arts Centre. **Garneau Neighbourhood Renewal** is evaluating its neighbourhood parks and open space more comprehensively, and options to redesign this space in further detail are being explored through the Neighbourhood Renewal process.



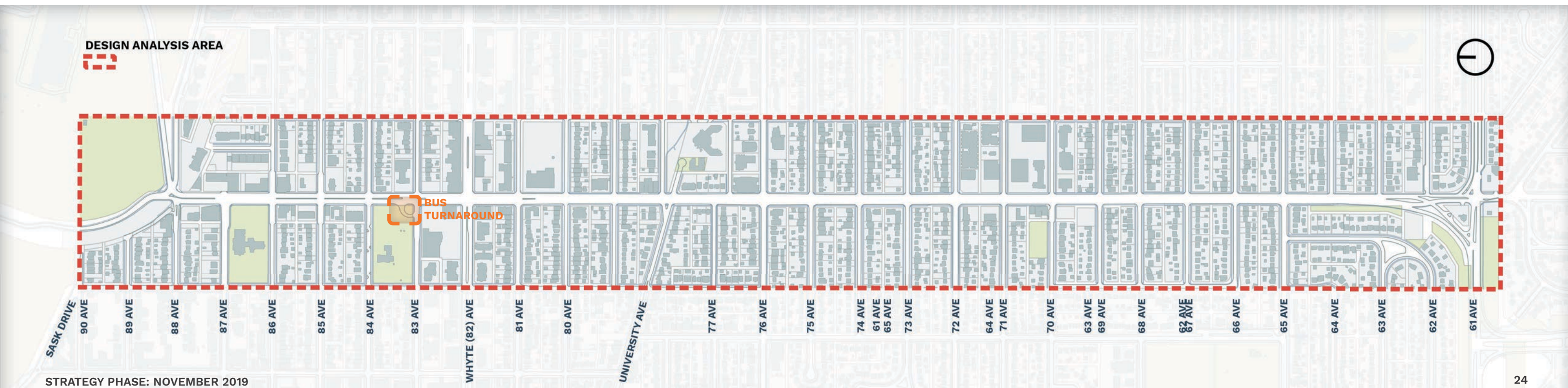
PLAZA NW CORNER 84 AVENUE INTERSECTION



PLAZA NW CORNER 84 AVENUE INTERSECTION



FIGURE 23 - UNDERUTILIZED LAND AT THE EXISTING BUS TURNAROUND



3.12 WHYTE AVENUE NODE

The 109 Street & 82 Avenue intersection is a highly visible place, connecting the well established Whyte Avenue precinct with the emergent pedestrian and retail environment of 109 Street. This intersection has the potential to be a key node along both corridors, and deserves special treatment. The **109 Street Corridor Area Redevelopment Plan (2013)** calls for a triangular setback (corner-cut) at all quadrants of the Whyte Avenue intersection. The purpose is to create small mini-plazas at each corner as an opportunity for increased public space that can accommodate medium scale public art interventions.

3.12.1 Triangular Setbacks at Four Corners of Whyte Avenue Intersection that Create Mini-Corner Plazas

When redevelopment happens, require a 6m corner-cut at all quadrants of the intersection. The primary entrance of each building here should be located at the corner-cut. Special attention and emphasis will be placed on the design of the public space gained as a corner plaza, with prominent details in paving patterns or architectural facades.

3.12.2 Artwork and Aesthetic Design Details Implemented in each Corner Plaza

Medium scale public artwork should be realized at this intersection, utilizing the mini-plazas created from 6m triangular corner-cuts. Artworks should consider the entire intersection holistically, and may include building facades, paving in the sidewalk, and details that extend into and across pedestrian crossings.

3.12.3 Marked Pedestrian Crossings with Special Material Treatment

Enhance the pedestrian comfort and prominence by treating the crosswalks at Whyte Avenue with special enhancement that may include paving materials, lighting, or other creative features.



FIGURE 24 - REPRESENTATIVE BUILDING WITH CHAMFERED CORNER



FIGURE 25 - ILLUSTRATIVE INTERSECTION



ENHANCED INTERSECTION  PUBLIC ART OPPORTUNITY  ILLUSTRATIVE REDEVELOPMENTS WITH 6M CORNER CUTS 

FIGURE 26 - EXISTING WHYTE AVENUE OPPORTUNITIES

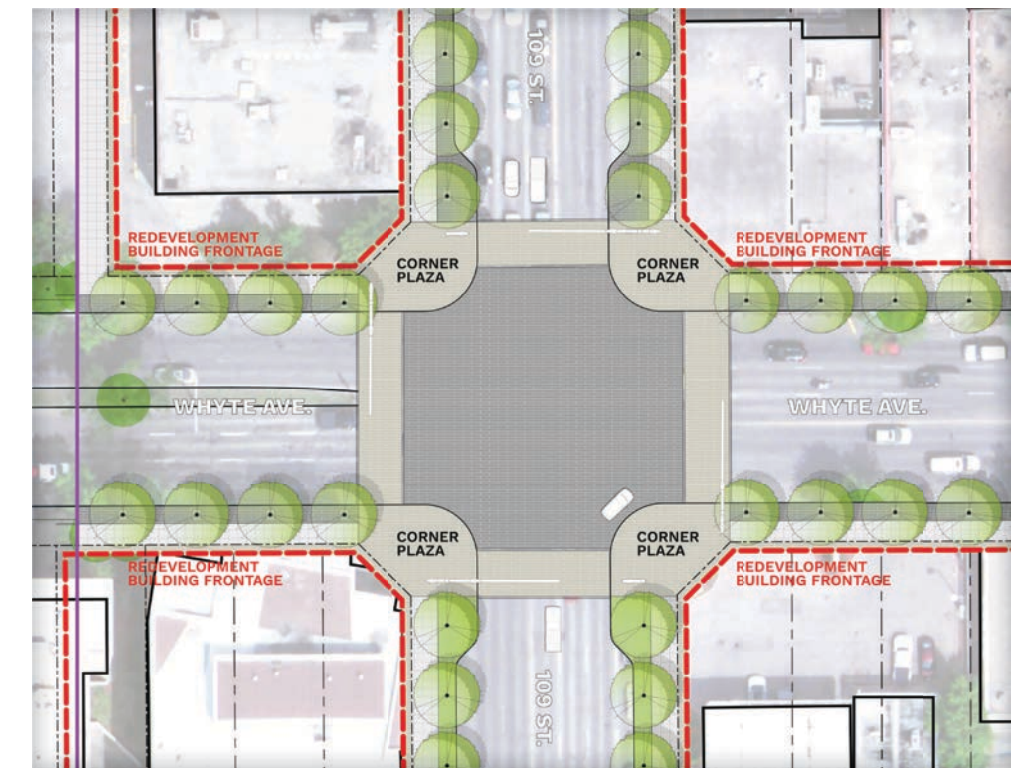


FIGURE 27 - ILLUSTRATIVE WHYTE AVENUE DESIGN PROPOSAL

3.13 UNIVERSITY AVENUE / JOE MORRIS PARK

University Avenue is historically significant as the southern boundary of the first surveyed lands for the colonial settlement of Edmonton, based on the seigneurial survey system that originated in 17th century France. The system generally produced long and narrow 'river lots' each with access to the water. University Avenue has a unique diagonal axis for this reason

3.13.1 Recognize the Irregularly Angled Road Pattern, and Celebrate the Unique Geometry and History at this Intersection

The unique angled geometry created by a diagonal University Avenue presents an opportunity to enhance a spatially unique condition as a counterpoint to the regular street grid along 109 Street and generally across central Edmonton. Accentuate the unique angle of University Avenue by providing pedestrian crossing that follows this angle. Use unique treatments such as materials, lighting, and planting to create a connection between the proposed plaza / parklet on the west side, with Joe Morris Park on the east side of 109 Street.

3.13.2 Celebrate and Communicate the Historic Significance of University Avenue

Consider special material treatment such as pavers and plaques along the sidewalk for example, to celebrate and communicate University Avenue as the original survey boundary of colonially settled Edmonton.

3.13.3 Increase Parks and Open Space and Make Functional Road Improvements

Functional improvements should be made pertaining to the west side of the intersection. Currently, there are two two-way intersections in close proximity to each other on the west side of 109 Street. Prior to or at the time of complete road reconstruction, remove the redundant south intersection and return road space to the pedestrian realm as a small plaza with public art to further increase prominence of the park and intersection.

3.13.4 Develop a Prominent Piece of Public Artwork

A prominent piece of public art that is sensitive to the historic and cultural context should be developed. As a former boundary of the first European settlement survey in Edmonton, it is symbolic of the establishment of institutionalized land rights, and also represents a tension and cultural conflict that has existed with First Nations since. It is a suitable location for an artwork of significance that explores themes related to Edmonton's settled history, colonial themes, and First Nations reconciliation.

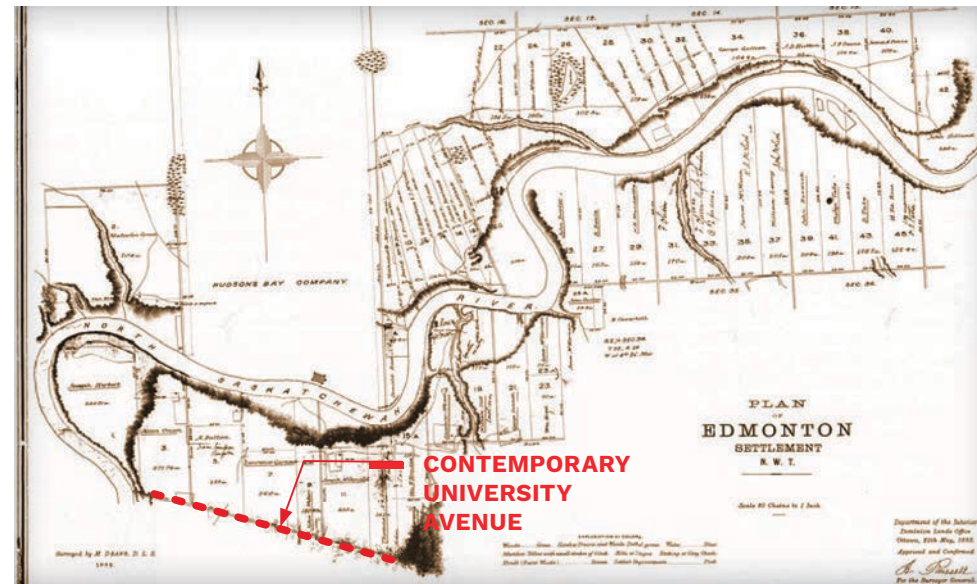
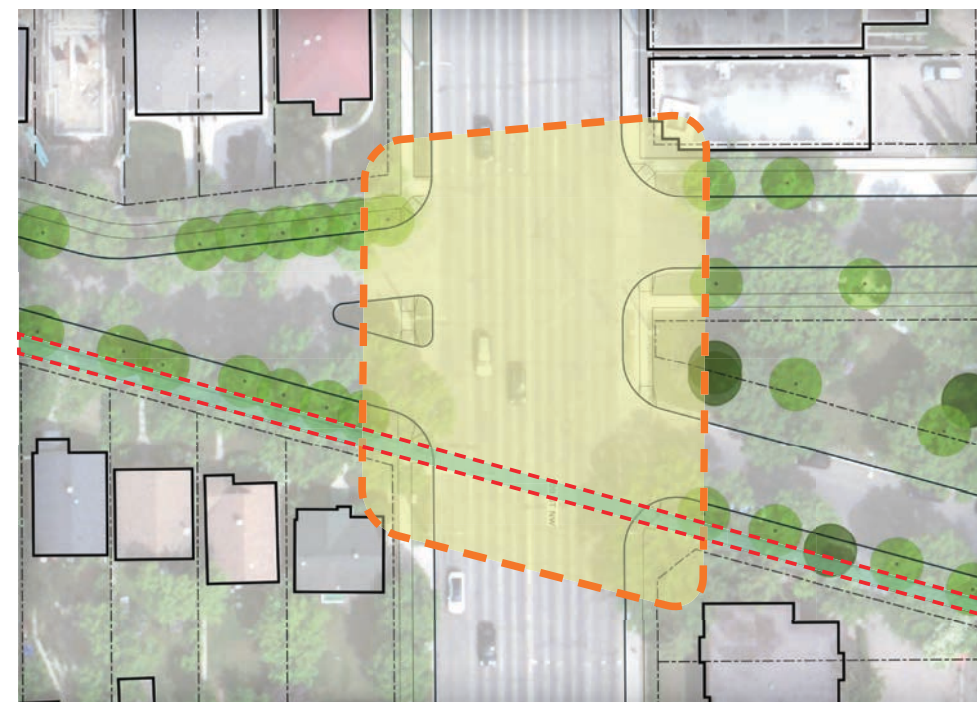


FIGURE 28 - PLAN OF SETTLEMENT 1882



ENHANCED INTERSECTION SPECIAL SIDEWALK TREATMENT

FIGURE 30 - EXISTING UNIVERSITY AVENUE OPPORTUNITIES

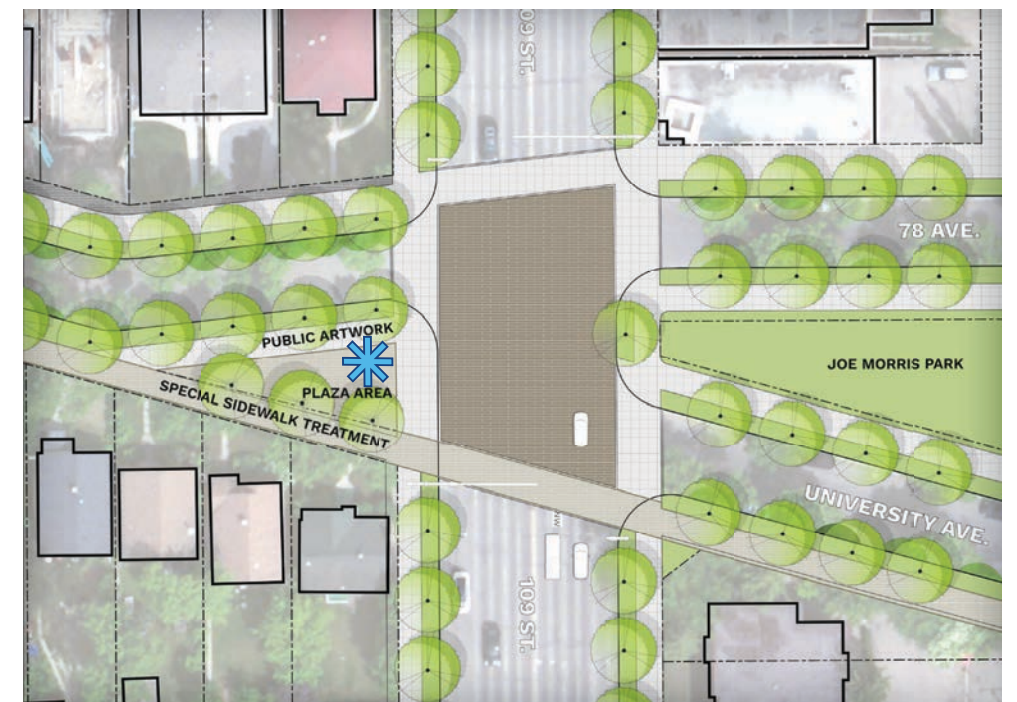


FIGURE 29 - ILLUSTRATIVE UNIVERSITY AVENUE DESIGN PROPOSAL

3.14 SOUTH TERMINAL 109

The southern terminus of the 109 corridor is a defacto gateway. The current condition here is not pedestrian friendly, and prioritizes vehicle transportation functions of the roadway, out of character with the rest of the 109 corridor. Many complex factors are at play in this sector, and prior to reconstruction a comprehensive planning and design approach should be used to reconsider and optimize transportation and land use functions of the area.

3.14.1 Re-Design of Lower 109 Street Terminus

The terminus area includes approximately 4-5 blocks from 65 Avenue to just south of 61 Avenue. Opportunities as elaborated in following points include: repurposing and redevelopment of idle lands, transportation and pedestrian connectivity enhancements, and optimization of currently inefficient land use.

3.14.2 Reconfigure 61 Avenue Intersection

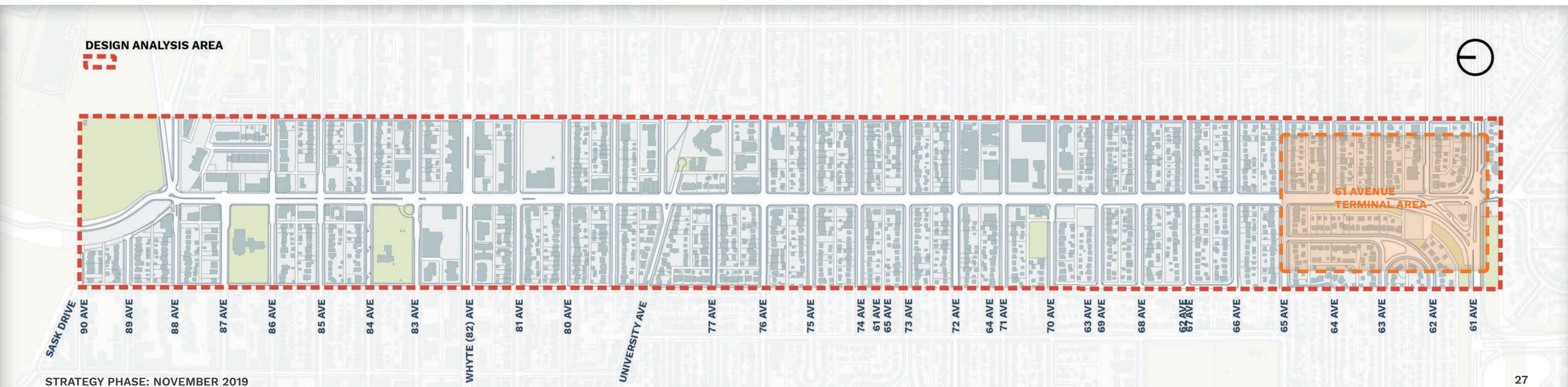
61 Avenue is the defacto southern terminus and gateway of the 109 Street corridor, and is of significance to its long-term coherence. Its existing configuration is a somewhat complicated intersection that functions reasonably well for traffic movement, at the expense of the pedestrian environment and suboptimal land use. The existing McDonalds restaurant is an islanded and auto-oriented land use that may be subject to reconsideration as land redevelopment and reconfiguration opportunities present themselves.

Enhance Linear Park

With the decommissioning of the NAV Canada Site at approximately 62 Avenue due to the closure of the Edmonton Municipal Airport, The City should encourage and explore land opportunities to continue the linear green park on this edge, and potential repurposing or redevelopment of the land to contribute to the character of 109 Street and Parkallen neighbourhood on either side. Any changes to land use, transportation, and park space in this area should be considered holistically in a comprehensive study of the whole area.

3.14.3 Optimize Land Use and Built-Form

During comprehensive re-design of this sector, opportunities should be explored to enhance and pronounce the streetwall character to be more in-line with what is proposed along the rest of the 109 Street corridor. There are significant but disjointed open space assets north and south of 61 Ave, representing a significant opportunity to integrate future development and currently underutilized open space assets.



3.15 CURB EXTENSIONS

Curb extensions visually and physically narrow the roadway, creating safer and shorter crossings for pedestrians while increasing the available space for street furniture, benches, plantings, and street trees. They may be implemented on downtown, neighborhood, and residential streets, large and small.

3.15.1 Recommended Short-Term Curb Extensions

Curb extensions should be provided on selected avenues north of Whyte along 109 Street, recommended for further consideration with *Garneau Neighbourhood Renewal* scheduled for construction in 2022. Recommended curb extensions are illustrated on the overall concept plan in *Section 3.4*, and include all intersections between and including 88-84 Avenues.

3.15.2 Recommended Long-Term Curb Extensions

Long-Term Curb Extensions should be considered in the future at the time of roadway reconstruction, or prior to roadway reconstruction with the addition of parking in the outermost lane adjacent to emerging commercial mixed-use nodes along 109 Street. Parking may be added selectively at existing nodes and as the corridor develops, subject to roadway redesign in subsequent design phases.

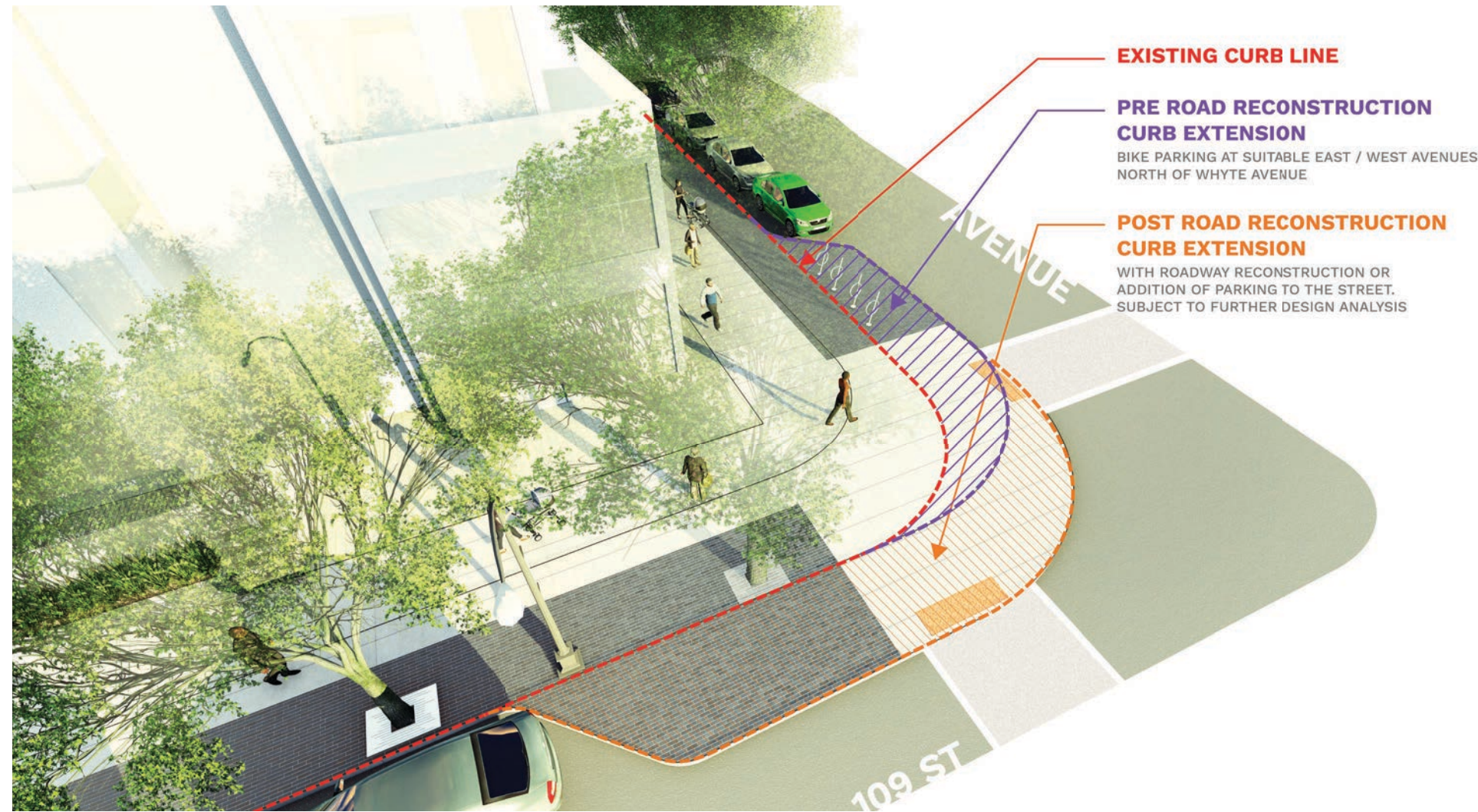


FIGURE 31 - TYPICAL STREET CORNER WITH CURB EXTENSIONS ILLUSTRATION

LEGEND

- 5 TWSI - TACTILE WARNING SURFACE INDICATOR AT ALL CROSSWALKS
- 14 Q BIKE RACK - CITY OF EDMONTON
- 16 BENCHES & SEATING

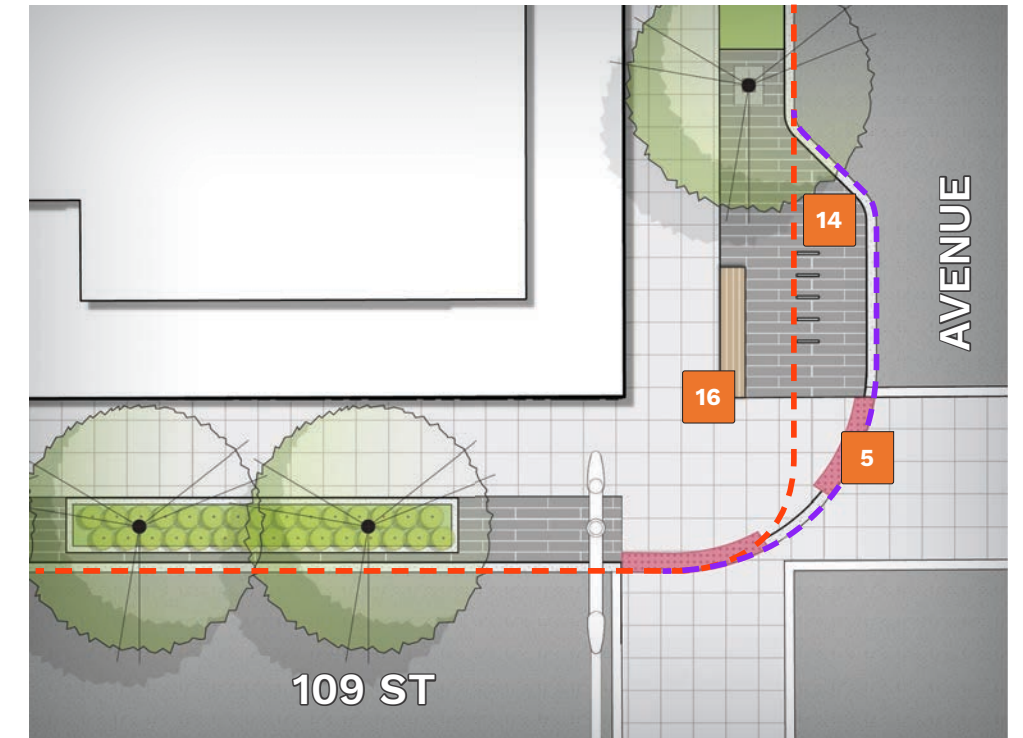


FIGURE 32 - PROPOSED SHORT-TERM CURB EXTENSIONS

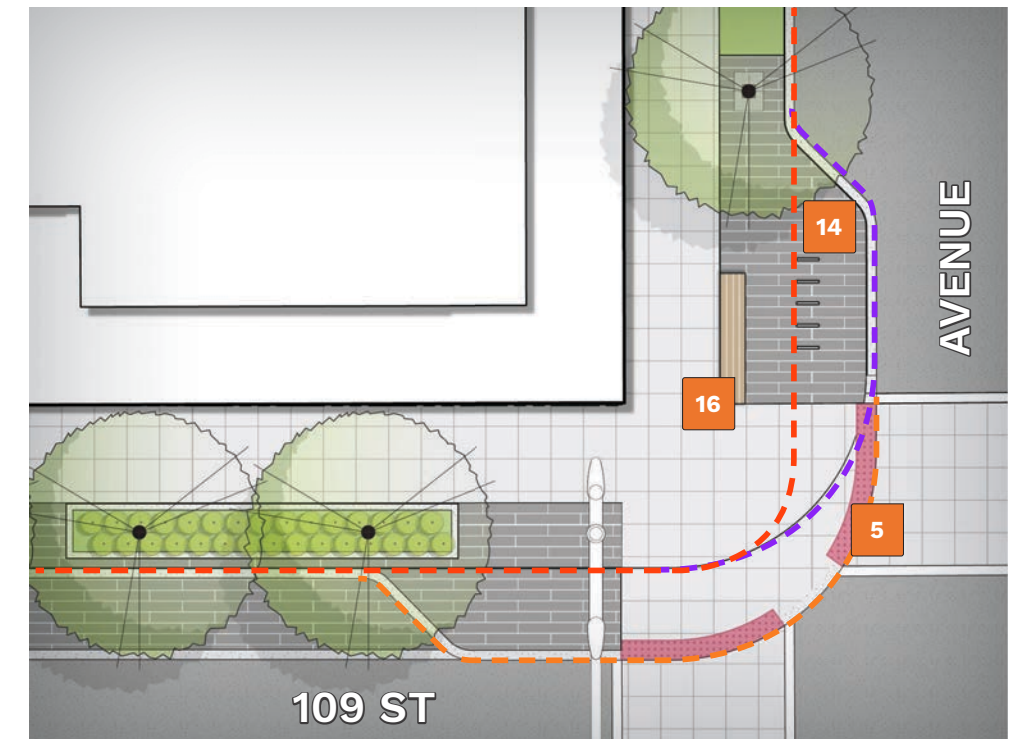


FIGURE 33 - PROPOSED LONG-TERM CURB EXTENSIONS. SUBJECT TO FURTHER CONSIDERATION AT TIME OF FULL ROAD REDESIGN

3.16 GATEWAYS & PUBLIC ART

3.16.1 Primary Gateways

109 Street and Saskatchewan Drive

The major entry and exit point to and from the City's River Valley and downtown deserves special treatment. Architectural designs that integrate artwork, a public viewpoint park, and a terminal gateway to the 109 should be explored. The view of downtown at this location is necessary to exploit, and an architectural structure that elevates the viewpoint with a terminal landmark is recommended.

109 Street and 61 Avenue

This intersection does not have the same considerable assets as those that exist at the Saskatchewan Drive intersection. However, in the long-term, in order to bookend both ends of the corridor with gateways, something of sculptural significance that is reflective of its northern counterpart should be developed.

3.16.2 Secondary Gateways

109 Street and Whyte Avenue

Whyte is an east-west avenue of civic importance connecting to 109 Street. The intersection is also designated as a location for medium scale public art interventions, and should be considered and designed holistically.

109 Street and University Ave

University Avenue is another east-west avenue of historic significance. The intersection is also designated as a location for a large scale public art intervention, and its nature as a gateway should consider these relationships and be designed holistically.

3.16.3 Large Scale Art

Large scale public art should occur at all major entries to 109 Street from crossings of other significant avenues such as Saskatchewan Drive, Whyte, and 61 Avenues. Art interventions may be conceived as standalone elements, or incorporated into the streetscape and the surrounding built form such as gateways or the facades of prominent new architectural works at locations:

- » 109 Street and Sask Drive Viewpoint
- » 109 Street & Whyte Ave
- » 109 Street and University Ave
- » 109 Street and 61 Ave



3.16.4 Medium Scale Art

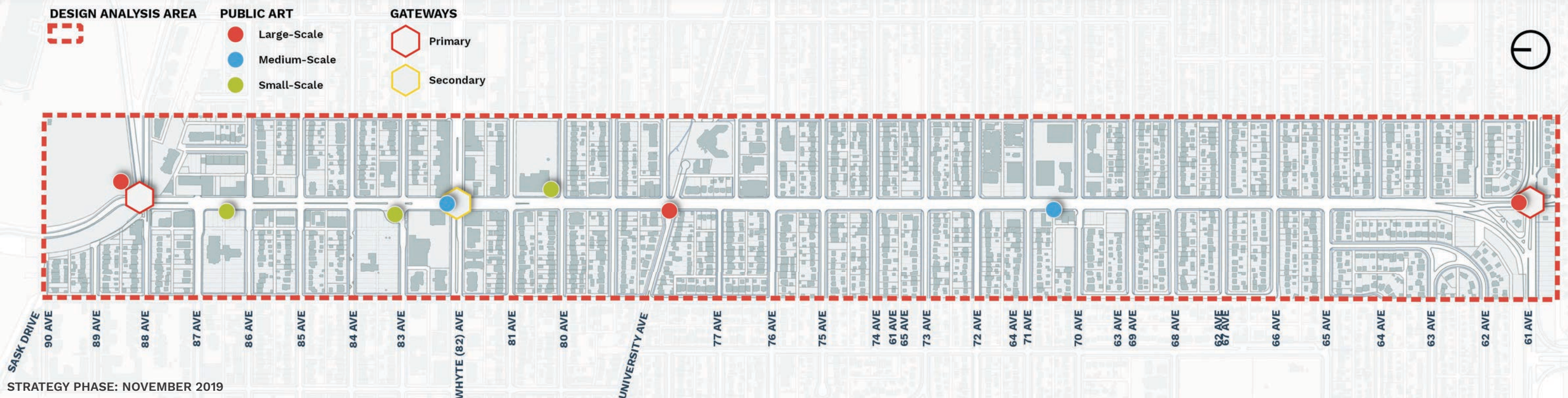
Medium scale interventions may include elements such as custom pieces of furniture, feature lighting, or other thought provoking creative interventions at locations:

- » 109 Street and 83 Avenue (Trolley Turnaround)
- » 109 Street Alley between 71 Avenue and 70 Avenue (connecting to Violet Archer Park)
- » 109 Street and 80 Avenue (Joe Morris Park)
- » All alleys that are converted to pedestrian gathering spaces over time should require small and medium scale art interventions



3.16.5 Small Scale Art

Small scale art interventions should be fine-grained subtle details, not provisioned to specific locations, dispersed consistently along the corridor to create a unified sense of street character. Some of these elements may include custom manhole covers, unique paving patterns and engravings, banners, signage, or plaques.



3.17 LANDSCAPE: RECOMMENDED PLANTINGS

Healthy and mature street trees are a significant factor in making Edmonton streets attractive and comfortable. Deciduous boulevard trees provide shade in hot summers while allowing sunlight penetration and warmth during cool winters and shoulder seasons. A proper selection of perennials and grasses create an attractive street interface with buildings, provide screening, and can enhance colour and vibrancy of a streetscape through all seasons.

3.17.1 Upper 109 Street Boulevard Trees

Due primarily to the larger allotment of hardscape in Upper 109, boulevard street trees should be planted along the street frontage of 109 in structural soil cells with a minimum soil volume of 17-21m³ per tree and as according to all relevant City standards.

3.17.2 Lower 109 Street Boulevard Trees

Lower 109 boulevard trees must also meet optimal soil volumes in order to develop a healthy canopy over the long term; however, due to the larger allotment of softscape in this primarily residential area, street trees can be planted in grasses, at grade planters, and sod along the street-fronting boulevard.

3.17.3 Accent Trees

Accent trees should be provided in special conditions away from the main avenue. These areas include: in the frontage of buildings with large setbacks, small scale parklets and mini-plazas, in raised planters in compliment to an understory of shrubs, grasses, and perennials. Pedestrian mews and pedestrianized lanes that will be created along the corridor are a recommended area for a higher number of accent plantings.

3.17.4 Boulevards, Planters, and Curb Extensions

Boulevards and planters should be planted with a healthy and colourful variety of shrubs and grasses, and vunderstory of groundcovers. All plantings should be selected for their hardiness and general low maintenance and watering requirements for the region.

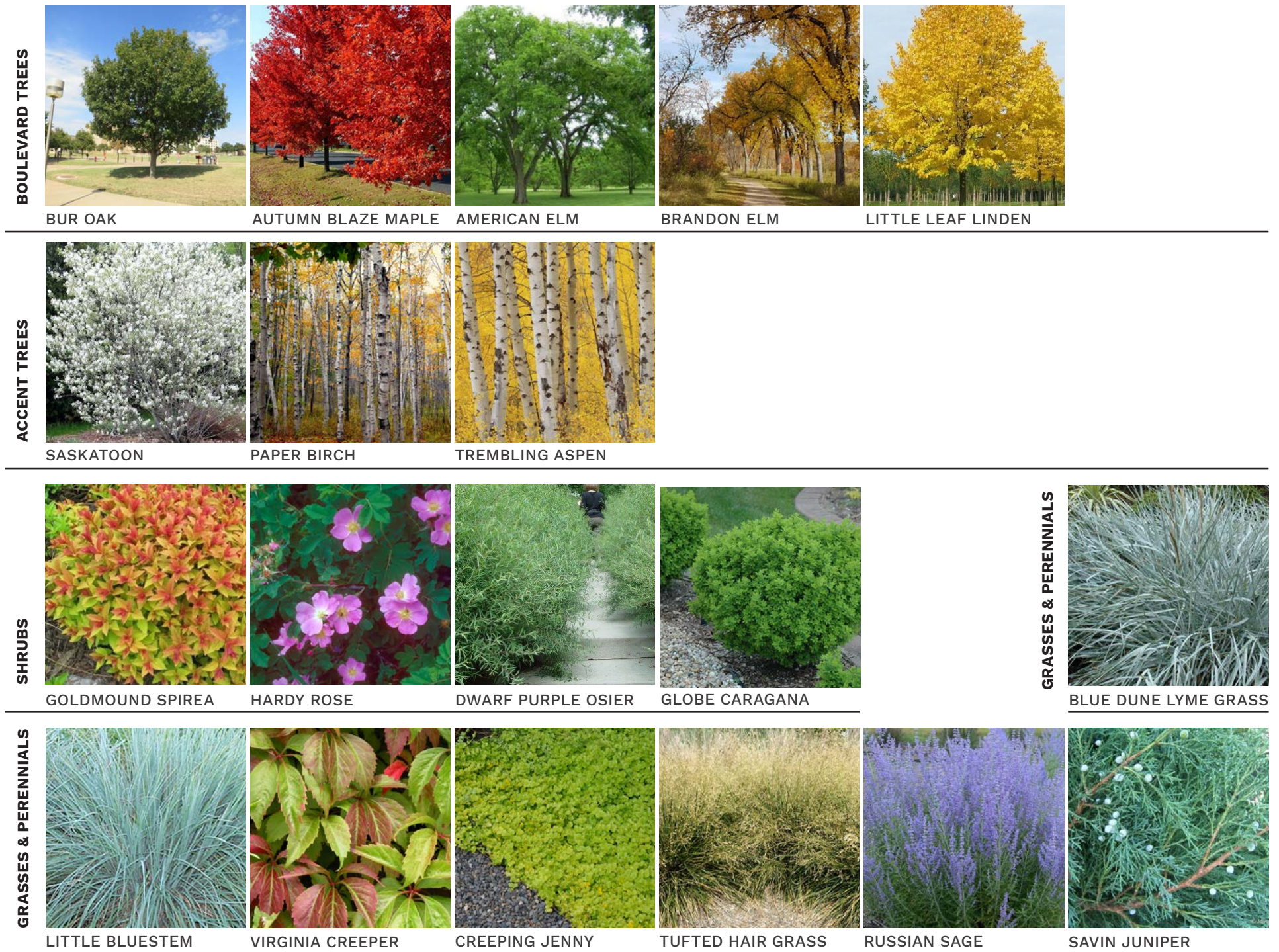


FIGURE 34 - ILLUSTRATIVE PLANTING PALETTE

3.18 LOW IMPACT DEVELOPMENT

The primary purpose and objective of **Low Impact Development (LID)** is to deal with stormwater and pollution on site locally. LID facilities can include rain gardens and swales that capture and use water for plants and bio-retention, underground cisterns that store and re-use water, and permeable pavements that promote groundwater infiltration. Traditional drainage infrastructure is mainly focused on capturing stormwater and channeling it away from sites via piped drainage infrastructure. LID facilities promote capture and re-use of water on site as opposed to funnelling it away.

3.18.1 Plant Trees in Structural Soil Cells

All trees along 109 Street including those planted in pedestrianized alleys, should be planted in structural soil cells where not in open planting beds. Soil cells when used should be evaluated for potential stormwater capture and on-site treatment and use where possible.

3.18.2 Develop Bio-Retention Areas

Curb extensions, softscape boulevards, and green spaces nearby and adjacent to 109 Street should be considered for water and bio-retention where technically appropriate.

3.18.3 Green Roof Development

Public and private buildings along 109 Street should be encouraged and supported in their use of low impact measures such as on site retention and treatment, and green roofs.

3.18.4 Boulevards, Planters, & Curb Extensions

Boulevards and planters should be evaluated for opportunities to provide low impact development opportunities, and should be planted with a healthy and colourful variety of shrubs and grasses, with an understory of groundcovers. All plantings should be selected for their hardiness and general low maintenance and watering requirements for the region.



FIGURE 35 - BIO-RETENTION AREA, RAIN GARDEN



FIGURE 36 - TREES IN STRUCTURAL SOIL CELLS



FIGURE 37 - GREEN ROOF ON FEDERAL BUILDING

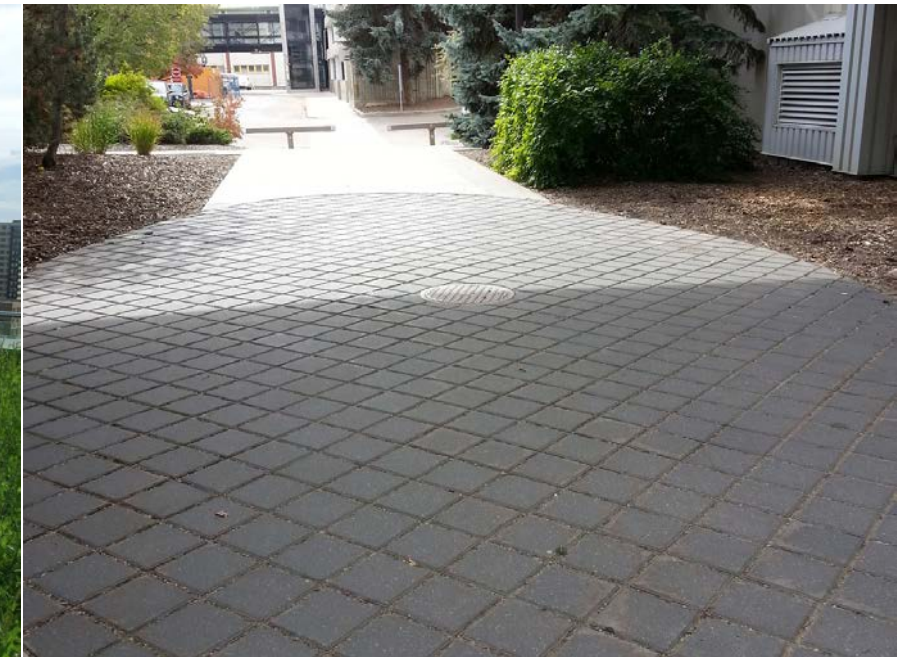


FIGURE 38 - POROUS PAVEMENT @ UNIVERSITY OF ALBERTA

3.19 BUILDING INTERFACE RECOMMENDATIONS

The City drives improvements and design work that will happen within the public road right-of-way; however, a successful and well liked street is equally dependent on an adjacent high quality architectural built form, with emphasis on the public-private interface with building facades. To encourage a high quality pedestrian realm and to make 109 Street an attractive street to live on, the vision includes recommendations for residential and commercial business frontages. All buildings along 109 Street should be street oriented with primary entrances facing 109 Street. No solid fences or blind walls shall be permitted along 109 Street.

3.19.1 Interface with Commercial Frontage

Commercial buildings should be built to within 1-2m of the front property lines to create a walkable pedestrian interface. The 1-2m setback should be encouraged for use with amenities like patios, sandwich boards, and bicycle racks. Larger setbacks should be considered in areas of existing constraint, to provide wider sidewalks.

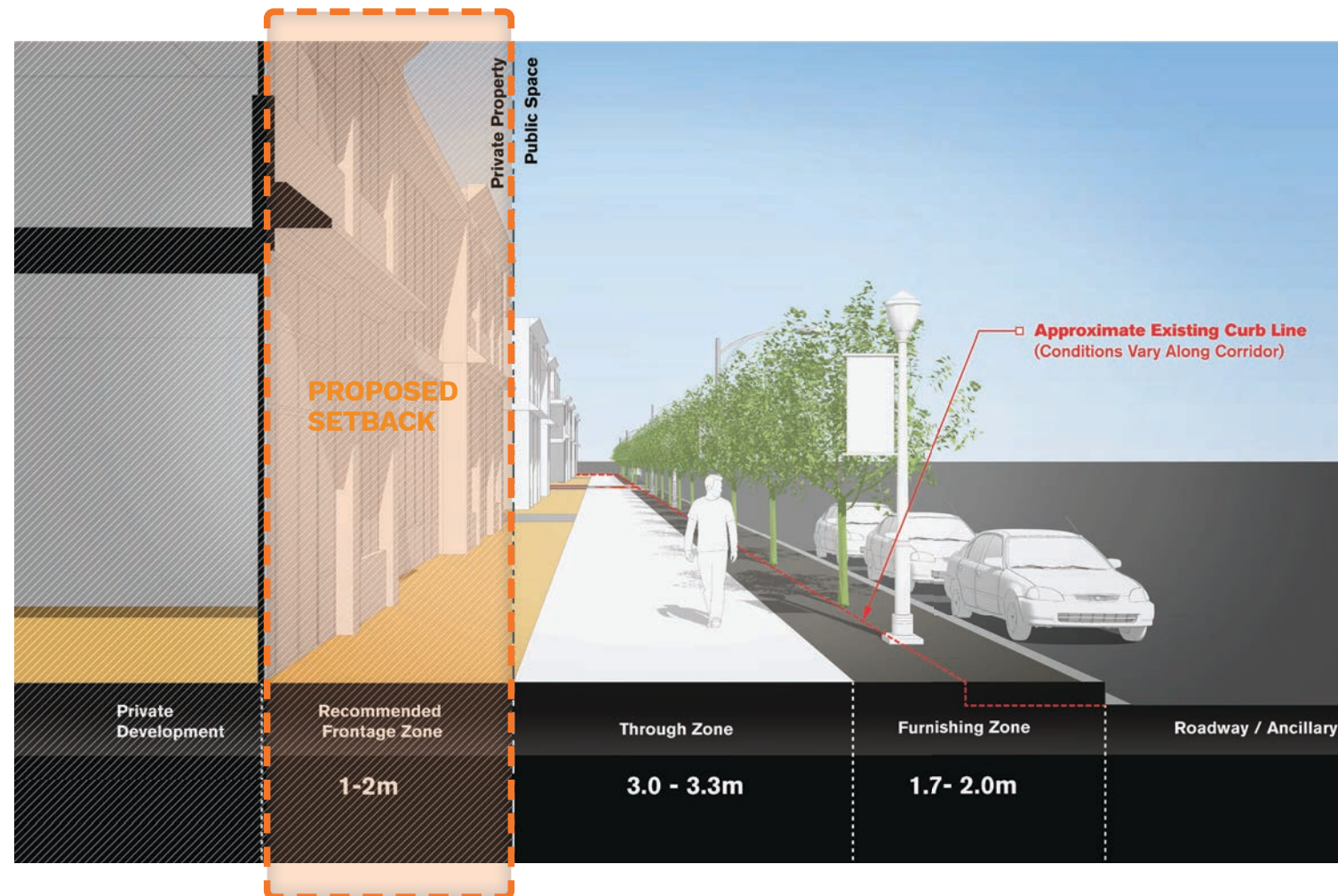


FIGURE 41 - REPRESENTATIVE DEVELOPMENT - UPPER 109 1-2M RECOMMENDED SETBACK

3.19.2 Interface with Residential Frontage

Residential buildings should be built with a minimum setback of 3m of the front property line, to develop a consistent and attractive streetwall on 109 while providing an intermediate space between public and private spheres of life. Items such as patios and small scale landscaping should be encouraged in this space, to enhance attractiveness of the street and provide a minimal level of screening and privacy for residents.

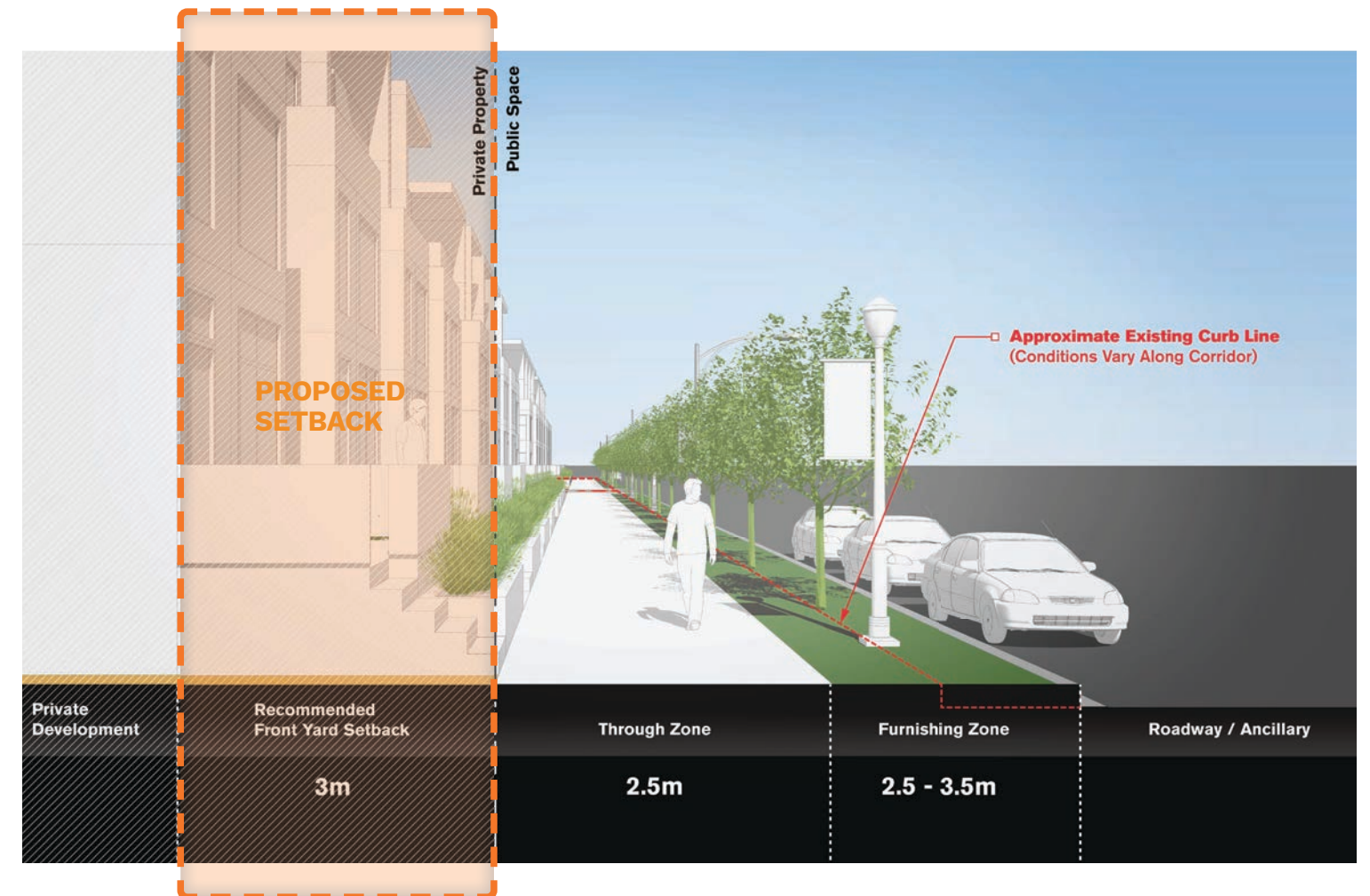


FIGURE 40 - REPRESENTATIVE DEVELOPMENT - LOWER 109 3M RECOMMENDED SETBACK

3.20 IMPLEMENTATION

IMPLEMENTATION			
	TIMELINE		
INITIATIVE	SHORT-TERM IMPROVEMENTS (CITY-INITIATED; PRE-ROAD RECONSTRUCTION 2-5 YEARS)	REDEVELOPMENT IMPROVEMENTS (PRE-ROAD RECONSTRUCTION - ONGOING):	LONG-TERM IMPROVEMENTS (FULL ROAD RECONSTRUCTION - 20+ YEARS)
SIGNALIZED INTERSECTIONS EVERY 200M	Upper 109 (North of Whyte) potentially in conjunction with Garneau Neighbourhood Renewal subject to review and prioritization of City Signals group	Lower 109 (South of Whyte) subject to review and prioritization of City Signals group	
CURB EXTENSIONS ALONG AVENUES CONNECTING WITH 109 STREET	Upper 109 (North of Whyte) potentially in conjunction with Garneau Neighbourhood Renewal subject to review and available budget	Lower 109 (South of Whyte) Subject to review during Garneau Neighbourhood Renewal, or when private redevelopment happens	Opportunities to be analyzed further during full road reconstruction
ALLEY CLOSURES & PEDESTRIANIZATION	Upper 109 (North of Whyte) To be reviewed for potential during Garneau Neighbourhood Renewal	As lots are consolidated and subject to redevelopment of properties that occur in intervening years along the corridor	
109 STREET & SASK DRIVE INTERSECTION RECONFIGURATION & ENHANCEMENT	To be recommended for inclusion in the scope of the Saskatchewan Drive Project. Subject to approval of capital funding during the next budget cycle		
109 STREET AND SASKATCHEWAN DRIVE GATEWAY & VIEWPOINT PARK			Subject to further review and design closer to the time of road reconstruction
TREE PLANTING & ENHANCED FURNISHINGS		Subject to further study, tree planting and enhanced furnishings can occur with redevelopment where possible, where spatial and technical constraints permit	Full realization of tree lined street with planted boulevards, trees in soil cells (North of Whyte), and street-side planters constructed at the time of full road reconstruction
CLOSE EXCESS ALLEY ACCESSES ALONG 109 STREET, CONVERT TO PEDESTRIANIZED SPACES		As permitted by consolidation and redevelopment of blocks as they occur along the 109 corridor	
REVISED ROAD CROSS SECTION, RE-EVALUATION & RE-DESIGN OF ROAD TRANSPORTATION FUNCTIONS			Subject to further review and design closer to the time of road reconstruction
ON-STREET PARKING & ANCILLARY ZONE ADDITION / RECONFIGURATION		To be considered on a case-by-case basis at existing and emerging commercial nodes along the corridor	Subject to further review and design closer to the time of road reconstruction
COMPREHENSIVE REDESIGN OF SOUTH TERMINAL 61 AVENUE PRECINCT TO OPTIMIZE LAND USE & TRANSPORTATION, DESIGN OF GATEWAY			Subject to further review and design closer to the time of road reconstruction
WHYTE AVENUE INTERSECTION ENHANCEMENTS		6m building setbacks to be enforced as buildings are redeveloped at this intersection	Subject to further review and design closer to the time of road reconstruction
UNIVERSITY AVENUE INTERSECTION ENHANCEMENTS			Subject to further review and design closer to the time of road reconstruction
TIPTON PARK & ARENA INTERFACE IMPROVEMENTS		If and when the arena or park are redeveloped, enhance the 109 Street interface with building and facade treatments that address the street. Improve the landscaping and park entry interface with 109 Street	
JOE MORRIS PARK IMPROVEMENTS		If and when the park is redeveloped, enhance the 109 Street interface with enhanced planting and / or plaza treatments that address the street. Improve the landscaping and park entry interface	
PUBLIC ARTWORK		public artworks may be provided in private developments as they occur, through negotiation by Administration at the rezoning and development permit stages	Full realization of public art at the time of road reconstruction, subject to percent for art policy that makes capital funding available as part of reconstruction

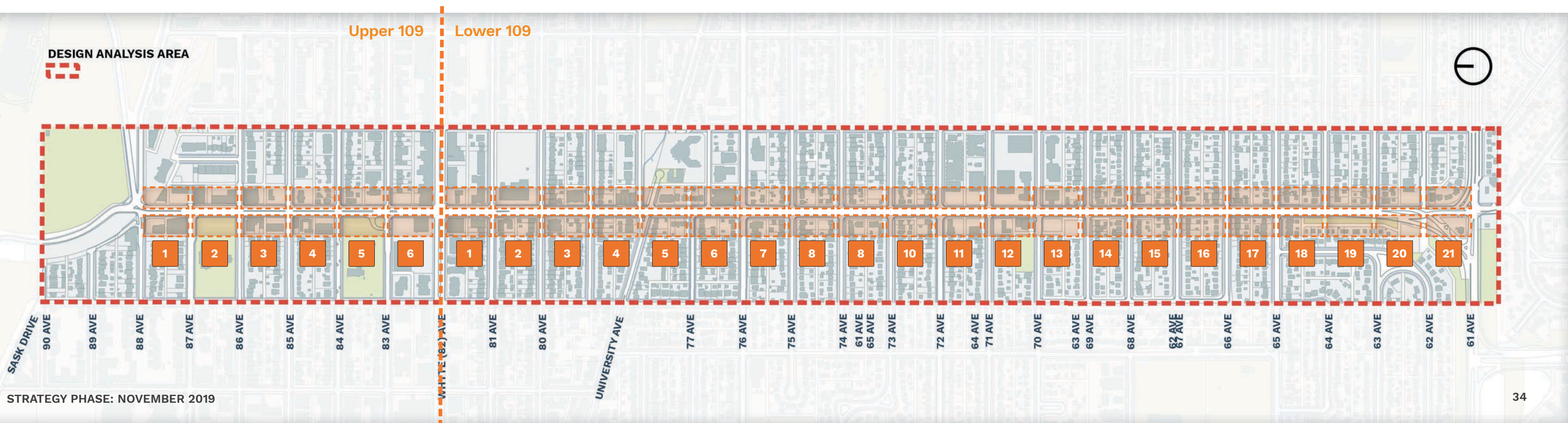
3.21 UPPER & LOWER 109 STREETSCAPE COSTS

The provided cost estimate at Strategy Phase is based on -50% to +100% accuracy. Materials and furnishings behind the curb lines are used to generate area and itemized costs for a representative block. Block-by-block costs are multiplied by the number of total blocks along the corridor to arrive at total streetscape cost estimate. The full road reconstruction cost estimate is 74.9 million dollars, of which 19.3 million is estimated for the Upper 109 commercial streetscape, and 55.6 million is allocated for the Lower 109 residential streetscape.

3.21.1 Road Reconstruction Cost Estimate

DESCRIPTION	UNIT COST	UPPER 109 STREET		LOWER 109 STREET		GRAND TOTAL
		UNITS	TOTAL UPPER 109	UNITS	TOTAL LOWER 109	
Upper 109 Streetscape Reconstruction (6 Blocks)	\$1,137,657	6	\$6,825,942	-	-	
Lower 109 Streetscape Reconstruction (21 Blocks)	\$780,700	-	-	21	\$16,394,700	
Total Streetscape Reconstruction (27 Blocks)						\$23,220,642
Road Reconstruction (27 Blocks)	\$873,465	6	\$5,240,792	21	\$18,342,771	\$23,583,563
Drainage Separation & Reconstruction (27 Blocks)	\$412,145	6	\$2,472,870	21	\$8,655,045	\$11,127,915
New Signalized Intersections (3 Total)	\$200,000	1	\$200,000	2	\$400,000	\$600,000
Enhanced Intersections (4 Total)	-	2	\$700,000	2	\$1,500,000	\$2,200,000
Avenue Curb Extensions (91 Potential)	\$15,000	18	\$270,000	73	\$1,095,000	\$1,365,000
Public Nodes Improvements (North Terminus Viewpoint, Bus Turnaround Park)	-	2	\$350,000			\$350,000
SUBTOTAL 109 VISION COSTS			\$16,059,604		\$46,387,516	\$62,447,120
15% DESIGN / ENGINEERING / PROJECT MANAGEMENT			\$2,408,941		\$6,958,127	\$9,367,068
5% CONTINGENCY			\$802,980		\$2,319,376	\$3,122,356
GRAND TOTAL			\$19,271,525		\$55,665,020	\$74,936,544

FIGURE 42 - HIGH LEVEL COST ESTIMATE SUMMARY



3.22 ACKNOWLEDGEMENTS

Envision 109 is the reflection of the collective effort by the consultants, public and private stakeholders and City Administration that provided advice and assistance throughout the study and planning process. We greatly appreciate the efforts of many individuals including the City of Edmonton, Community Leagues, residents, businesses, commuters, developers, and the consultant team who took the time to share their vision for the 109 Street Concept Streetscape Design and helped translate it into a plan that will help revitalize this prominent street.

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Community Integrated Committee

Garneau Community League
McKernan Community League
Queen Alexandra Community League
Parkallen Community League
Allendale Community League
Pleasantview Community League
Central Area Council of Community Leagues
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