

## **(DC2) DIRECT DEVELOPMENT CONTROL PROVISION**

Queen Alexandra

Between 80 and 81 Avenues NW at 104 Street NW

### **1. General Purpose**

To provide the opportunity for high density mixed-use development that accommodates a wide variety of uses including pedestrian oriented commercial and high rise residential that contributes to an inviting “Whyte Avenue” environment with a public midblock north–south pedestrian corridor.

### **2. Application**

This Provision shall apply generally to the area located between 80 Avenue NW and 81 Avenue NW, west of 104 Street NW as shown on Schedule 1 of the Bylaw adopting this Provision. This Provision is further divided into two smaller areas, Area 1 and 2, as identified in Appendix 1.

### **3. Uses**

#### **Areas 1 and 2**

- a. Apartment Housing
- b. Bars and Neighbourhood Pubs
- c. Business Support Services
- d. Child Care Services
- e. Commercial Schools
- f. Convenience Retail Stores
- g. Extended Medical Services
- h. General Retail Stores
- i. Government Services
- j. Health Services
- k. Indoor Participant Recreation Service
- l. Live Work Units
- m. Major Home Based Business
- n. Media Studios
- o. Minor Alcohol Sales
- p. Minor Home Based Business
- q. Non-Accessory Parking
- r. Personal Service Shops, excluding Body Rub Centres
- s. Professional, Financial and Office Support Services
- t. Public Libraries and Cultural Exhibits
- u. Residential Sales Centre
- v. Restaurants
- w. Specialty Food Services
- x. Residential Sales Centre
- y. Restaurants
- z. Veterinary Services
- aa. Fascia On-premises Signs
- bb. Minor Digital On-Premise Signs

- cc. Projecting On-Premises Signs
- dd. Freestanding On-Premise Sign, limited to the existing “South Scona Parking” sign
- ee. Temporary On-premises Signs

#### 4. Areas 1 and 2: General Development Regulations

- a. Development shall be in general conformance with Appendices 1 - 15.
- b. General Retail Stores shall be limited to 250 m2 of Floor Area.
- c. Restaurants and Specialty Food Services shall be limited to 240 m2 of Public Space per Use.
- d. Bars and Neighbourhood Pubs shall be limited to 200 occupants and 240 m2 of public Space, and one establishment per Area 1 and Area 2.
- e. Non-Residential and Non-Residential-Related Uses shall not be in any freestanding structure separate from a structure containing Residential Uses, and shall be accessed from a public roadway, including the Lane, and not be developed above the lowest Storey.
- f. The maximum Height, number of Dwellings and Floor Area Ratio for each Area shall be as follows:

	Height	Maximum Dwelling Units	Overall Maximum FAR
<b>Area 1 (North)</b>			4.0
Tower A	60.0m	180	
North - East	12.0m	10 (including Work Live units)	
<b>Area 2 (South)</b>			7.0
Tower B	50.0m	110	
Tower C	66.0m	195	
<b>Area 1 and 2 (combined)</b>			5.0

The maximum Height shall be in accordance with Section 52.2(a) of the Zoning Bylaw. Notwithstanding this Provision, all buildings shall have an overall Height which includes all the features listed in Section 52.2(a) of the Zoning Bylaw, so as to not to cast a shadow past the curb on the south side of 82 (Whyte) Avenue NW at 9:30am and 3:30pm on March 21 and 9:30am and 3:30pm on September 21, as shown on Appendices 12 - 15.

- g. Minimum building Setbacks shall be provided as follows:

#### Area 1 (North)

Front (north, 81 Avenue)	1.0m
Front (west, 105 Street)	1.0m

Rear (south, lane)	1.5m
Side Setback (east, lane)	0.0m
Corner (north-west, 81 Avenue and 105 Street)	4.5 x 4.5m corner cut

#### **Area 2 (South)**

Front (south, 80 Avenue)	1.0m
Front (west, 105 Street)	1.0m
Rear (north, lane)	1.5m
Side (east)	0.0m
Corner (south-west, 80 Avenue and 105 Street)	4.5 x 4.5 m corner cut

- h. Live Work Units shall have individual entrances at Grade.
- i. Notwithstanding Section 48 of the Zoning Bylaw, required Separation Space shall be reduced to the required Setbacks.
- j. Amenity Areas shall be in accordance with the following:
  - i. A minimum Amenity Area of 7.5m<sup>2</sup> per Dwelling shall be provided.
  - ii. Notwithstanding Section 46 of the Zoning Bylaw, balconies or private terraces with a minimum depth of 1.5 m shall be included in the Amenity Area calculations.
  - iii. Of the total required Amenity Area, a minimum 200 m<sup>2</sup> for Area 1 and Area 2 shall be provided as communal outdoor Amenity Area in the form of a roof top terrace or patio.
  - iv. A minimum Interior Amenity Area of 200 m<sup>2</sup> shall be provided in both Areas 1 and 2.
  - v. The provision of a mid-block north-south Walkway (pedestrian corridor) connecting to 80 Avenue and 81 Avenue, generally as shown in Appendices 3, 5 and 7. The mid-block connection shall be open to the public 24 hours per day and have a minimum width of 10.0 m.
- k. A public parkade entry structure shall be constructed within the mid-block north-south pedestrian corridor in general accordance with Appendices 3 and 5. The at-grade structure shall provide 24 hour public access to non-accessory (public) underground parking and be of a non-barrier/handicap design. The exterior of the structures shall be mainly comprise of fenestration that is transparent, non-reflective and non-obscured. The structure shall be located to provide clear unobstructed pedestrian visibility and accessibility to the satisfaction of the Development Officer.
- l. Parking, Access, Loading and Waste Collection:
  - i. Vehicular access to a Site shall be from the abutting Lanes.
  - ii. All vehicular parking shall be located underground.
  - iii. Loading, storage and waste collection areas shall be located within the building. The waste collection areas shall be designed to the satisfaction of the Development Officer in consultation with Transportation Planning and Engineering and City Operations.
  - iv. Notwithstanding Schedule 3, Section 54.4 of the Zoning Bylaw, the minimum required number of off-street vehicular loading spaces shall be 1 per Area, for a total of two (2) for the overall development.

- v. Notwithstanding Section 54 of the Zoning Bylaw, Loading Spaces shall be a minimum of 3.0m in width and 9.0m in depth.
- vi. Parking Garages developed below Grade shall be permitted to be built to the Lot line.
- vii. Any driveway ramps to the below Grade Parking Garage shall be at Grade at the Lot Line and must not exceed a slope of 6% for a distance of 4.5m inside the Lot Line to the satisfaction of the Development Officer.
- viii. Any below Grade Parking Garage access card device(s) must be located on Site, a minimum 3.0 m inside the Lot Line.
- ix. Retaining walls bordering the below Grade Parking Garage shall not exceed a Height of 0.3 m at the Lot Line nor 1.0 m within 1.0 m of the Lot Line and no portion of the wall may encroach onto road right-of-way. If the applicant/owner wish to vary this, a sight line study for safety for vehicles and pedestrians must be prepared to the satisfaction of the Development Officer.
- x. Notwithstanding Schedule 1, Section 54.2 of the Zoning Bylaw, Residential and Residential-Related Uses Accessory Vehicular Parking requirements shall be as follows:
  - a. The minimum number of off-street parking spaces shall be 1.0 space per Dwelling, Sleeping Unit or Live Work Unit;
  - b. The minimum number of visitor parking spaces per Dwelling, Sleeping Unit or Live Work Unit shall be 1 for every 25 in Area 1 and 2; and
  - c. Non-residential and Non-Residential-Related Uses, no vehicular parking spaces shall be required.
- xi. A total of 150 Non-Accessory Parking spaces for public use will be provided in Area 1.
- xii. Notwithstanding Schedule 2, Section 54.3, Bicycle Parking for Residential Uses shall be provided in an amount equal to at least 50% of the number of Dwellings, Sleeping Units and Live Work Units and shall be provided in a secure indoor location within the podium within Area 1 as generally shown in Appendix 5.
- xiii. In addition to Subsection (xii), a minimum of 10 public Bicycle Parking spaces for visitors shall be provided for each of Areas 1 and 2 in an easy accessible location(s) and available for public use.
- xiv. A drop-off zone shall be provided next to the lane in conjunction with the mid-block pedestrian corridor generally show in Appendix 3.

m. Landscaping

- i. Notwithstanding Section 55 of the Zoning Bylaw, Landscaping shall comply with the following:
  - a. Landscaping within the Site shall consist of hard landscaping that provides texture and visual interest throughout the year to enhance the appearance of the development and create comfortable, attractive and sustainable environments;
  - b. The mid-block north-south Walkway (pedestrian corridor) as shown on Appendix 3 , shall be hardsurfaced and provide high quality amenities for people of all ages and during all seasons to the satisfaction of the Development Officer. These area(s) shall include, but are not limited to, public art, hard landscaping, seating areas and/or bicycle facilities. The mid-block Walkway shall contain exterior lighting that enhances the pedestrian experience. The hardsurfacing shall be textured, patterned and continuous.
  - c. Building Setbacks at Grade in front of Commercial Uses and Residential entries shall have hard landscaping (hard surface paving) and integrated with the pedestrian

oriented public realm to create Public Amenity Space, in general conformance with Appendix 3.

- d. The Landscape Plan shall show the following details:
  - (i) existing and proposed utilities within the road right-of-way;
  - (ii) off-Site improvements including enhancements to Lanes and the public realm; and
  - (iii) on-Site and off-Site pavement materials, including colour and pattern, exterior lighting, street furniture elements, pedestrian seating, sizes and species of existing and new plantings.
- e. The owner/applicant shall provide a Guaranteed Landscape Security in accordance with Section 55.8 of the Zoning Bylaw. The release of the Security is subject to an inspection by the Development Officer in accordance to Section 55.9 of the Zoning Bylaw.

n. Signs

- i. Signs shall comply with the General Provisions of Section 59 and Schedule 59H of the Zoning Bylaw.
- ii. A Comprehensive Sign Design Plan and Schedule, in accordance with Section 59.3 of the Zoning Bylaw, shall be prepared for the development and submitted with the new building construction Development Permit Application to the satisfaction of the Development Officer.
- iii. The applicant shall demonstrate visual harmony and the compatibility of the proposed signage with the architectural character and finish of the development and with the design, location and appearance of other signs on the development to the satisfaction of the Development Officer.
- iv. The existing Freestanding "South Scona Parking" Sign shall be integrated within the site.
- v. Notwithstanding Section 59 and Schedule B of the Zoning Bylaw, Signs shall be in accordance with the following:
  - (a) Fascia or Projecting On-premise signs shall not extend above the podium;
  - (b) Temporary On-premises shall not include trailer mounted or signs with changeable copy;
  - (c) a Sign may be backlit provided the lettering is translucent, so that only the lettering is backlit with the remainder being opaque;
  - (d) The outward projection of a Projecting On-premises Signs from the building wall shall be a maximum of 2.5m;
  - (e) Projecting On-premises Signs shall have a minimum vertical clearance of 2.4 m; and
  - (f) The maximum Area of a Projecting On-premises Signs is 7.5 m.

**6. General Urban Design and Architectural Control Regulations**

- a. All buildings greater than 30m in Height shall be in the form of a "Podium" plus Tower composition that includes a "Mid Tower" and a "Tower Top" that are designed to allow for creative architectural expression, reduction of building mass, and augment views, light and privacy.

- b. Building massing shall be minimized through additional means such as building orientation, roof treatment and the choice of exterior materials and colours.
- c. The Height of the Podium/Streetwall, including the parapet, shall be a minimum of 6.0 m.
- d. The Tower design details, including exterior cladding materials, colour and architectural expression shall be complimentary, but distinct from the Podium architecture.
- e. All mechanical and electrical equipment shall be screened in a manner compatible with the architectural character of the building, or concealed by incorporating it within the building.
- f. Ground Storey Non-Residential Uses shall be designed with active frontages and be limited to a frontage width per Use of 10 m. All ground level Non- Residential Uses shall have separate external entrances that shall be no greater than 0.3 m above the abutting public sidewalk and shall be universally accessible and oriented to face the public roadway or a Lane.
- g. Building Façade, Materials and Exterior Finishing
  - i. Building Façades shall be designed with detail and articulation to create attractive streetscapes and interfaces. Building Façades shall be articulated through means which may include the use of recesses, entrances, windows, projections, change in building materials, colours, and/or physical breaks in building mass.
  - ii. The Podium Facades that face onto: 80 Avenue; 81 Avenue; 105 Street; the most northerly and southerly 4.5 m mid-block north-south Walkway (pedestrian corridor); and the most westerly 4.5 m of the east-west rear lane shall develop a active commercial frontages in general accordance with Appendices 5 and 7. The facades shall comply with the following:
    - (a) Consistent and harmonious exterior finishing materials that are durable of a high quality and appropriate for the development within the urban context;
    - (b) The Podium shall emphasis the use of traditional materials such as brick, pressed metal and /or stone, however brick shall be predominant cladding material (more than 50% of the exterior cladding excluding windows and entrances);
    - (c) Blank walls or non-transparent surfaces shall not exceed 4.5 m in length;
    - (d) A minimum of 65% of the linear frontage of the podium façade shall be consist of fenestration. Linear frontage shall be measured as the horizontal plane at 1.5m above Grade.
    - (e) Fenestration shall be comprised of transparent, non-reflective, non-obscured glazing;
    - (f) Window placement shall allow viewing into the building to provide a positive pedestrian oriented shopping street; and
    - (g) The overall architectural composition, including distinct vertical and horizontal bands, design details and features, shall

generally reflect the urban fabric and character of the Old Strathcona heritage area and shall be in general conformance with Appendix 11. Store front breaks into modules of a maximum width of 11 m or less.

- iii. Notwithstanding Subsection (6)(g)(ii), the Podium Façade that faces onto the mid-block pedestrian corridor shall contain a minimum linear frontage of 50% of transparent , non-reflective, non-obscured glazing. Linear frontage that shall be measured as the horizontal plane 1.5m above Grade.
- iv. The Tower shall be finished with high quality and durable materials such as metal, acrylic stucco and glass. The use of vinyl and masonry stucco is prohibited. Tower exterior architectural expression shall be complimentary to the Podium. The exterior architectural expression of the Tower may utilize alternate façade forms, materials and finishing other than the Podium.

h. Lighting

- i. Decorative and security lighting shall be designed and finished in a manner consistent with the architectural theme of the development and will be provided to ensure a well-lit environment for pedestrians in accordance with Section 58 of the Zoning Bylaw, and to accentuate architectural elements, public art and provide security in public accessible areas to the satisfaction of the Development Officer.
- ii. Exterior lighting associated with the development shall be designed, located or screened so as to reduce impacts on adjacent properties, in accordance with Section 51 of the Zoning Bylaw.

**7. Areas 1 + 2: Urban Design and Built Form Regulations**

- a. The three towers will have a minimum Tower separation/ spacing of 25.0m and in general conformance with Appendix 4. The Development Officer may reduce the Tower separation/spacing in consideration of the following: The privacy, wind impact, sunshadow and other microclimatic impacts within or on adjacent residential development; and the recommendations and mitigative measures specified in any other technical studies.
- b. The Towers shall have the following minimum Stepback from the Podium Façade/Street Wall:

**AREA 1**

Front (north, 81 Avenue)	3.0m
Front (west, 105 Street)	3.0m

**Area 2**

Front (south, 80 Avenue)	3.0m
Front (west, 105 Street)	3.0m
Side (east)	8.5m

- c. The maximum Floor Plate for the Tower shall be as follows:

Tower A, Area 1	800m <sup>2</sup>
Tower B, Area 2	575m <sup>2</sup>
Tower C, Area 2	800m <sup>2</sup>

- d. The Tower Top shall be the portions of the building above 53.0m in Height for Area 1.
- e. The Tower Top shall be the portions of the building above 59.0m in Height for Area 2.
- f. The maximum Floor Plate for the Tower Top shall be 725 m<sup>2</sup>.
- g. Notwithstanding any other regulations of this Provision, the Tower Top shall have a minimum of 3.0 m Stepback from the north Tower Façade on 81 Avenue in Area 1.
- h. Notwithstanding any other regulations of this Provision, the Tower Top shall have a minimum of 3.0m Stepback from the south Podium Façade on 80 Avenue in Area 2.
- i. The Tower Top, including rooftop mechanical shall contribute to the uniqueness of the building, architectural interest and the skyline through the architectural treatment and sculpting of the upper portion of the building.
- j. The Facades shall incorporate different setbacks, building projections and recessions, building material finishes, textures and/or colors to divide the Façade into smaller visual forms vertically and horizontally to minimize the visual impact.

## **8. Other Regulations**

- a. Prior to the issuance of a Development Permit, a Wind Impact Statement shall be submitted for any buildings with a Height greater than 21 m in accordance to Section 14 of the Zoning Bylaw and shall be to the satisfaction of the Development Officer. Prior to the issuance of a Building Permit for any buildings greater than 21 m, a Wind Impact Study shall be prepared by a qualified, registered Professional Engineer in accordance with Section 14 of the Zoning Bylaw and shall be to the satisfaction of the Development Officer. The Wind Impact Study shall be based on a computer model simulation analysis, prepared to professional standards. The Wind Impact Study shall include any mitigation measures that ensure the space is fit for the intended Uses to the satisfaction of the Development Officer. The Sun Shadow Study shall demonstrate that there is no shadow impact on the public sidewalk in accordance to Section (4)(f) of this provision.
- b. The development shall incorporate design features to minimize adverse microclimatic effects such as wind tunneling, snow drifting, rain sheeting, shadowing, and loss of sunlight, both on and off-site, consistent with



recommendations of appropriate studies in accordance with Section 14 of the Zoning Bylaw and to the satisfaction of the Development Officer.

- c. A Crime Prevention through Environmental Design (CPTED) Assessment shall be provided to the satisfaction of the Development Officer to ensure the development provides a safe lit urban environment in accordance with Section 58 of the Zoning Bylaw.
- d. Prior to the issuance of a Development Permit, except for Development Permits for Area 1 or Development Permits for demolition, excavation, shoring or signage in any Area, pursuant to Sections 11.2 and 14.9 of the Zoning Bylaw, additional Environmental Site Assessment work, an Environmental Risk Management Plan and Remedial Action Plan, as required by the Development Officer, shall be submitted and reviewed to the satisfaction of the Development Officer. The Development Officer shall also impose any conditions necessary, prior to the release of drawings for Building Permit review, to ensure that the Site is suitable for the full range of uses contemplated in the Development Permit application.
- e. Notwithstanding the other Development Regulations and Appendices of this Provision, in the event that the owner/developer does not obtain a Development Permit and commence construction of the principal buildings in both Areas 1 and 2 under valid Development Permits within 5 years of the passage of the Bylaw adopting this Provision, development within Areas 1 and 2 shall be in accordance with this Provision.

## **9. Public Improvements and Amenity Contributions**

- a. A minimum total of 10 Dwellings in each Area shall be developed as Family Oriented Dwellings (3 bedroom units) within Areas 1 and 2, which notwithstanding Section 6(33) of the Zoning Bylaw, shall meet the following criteria:
  - (i) The Dwelling has three bedrooms, and the minimum number of three bedroom units/; and
  - (ii) The Dwelling has direct access to an outdoor Amenity Area, in the form of a balcony or patio.
- b. As a condition of the Development Permit, the owner shall enter into an Agreement with the City of Edmonton for off-Site improvements required to enhance the development and surrounding streetscape, including the Tree Landscaped Boulevard. The owner shall provide detailed engineering/landscaping drawings with detailed costing to the satisfaction of the Development Officer, in consultation with City Operations and Integrated Infrastructure Services. The Agreement shall include an engineering drawing review and approval process. Improvements shall be constructed at the owner's cost and shall include the following:
  - (i) Construction of an enhanced pedestrian crossing at the north-west corner of Area 1 across 105 Street NW and 81 Avenue NW in order to provide an improved pedestrian connection. The exact location and improvement details shall be to the satisfaction of the Development

Officer in consultation with Transportation Planning & Engineering, City Operations and Integrated Infrastructure Services.

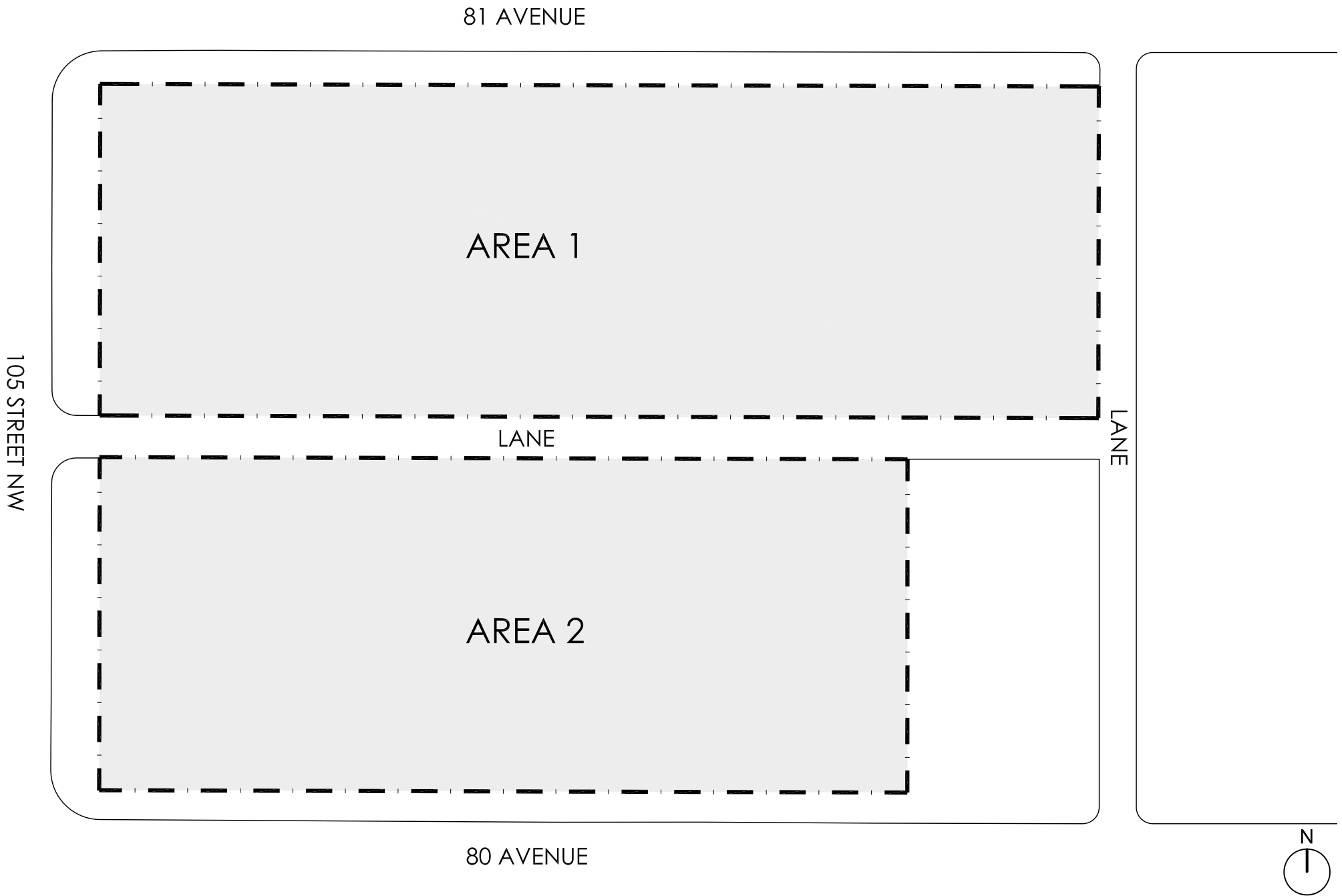
- (ii) Improvements to the west-east lane between Areas 1 and 2 and to north-south lane to the east of Areas 1+2. Improvements will include an enhanced pedestrian crossing within the east-west lane to provide a connection between Areas 1 and 2 for the north-south mid-block Walkway (public pedestrian corridor). These improvements shall be designed to the satisfaction of the Development Officer in consultation with Transportation Planning & Engineering, City Operations and Integrated Infrastructure Services. Improvements may include, but shall not be limited to provision of new curb, sidewalk, street lighting and street furniture.
- (iii) Improvements to the northern portion of 81 Avenue NW, the southern portion of 80 Avenue, NW, and western portion of 105 Street abutting Area 1 and 2. These improvements shall be designed to the satisfaction of the Development Officer in consultation with Transportation Planning & Engineering, City Operations and Integrated Infrastructure Services. Improvements may include, but shall not be limited to provision of new curb, sidewalk, street lighting, furniture, and boulevard trees.
- (iv) The fixed cost does not apply to the repair of any damage to abutting roadways and/or sidewalks resulting from construction of the development, to the satisfaction of Urban Transportation. The site shall be inspected by Urban Transportation prior to the start of construction and once again when construction is complete.

- o. Prior to the release of drawings for Building Permit, details shall be provided for the Public Art with a total combined value of \$7.00/m<sup>2</sup> of Floor Area (excluding the underground parking facility) shall be provided for Areas 1 and 2 to the satisfaction of the Development Officer.

The following shall apply to this contribution:

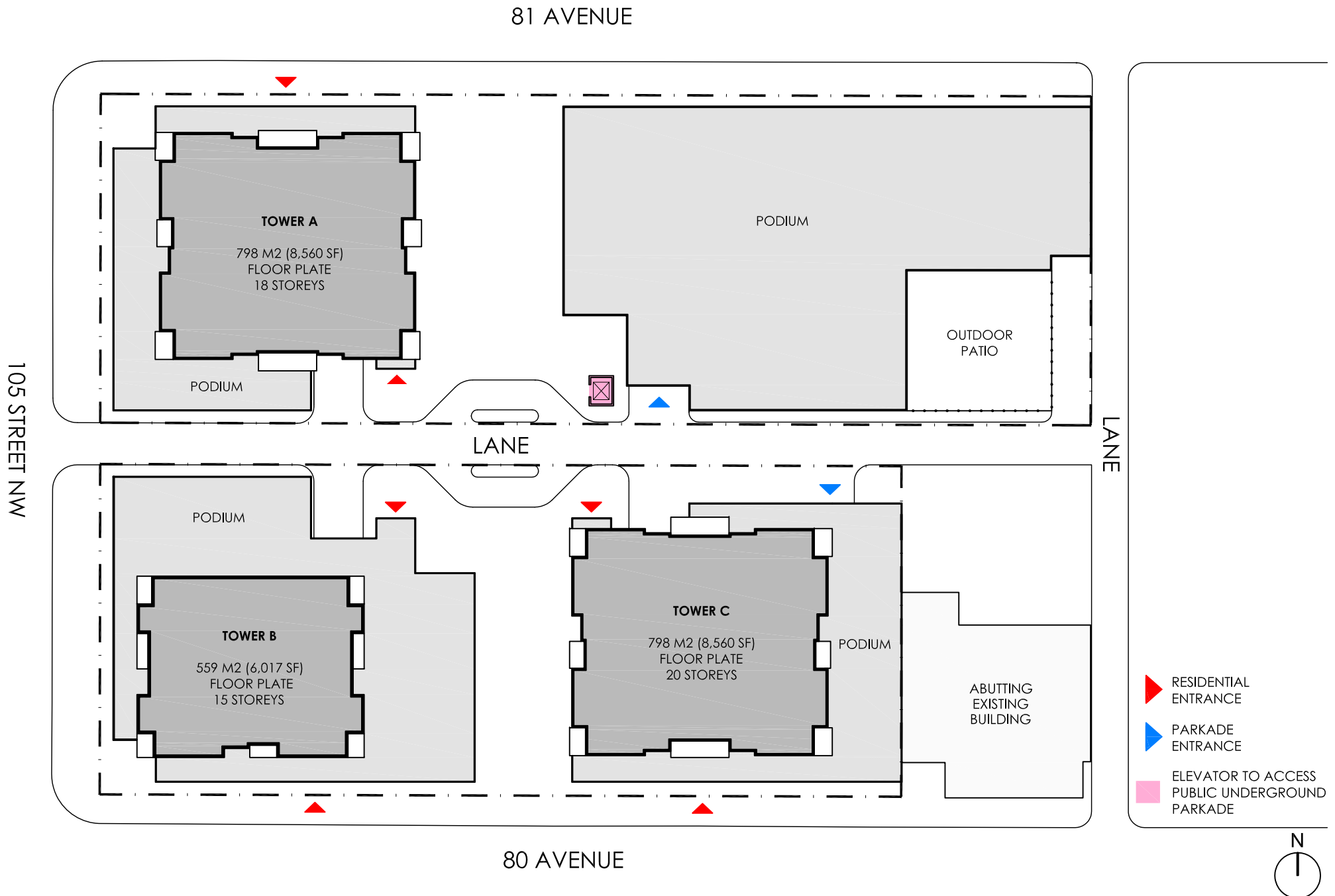
- (I) The owner shall provide a Public Art program details, including location, specifications, lighting and costs, to the satisfaction of the Development Officer.
- (II) Artworks may be created by an artist or be in the form of structural art and/or the application to the, but not limited to, the restoration and placement of the landmark "South Scona Parking" sign.
- (III) Artwork(s) shall be located on or within private property and shall be in locations that are publicly viewable to the satisfaction of the Development Officer.
- (IV) Artworks shall be commissioned or purchased by the owner(s) and all costs and procedures related to the procurement of the artworks, operation and future maintenance shall be the responsibility of the owner(s).
- (V) If development is phased by Area within this Provision, the Development Permit for the first principle building within Area 1 and the second principle building within Area 2 respectfully, shall trigger the requirement for this contribution.
- (VI) Upon completion of the building/development, the owner shall demonstrate, to the satisfaction of the Development Officer, that the approved Public Art has been installed or is placed in accordance with the approved Public Art program.

- p. The building/development shall be designed to meet the requirements of the Green Building Rating System LEED TM v4 to achieve a minimum LEED Silver standard, although the applicant/owner is not required to obtain LEED certification. Upon submission of a Development Permit application, the applicant must submit a detailed report, endorsed by registered Engineer/Architect, on how the LEED Silver points will be achieved. Upon completion of the building/development, the applicant/owner shall provide a report by a registered Engineer/Architect that the building/development meets the target LEED Silver points described in the aforementioned approved report.



# APPENDIX 2

## SITE PLAN



# APPENDIX 3

## PUBLIC REALM

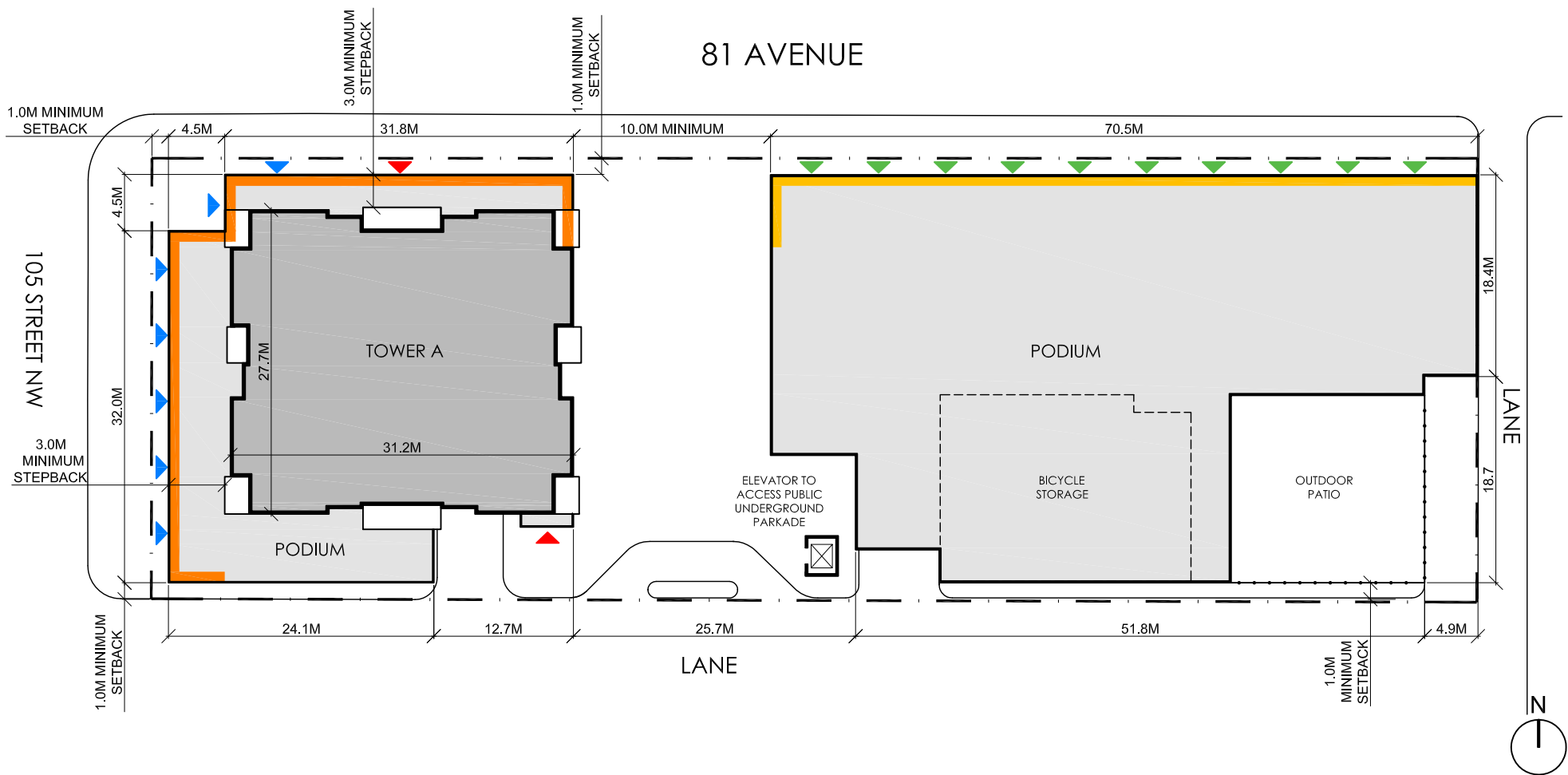


## 81 AVENUE



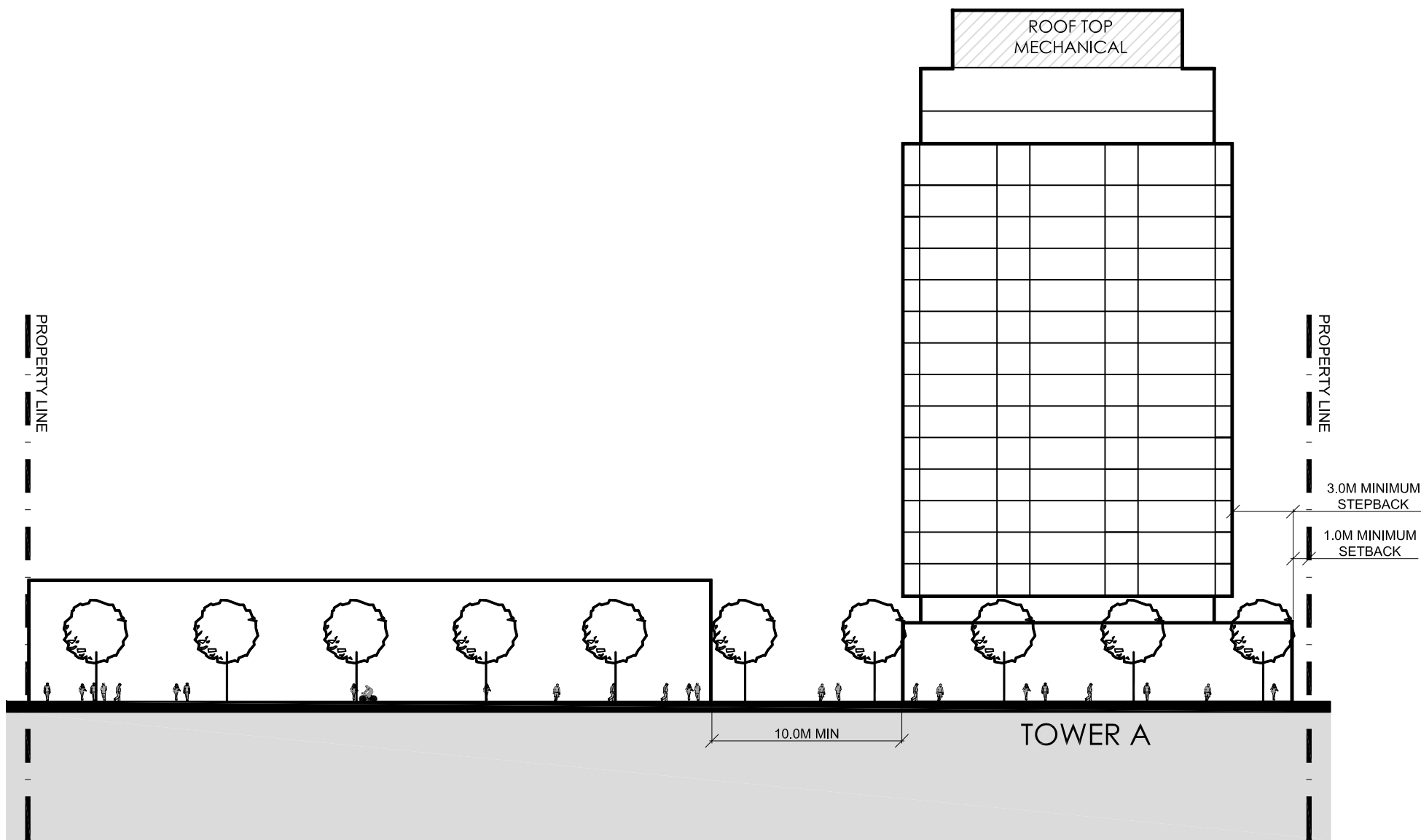
APPENDIX 5  
SITE PLAN (AREA 1)

- PROPERTY LINE
- ACTIVE COMMERCIAL FRONTAGE
- ACTIVE COMMERCIAL AND/OR WORK LIVE FRONTAGE
- RESIDENTIAL ENTRANCE
- COMMERCIAL RETAIL ENTRANCE
- COMMERCIAL RETAIL AND/OR WORK LIVE ENTRANCE





APPENDIX 6  
NORTH ELEVATION  
(AREA 1)



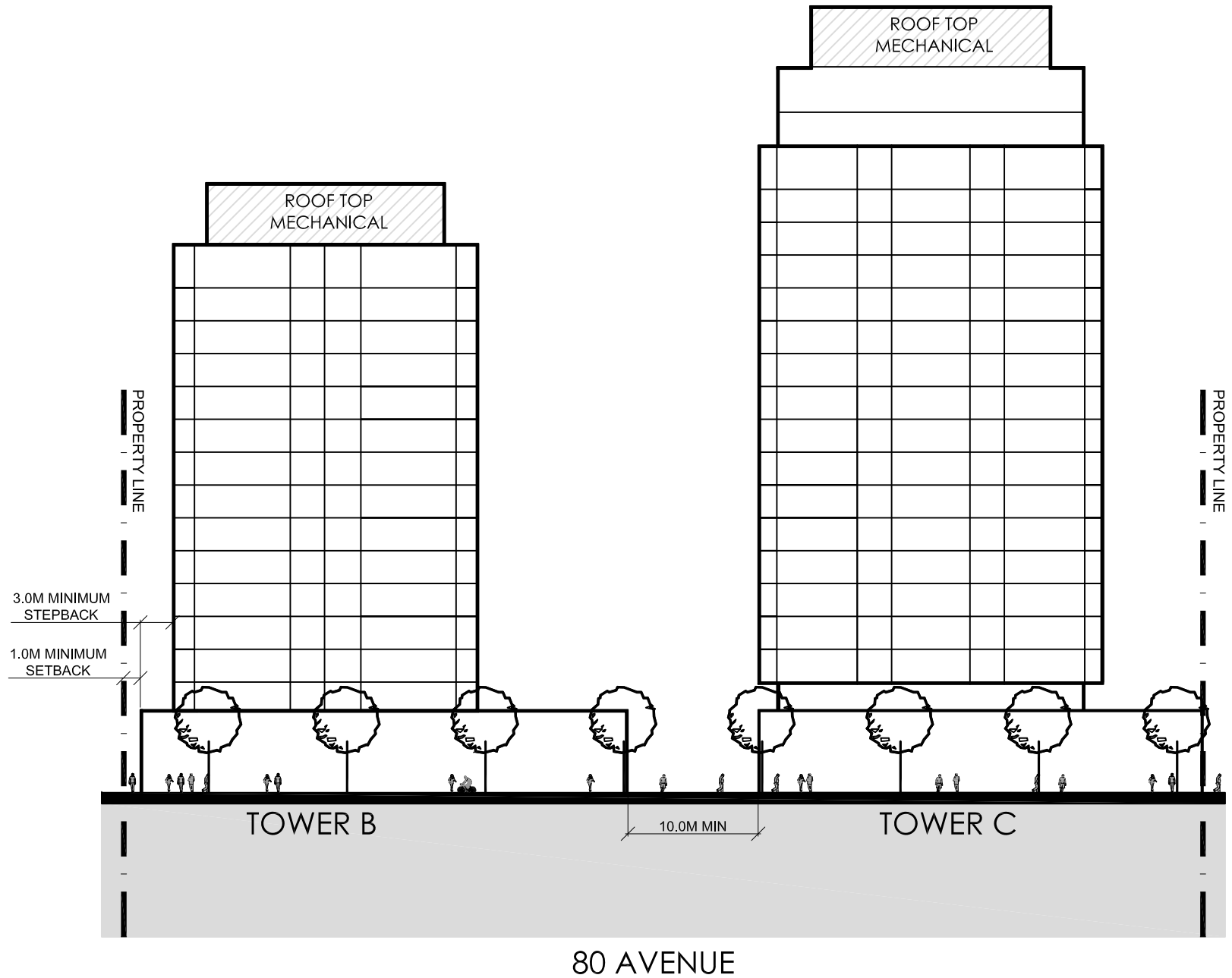
81 AVENUE

APPENDIX 7  
SITE PLAN (AREA 2)



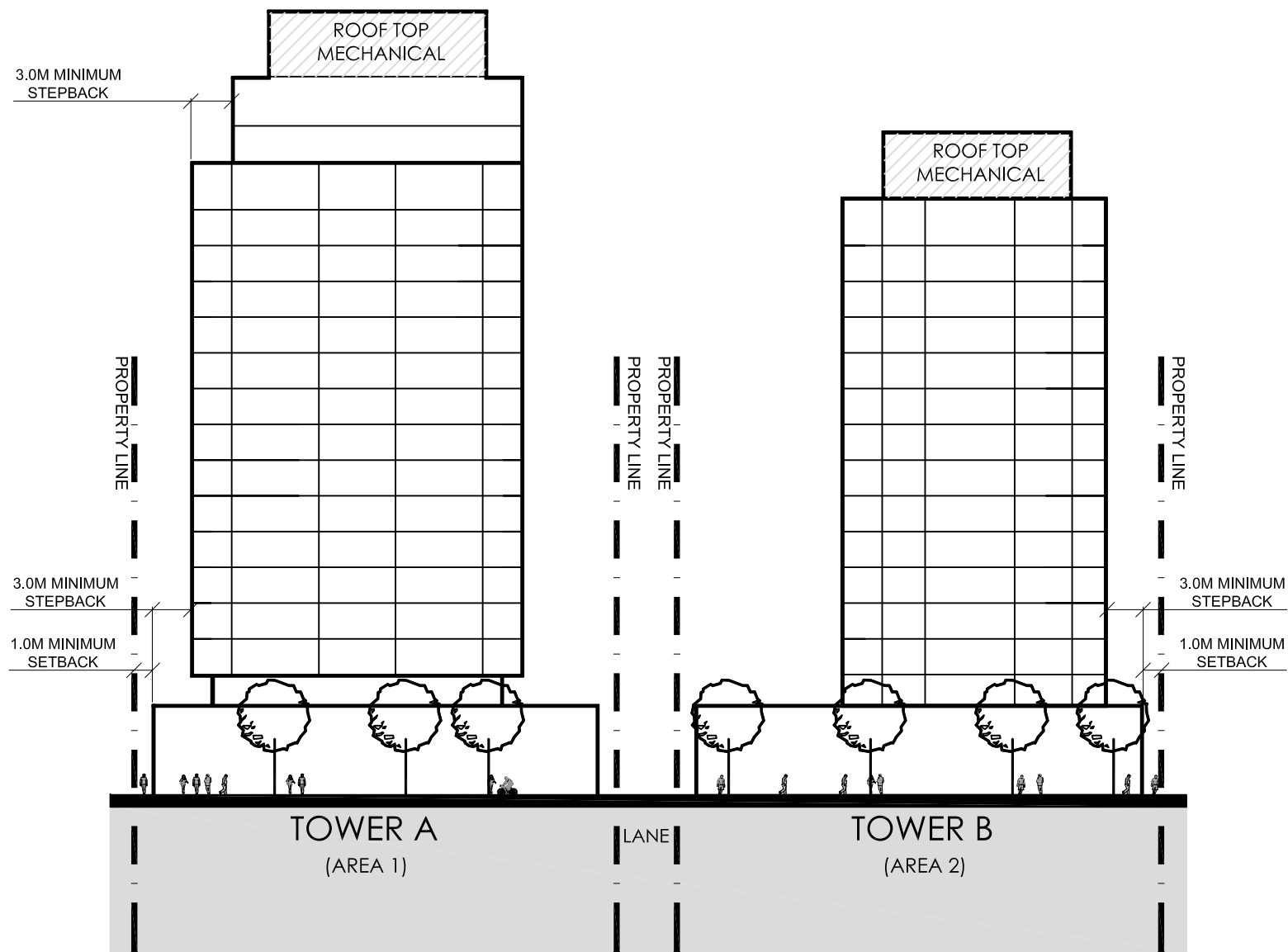
# APPENDIX 8

SOUTH ELEVATION  
(AREA 2)



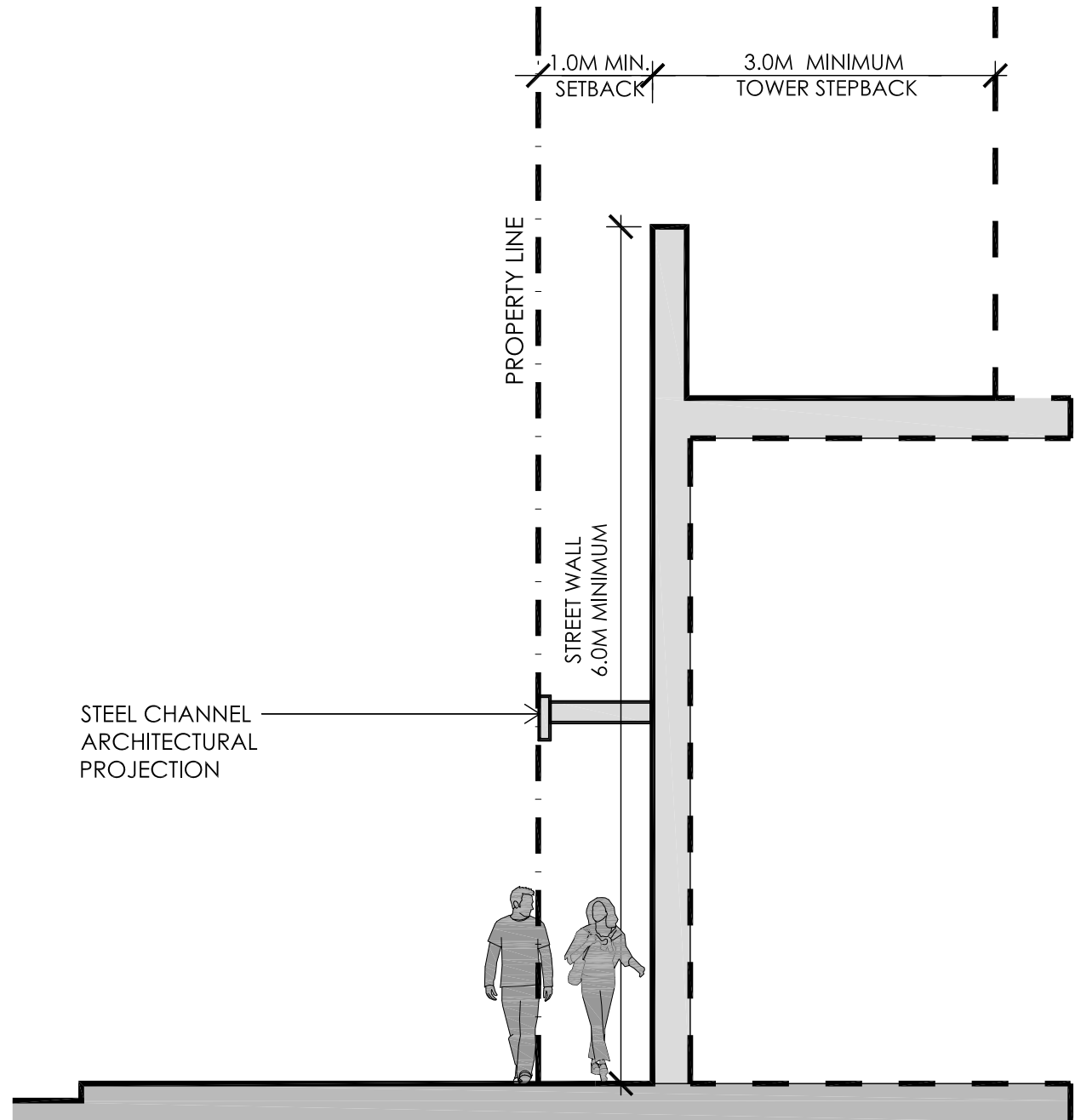
# APPENDIX 9

WEST ELEVATION  
(AREA 1 & AREA 2)



# APPENDIX 10

## SECTION



# APPENDIX 11

## PODIUM ELEVATION AREAS 1 & 2

- ① RED-BROWN BRICK
- ② PRE-CAST CONCRETE
- ③ STOREFRONT GLAZING
- ④ STEEL CHANNEL  
ARCHITECTURAL  
PROJECTION



# APPENDIX 12

## SHADOW STUDY

82 AVENUE



MARCH 21 - 9 AM



MARCH 21 - 12 PM



MARCH 21 - 15 PM



JUNE 21 - 9 AM



JUNE 21 - 12 PM



JUNE 21 - 15 PM



# APPENDIX 13

## SHADOW STUDY

82 AVENUE



SEPTEMBER 21 - 9 AM



SEPTEMBER 21 - 12 PM



SEPTEMBER 21 - 15 PM



DECEMBER 21 - 9 AM



DECEMBER 21 - 12 PM



DECEMBER 21 - 15 PM



# APPENDIX 14

## SHADOW STUDY

82 AVENUE



MARCH 21 - 9:34 AM



MARCH 21 - 15:34 PM



MARCH 21 - 9:34 AM TO 15:34 PM



JUNE 21 - 9:34 AM



JUNE 21 - 15:34 PM



JUNE 21 - 9:34 AM TO 15:34 PM



# APPENDIX 15

## SHADOW STUDY

82 AVENUE



SEPTEMBER 21 - 9:34 AM



SEPTEMBER 21 - 15:34 PM



SEPTEMBER 21 - 9:34 TO 15:34 PM



DECEMBER 21 - 11 AM



DECEMBER 21 - 14 PM



DECEMBER 21 - 11 AM TO 14 PM