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January 30, 2023

Via: Email

Pat Scanga, P. Eng. FEC
Manager (Acting)
City of Toronto, Development Engineering
55 John Street, 16th Floor
Toronto, ON M5V 3C6

Dan Polak, P. Eng.
Engineer
City of Toronto, Development Engineering
55 John Street, 16th Floor
Toronto, ON M5V 3C6

Dear Pat and Dan:

Re: Transportation Response to Comments (Revised)
145 St. George Street, Toronto, ON
Project No.: 300052949.0000

R.J. Burnside & Associates Limited (Burnside) completed a Transportation Study (TIS) dated May 2021 for the proposed residential development at 145 St. George Street located in the City of Toronto. Since the completion of the TIS, the site plan underwent some changes, as summarized in Table 1.

Table 1: Summary of Site Plan Changes

Item	Previous Site Plan	Updated Site Plan
Units	341	398
Vehicle Parking Supply	Resident Spaces: 90 Visitor Spaces: 4 Total Spaces: 94	Resident Spaces: None Visitor Spaces: 5 Total Spaces: 5
Accessible Spaces	4	1
Carshare Spaces	None	2
Bicycle Parking Supply	Resident Spaces: 310 Visitor Spaces: 35	Resident Spaces: 398 Visitor Spaces: 80 1 Bike Share Station
Loading Spaces	1 Type G	1 Type G
Retail Use	None	131 m^2

In addition to the above, two Pick-Up/Drop-Off (PUDO) spaces will be provided along the frontage of the site on Prince Arthur Avenue.

The latest site plan is provided in Attachment 1. The updated maneuvering and circulation analysis is provided in Attachment 2. An update to the traffic review in the TIS and response to the City's comments are as follows.

1.0 Traffic Analysis Update

Compared to the previous submission, the new site plan proposes 57 additional units, a retail area, and a removal of the resident parking supply. A trip generation comparison was conducted to assess the impact of these site plan changes. Trip generation rates used for the apartment and retail area in the updated site plan were based on data for Land Use Code (LUC) 222 – Multifamily Housing (High-Rise) and LUC 820 – Shopping Center from the Institute of Transportation Engineers (ITE) Trip Generation Manual. The trip generation comparison is provided in Table 2.

Table 2: Total Trip Generation Comparison

Site Plan	Land Use	Size	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Previous	Multifamily Housing (High-Rise)	341 units	27	86	113	79	51	130
Updated	Multifamily Housing (High-Rise)	398 units	30	94	124	88	56	144
	Retail	131 m^2	1	0	1	2	3	5
		Total	31	94	125	90	59	149
		Difference	**+4**	**+8**	**+12**	**+11**	**+8**	**+19**

With the additional residential units and retail use, there is anticipated to be an additional 12 and 19 trips during the AM and PM peak hour, respectively. The TIS forecasted 113 and 130 site generated trips during the AM and PM peak hour, respectively, 74% of which were non-vehicle trips. The new site plan does not provide any resident parking spaces. The majority of vehicular site trips are not anticipated to be attributed to residents. The small proportion of vehicle trips accessing the site is expected to be generated from visitors, deliveries, and pick-up/drop-off operations. Therefore, the site will generate significantly less vehicle trips compared to the previous submission and operations will be better than reported in the TIS.

The mode split breakdown was initially based on data from the Transportation Tomorrow Survey (TTS). These splits were updated by proportionally shifting the vehicle trips to other modes to account for the removal of resident parking spaces. The updated mode split breakdown is summarized in Table 3.

Table 3: Updated Mode Split Breakdown

Mode	Split	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Auto	2%	1	2	**3**	2	1	**3**
Transit	39%	12	37	**49**	35	23	**58**
Walk	50%	15	47	**62**	45	30	**75**
Cycle	9%	3	9	**12**	9	6	**15**
Total	**100%**	**31**	**94**	**125**	**90**	**59**	**149**

Note: Updated mode splits based on 2016 Transportation Tomorrow Survey (TTS) data for trips made by residents within the local ward (TTS Ward 20).

The TIS' traffic operations analysis forecasted all intersections to be operating with a level-of-service (LOS) D or better under future conditions. This analysis was conducted based on a vehicle trip forecast of 29 and 34 site trips during the AM and PM peak hour, respectively. The new site is anticipated to generate minimal vehicle trips. Therefore, traffic operations are expected to be better than originally reported and will not change the conclusions of the TIS.

2.0 Response to City Comments

Burnside has reviewed the transportation-related comments from the Engineering & Construction Services Memorandum, dated August 12, 2021. These comments have been repeated below in *italics* with our responses following each set of comments.

2.1 Engineering & Construction Services Comments (pages 2-5, 8-9, 11 and 16)

PART I – ZONING BY-LAW AMENDMENT APPLICATION

A. REVISIONS AND ADDITIONAL INFORMATION REQUIRED FOR PLANS, STUDIES, AND DRAWINGS

1. Transportation Services

1.1. Provide new 2.1 metre wide pedestrian clearway (via concrete sidewalk) along St. George Street, as further discussed in this memorandum.

A 2.1 metre wide pedestrian clearway has been provided along St. George Street. Please see updated site plan in Attachment 1.

1.2. Given the current design of the underground garage, revise the visitor supply and configuration to a minimum of eight (8) spaces on the P1 level with appropriate pedestrian access to the elevators.

An underground garage is no longer being proposed. Five visitor spaces have been provided in a surface parking lot, as shown in Attachment 1. The current amended Zoning By-law 569-2013 (ZBL) requires a minimum of 2 plus 0.01 visitor space per unit, which results in 5 visitor spaces. Therefore, the proposed visitor parking supply meets the minimum requirements.

1.3. Review the opportunity to provide 1-3 publically accessible car-share parking spaces on-site.

Two car-share parking spaces are proposed on-site, as shown in Attachment 1.

B. PRELIMINARY ZONING BY-LAW AMENDMENT CONDITIONS

1. Provide parking for the development in accordance with the following rates:

a) Residential: 0.25 spaces/unit

b) Visitors: 0.02 spaces/unit

c) Car-Share: To be determined

The ZBL has no minimum requirements for resident spaces. A minimum of 2 plus 0.01 visitor spaces per unit are required, resulting in 5 minimum visitor spaces. There are 5 visitor spaces proposed on the site, which meets the minimum requirement. Two of the visitor spaces will be allocated for car-share.

2. In addition to Regulations 10.5.80 in Zoning By-law No. 569-2013, car-share parking spaces are permitted.

Acknowledged. Two car-share parking spaces are provided as shown in Attachment 1.

4. Provide a minimum of one (1) Type G loading space for the project.

One Type G loading space is proposed. Please see Attachment 1.

PART II – SITE PLAN CONTROL APPLICATION

C. REVISIONS TO PLANS AND ADDITIONAL INFORMATION REQUIRED PRIOR TO SITE PLAN APPROVAL AND THE ISSUANCE OF ANY BUILDING PERMITS (INCLUDING BELOW GRADE PERMITS)

1. Transportation Services

1.2. Revise the plans to illustrate convex mirrors at the top and bottom of the access ramp to the underground garage ramp, the internal ramps and at all right-angled turns within the underground parking garage and position them in such a manner as to give all motorists clear views of oncoming traffic.

This no longer applies as there is no underground parking garage proposed. However, we are recommending a convex mirror across from the loading space to minimize potential conflicts between cyclists exiting the building from the ramp and visitor parking maneuvers.

1.3. Revise and label the proposed driveway access to be a maximum width of 6.0 metres in the public right-of-way with a west curb radius of a maximum of 5.0 metres.

The proposed driveway access has been updated with a minimum 6.0 metre width and 5.0 metre radius. Please see updated site plan in Attachment 1.

1.4. Provide tactile walking surface indicator plates on the northeast corner of the St. George Street and Prince Arthur Avenue intersection.

Tactile walking surface indicator plates are proposed on the northeast corner of the St. George Street and Prince Arthur Avenue intersection. Please see Attachment 3.

1.5. Provide a curb extension along the north side of Prince Arthur Avenue, extending from the northeast corner of St. George Street to the start of the on-street parking, to achieve the following:

a) Tighten the curb radius at the northeast corner of St. George Street and Prince Arthur Avenue, in accordance with the City's Curb Radii Design Guidelines.

b) Provide tactile walking surface indicator plates at the northeast corner of the intersection.

c) Re-locate pedestrian crossing lines on the north and east legs of the existing all-way stop controlled intersection as needed.

1.6. Provide a functional plan illustrating the above-noted civil work, along with the pavement marking and signage additions and/or modifications required at the St. George Street and Prince Arthur Avenue intersection.

The above have been addressed in the latest site plan and the signage and pavement marking plan provided in Attachment 3. Note that there will be minor changes to the pedestrian crossing lines at the St. George Street / Prince Arthur Avenue intersection as a result of the tightening of the curb radius.

3. Solid Waste Management

3.1. c) That a trained on-site staff member will be available to manoeuvre bins for the collection driver and also act as a flagman when the truck is reversing. In the event the on-site staff is unavailable at the time the City collection vehicle arrives at the site, the collection vehicle will leave the site and not return until the next scheduled collection day.

Acknowledged.

3.1. d) A collection vehicle movement diagram that has a length of 12 metres and a width of 2.4 metres with a minimum inside/outside turning radii of 9.5 metres and 14 metres respectively, when entering, exiting, travelling throughout the site and entering/exiting the type G loading space. The diagram must also indicate the ability of the collection vehicle to enter and exit the site in a forward motion with no more than a three-point turn.

The collection vehicle is shown to enter and exit the site in a forward motion with no more than a three-point turn. The turning movements were modelled using a 10 m design vehicle to reflect the length of a front-end collection vehicle with the forks up. A rear-end collection vehicle is not anticipated to be required to enter this site. If required, it will be considered in the future SPA submission.

3.2. As the planned movement of the collection vehicle is adjacent to exits from the parking garage, revised drawings must indicate a warning system to caution motorists leaving the parking garage of heavy vehicles when loading operations are occurring. This warning system should include both lights and signs.

A parking garage is no longer proposed as part of the latest site plan.

D. PRELIMINARY NOTICE OF APPROVAL CONDITIONS

9. Other Conditions

9.1. c) Documentation and financial contributions in the form of certified cheques (overall amount to be determined) for the implementation of a Transportation Demand Management (TDM) plan. These provisions include, but are not limited to, the following items:

i. A supply of car-share spaces to be determined;

ii. One (1) car-share and/or bike-share membership per unit, offered to first-time tenants/purchasers;

iii. One (1) pre-loaded Presto pass ($25.00 value) offered to first-time tenants/purchasers; and

iv. A minimum of two (2) bike repair stations provided on-site.

The following measures are proposed to support Transportation Demand Management. However, it is important to note that the removal of resident parking spaces is the most effective measure in reducing single-occupant vehicle trips, and the following measures are proposed to support the shift to alternative travel modes.

- A $25 pre-loaded Presto pass offered with each unit.
- Bike Share membership offered with each unit.
- An information package will be provided to residents, which will include TTC and GO Transit maps and schedules, cycling and trail maps, and information on Smart Commute.
- User-friendly, premium quality bike parking facilities with a minimum of two repair stations and easy access to bike parking.
- Bikeshare station for e-bikes along Prince Arthur Avenue, as discussed with Toronto Parking Authority (TPA).
- Two car-share spaces.

Documentation of payment will be provided for the above items, where required.

E. PRELIMINARY SITE PLAN AGREEMENT CONDITIONS

3. Vehicular Loading and Parking Facilities and Access/Driveways

3.1. Provide and maintain off-street vehicular parking and loading facilities and access driveways in accordance with the approved plans and drawings, to the satisfaction of the Chief Engineer and Executive Director, Engineering and Construction Services.

Acknowledged.

3.2. Construct any Type G loading space and all driveways and passageways providing access thereto in accordance with the requirements of the Ontario Building Code, including allowance for City of Toronto bulk lift and rear bin loading with impact factors where they are to be built as supported structures.

Acknowledged. Please see Attachment 1. A rear-end collection vehicle is not anticipated to be required to enter this site. If required, it will be considered in the future SPA submission.

3.3. Provide and maintain a minimum of 20 percent of the parking spaces with EVSE infrastructure (18 spaces) and provide roughed-in conduits for the balance of the proposed parking spaces (76 spaces).

All vehicle parking spaces will be equipped with EVSE infrastructure.

3.4. Provide and maintain a physical separation between the resident and non-resident parking spaces by means of overhead doors or gate controls.

This no longer applies as there are no resident parking spaces and underground parking garage proposed.

3.5. Provide and maintain convex mirrors at the top and bottom of the access to the underground garage ramp and at all right-angled turns within the underground parking garage and position them in such a manner as to give all motorists clear views of oncoming traffic.

This no longer applies as there is no underground parking garage proposed.

3.6. Provide and maintain "No Parking" signs adjacent to the proposed loading spaces.

Acknowledged. Please see Attachment 3.

6. Facilities for the Storage of Garage and Other Waste Material

6.1. Construct and maintain all facilities necessary to permit bulk lift compacted City collection of solid waste, organic and recyclable materials in accordance with Chapter 844 of the City of Toronto Municipal Code, Waste Collection, Residential Properties.

Acknowledged. Please see Attachment 1.

G. BACKGROUND

TRANSPORTATION SERVICES

DRIVEWAY ACCESS AND SITE CIRCULATION

Access for the site is proposed via a driveway connection to Prince Arthur Avenue along the east side of the site in the same location as the existing site driveway. In principle this is acceptable to Transportation Services.

That said, we require the site driveway to be a maximum width of 6.0 metres in the public right-of-way with a west curb radius of a maximum of 5.0 metres. These dimensions must be revised and labelled on the site plans.

Acknowledged. Please see response to Comment #1.3 under Section C.

Should you require clarification of any of the above please contact either of the undersigned.

Yours truly,

R.J. Burnside & Associates Limited

Xinli Tu, E.I.T.
Transportation Planner
XT:lam

David Angelakis, C.E.T.
Senior Project Manager – Transportation

Enclosure(s)
Attachment 1: Updated Site Plan
Attachment 2: Updated Maneuvering and Circulation Analysis
Attachment 3: Signage and Pavement Marking Plan

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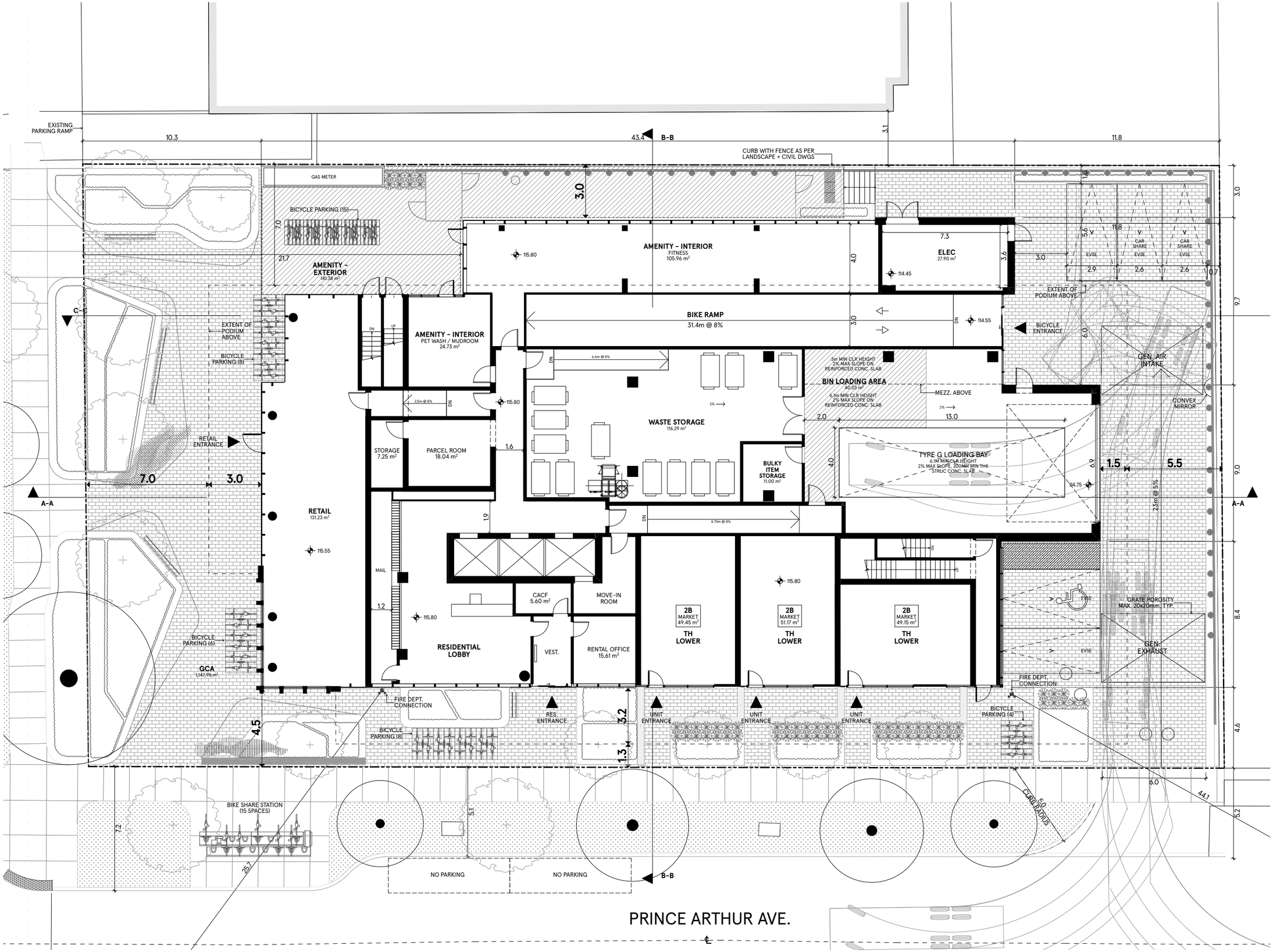
Attachment 1

Updated Site Plan



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2. These Contract Documents are the property of the Architect. The Architect bears no responsibility for the interpretation of these documents by the Contractor. Upon written application, the Architect will provide written/graphic clarification or supplementary information regarding the intent of the Contract Documents. The Architect will review Shop Drawings submitted by the Contractor for design conformance only.
3. Drawings are not to be scaled for construction. The Contractor is to verify all existing conditions and dimensions required to perform the work and report any discrepancies with the Contract Documents to the Architect before commencing any work.
4. Positions of exposed finished mechanical or electrical devices, fittings, and fixtures are indicated on architectural drawings. The locations shown on the architectural drawings govern over the Mechanical and Electrical drawings. Those items not clearly located will be located as directed by the Architect.
5. These drawings are not to be used for construction unless noted below as "Issuance: For Construction"
6. All work is to be carried out in conformance with the Code and Bylaws of the authorities having jurisdiction.
7. The Architect of these plans and specifications gives no warranty or representation to any party about the constructability of the building(s) represented by them. All contractors or subcontractors must satisfy themselves when bidding and at all times ensure that they can properly construct the work represented by these plans.
8. Geodetic Elevations provided in these drawings are measured in accordance with the Canadian Geographic Vertical Datum (CGVD2013).

No	Issued For	Date
01	ZBA / SPA #1	05 May 2021
02	ZBA / SPA #2	30 Jan 2023

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145 ST. GEORGE
Tenblock

145 St. George St.
Toronto . ON .

GROUND FLOOR PLAN

Scale: 1:100

Project No: 22103

30 January 2023

A-2.2

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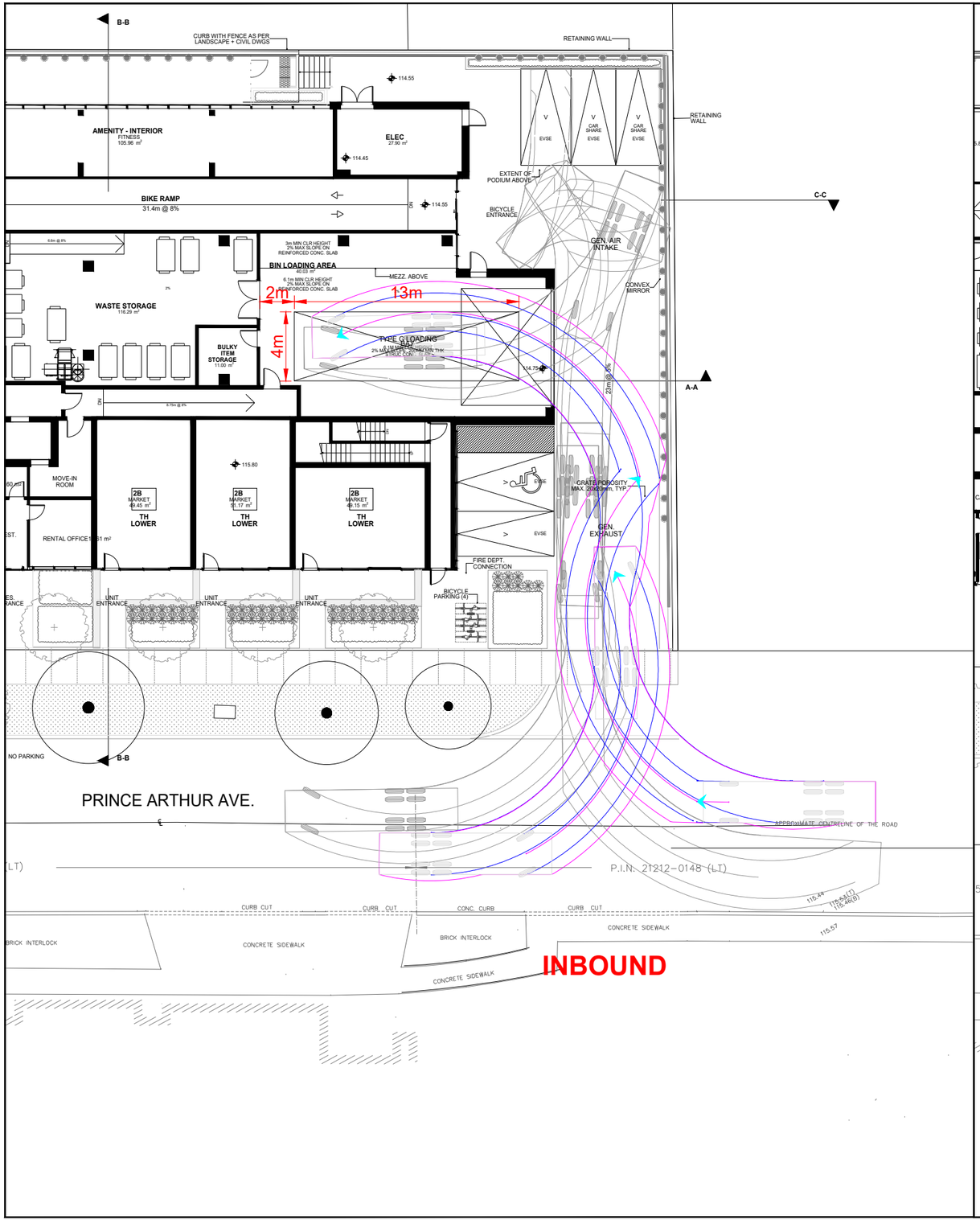
Attachment 2

Updated Maneuvering and Circulation Analysis


B-B
CURB WITH FENCE AS PER LANDSCAPE + CIVIL DWGS
RETAINING WALL
AMENITY - INTERIOR
FITNESS
105.96 m²
ELEC
27.90 m²
114.55
114.45
BIKE RAMP
31.4m @ 8%
EXTENT OF PODIUM ABOVE
BICYCLE ENTRANCE
GEN. AIR INTAKE
C-C
3m MIN CLR HEIGHT
2% MAX SLOPE ON
REINFORCED CONC. SLAB
BIN LOADING AREA
40.03 m²
6.1m MIN CLR HEIGHT
2% MAX SLOPE ON
REINFORCED CONC. SLAB
MEZZ. ABOVE
CONVEX MIRROR
2m
13m
4m
WASTE STORAGE
116.29 m²
BULKY ITEM STORAGE
11.00 m²
TYPE G LOADING BAY
2% MAX SLOPE IN ANY DIRECTION
SHRUB CUT
114.75
A-A
20m @ 6%
MOVE-IN ROOM
2B MARKET 49.45 m² TH LOWER
2B MARKET 51.17 m² TH LOWER
2B MARKET 49.15 m² TH LOWER
115.80
RENTAL OFFICE 51 m²
GRATE POSOSITY MAX. 20x20mm, TYP.
GEN. EXHAUST
FIRE DEPT. CONNECTION
BICYCLE PARKING (4)
RES. ENTRANCE
UNIT ENTRANCE
UNIT ENTRANCE
UNIT ENTRANCE
UNIT ENTRANCE
V EVSE
V CAR SHARE EVSE
V CAR SHARE EVSE
V CAR SHARE EVSE
NO PARKING
B-B
PRINCE ARTHUR AVE.
APPROXIMATE CENTRELINE OF THE ROAD
P.I.N. 21212-0148 (LT)
CURB CUT
CURB CUT
CONC. CURB
CURB CUT
BRICK INTERLOCK
CONCRETE SIDEWALK
CONCRETE SIDEWALK
BRICK INTERLOCK
CONCRETE SIDEWALK
115.44
115.57
INBOUND
OUTBOUND
N
5791
914
3353
P
mm
Width : 2134
Track : 1829
Lock to Lock Time : 6.0
Steering Angle : 31.6
10000
1480
5490
Toronto - FL Refuse Truck 10m
mm
Width : 2400
Track : 2438
Lock to Lock Time : 6.0
Steering Angle : 27.2
LEGEND
VEHICLE TIRE PATH
VEHICLE BODY PATH
145 ST GEORGE ST
TRUCK AND PASSENGER VEHICLE ACCESS ANALYSIS
R.J Burnside & Associates Limited
XT / DWA
JAN 30, 2023
N.T.S

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Attachment 3

Signage and Pavement Marking Plan

Remove existing parking pole and signs

Relocate existing stop sign

Relocate existing parking signs

PRIVATE PROPERTY VISITOR PARKING ONLY
UNAUTHORIZED VEHICLES WILL BE TAGGED AND / OR TOWED AWAY AT OWNER'S EXPENSE

PRIVATE PROPERTY VISITOR PARKING ONLY
UNAUTHORIZED VEHICLES WILL BE TAGGED AND / OR TOWED AWAY AT OWNER'S EXPENSE

BY PERMIT ONLY

PAY PARKING ENFORCED
MON - SAT 10:00 AM - 9:00 PM
SUN 1:00 PM - 9:00 PM
6021 Location ID

12:01AM - 10AM EXCEPT BY PERMIT

NO PARKING

NO PARKING

STOP

STOP

PRINCE ARTHUR AVE

LEGEND

- VEHICLE TIRE PATH
- VEHICLE BODY PATH

BURNSIDE

145 ST GEORGE ST

SIGNAGE AND PAVEMENT MARKING PLAN

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JAN 30, 2023 N.T.S