COMMITTEE OF ADJUSTMENT
City Hall, 5th floor, 71 Main Street West, Hamilton, ON L8P 4Y5
Telephone (905) 546-2424, ext. 4221
E-mail: cofa@hamilton.ca

NOTICE OF PUBLIC HEARING
Minor Variance

You are receiving this notice because you are either:

- Assessed owner of a property located within 60 metres of the subject property
- Applicant/agent on file, or
- Person likely to be interested in this application

APPLICATION NO.:	**A-24:272**	**SUBJECT PROPERTY:**	215-217 King Street West, Hamilton
ZONE:	D2, H17, H19, H20 (Downtown Prime Retail Streets) Zone	**ZONING BY-LAW:**	Hamilton Zoning By-law 05-200, as Amended

APPLICANTS: Owner: Reem Amer
Agent: API Development Consultant Inc. David Barnard, Natalia Garavito

The following variances are requested:

1. A minimum 3.0 metre step-back shall be provided at 16.65 metres instead of providing the minimum required 3.0 metre step-back from the base building façade height of 16.0 metres.

2. A minimum 3.0 metres step-back shall be provided at 22.45 metres from a side or rear lot line instead of providing the minimum required 3.0 metre step-back for any portion of a building exceeding 22.0 metres in height from a side or rear lot line.

3. A minimum of 48% of the area of the ground floor façade shall be comprised of clear glazed windows and doors instead of a minimum of 60% of the area of the ground floor façade required to be provided as clear glazed windows and doors.

4. A maximum of 48% of the façade of the second and third storeys shall be composed of windows instead of the maximum area of 40% of the façade of the second and third storeys permitted to be composed of windows.

5. A balcony (green roof) shall be permitted to encroach the entire width of the required 3.0 metres step-back at the 8th floor level instead of the maximum permitted balcony encroachment of 1.0 metres into a required side yard.

6. Required short-term bicycle parking spaces shall be permitted to be provided in a bicycle parking area on the first floor level of the proposed building which is not publicly accessible

instead of providing the required short-term bicycle parking spaces in a publicly accessible bicycle parking area at grade, which may include the first floor of a building or an exterior surface area.

7. One (1) accessible parking space shall be provided instead of providing a minimum of two (2) accessible parking spaces which are required to be provided for the proposed development.

8. The proposed development providing a maximum building height of 44.05 metres shall be permitted notwithstanding Holding Provisions “H17” and “H19” restricts development exceeding the maximum building height of 44.0 metres for such time that the Holding Provisions are in place.

9. The proposed development providing a maximum building height of 44.05 metres shall be permitted notwithstanding Holding Provision “H20” restricts development exceeding the maximum building height of 22.0 metres for such time that the Holding Provision is in place.

PURPOSE & EFFECT: To permit the construction of a 14-storey, mixed-use, multiple dwelling consisting of a 5-storey podium and a 9-storey tower, comprised of 77 dwelling units, 34.92 square metres of retail space and 18 parking spaces split across 3 levels of an underground parking garage.

Notes:

i. The variances are necessary to facilitate Site Plan application DA-24-061.

ii. The variances have been written in accordance with zoning compliance comments for DA-25-061 dated January 07, 2025, and not as requested in the minor variance application.

iii. It is unclear if a balcony (terrace) is proposed for any portion of the building in addition to the “green roof” abutting the side yard at the 8th floor level. A further variance(s) will be required should a balcony project greater than 1.0 metres into a required step-back above 16.65 metres.

This Notice must be posted by the owner of any land which **contains seven or more residential units so that it is visible to all residents.**

This application will be heard by the Committee as shown below:

DATE:	**Thursday, February 13, 2025**
TIME:	**2:20 p.m.**
PLACE:	**Via video link or call in (see attached sheet for details)**
	City Hall Council Chambers (71 Main St. W., Hamilton)
	To be streamed (viewing only) at www.hamilton.ca/committeeofadjustment

For more information on this matter, including access to drawings illustrating this request and other information submitted:

- Visit www.hamilton.ca/committeeofadjustment
- Visit Committee of Adjustment staff at 5th floor City Hall, 71 Main St. W., Hamilton

PUBLIC INPUT

Written: If you would like to submit written comments to the Committee of Adjustment you may do so via email or hardcopy. Please see attached page for complete instructions, written comments must be received no later than noon February 11, 2025

Orally: If you would like to speak to this item at the hearing you may do so via video link, calling in, or attending in person. Please see attached page for complete instructions, registration to participate virtually must be received no later than noon February 12, 2025

FURTHER NOTIFICATION

If you wish to be notified of future Public Hearings, if applicable, regarding A-24:272, you must submit a written request to cofa@hamilton.ca or by mailing the Committee of Adjustment, City of Hamilton, 71 Main Street West, 5th Floor, Hamilton, Ontario, L8P 4Y5**.**

If you wish to be provided a Notice of Decision, you must attend the Public Hearing and file a written request with the Secretary-Treasurer by emailing cofa@hamilton.ca or by mailing the Committee of Adjustment, City of Hamilton, 71 Main Street West, 5th Floor, Hamilton, Ontario, L8P 4Y5.

DATED: January 27, 2025

_____

Jamila Sheffield,
Secretary-Treasurer
Committee of Adjustment

Information respecting this application is being collected under the authority of the Planning Act, R.S.O., 1990, c. P. 13. All comments and opinions submitted to the City of Hamilton on this matter, including the name, address, and contact information of persons submitting comments and/or opinions, will become part of the public record and will be made available to the Applicant and the general public, and may include posting electronic versions.

COMMITTEE OF ADJUSTMENT

City Hall, 5th floor, 71 Main Street West, Hamilton, ON L8P 4Y5

Telephone (905) 546-2424, ext. 4221

E-mail: cofa@hamilton.ca

PARTICIPATION PROCEDURES

Written Submissions

Members of the public who would like to participate in a Committee of Adjustment meeting are able to provide comments in writing advance of the meeting. Comments can be submitted by emailing cofa@hamilton.ca or by mailing the Committee of Adjustment, City of Hamilton, 71 Main Street West, 5th Floor, Hamilton, Ontario, L8P 4Y5. **Comments must be received by noon on the date listed on the Notice of Public Hearing.**

Comments are available the Tuesday prior to the Hearing and are available on our website: **www.hamilton.ca/committeeofadjustment**

Oral Submissions

Members of the public are also able to provide oral comments regarding Committee of Adjustment Hearing items by participating Virtually through Webex via computer or phone or by attending the Hearing In-person. Participation Virtually requires pre-registration in advance. Please contact staff for instructions if you wish to make a presentation containing visual materials.

1. Virtual Oral Submissions

Interested members of the public, agents, and owners **must register by noon on the day listed on the Notice of Public Hearing to** participate Virtually.

To register to participate Virtually by Webex either via computer or phone, please contact Committee of Adjustment staff by email cofa@hamilton.ca. The following information is required to register: Committee of Adjustment file number, hearing date, name and mailing address of each person wishing to speak, if participation will be by phone or video, and if applicable the phone number they will be using to call in.

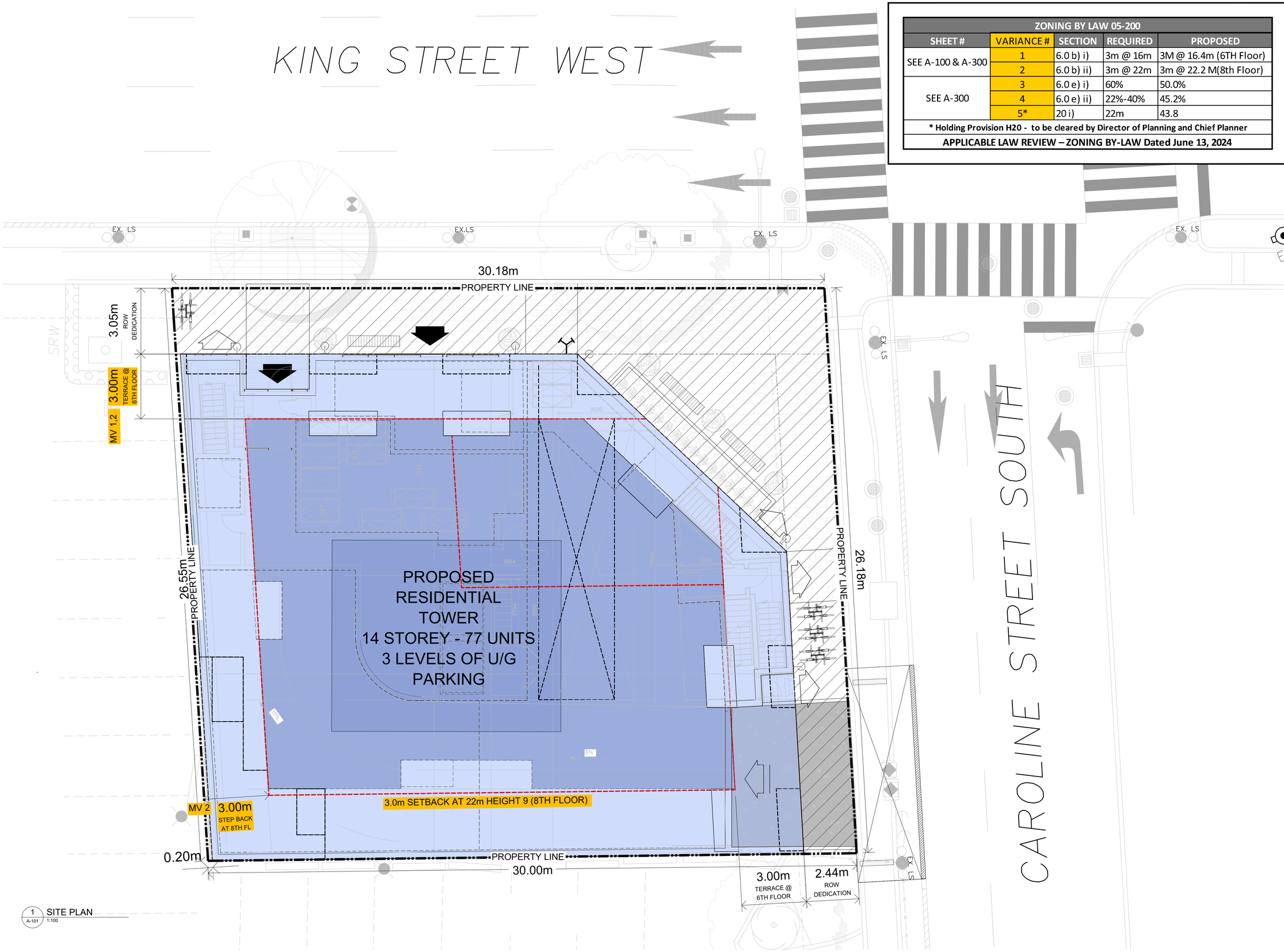
A separate registration for each person wishing to speak is required. Upon registering for a meeting, members of the public will be emailed a link for the Webex meeting one business day before the Hearing. Only those registered will be called upon to speak.

2. In person Oral Submissions

Interested members of the public, agents, and owners who wish to participate in person may attend Council Chambers on the date and time listed on the Notice of Public Hearing. Please note, you will be required to provide your name and address for the record. It is advised that you arrive **no less than 10 minutes** before the time of the Public Hearing as noted on the Notice of Public Hearing.

We hope this is of assistance and if you need clarification or have any questions, please email cofa@hamilton.ca.

Please note: Webex (video) participation requires either a compatible computer or smartphone and an application (app/program) must be downloaded by the interested party in order to participate. It is the interested party's responsibility to ensure that their device is compatible and operating correctly prior to the Hearing.



1 A-101 SITE PLAN
1:100

ZONING BY LAW 05-200				
SHEET #	VARIANCE #	SECTION	REQUIRED	PROPOSED
SEE A-100 & A-300	1	6.0 b) i)	3m @ 16m	3M @ 16.4m (6TH Floor)
	2	6.0 b) ii)	3m @ 22m	3m @ 22.2 M(8th Floor)
SEE A-300	3	6.0 e) i)	60%	50.0%
	4	6.0 e) ii)	22%-40%	45.2%
	5*	20 i)	22m	43.8
* Holding Provision H20 - to be cleared by Director of Planning and Chief Planner				
APPLICABLE LAW REVIEW – ZONING BY-LAW Dated June 13, 2024				

KEY PLAN - NTS

GENERAL NOTES:

1. ALL EXISTING PAVEMENT, CURBS, SIDEWALKS, DRIVEWAYS AND BOULEVARD AREAS DISTURBED BY THE CONSTRUCTION MUST BE REINSTATED TO THE SATISFACTION OF THE TOWN.
2. A MINIMUM SETBACK OF 1.0m FROM STREET FURNITURE TO PROPOSED DRIVEWAYS AND SIDEWALKS SHALL BE MAINTAINED. ALL EXISTING STREET FURNITURE TO BE RELOCATED BY THE CONTRACTOR/OWNER TO A SETBACK OF 1.0m. THE COST OF THE RELOCATION OF ANY UTILITY IS THE RESPONSIBILITY OF THE DEVELOPER/OWNER.
3. THE CONTRACTOR/OWNER IS RESPONSIBLE FOR ALL UTILITY LOCATES AND DAMAGE OR DISTURBANCE DURING CONSTRUCTION.
4. ALL BARRIER FREE ENTRANCES AND BARRIER FREE PATHS OF TRAVEL MUST COMPLY WITH O.B.C. 3.8.
5. THE OWNER/CONTRACTOR SHALL SUPPLY ALL FIRE ROUTE AND HANDICAP SIGNS AS SET OUT IN THE TOWN BY-LAWS AND DESIGN CRITERIA
6. ALL EXTERIOR ILLUMINATION TO BE DIRECTED DOWNWARD AS WELL AS INWARD AND DESIGNED TO MAINTAIN ZERO CUTOFF LIGHT DISTRIBUTION AS THE PROPERTY LINE.
7. ALL DOWNSPOUTS TO BE CONNECTED TO THE STORM DRAINAGE SYSTEM.
8. ALL CONDENSING UNITS TO BE SCREENED ON THE GROUND FLOOR
9. SEPARATE PERMITS ARE REQUIRED FOR ANY SIGNAGE ON THE PROPERTY.
10. WHERE POSSIBLE TREES ARE TO BE PROTECTED FROM CONSTRUCTION.
11. EXCESS SNOW WILL BE REMOVED BY PRIVATE HAULER SUBJECT TO DEMAND FOR PARKING.
12. REBOUNDING SIGN POST MOUNTED ON CURB. MANUFACTURE: IMPACT RECOVERY (http://www.impactrecovery.com/) STYLE: Sta-Rite Sign Posts. SIGN MOUNTING HEIGHT & SIGN AS PER TOWN ACCESSIBILITY STANDARDS

PAVEMENT MARKING INDEX:

#	
1	STOP BAR 0.30 m
2	SOLID YELLOW Ø.10 m
	ACCESSIBLE PARKING MARKING

ABBREVIATIONS		ABBREVIATIONS	
C.D.	- CURB DEPRESSION	C.D.	- CURB DEPRESSION
FH	- FIRE HYDRANT	FH	- FIRE HYDRANT
G.F.A.	- GROSS FLOOR AREA	G.F.A.	- GROSS FLOOR AREA
H.D.	- HEAVY DUTY PAVING	SM	- SQUARE METERS
L.D.	- LIGHT DUTY PAVING	SF	- SQUARE FEET
LB	- LIGHT BOLLARD	PROV.	- PROVIDED
LS	- LIGHT STANDARD	REQ'D.	- REQUIRED
BF	- BARRIER FREE	BS	- BUS SHELTER
F.R.S.	- FIRE ROUTE SIGN	EX	- EXISTING
BFFE	- BASEMENT FFE	B	- BOLLARD
FFE	- FINISHED FLOOR ELEVATION		
T.B.D.	- TO BE DETERMINED		
T.B.R.	- TO BE REMOVED		
FYSB	- FRONT YARD SETBACK		
ISYSB	- INTERIOR SIDE YARD SETBACK		
RYSB	- REAR YARD BUILDING SETBACK		
ESYSB	- EXTERIOR SIDE YARD SETBACK		

CREDIT NOTES:

BASE INFORMATION PROVIDED BY ertl Surveyors. FILE REFERENCE: 35252-T, DATED MARCH 21, 2018. SAPLYS ARCHITECTS ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY, OR COMPLETENESS OF THE DATA SUPPLIED AND SUCH DATA IS NOT INCLUDED UNDER SEALS OF CERTIFICATION.

LEGAL LAND DESCRIPTION: PART OF LOTs 10 & 11 UNREGISTERED, CITY OF HAMILTON

ISSUE	BY	DESCRIPTION	DATE YY-MM-DD
5	DB	MV SUBMISSION	24-11-28
4	DB	SPA	24-10-11
3	DB	DRP - REVISED LANDSCAPE	24-05-24
2	DB	ZCR / DRP	24-05-15
1	DB	PRE-CON - 2 (RE-DESIGN)	23-11-16

GENERAL NOTES:

DO NOT SCALE DRAWINGS. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". VERIFY CONFIGURATIONS & DIMENSIONS ON SITE BEFORE BEGINNING WORK. NOTIFY ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.

PLOT DATE

DEVELOPMENT CONSULTANT:
UNIT 7 - 1464 CORNWALL ROAD
OAKVILLE, ONTARIO L6J 7W5
API DEVELOPMENT CONSULTANTS INC.

ARCHITECT:
60 ST.CLAIR AVE E. SUITE 806
TORONTO, ONTARIO M4VT 1N5
p: 905-337-7249
SAI SAPLYS ARCHITECTS

LAND OWNER:
PIN: 17143-0096
2056515 ONTARTIO INC.
CONTACT REEMA AMER / HUSSEIN AMER
reemamer@live.ca / hussein.amer92@gmail.com
416-871-9113

KING STREET WEST
TOL BUILDING
CAROLINE STREET SOUTH
TOL PARKING - ENTRANCE
PROJECT NORTH & TRUE NORTH

ONTARIO ASSOCIATION OF ARCHITECTS
LINAS BRONIUS SAPLYS
LICENCE
6265
PROFESSIONAL CERTIFICATION

DRAWING NO.

PROJECT

RESIDENTIAL TOWER
MIXED USE

215-217 KING ST W, HAMILTON, ONTARIO
@ KING ST W & CAROLINE ST S

DRAWING TITLE

Simplified Site Plan

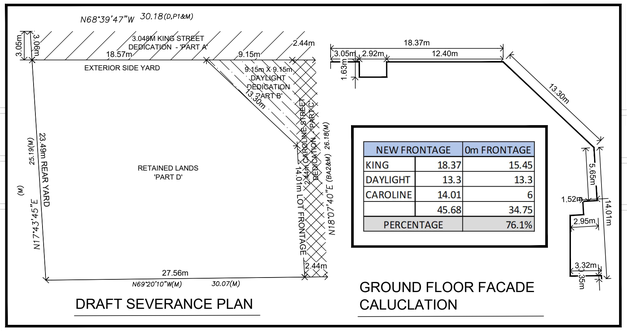
FCSP-23-130

BY	CHECKED	ISSUED FOR
DB	LS	SEE TABLE ABOVE

PROJECT No. S20-056
SCALE 1:100
SHEET NO. A-100
4.1
SHEET REV

PLOT

START



DRAFT SEVERANCE PLAN

NEW FRONTAGE	0m FRONTAGE
KING	18.37	15.45
DAYLIGHT	13.3	13.3
CAROLINE	14.01	6
	45.68	34.75
PERCENTAGE	76.1%	

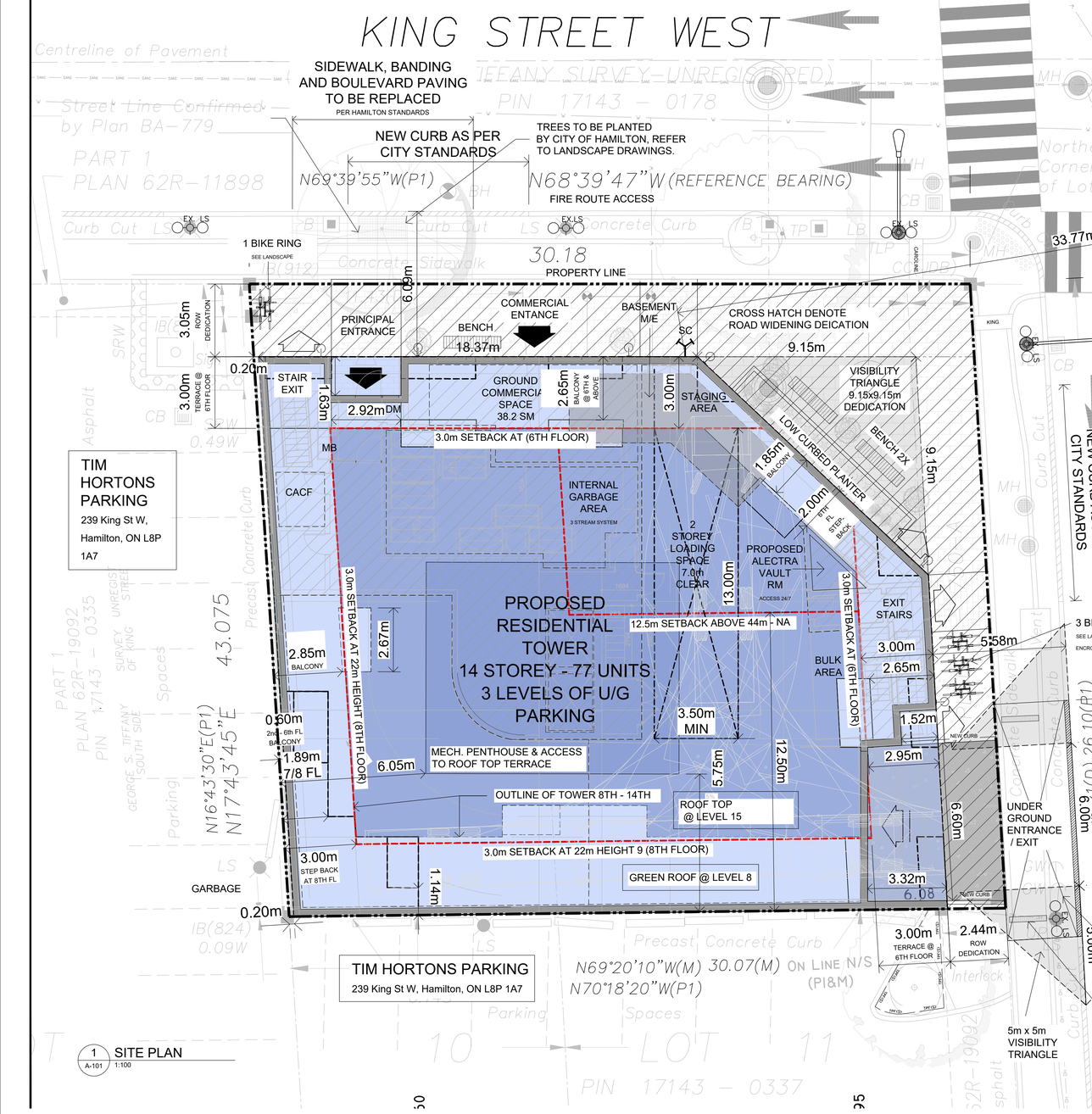
GROUND FLOOR FACADE CALUCLATION

PARKING STANDARDS - Section 5 Continued)		BY-LAW REQ'D	PROVIDED	COMPLY
5.2.1 e)	PARKING STALL	2.80 m x 5.80 m	2.80 m x 5.80 m	YES
5.2.1 f)	SMALL CARE PARKING SPACE	2.6 X 5.5 | 10%	N/A	YES
5.2.1 g)	Parralell Parking Space	2.6m x 6.7m - Approach 5.5	2.8m x 6.7m Approach 6.1m	YES
5.2.2 a)	ACCESSIBILE PARKING - TYPE A	3.40 x 5.80 m	3.40 x 5.80 m	YES
5.2.2 b)	ACCESSIBILE PARKING - TYPE B	2.40 x 5.80 m	N/A	N/A
5.2.2 c)	ACCESSIBILE AISLE REQUIRMENT	1.5 - CAN BE SHARED		YES
5.3 a	AISLE - TWO WAY - 90◦ PARKING ANGLE	6	6.4	YES
AREAS OF PLAN THAT DO NOT COMPLY WITH THE ZONING BYLAW				

DO NOT ENTER

DRAWING LEGEND

- LOCATION OF BLDG PRINCIPAL ENTRANCES FOR PUBLIC, FIRE FIGHTERS AND BF USE
- FREE STANDING SIGNS
- TRAFFIC FLOW
- NUMBER OF PARKING STALLS IN A ROW
- LOCATION OF L.S.
- AREA OF PROPOSED NEW BLDG
- EXISTING BUILDING
- PROPOSED LOCATION OF PAD MOUNTED TRANSFORMER (CONFIRM WITH LOCAL UTILITIES SEE SITE ELECTRICAL PLAN)
- OWNERS OPTION FOR HYBRID PARKING STALLS. EV CHARGING STATION C/W SIGN AND - SEE ELECTRICAL. AT A MINIMUM A CONDUIT IS TO BE RUN FOR FUTURE WORK
- PROPERTY LINE
- TREE PROTECTION FENCE SEE LANDSCAPE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM SERVICE
- PROPOSED WATER SERVICE
- SERVICE EXITS/ ENTRANCE POINTS
- (S.C.) SIAMESE CONNECTION
- PAINTED ISLAND -NO PARKING
- BIKE RACK - REFER TO LANDSCAPE DWGS
- BF DEPRESSED CURB/ RAMP (TYPICAL) - AS PER 3.8.3.2(3) OBC
- DESIGNATED BARRIER FREE PARKING SPACE. REFER TO CITY STANDARD FOR PAINED SYMBOL SEE DET. 2/ASP-101
- HARDSCAPE AREAS PAVERS / STAMPED CONCRETE. REFER TO LANDSCAPE DRAWINGS
- SOFT LANDSCAPE AREAS REFER TO LANDSCAPE DRAWING



TIM HORTONS PARKING
239 King St W,
Hamilton, ON L8P 1A7

TIM HORTONS PARKING
239 King St W, Hamilton, ON L8P 1A7

1 / A-101 SITE PLAN
1:100

SITE PLAN NOTES

1. All work involved in the construction, relocation, repair of municipal services for the project shall be to the satisfaction of the Director of Planning and Chief Planner, Planning and Economic Development Department.
2. Fire Route Signs and 3-Way Fire Hydrants shall be established to the satisfaction of the City Fire Department and at the expense of the owner.
3. Main driveway dimensions at the property line boundaries are plus or minus 7.5 m unless otherwise stated.
4. All driveways from property lines for the first 7.5 m shall be within 5% maximum grade, thereafter, all driveways shall be within 10% maximum grades.
5. The approval of this plan does not exempt the owner's bonded contractor from the requirements to obtain the various permits/approvals normally required to complete a construction project, such as, but not limited to the following:
   - Building permit — Sewer and Water Permit — Road cut permits
   - Relocation of Services" — Approach approval permits — Encroachment Agreements (If Req'd)
   - Committee of Adjustment
6. Abandoned accesses must be removed and the curb and boulevard restored with sod at the Owner's expense to the satisfaction of the Geomatics and Corridor Management Section, Public Works Department.
7. For visibility triangles at the vehicular access points, the following note to be provided: "5.0 metre by 5.0 metre visibility triangles in which the maximum height of any objects or mature vegetation is not to exceed a height of 0.70 metres above the corresponding perpendicular centreline elevation of the adjacent street."
8. Proposed signage shall conform to the City's Sign By-law No. 10-197.
9. Lighting must be directed on site and must not spill over to adjacent properties or streets.
10. This development is ineligible for municipal waste collection service. The collection of waste materials is required through a private waste hauler. Participation in waste diversion programs including recycling collection and organic waste collection is encouraged.
11. All existing infrastructure should be illustrated on the site plan. A minimum of 1.2m separation must be provided within the City's road allowance area between driveways, a fence and any pole, utility, fire hydrant, tree, sign, etc. Any costs for traffic sign or utility relocation are the sole responsibility of the Applicant/Owner. It is the Applicant's responsibility to coordinate with the appropriate departments ahead of time.
12. Contact Corridor Management in the Public Works Department should the applicant require information regarding Commercial and High-density Residential Driveway Access Permits; Any construction related activity that negatively impacts the City's Right of Way that requires a Construction Management Plan; and/or Temporary Lane & Sidewalk Occupancy Permit. More information can also be found on the following website: http://hamilton.ca/cm
13. All Fence shall conform to the Fence Bylaw 10-142

UNDERTAKING

RE: 215217 KING ST WE File No.

I, (We) _____ the owner(s) of the land, hereby undertake and agree without reservation,

(a) To comply with all the content of this plan and drawing and not to vary therefrom;

(b) To perform the facilities, works or matters mentioned in Section 41(7)(a) of the Planning Act shown on this plan and drawing(s) in accordance with the conditions of approval as set out in the Letter of Approval dated _____

(c) To maintain to the satisfaction of the City and at my (our) sole risk and expense, all of the facilities, works or matters mentioned in Section 41(7)(b) of the said Act, shown in this plan and drawing, including removal of snow from access ramps and driveways, parking and loading areas and walkways;

(d) In the event that the Owner does not comply with the plan dated _____, the owner agrees that the City may enter the land and do the required works, and further the Owner authorizes the City to use the security filed to obtain compliance with this plan.

(e) That the Owner agrees to affix the physical municipal number to the building or a sign near the driveway entrance at the road with either the municipal number or full address to the building on a sign in accordance with the Sign By-law, in a manner that is visible from the street.

(f) Should any conflict arise with existing Bell Canada Facilities where a current and valid easement exists within the subject area, the Owner shall be responsible for the relocation of any such facilities or easements at their own cost.

(g) Should the proposed site plan impact Enbridge Gas services, it may be necessary to terminate the gas service and relocate the line according to the new property boundaries. Any Service relocation required would be at the cost of the property owner.

Dated this _____day of _____20_____

_____

Witness (signature) Owner(s) (signature)

_____

Witness (print) Owner(s) (print)

_____

Address of Witness

SITE STATISTICS (HAMILTON TOWER -215/217 KING STREET W)	SM	SF	ACRES	%
ORIGINAL GROSS SITE AREA	792.2	8,527	0.196	100.0%
ROAD WIDENING KING STREET WEST - 3.048m	92.0	989.9	0.023	11.6%
ROAD WIDENING CAROLINE STREET SOUTH - 2.440m	58.5	607.8	0.014	7.1%
9 15m X 9 15 DAYLIGHT TRIANGLE	41.8	449.9	0.010	5.3%
TOTAL DEDICATION	190.2	2,047.7	0.047	24.0%
NEW GROSS SITE AREA	601.9	6,479.3	0.149	76.0%
SOFT LANDSCAPE 0.2 /STRIP - WEST	4.7	51	0.001	0.8%
LANDSCAPE DECORATIVE PAVING (Entrance)	4.7	51	0.001	0.8%
TOTAL LANDSCAPE AREA	9.4	102	0.002	1.6%
DRIVEWAY - CONC.	20.6	222	0.005	3.4%
MISC (CURBING & WALKWAYS)	1.9	21	0.000	0.3%
LOT COVERAGE (GROUND FLOOR)	570.0	6,135	0.141	94.7%
TOTAL				100.0%
BASEMENT (R, P3 - P1)	1,792	19,287	0.443	
GROUND FLOOR PLAN (NOT INCLUDING LOADING AND RAMP)	249.9	2,690	0.062	43.7%
SECOND FLOOR PLAN	489.2	5,266	0.121	
THIRD FLOOR PLAN	556.4	5,989	0.137	
FOURTH-FIFTH FLOOR PLAN	1,102.4	11,866	0.272	
SIXTH-SEVENTH FLOOR PLAN	869.0	9,354	0.215	
EIGHTH- FOURTHEENTH FLOOR PLAN	2,320	24,970	0.573	PSI
TOTAL GFA - NO DEDUCTIONS	5,586	60,125	1.380	9.28
TOTAL FLOOR AREA WITH UNDERGROUND	7,378	79,412	1.823	12.26

PARKING REQUIREMENTS - SECTION 5.7.1 (NEW BYLAW APRIL 2024)				
a) in PRA 1, no parking spaces are required for residents, and 2 visitor parking spaces,plus 0.05 visitor parking spaces are required per unit.				
DWELLING MIX USE GREATER THES UNITS		UNITS	RATIO	TOTAL
PARKING PER UNIT IN PRA 1		77.0	0.0	0.0
VISTORS PER UNIT IN PRA 1			0.05	3.9
COMMERICAL - 450 SM AND UNDER - NO PARKING		34.9	0.0	0.0
TOTAL PARKING REQUIRED	BF A	BF B	R. STALL	4
PARKING LEVEL 1	1	1	2	4
PARKING LEVEL 2	0	0	6	6
PARKING LEVEL 3	0	0	8	8
TOTAL PARKING PROVIDED	1	1	16	18
Parking Surplus		468%	14	

OLD BYLAW PARKING REQUIREMENTS - SECTION 5.6 (a)					
54	Dwelling units less than or equal to 50m2	23	Dwelling units less than or equal to 50m2		
DWELLING MIX	TOTAL UNITS 77	UNIT RATE	UNITS	RATIO	TOTAL
-50 SM	54	0-12	12.0	0.0	0.0
		13+	42.0	0.3	12.6
+50 SM	23	0-12	12.0	0.0	0.0
		13-50	11.0	0.5	5.5
		50+	0.0	0.7	0.0
COMMERICAL - 450 SM AND UNDER - NO PARKING		34.9	SM		0.0
TOTAL PARKING REQUIRED			BF	R. STALL	18
Parking Surplus			101%	0	

ELECTRIC VEHICLE PARKING SCHEDULE 5.7.4 a)			
100% of all parking spaces, excluding any visitor parking space.	REQ.	PROVIDED	COMPLY
Tenant Parking (No Parking Spaces Required)	5.0	P1 = 2 P2=3 TOTAL 5	YES
Vistors Parking (All Spaces are Considered Vistors for Bylaw Purposes)	0.0	0.0	

BICYCLE PARKING Section 5.7.5				
	UNITS	REQ.	PROVEDED	COMPLY
SHORT TERM - AT GRADE (PRA 1 & 2) 0.1 / UNIT	77	7.7	9	YES
LONG TERM - INTERNAL (PRA 1 & 2) 0.7 / UNIT		53.9	2ND FLOOR - 72	YES

LOADING Section 5.2.1			
	SM	PROV.	COMPY
REQUIRED	5585.8	0	YES
PROVIDED	TOTAL	1	

ACCESSIBLE PARKING Section 5.5 / 5.7.3c				
	TYPE A	TYPE B	TOTAL	COMPY
TOTAL REQUIRED (1%OF UNITS) OR 4%REQUIRED (5.7.3 c)	1	0	77 * 1%= .77 18 * 4%=0.72	YES
TOTAL PROVIDED	1	0	1	

ZONING INFORMATION - BY-LAW 05-200 - SECTION 6.0 / 6.2				
ZONED: DOWNTOWN MIXED USE - PEDES TRIAN FOCUS (D2) ZONE				
Permitted Uses	Yes		NO	
DWELLING UNITS / MIXED USE	x			
STEPBACK NOT EXCEEDING 44 m IN HEIGHT				
SECTION s	REQ'D (SM/M)		PROV.(SM/M)	
6.0 b) i)	3.0 metre stepback shall be req'd from the building base façade height shown in Schedule "F" – Special Figure 15.	3m @ 16m	3M @ 16.4m (6TH Floor)	NO
6.0 b) ii)	3m STEPBACK @ 22m - SIDE (WEST) ROOF	3m @ 22m	3m @ 22.2 M (8th Floor)	NO
	3m SETPBACK @ 22m - REAR (SOUTH) - ROOF		3m @ 22.2 M (8th Floor)	
ADDITIONAL STEPBACK FOR ANY PROTION OF THE BLDG EXCEEDING (44M) IN HEIGHT				
6.0c iii) 2	FRONT YARD - CAROLINE ST	3	N/A	YES
	REAR YARD	12.5	N/A	
	INTERIOR SIDE YARD		N/A	
	EXTERIOR SIDE YARD (KING STREET)	3	N/A	
6.0c) iv)	Min. 35m Lot Frontage (CAROLINE) - NOT ABOVE 44m	N/A	NEW 14.01	YES
6.0c) iv)	Min. 1575 sm Lot Area - NOT ABOVE 44m	N/A	EX 792.18 NEW 601.94	YES
GENERAL DOWNTOWN PROVISION- HERITAGE CHARACTER ZONE				
6.0 e) i)	MIN. AREA OF GROUND FLOOR FACADE OF CLEAR GLAZED W INDOWS AND DOOR @ 60%	60%	50.0%	NO
6.0 e) ii)	MIN. 25%- MAX 45% AREA OF 2ND AND 3RD FLOOR FACADE OF CLEAR GLAZED WINDOWS	22%/40%	45.2%	NO
6.0 e) iii)	Min. - Max. Ground Floor Height	3.6 - 4.5	4.20	YES
	Min. 2nd and 3rd Floor Height	3.0-4.0	3.m (2nd) 3m (3rd)	YES
6.0 e) iv)	Cladding for first three storeys - 1 or Combination the following material - Brick, Concrete Panels, Stone Block, Stone Veneer, Artificial Stone, Stucco, Metal or Metal Panels - Excluding Alum.		Brick / Stucco	YES
HOLDING PROVISION SCHEDULE D				
17	Permitted Uses in D1, D2 & D5 Zone	Mixed Use	Mixed Use	YES
17 i)	Building Height May Note Exceed (Penthouse Excluded - See Definition) - FLAT ROOF	44m	43.80	YES
19	ONLY PERMIT USES IN D1 , D2 & D5	Mixed Use	Mixed Use	YES
19 i)	No Development Exceeding 44m IN BUILDING HEIGHT	44m	43.8	YES
20	Permitted Uses in D1, D2 & D5 Zone	Mixed Use	Mixed Use	YES
20 i)	No Development Exceeding 22m IN BUILDING HEIGHT	22m	43.8	"/"NO

* Note : Removal of Holding Provision H20 may not be required for the proposed building above 22.0 metres should it be demonstrated that the development will have the effect of removing all or part of rental housing comprised of three or more units will be replaced

**Note: Holding Provision to be cleared by Director of Planning and Chief Planner

DOWNTOWN PRIME RETAIL STREETS ZONE (D2) SECTION D2				
6.2.3 a) i) and iv, vi)	i) MAX. BLDG STEPBACK FROM A STREET LINE - FOR ANY PORTION OF THE BLDG BELOW 11M EXCEPT WHERE A VISIBILTY TRIAGLE SHALL BE PROVIDED FOR THE DRIVEWAY ACCESS	2	1.52, 1.63	YES
	ii) Driveway Setback Max	6	3.32	YES
6.2.3 b) i)	Min. Building Height	7.5	16.40	YES
6.2.3 b) ii)	Max. Building Height - SCHEDULE F - FIGURE 1	83.0	43.80	YES
6.2.3 c) i)	Built Form for for New Development - Roof Top Mechecal to be screened	TO BE SCREENED	ENCLOSED	YES
6.2.3 c) ii)	INTERIOR LOT AND THROUGH LOT WIDTH	1.75% | 2.2m SETBACK	N/A	YES
6.2.3 c) iii) 1		+ 50 %	76.1%	YES
6.2.3 c) iii) 2	CORNER LOT - Min, Combined Width of the Ground Floor Façade facing the front lot line and flankage shall be KING / DAYLIGHT / CAROLINE | 2.0 STEP BACK		1.63 / 0.00 / 1.52	YES
6.2.3 c) iv)	Max Driveways Width	7.5	6.60	YES
6.2.3 c) v)	No Parking between façade and the lot Line		0.00	YES
6.2.3 c) vi)	Min. 1 Principal Entrance accessed from the public Sidewalk		1	YES
6.2.3 d)	Outdoor Storage		n/a	YES
GENERAL PROVIONS - SECTION 4				
4.6	Yard Encroachments - A balcony may encroach into any required yard to a maximum of 1.0 metres, except into a required side yard of not more than one-third of its width or 1.0 metres,whichever is the lesser; and, FY 1 / RY 1 / ESY 1 / IS 0.7 / 3 = 0.9m		3.0-2.65 = 0.35 / 3.0-2.65 = 0.35 / N/A / 3.0-2.85=0.15	YES
GENERAL PROVIONS - SECTION 5				
5.1. a) v) a)	Location of Surface Parkings from a Street Line	ex 1.0	N/A	YES
5.1. a) v) a)	Planting Strip Width for Parking from StreetLine	3.0	N/A	N/A
5.1. d) i)	Location of Parking for Muliple Dwelling	FY or St Line | 3.0	N/A	N/A
5.2.1. a)	Parking Stall Size	2.80 m x 5.90 m	2.8 X 5.8	YES
5.2.1. b)	Min. Dist.to a Column or Wall from a Parking Space	0.3	0.30	YES
5.2.1 c)	Max. Length of Obstructions within a Parking Space	1.15	1.00	YES
5.2.1 f)	Small Car Parking Space	2.8 X 5.5 | 10%	N/A	YES
5.2c)	Adequate Ingress or Egress	6	6.50	YES
5.2.1 d)	Parralell Parking Space	2.4m x 6.7m 5m approach	2.4m x 6.7m 6.5m approach	YES
5.2e)	Surface Material - Stable Surface - Conc. / Asphalt	Conc / Asphalt	Conc.	YES
5.2f))	BARRIER-FREE	SECTION REPLACED		YES
5.2i)	AISLE - TWO WAY - 90◦ PARKING ANGLE	6	6.5	YES
5.2.1	a) Location of Loading - Not Be Located in a FY b) Loading - Not be located in a Yard Fronting a St. c) Loading - Permited in a Yard abutting Residential or Instutional except when screened		LOCATED INTERNALLY	YES

KEY PLAN - NTS

GENERAL NOTES:

1. ALL EXISTING PAVEMENT, CURBS, SIDEWALKS, DRIVEWAYS AND BOULEVARD AREAS DISTURBED BY THE CONSTRUCTION MUST BE REINSTATED TO THE SATISFACTION OF THE TOWN.
2. A MINIMUM SETBACK OF 1.0m FROM STREET FURNITURE TO PROPOSED DRIVEWAYS AND SIDEWALKS SHALL BE MAINTAINED. ALL EXISTING STREET FURNITURE TO BE RELOCATED BY THE CONTRACTOR/OWNER TO A SETBACK OF 1.0m. THE COST OF THE RELOCATION OF ANY UTILITY IS THE RESPONSIBILITY OF THE DEVELOPER/OWNER.
3. THE CONTRACTOR/OWNER IS RESPONSIBLE FOR ALL UTILITY LOCATES AND ANY DAMAGE OR DISTURBANCE DURING CONSTRUCTION.
4. ALL BARRIER FREE ENTRANCES AND BARRIER FREE PATHS OF TRAVEL MUST COMPLY WITH O.B.C. 3.8.
5. THE OWNER/CONTRACTOR SHALL SUPPLY ALL FIRE ROUTE AND HANDICAP SIGNS AS SET OUT IN THE TOWN BY-LAWS AND DESIGN CRITERIA.
6. ALL EXTERIOR ILLUMINATION TO BE DIRECTED DOWNWARD AS WELL AS INWARD AND DESIGNED TO MAINTAIN ZERO CUTOFF LIGHT DISTRIBUTION AS THE PROPERTY LINE.
7. ALL DOWNSPOUTS TO BE CONNECTED TO THE STORM DRAINAGE SYSTEM.
8. ALL CONDENSING UNITS TO BE SCREENED ON THE GROUND FLOOR
9. SEPARATE PERMITS ARE REQUIRED FOR ANY SIGNAGE ON THE PROPERTY.
10. WHERE POSSIBLE TREES ARE TO BE PROTECTED FROM CONSTRUCTION.
11. EXCESS SNOW WILL BE REMOVED BY PRIVATE HAULER SUBJECT TO DEMAND FOR PARKING.
12. REBOUNDING SIGN POST MOUNTED ON CURB. MANUFACTURE: IMPACT RECOVERY (http://www.impactrecovery.com/) STYLE: Sta-Rite Sign Posts. SIGN MOUNTING HEIGHT & SIGN AS PER TOWN ACCESSIBILITY STANDARDS

PAVEMENT MARKING INDEX:

1 STOP BAR 0.30 m
2 SOLID YELLOW 0.10 m
ACCESSIBLE PARKING MARKING

ABBREVIATIONS	ABBREVIATIONS
C.D. - CURB DEPRESSION	C.D. - CURB DEPRESSION
FH - FIRE HYDRANT	FH - FIRE HYDRANT
G.F.A. - GROSS FLOOR AREA	G.F.A. - GROSS FLOOR AREA
H.D. - HEAVY DUTY PAVING	SM - SQUARE METERS
L.D. - LIGHT DUTY PAVING	SF - SQUARE FEET
LB - LIGHT BOLLARD	PROV. - PROVIDED
LS - LIGHT STANDARD	REQ'D - REQUIRED
BF - BARRIER FREE	BS - BUS SHELTER
F.R.S - FIRE ROUTE SIGN	EX - EXISTING
BFFE - BASEMENT FFE	B - BOLLARD
FFE - FINISHED FLOOR ELEVATION	
T.B.D - TO BE DETERMINED	
T.B.R - TO BE REMOVED	
FYSB - FRONT YARD SETBACK	
ISYSB - INTERIOR SIDE YARD SETBACK	
RYSB - REAR YARD BUILDING SETBACK	
ESYSB - EXTERIOR SIDE YARD SETBACK	

CREDIT NOTES:

BASE INFORMATION PROVIDED BY ertl Surveyors. FILE REFERENCE: 35252-T, DATED MARCH 21, 2018. SAPLYS ARCHITECTS ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY, OR COMPLETENESS OF THE DATA SUPPLIED AND SUCH DATA IS NOT INCLUDED UNDER SEALS OF CERTIFICATION.

LEGAL LAND DESCRIPTION: PART OF LOTS 10 & 11 UNREGISTERED, CITY OF HAMILTON

ISSUE	BY	DESCRIPTION	DATE YY-MM-DD
4	DB	SPA	24-10-11
3	DB	DRP - REVISED LANDSCAPE	24-05-24
2	DB	ZCR / DRP	24-05-15
1	DB	PRE-CON - 2 (RE-DESIGN)	23-11-16

GENERAL NOTES:
DO NOT SCALE DRAWINGS. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". VERIFY CONFIGURATIONS & DIMENSIONS ON SITE BEFORE BEGINNING WORK. NOTIFY ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.

DEVELOPER/ CONSULTANT:
UNIT 7 - 1464 CORNWALL ROAD
OAKVILLE, ONTARIO L6J 7W5
API LAND DEVELOPMENT CONSULTANTS INC.

ARCHITECT:
60 ST.CLAIR AVE E. SUITE 806
TORONTO, ONTARIO M4VT 1N5
p: 905.337.7249
SAPLYS ARCHITECTS

LAND OWNER:
PIN: 17143-0096
2056515 ONTARTIO INC.
CONTACT REEMA AMER / HUSSEIN AMER
reemamer@live.ca / hussein.amer92@gmail.com
416-871-9113

KING STREET WEST
TDL BUILDING
TDL PARKING - ENTRANCE
CAROLINE STREET SOUTH
PROJECT NORTH & TRUE NORTH
ONTARIO ASSOCIATION OF ARCHITECTS
LINAS BRONIUS SAPLYS LICENCE 10265
PROFESSIONAL CERTIFICATION
OWNER'S
ARCHITECT'S
PLANS

PROJECT

RESIDENTIAL TOWER MIXED USE

215-217 KING ST W, HAMILTON, ONTARIO
@ KING ST W & CAROLINE ST S

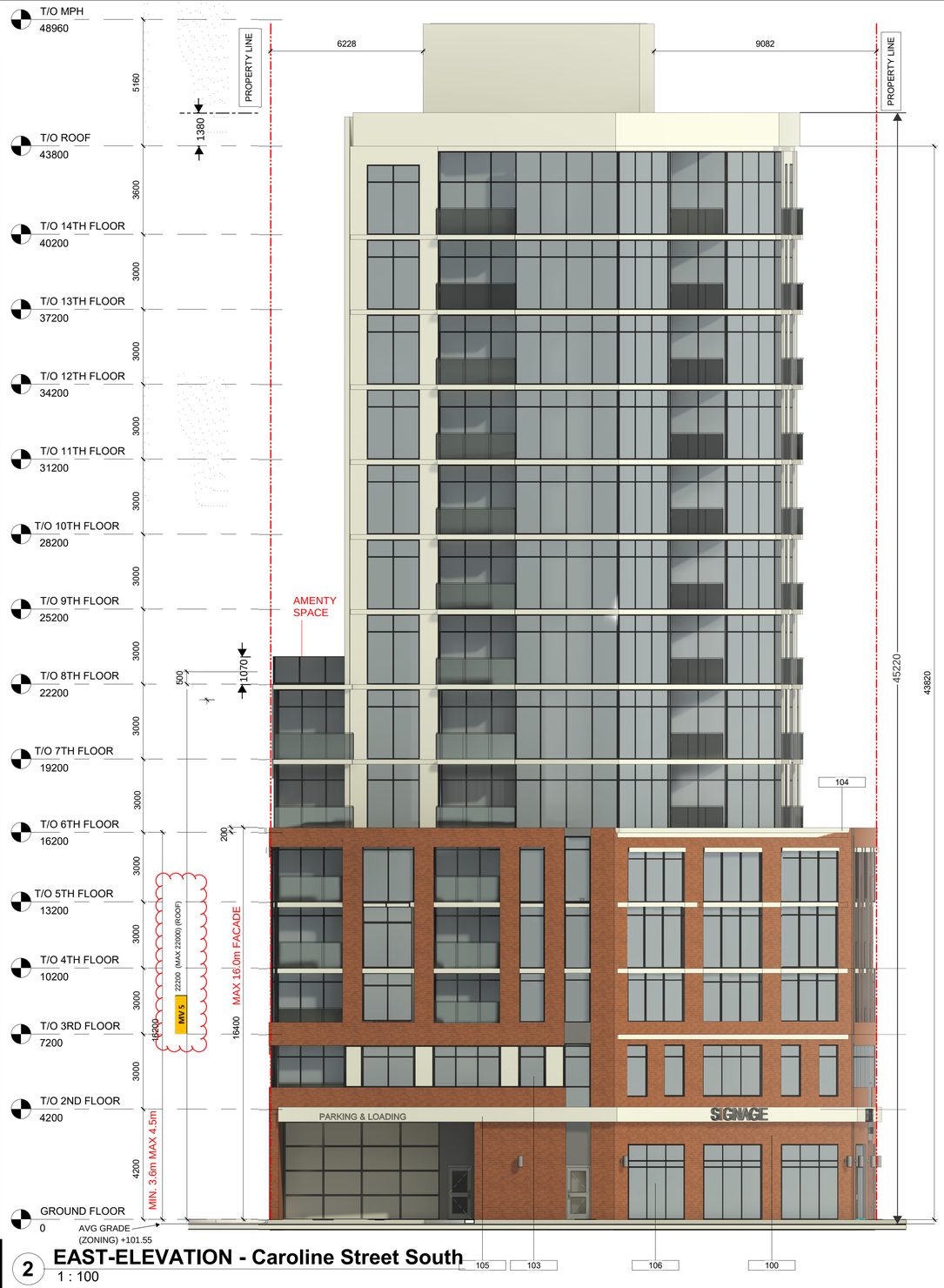
DRAWING TITLE

Site Plan

FCSP-23-130

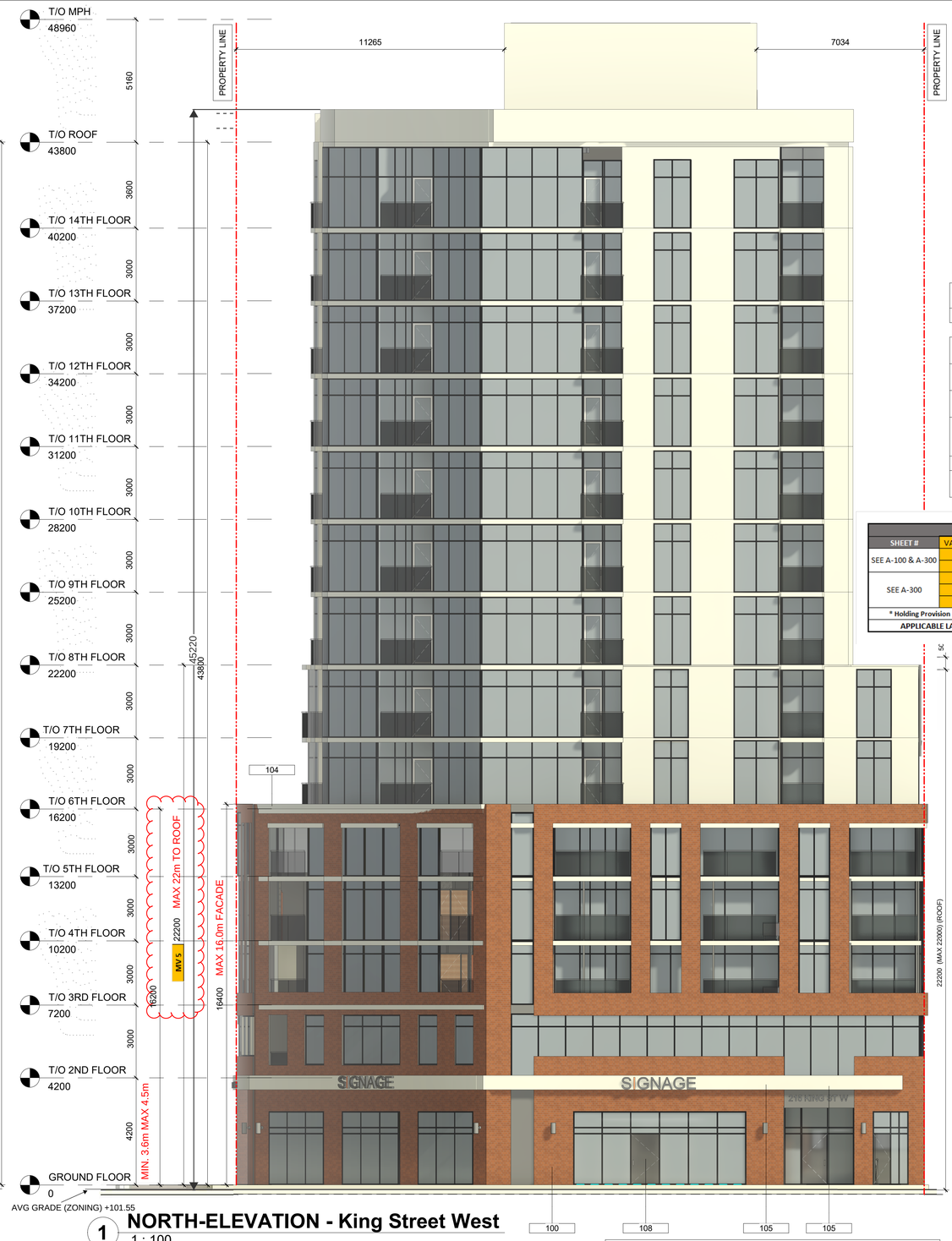
BY	CHECKED	ISSUED FOR
DB	LS	SEE TABLE ABOVE

PROJECT No. S20-056
SCALE 1:100
START
SHEET NO. A-101
SHEET REV 4.1



2 EAST-ELEVATION - Caroline Street South

1 : 100



1 NORTH-ELEVATION - King Street West

1 : 100

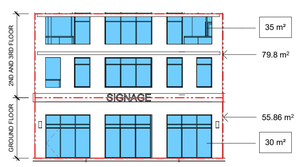
Average Grade		
Item	Description	Site Plan Grades
1	Frontage	101.76
2	Frontage	101.80
3	Frontage	101.80
4	Frontage	101.76
5	Frontage	101.76
6	Frontage	101.40
7	Frontage	101.30
8	Frontage	101.20
9	Frontage	101.35
10	Frontage	101.25
11	Frontage	101.26
12	Frontage	101.30
13	Frontage	101.30
14	Rear Ex.	101.60
15	Rear Ex.	102.08
16	Rear Ex.	101.82
Average Grade		101.55

Elevations Materials Legend	
Key Value	Keynote Text
100	THIN BRICK VENEER - BROWN
103	ALUMINUM GLAZING SYSTEM - CLEAR
104	LINTEL/SILL/CORNICE DETAILS IN STONE - WHITE
105	STONE-FINISHED MOULD FOR SIGNAGE SUPPORT - COLOUR TO MATCH 104
106	DISPLAY WINDOW
108	STOREFRONT GLAZING - CLEAR

ZONING BY LAW 05-200				
SHEET #	VARIANCE #	SECTION	REQUIRED	PROPOSED
SEE A-100 & A-300	1	6.0 b) i)	3m @ 16m	3M @ 16.4m (6TH Floor)
	2	6.0 b) ii)	3m @ 22m	3m @ 22.2 M(8th Floor)
SEE A-300	3	6.0 e) i)	60%	50.0%
	4	6.0 e) ii)	22%-40%	45.2%
	5*	20 i)	22m	43.8
* Holding Provision H20 - to be cleared by Director of Planning and Chief Planner				
APPLICABLE LAW REVIEW – ZONING BY-LAW Dated June 13, 2024				

Caroline St. - Glazing Area

1 : 200



Daylight triangle - Glazing area

1 : 200

King St. - Glazing area

1 : 200

SEE A101 FOR FRONTAGES

GROUND FL SECTION 6e)i) - 60%	BUILDING FACE		HEIGHT	LENGTH	GLAZED
	STREEET	SM	M	M	SM
	KING	77.2	4.2	18.37	37
	DAYLIGHT	55.9		13.3	30
	CAROLINE	58.8		14.01	29
	TOTAL	191.9		45.68	96
	PERCENTAGE		-10.0%	MV 3	50.0%

2ND / 3RD FL SECTION 6e)ii) 25-40%	BUILDING FACE		HEIGHT	LENGTH	GLAZED
	STREEET	SM	M	M	SM
	KING	110.2	6	18.37	53
	DAYLIGHT	79.8		13.3	35
	CAROLINE	84.1		14.01	36
	TOTAL	274.1		45.68	124
	PERCENTAGE		5.2%	MV 4	45.2%

e) For the lots delineated as a Heritage Character Zone on Figure 2 of Schedule "F" – Special Figures, where construction and/or alteration to the façade of a building are proposed, the following regulations shall also apply:

i) A minimum of 60% of the area of the ground floor façade shall be comprised of clear glazed windows and doors. Window and doorframes, clear glazed transoms and sidelights, doors with at least 50% clear glazing, and a sill up to 0.6m in height are permitted to be included in the calculation of the clear glazed area.
Signage and opaque/spandrel glazing shall not be included in the calculation of the clear glazed area;

ii) A minimum of 25% and a maximum of 40% of the façade of the second and third storeys shall be composed of windows. Window and doorframes, clear glazed transoms and sidelights, doors with at least 50% clear glazing, and a sill up to 0.6m in height are permitted to be included in the calculation of the clear glazed area.
Signage and opaque/spandrel glazing shall not be included in the calculation of the clear glazed area;

The City of Hamilton - Zoning By-Law - Section 6: Downtown Zones - 6.1-2

No.	By	Description	Date YY-MM-DD
1	ED	SPA	24-10-15

ISSUANCE SCHEDULE

DO NOT SCALE DRAWINGS. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". VERIFY CONFIGURATIONS & DIMENSIONS ON SITE BEFORE BEGINNING WORK. NOTIFY ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.

DEVELOPMENT CONSULTANT:
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1464 CORNWALL ROAD, UNIT 7
OAKVILLE, ONTARIO L6J 7W5
P: 905.337.7249

ARCHITECT:
SAPLYS ARCHITECTS INC.
60 ST. CLAIR AVENUE EAST, SUITE 806
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P: 905.510.0595

CLIENT:
PIN: 17143-0096
2056515 ONTARIO INC.
CONTACT REEMA AMER / HUSSEIN AMER
reemamer@live.ca / hussein.amer92@gmail.com
416-871-9113

ONTARIO ASSOCIATION OF ARCHITECTS
LUKAS BIRONIUS SAPLYS
LICENCE 6265
PROFESSIONAL CERTIFICATION

PROJECT
RESIDENTIAL TOWER
MIXED USE

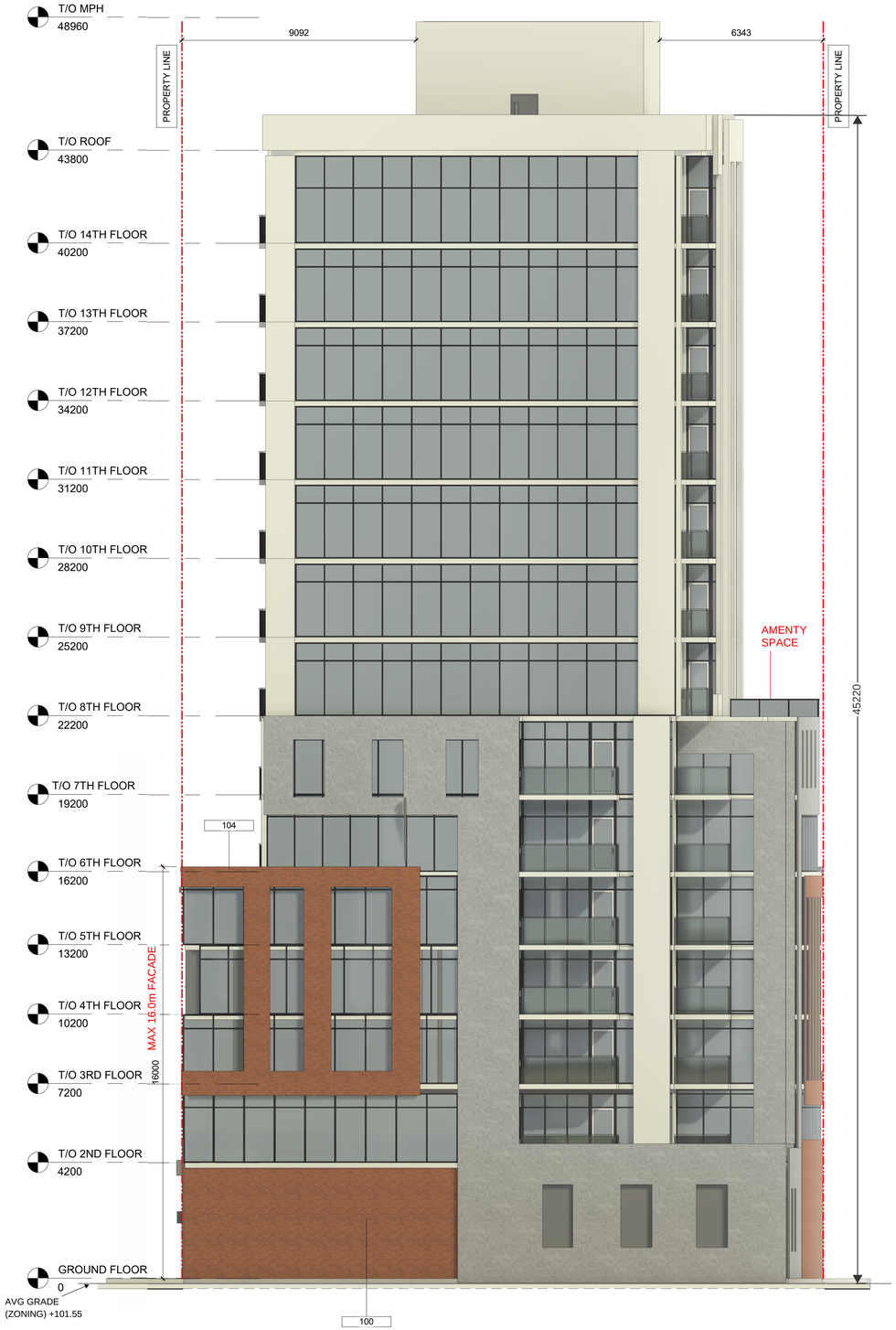
215-217 KING ST WEST,
HAMILTON, ON, L8P 1A7

DRAWING TITLE
ELEVATIONS I

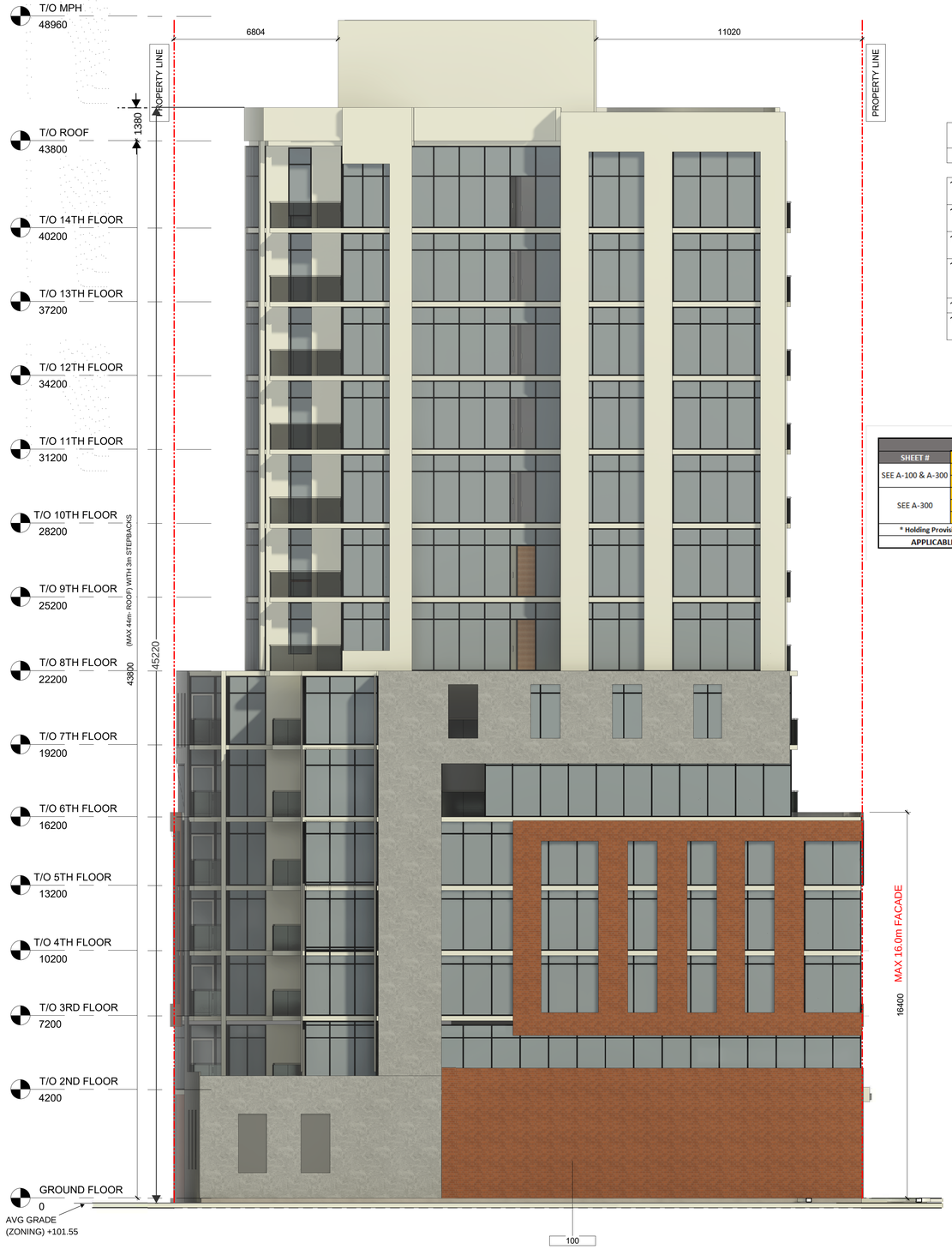
BY	CHECK	ISSUED FOR
	ED	SPA

PROJECT NO.: A20-056
SCALE: As indicated
ISSUE DATE: 24-10-15
SHEET NO.: A300 1 SHEET ISSUE No.

PLOT DATE 2024-10-07 4:12:59 PM



2 **WEST-ELEVATION** TDL PARKING AND BUILDING
1 : 100



1 **SOUTH-ELEVATION** TDL PARKING EXIT TO CAROLINE
1 : 100

Elevations Materials Legend	
Key Value	Keynote Text
100	THIN BRICK VENEER - BROWN
103	ALUMINUM GLAZING SYSTEM - CLEAR
104	LINTEL/SILL/CORNICE DETAILS IN STONE - WHITE
105	STONE-FINISHED MOULD FOR SIGNAGE SUPPORT - COLOUR TO MATCH 104
106	DISPLAY WINDOW
108	STOREFRONT GLAZING - CLEAR

ZONING BY LAW 05-200				
SHEET #	VARIANCE #	SECTION	REQUIRED	PROPOSED
SEE A-100 & A-300	1	6.0 b) i)	3m @ 16m	3M @ 16.4m (6TH Floor)
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SEE A-300	3	6.0 e) i)	60%	50.0%
	4	6.0 e) ii)	22%-40%	45.2%
	5*	20 i)	22m	43.8
* Holding Provision H20 - to be cleared by Director of Planning and Chief Planner				
APPLICABLE LAW REVIEW – ZONING BY-LAW Dated June 13, 2024				

No.	By	Description	Date YY-MM-DD
1	ED	SPA	24-10-15

ISSUANCE SCHEDULE

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DEVELOPMENT CONSULTANT:
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P: 905.510.0595

CLIENT:
PIN: 17143-0096
2056515 ONTARIO INC.
CONTACT REEMA AMER / HUSSEIN AMER
reemamer@live.ca / hussein.amer92@gmail.com
416-871-9113

ONTARIO ASSOCIATION OF ARCHITECTS — LINAS BRONIUS SAPLYS — LICENCE 6265
PROFESSIONAL CERTIFICATION

PROJECT
RESIDENTIAL TOWER
MIXED USE

215-217 KING ST WEST,
HAMILTON, ON, L8P 1A7

DRAWING TITLE
ELEVATIONS II

BY	CHECK	ISSUED FOR
	ED	SPA

PROJECT NO.: A20-056
SCALE: 1 : 100
ISSUE DATE: 24-10-15
SHEET NO.: A301 | 1 SHEET ISSUE No.

PLOT DATE: 2024-10-07 4:13:11 PM

TRAFFIC IMPACT STUDY

Proposed Mixed-Use Development
235 King Street West,
Hamilton, ON

October 2024

Prepared For
Lavish Design Build

TRANS-PLAN
Transportation Engineering

67 Mowat Ave, Suite 331
Toronto, ON M6K 3E3

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1 (877) 668 8784

trans-plan.com
admin@trans-plan.com

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1 (647) 931 7383

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trans-plan.com

October 11, 2024

Lavish Design Build

c/o Ms. Natalia Garavito
Site Plan & Development Coordinator
API Development Consultants Inc.
1464 Cornwall Road, Unit #7
Oakville, ON L6J 7W5

Re: **Proposed Mixed-Use Development, 235 King Street West, City of Hamilton, ON, Traffic Impact Study**

Dear Ms. Garavito,

TRANS-PLAN is pleased to submit this Traffic Impact Study (TIS) for the proposed mixed-use development located in the city of Hamilton, Halton Region. The subject site is in the northwest quadrant of Caroline Street South. The subject site is currently occupied by an existing restaurant and convenience store and will be redeveloped into a mixed-use building with 14 storeys.

Based on our review of the City's Zoning By-Law dated April 2024, the proposed parking rate of 21 spaces conforms to the minimum and maximum parking rate requirements. The vehicle turning templates indicate that the proposed driveways and internal drive aisles can accommodate the design vehicles and access and circulate the site without conflict.

The intersections in the study area are expected to operate at an acceptable capacity. It should be noted that the existing and total conditions are showing similar results, indicating the site has a minor impact on the study intersections.

Transportation Demand Management infrastructure (sidewalks, nearby bus stops, bicycle parking, etc. is well established within and around the subject site as well.

Sincerely,

Anil Seegobin, P. Eng.
Partner, Engineer
Trans-Plan Transportation Inc.
Transportation Consultants

Table of Contents

List of Tables

List of Figures

1. INTRODUCTION

Trans-Plan has been retained by API Development Consultants Inc. to complete a Traffic Impact Study (TIS), Parking Study, Traffic Demand Management Plan (TDM), Site Access, and Circulation review for a proposed mixed-use development located at 235 King Street West, Hamilton, ON. This assessment includes the following studies and tasks:

Traffic Impact Study

- Review of the study area, existing uses, and the development proposal
- Review and assessment of the existing transportation network.
- Assessment of boundary road operations under future background conditions, including a review of traffic growth, area developments, and transportation improvements in the study area
- Assessment of the impact of site-generated traffic on the study area intersections and site entrances under future traffic conditions
- Discussion of roadway and intersection improvements, as required, to accommodate the existing development.
- Recommendations on various TDM measures for the site to encourage on the site plan (i.e. amenities, walkway connections, bicycle racks, etc.).
- Assessment of the proposed site access would operate adequately during peak periods of activity.
- Provide short-term and long-term recommendations for road improvements and signal timing optimization and road improvements as necessary.

Parking Study

- A review of the site parking supply and the City of Hamilton Zoning By-law for parking requirements
- Comparison of parking utilization surveys at proxy sites with a similar site context as the subject site
- Confirmation that the proposed parking supply would be sufficient for the site based on our parking survey results
- A review of alternative modes of travel, including transit, cycling and walking

Transportation Demand Management Plan

- A review of existing and future TDM opportunities near the study area
- Recommendations of various TDM measures for the site to encourage a reduction in single-occupant auto vehicle trips and auto parking demands
- An implementation plan of the proposed TDM measures

Site Access and Circulation Review

- A review of entrance design, lane configurations, and traffic control for the site entrance based on the applicable standards/Township Zoning By-laws.
- A review of the circulation of a medium single-unit (MSU) loading truck, a passenger vehicle, a waste collection vehicle, and a typical fire truck within the site plan.

Before commencing this study, Transportation and Engineering staff at the City of Hamilton were

contacted and provided a study Terms of Reference to discuss the scope and methodology. This report adheres to the City of Hamilton's Traffic Impact Study Guidelines.

2. SITE LOCATION

The site, shown in Figure 1, is located at 235 King Street West, Hamilton, ON (previously noted as 215-217 King Street), in the northwest quadrant of Caroline Street South. The subject site is currently occupied by an existing restaurant and convenience store and will be redeveloped into a 14-story mixed-use building. It is surrounded by commercial establishments and is close to some notable landmarks such as First Ontario Concert Hall and the Art Gallery of Hamilton.

3. PROPOSED DEVELOPMENT

The site plan, prepared by SAPLYS Architects Inc., is shown in Figure 2. Based on the preliminary site statistics received, the proposed development is expected to consist of one Building for the proposed mixed-use development with the following details,

- A total GFA of 7,585 m^2 with 77 residential units and 1 unit of retail and office for proposed development.
- 21 proposed parking spaces located at the 3-level basement parking
- 77 residential units; 42 units have less than 50 m^2, and 35 units have greater than 50 m2, with a total of 5,585.7 m^2 GFA rooms
- 1 retail unit, with a total of 38.17m^2 GFA
- 1 office unit, with a total of 5.54m^2 GFA

4. EXISTING CONDITIONS

4.1 Road Network

The major roadways located in the study area are under the jurisdiction of the City of Hamilton and are described as follows.

King Street West is a major arterial road that runs in an east-west direction and is the location of the subject site. There is no posted speed limit, but since it is a major arterial road, it was assumed to be 70 km/h throughout the study. It is a one-way road with four travel lanes. Sidewalks and transit stops are present on the north and south sides of the street. It is a major roadway that is connected to Highway 8, and several other roadways.

Caroline Street South is a local road that runs in a north-south direction and is located west of the subject site. The posted speed limit is 40 km/h. The roadway consists of three lanes: two lanes for southbound, and one lane going northwest direction. According to the City of Hamilton's Interactive map for Lane Restrictions and Road Closures, there is a temporary road closure along Caroline Street South due to development-related service & utility connections from June 29, 2024 – October 31, 2024.

Main Street West is also a major arterial road that runs in a west-east direction and is located south of the subject site. It is a one-way road with four to five travel lanes going east direction. There is no posted speed limit, but it was assumed to be 70 km/h in this study. Sidewalks and transit stops are present on the north and south sides of the street.

George Street is a local road that runs in an east-to-west direction and is located south of the subject site. The posted speed limit is 40 km/h. The roadway consists of two travel lanes, with one in each direction.

King Street West and Main Street West currently form signalized intersections at Caroline Street South. Site access for the subject site is connected to Caroline Street South. The study area roadway characteristics are shown schematically in Figure 3.

4.2 Traffic Counts

To determine existing operating conditions in the study area, Trans-Plan obtained the signal timing plans from the City of Hamilton for the study area intersections. Trans-Plan also conducted Intersection Turning Movement Counts (TMC), since the data for the study area were not available in the City's database. Additionally, Trans-Plan conducted a site visit and made traffic observations.

The TMCs were conducted on Thursday, September 12, 2024. The count hours and peak hours obtained for each intersection are summarized in Table 1. Detailed TMC data and current signal timing plans are provided in Appendix A. The existing traffic volumes for the weekday AM and PM peak hours are shown in Figure 4. Traffic volumes were balanced (increased) between the two intersections for consistency, where appropriate,

Table 1 – Intersection Turning Movement Count Details

Intersection	Source	Count Date	Count Hours	Peak Hours
Caroline Street South and George Street	Trans-Plan	Thursday, September 12,2024	7:00am – 9:30am 4:00pm – 6:30pm	8:00am – 9:00am 4:30 pm – 5:30 pm
Caroline Street and Main Street West				
Caroline Street and King Street West				

4.3 Transit Service

The site is currently well served by Hamilton Street Railway (HSR) and GO Transit, HSR, and GO buses with multiple routes operating within proximity (i.e., within a three-minute walk) to the site. It connects transit riders to local and regional destinations. The HSR and GO connect transit riders to major locations within Hamilton such as the Hamilton Convention Center, First Ontario Centre, and First Ontario Concert Hall. HSR and GO operates the following bus routes within the study area:

Route 1: HSR Route 001 / 051 – King Street is a bus route that runs in an east-west direction and serves different neighborhoods within King Street and Caroline Street. The nearest bus stop for this route is located across from the site**.**

Route 2: HSR Route 0034 – Main Street is a bus route that runs in an east-west direction and operates between Queen Street and Bay Street. It serves 37 bus stops in the Hamilton area, and the route primarily travels from the first stop at Main St up to Glancaster Loop and may deviate onto adjacent streets. The nearest bus stop for this route is located approximately 220 meters southern side of the site, at the intersection of Main Street and Caroline Street.

Route 3: Go Transit 011 / 016 / 017 / 018 / 040 / 041 / 047 – Main Street is a bus route that runs in an east-west direction within Main Street. Route 11 has 17 stops and the total trip duration for this route is

approximately 110 minutes. Route 16 has 11 stops and the total trip duration for this route is approximately 68 minutes. Route 17 has 28 stops and the total trip duration for this route is approximately 145 minutes. Route 18 has 25 stops and the total trip duration for this route is approximately 110 minutes. Route 40 has 20 stops and the total trip duration for this route is approximately 117 minutes. Route 41 has 33 stops and the total trip duration for this route is approximately 208 minutes. And lastly, Route 47 has 19 stops and the total trip duration for this route is approximately 117 minutes. The nearest bus stop for this route is 550 meters south-west side of the site, at the intersection of Main Street and Ray Street.

Table 2 – Transit Service in the Study Area

Route	No.	Location	Distance to Closest Stop from Site (m)	Approximate Service Times		Approximate Peak Service Frequency (min)		
				Weekdays	Weekends	AM	PM	SAT
King St.	001	King St at Caroline St	40	6:26 AM - 6:01 PM	-	15	12	-
	051			5:31 AM - 2:29 AM	11:26 AM - 2:29 AM	7	8	30
Main St.	034	Main St at Caroline St	220	5:29 AM - 12:09 AM	7:10 AM - 11:56 PM	15	15	30
	011	Main St at Ray St	550	6:23 AM - 5:55 PM	-	-	-	-
	016			6:17 AM - 1:17 AM	8:17 AM - 1:23 AM	-	-	30
	017			7:07 AM - 10:07 PM	-	-	-	-
	018			7:03 AM - 4:02 AM	8:19 AM - 3:49 AM	-	-	30
	040			5:42 AM - 3:42 AM	5:42 AM - 3:42 AM	20	20	20
	041			8:08 AM - 1:02 AM	-	30	20	-
	047			6:17 AM - 2:47 AM	8:17 AM - 2:47 AM	-	-	30

Source: Triplinx.ca Website

4.4 Cycling Connectivity

According to the City of Hamilton's Transportation Master Plan, 2018, King Street West does not currently provide cycle lanes, shared or otherwise. However, the nearest connection to the City of Hamilton's existing cycling route network is located at the intersection of King Street West and Bay Street South, approximately 150m east of the subject site. A map of existing and planned bike routes in the surrounding area of the site is provided in Figure 16.

5. FUTURE BACKGROUND CONDITIONS

Future background traffic volumes were determined based on a review of future traffic volume growth, planned developments, and road improvements in the study area.

5.1 Background Growth Rate

A one percent per annum growth rate for the planning horizon years was applied to the study area roadways. This is consistent with the growth rates utilized in the background development studies discussed in the section below.

5.2 Planned Background Developments

The City of Hamilton Development Applications Map was reviewed to determine current planning applications in the surrounding area and is summarized in Table 3. A map detailing the general location of the development is provided in Appendix B. Since no TIS was available for the background development, trip rates from the ITE Trip Generation Manual, 11th edition were utilized. The ITE Land Use Code 222 (Multifamily Housing – High Rise), LUC 822 (Strip Retail Plaza <40k), and LUS 227 (Off-Campus Student Apartment – High Rise) were used to determine suitable trip rates. Site statistics and trip distribution of the background development on the study roadway are provided in Appendix B and summarized in Table 3.

Table 3 - Study Area Background Development

No.	File Number	Address	Description
1	ZAH-23-018	206 King Street West	To construct a 9-storey tower atop a four 4 storey base for a total of 13 storeys (43m). The proposal will provide for 122 residential units with 138m2 of commercial space at grade.
2	ZAD-23-030	213 King Street West	To develop a 30-storey mixed-use tower, with residential units, and retail frontage along King St W. A 110-room hotel is proposed with 241 dwelling units and 227 parking spaces, which consists of a total 343 units with 492 bedrooms.
3	DA-20-058	191 King Street West	To construct a 453-unit (639 bed) student residence building consisting of a 30 storey tower above a two to nine storey podium. A total of 266 parking spaces are proposed.
4	FC-19-067	22 Bay Street South	To develop the lands with a 29 storeys mixed use building with commercial/retail at grade and 285 residential units above
5	DA-20-076	166-190 Main St West	To construct a mixed-use development consisting of two 28 storey towers and one 27 storey tower above two base buildings. A total of 826 dwelling units, 749 sq.m. of commercial space and 531 parking spaces

Source: City of Hamilton – Development Application Map

5.3 Planned Roadway / Transit Improvements

As per the City of Hamilton's Transportation Master Plan, there are no improvements scheduled in the vicinity of the site.

6. SITE TRAFFIC

6.1 Trip Generation

2016 Transportation Tomorrow Survey (TTS) data was used to obtain the mode of travel percentages within the subject site, which falls under the City of Hamilton Ward 2. The summarized results are shown in Table 4. Source information for TTS data and mode of travel percentages is provided in Appendix C.

Table 4 – Alternative Mode of Travel Trips

Mode of Travel	Auto	Transit	Walk / Cycle/Other
Percent of Trips Made by Residents of the City of Hamilton – Ward 2	57%	17%	26%

Source: Transportation Tomorrow Survey 2016

Based on the data for Ward 2 which encompasses the site, 43% of the trips to and from the study area are from non-auto vehicular trips.

Trips for the proposed developments were generated using the Institute of Transportation Engineers (ITE) Trip Generation manuals, 11th Edition. Trip generation was adjusted using TTS data for the non-auto travel modes. Residential and commercial uses were generated based on ITE Land Use Code (LUC) 222 for multi-family housing high rise, Strip Plaza <40k (LUC) 822, and (LUC) 710 for business offices. The site trip generation is provided in Table 5.

Table 5 – Site Trip Generation

Land Use	Dwelling Units		Weekday AM			Weekday PM		
			Peak Hour			Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing - High Rise (LUC 222)	77.00	Dir. Distr.	26%	74%	100%	62%	38%	100%
		Equation	T = 0.22 (X) + 18.85			T = 0.26 (X) + 23.12		
		Rate	0.12	0.35	0.47	0.35	0.21	0.56
		Trips	**9**	**27**	**36**	**27**	**16**	**43**
General Office Building (LUC 710)	0.06	Dir. Distr.	88%	12%	100%	17%	83%	100%
		Equation	Ln(T) = 0.86 Ln (X) +1.16			Ln(T) = 0.83 Ln (X) +1.29		
		Rate	0	0	0	0	0	0
		Trips	**0**	**0**	**0**	**0**	**0**	**0**
Strip Retail Plaza (<40k) (LUC 822)	0.41	Dir. Distr.	60%	40%	100%	59%	41%	100%
		Equation		N/A			N/A	
		Rate	2.43	0	2.36	4.87	2.43	6.59
		Trips	**1**	**0**	**1**	**2**	**1**	**3**
Total Trips			**10**	**27**	**37**	**29**	**17**	**46**

Based on the ITE manuals, the subject site is expected to generate approximately 37 two-way auto trips in the weekday AM and 46 two-way auto trips in the weekday PM peak hours.

6.2 Trip Distribution and Assignment

Site trips for the proposed developments were distributed to/from the subject site and the boundary roadways based on existing travel patterns obtained from the study area intersection counts and study area context, as well as 2016 TTS data for the area. The study area is in the City of Hamilton, Ward 2.

The resulting trip distribution for all purposes, traveling to/from the study area from surrounding municipalities is shown below. According to the noted trip distribution, most of the trips travel between Hamilton and destinations to the west.

N
18%
W **57%** **14%** **E**
15%
S

The site traffic assignment for the weekday AM and PM peak hours are shown in Figure 6.

6.3 Multimodal Trip Generation

A review of the 2016 Transportation Tomorrow Survey (TTS) was conducted to obtain the mode of travel percentages within the subject site, which falls under the City of Hamilton, Ward 2. Applying the results

of the auto trip generation and the TTS mode of travel percentages, the trip generation for all other modes was estimated for the site for the weekday AM and PM peak hours, as summarized in Table 6. Source information for TTS data, and mode of travel percentages, is provided in Appendix C.

Table 6 - Modal Trip Generation

Mode of Travel		Weekday AM Peak Hour			Weekday PM Peak Hour		
Mode	Percentage	In	Out	Total	In	Out	Total
Driver	49%	6	16	22	17	10	27
Passenger	8%	1	3	4	3	2	5
Transit	16%	2	5	7	5	3	8
GO Train	1%	0	0	0	0	0	0
Cycle	6%	1	2	3	2	1	3
Walk	20%	2	6	8	7	4	11
Other	0%	12	32	44	34	20	54
Total Trips for All Modes							

Source: Transportation Tomorrow Survey 2016

Transit Trips

- Approximately sixteen percent (16%) of trips from Ward 2 are transit trips. The site is expected to generate a total of 7 trips during the weekday AM and 8 trips during the weekday PM Peak Hour.

GO Train Trips

- Approximately one percent (1%) of all trips utilize the GO Train within the City of Hamilton, Ward 2. The site is expected to generate 0 two-way GO Train trip during the weekday AM and PM Peak Hours.

Cycle Trips

- Approximately six percent (6%) of all trips use Cycle within the City of Hamilton, Ward 2. The site is expected to generate a total of 3 trip for both weekdays AM and PM Peak Hour.

Walk Trips

- Approximately twenty percent (20%) of trips within Ward 2 are walk trips. The site is expected to generate a total of 8 trips for weekday AM Peak Hour, and 11 trips during weekday PM Peak Hour. (excluding walk trips to and from the nearby transit stops).

7. FUTURE TOTAL TRAFFIC CONDITIONS

Site traffic volumes were added to the future background traffic volumes to obtain future total traffic volumes for the peak hours. The year future 2031 total traffic volumes for the weekday AM and PM peak hours are shown in Figure 7.

8. CAPACITY AND QUEUEING ANALYSIS

8.1 Auto Trip Capacity

A capacity analysis was performed for the study area intersections and site driveway using Synchro analysis software. The capacity analysis results of the weekday AM and PM peak hours are shown in Table 7 . Capacity and Queuing Analysis Sheets and Level of Service Definitions are provided in Appendix D and Appendix E, respectively.

According to the City of Hamilton's Traffic Impact Study Guidelines, a level-of-service (LOS) of D or better, or a volume-to-capacity (v/c) ratio of 0.85 or better is generally acceptable for individual movements and the overall intersection. The results of the capacity analysis and queuing analysis are summarized in this section for each intersection:

Caroline Street South / King Street West

The overall intersection is currently operating at an acceptable capacity for both weekdays AM and PM Peak Hours, with a volume-to-capacity (v/c) ratio of 0.43 and 0.42, respectively. It is expected to continue to operate at an acceptable capacity in future conditions for both weekdays AM and PM Peak Hours at a v/c ratio of 0.56 and 0.51.

Caroline Street South / George Street

The overall intersection is expected to operate at an acceptable LOS of B or better, with a maximum delay of 4 seconds for all scenarios.

Caroline Street South / Main Street West

The overall intersection is currently operating at an acceptable capacity for both weekdays AM and PM Peak Hours, with a volume-to-capacity (v/c) ratio of 0.38 and 0.40, respectively. It is expected to continue to operate at an acceptable capacity in future conditions for both weekdays AM and PM Peak Hours at a v/c ratio of 0.41 and 0.44.

Caroline Street South and Proposed Site Access

The proposed site access is expected to operate at a Level of Service (LOS) of A and a maximum delay of 1 second for both Weekday AM and PM Peak Hour conditions.

Table 7 - Capacity Analysis Results

Intersection	Existing Traffic Conditions						Background Traffic Conditions						Total Traffic Conditions					
Movement	Weekday AM Peak			Weekday PM Peak			Weekday AM Peak			Weekday PM Peak			Weekday AM Peak			Weekday PM Peak		
	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
Caroline Street South & King Street West	**0.43**	**15**	**B**	**0.43**	**15**	**B**	**0.52**	**19**	**B**	**0.5**	**16**	**B**	**0.56**	**15**	**B**	**0.51**	**16**	**B**
Westbound Through / Left	0.63	16	B	0.65	16	B	0.69	20	C	0.67	16	B	0.65	16	B	0.68	16	B
Northbound Left	0.27	10	B	0.23	11	B	0.4	13	B	0.34	14	B	0.48	14	B	0.36	14	B
Southbound Through / Right	0.04	8	A	0.03	9	A	0.05	9	A	0.05	11	B	0.05	9	A	0.05	11	B
Caroline Street South & Proposed Site Access																		
Eastbound Left / Right		0	A		0	A		0	A		0	A		10	B		10	B
Nothbound Left / Through		0	A		0	A		0	A		0	A		0	A		1	A
Southbound Through / Right		0	A		0	A		0	A		0	A		0	A		0	A
Caroline Street South & George Street																		
Eastbound Left / Through / Right		11	B		13	B		12	B		15	B		12	B		15	B
Westbound Left / Through / Right		11	B		13	B		12	B		14	B		12	B		14	B
Nothbound Through / Right		0	A		0	A		0	A		0	A		0	A		0	A
Southbound Left / Through		2	A		2	A		2	A		2	A		2	A		2	A
Caroline Street South & Main Street West	**0.38**	**20**	**B**	**0.4**	**19**	**B**	**0.42**	**20**	**C**	**0.43**	**19**	**B**	**0.41**	**20**	**C**	**0.44**	**19**	**B**
Eastbound Left / Through / Right	0.67	21	C	0.65	21	C	0.69	21	C	0.67	21	C	0.68	22	C	0.67	21	C
Nothbound Through / Right	0.14	15	B	0.09	15	B	0.17	17	A	0.13	16	A	0.16	16	A	0.13	17	A
Southbound Left	0.16	9	A	0.21	8	A	0.19	10	B	0.24	9	B	0.18	9	B	0.25	9	B
Southbound Through	0.07	9	A	0.16	8	A	0.09	10	A	0.18	9	A	0.08	9	A	0.18	9	A

9. PARKING STUDY

9.1 Parking Requirements

The proposed parking supply in comparison to the parking requirements from the City of Hamilton Zoning By-law 05-200, Section 5, dated April 2024, which is summarized below in Table 8.

Table 8 - Minimum Parking Requirements using Zoning By-law

Land Use Category (Uses)	GFA / No. of Units	Minimum Parking Requirement		Maximum Parking Rate	Proposed Parking Supply
		Rate for each use	Required Parking Space		
Retail (Commercial Office)	38.17 m2	0	0	In PRA 1, 1 space per unit	21
Multiple Dwelling	77 units	In PRA 1, 0 parking space are required for residents	0		
		2 Visitor Parking Spaces + 0.05 visitor parking Space per unit	6		
TOTAL			**6**	**77**	**21**

Source: City of Hamilton Zoning By-law 05-200, Section 5

Based on our review of the City's Zoning By-Law, the total parking requirement for the proposed development is 6 spaces for Retail and Residential use and a maximum of 77 parking spaces. Given that the proposed site plan indicates a total of 21 parking spaces, the proposed development conforms to the minimum and maximum parking requirements.

10. SITE CIRCULATION REVIEW

An on-site circulation study was conducted using AutoTurn vehicle turning template software to demonstrate that design vehicles can safely and efficiently access the site and their designated areas, as illustrated in the following figures:

- **Waste Collection Vehicle -** Figure 8 and Figure 9 show a waste collection vehicle entering and exiting the site and accessing the designated loading space in the site.
- **Loading Vehicle -** Figure 10 and Figure 11 show a medium-sized loading vehicle accessing and exiting the proposed loading space.
- **Passenger Vehicle -** Figure 12 to Figure 15 show a typical 5.6 m passenger vehicle entering and exiting from critical parking spaces on the Ground Floor.

The vehicle turning templates indicate that the proposed driveways and internal drive aisles can accommodate the design vehicles and access and circulate the site without conflict.

11. TRANSPORTATION DEMAND MANAGEMENT PLAN

TDM measures include policies, programs, services, and products that influence whether, why, when, where, and how people travel. They work by shaping the economic and social factors behind personal travel decisions. TDM is not a substitute for infrastructure investment but complements investments in walking, cycling, and transit facilities by making them more effective.

By improving individuals' awareness of different travel options, their understanding of how to use those options, and their willingness to try those options, TDM increases the likelihood that they will make informed choices.

Based on a review of the City of Hamilton's TDM Guidelines, the TDM measures reviewed for the subject site (and corresponding level of analysis applied) are consistent with a residential development (multi-family, low-medium density) that generates less than 50 trips in peak hour traffic conditions.

A detailed list of all potential measures to be considered for the proposed development is provided in Appendix H, including our feedback as to whether the application of each measure being considered is feasible or not for the subject site. The measures that we propose to be carried forward are further summarized in Table 9.

Table 9 – Proposed TDM Measures for the Subject Site

Category	TDM Initiative / Incentives	Initiatives to be Considered
Cycling	Visible, well-lit, short-term bicycle parking for visitors and customers (above minimum provisions or recommendations)	✓
	Secure, indoor bicycle parking storage spaces for residents and employees	✓
Walking	Safe and attractive walkways for pedestrians linking building entrances with public sidewalks	✓
	Enhanced pedestrian amenities on-site (benches, landscaping, lighting)	✓
Transit	Enhance walking routes between the main building entrance(s) and transit stops/stations	
	Provision of transit information on-site and adjacent to stops/stations	
	Provide weather-protected waiting areas	
	Bicycle parking located at or near transit stops	
Parking	Provide no more than the minimum number of required spaces for residents and visitors	✓
	Reduced minimum parking requirements based on proximity to transit	✓
	Unbundle parking costs from residential unit costs	✓
	Shared parking with nearby developments or on-street spaces	✓
Car Share / Bike Share	On-site bike share facility	✓ ✓
Wayfinding and Travel Planning	Travel planning resources for residents and employees (individualized marketing, trip planning tools, active transportation maps, information resources)	✓
	Wayfinding signage	✓
Education / Promotion, Incentives	Contribute to building a strong TDM brand	✓

12. SITE PLAN REVIEW OF TDM MEASURES

This section reviews how TDM measures could be incorporated into the site plan and provides a further understanding of the connectivity of the site to and from the pedestrian and cycling network and to and from the nearest transit stops.

12.1 Pedestrian Connectivity

The proposed development's main entrance, exits, and ground floor retail units will be connected to existing sidewalks on the building's King Street West and Caroline Street South frontages. These connections will provide access to the broader local sidewalk network and local amenities such as fine-grained street-oriented shops and services on King Street. The proposed development will enhance its adjacent sidewalks and the public realm via active ground-floor retail frontages and design elements.

12.2 Cycle Connectivity

Bicycle parking on-site is recommended to encourage more people to cycle, especially for utilitarian purposes. Such implementation would likely result in taking more cars off the road during peak hours, helping to reduce traffic congestion, and being more environmentally friendly.

The City of Hamilton's TDM Guidelines were applied by using typical bicycle parking rates to determine bicycle parking needs for the site. In the Guidelines, long-term and short-term bicycle spaces are to be considered. Long-term spaces are generally rooms located within or a part of a building, exclusive for bicycle parking. Short-term spaces are designated areas for bicycle parking with racks/stands designed to lock the wheel and frame of a bicycle. Table 10 provides the bicycle parking supply provision, as noted in Hamilton's TDM Guidelines.

Table 10 – Bicycle Parking Guidelines

Land Use Category (Uses)	No. of Units	Minimum Parking Requirement	
		Other Areas	Required Spaces
Multiple Dwelling	77	Long Term: 0.7 space/unit	54
		Short Term: 0.1 space/unit	8
Retail (38.17 sq.m. GFA)	1	Long Term: 0.2 / 100 sq. m	0
		Short Term: 0.15 / 100 sq. m	0
		Total	62

Source: Hamilton Transportation Demand Management (TDM) Guide for Development, June 2015.

As per the City's TDM guidelines, a minimum of 8 short-term bicycle parking spaces and 54 long-term bicycle parking spaces are suggested to serve the development. Currently, there are no proposed bicycle parking spaces in the proposed development.

To further support cycling, one bike repair station could be added between the blocks.

12.3 Transit Connectivity

Increasing public transit use has many benefits such as protecting the environment, reducing traffic congestion on regional roads, providing convenience, saving energy, strengthening communities, and improving liveability.

As discussed in Section 5.1, high-frequency HSR currently serves the subject site throughout the City of Hamilton and GO transit through bus routes and trains provides connectivity to the Greater Toronto Area, York Region, and Durham Region.

12.4 Summary of TDM Measures

A summary of proposed measures that the developer can implement is shown in Table 11. The table includes the TDM measures as well as the associated estimated costs and actions needed to implement each measure.

Table 11 - Transportation Demand Management Plan Summary

	TDM Program or Measure	Applicant's Responsibility	Implementation of TDM Measure	Units Costs	Total Costs
A	Transit / Carpool Information	Information packages (HRS, GO schedules, cycling maps)	Provide new tenants information on transit routes, cycling maps, and carpool options	$20 per package	$20 per tenant (77 units)
B	Pedestrian / Cycling	Bicycle Parking	Installation of bicycle parking spaces	$100 per rack	62 racks: $6,200
		Bicycle Repair Station	Installation of bicycle parking spaces	$1,500 per repair station	$1,500
Total			**~$9,240 + HST**		

13. CONCLUSIONS

Our Traffic Impact Study for the proposed residential development, located at 235 King Street, in the city of Hamilton, Halton Region is summarized as follows:

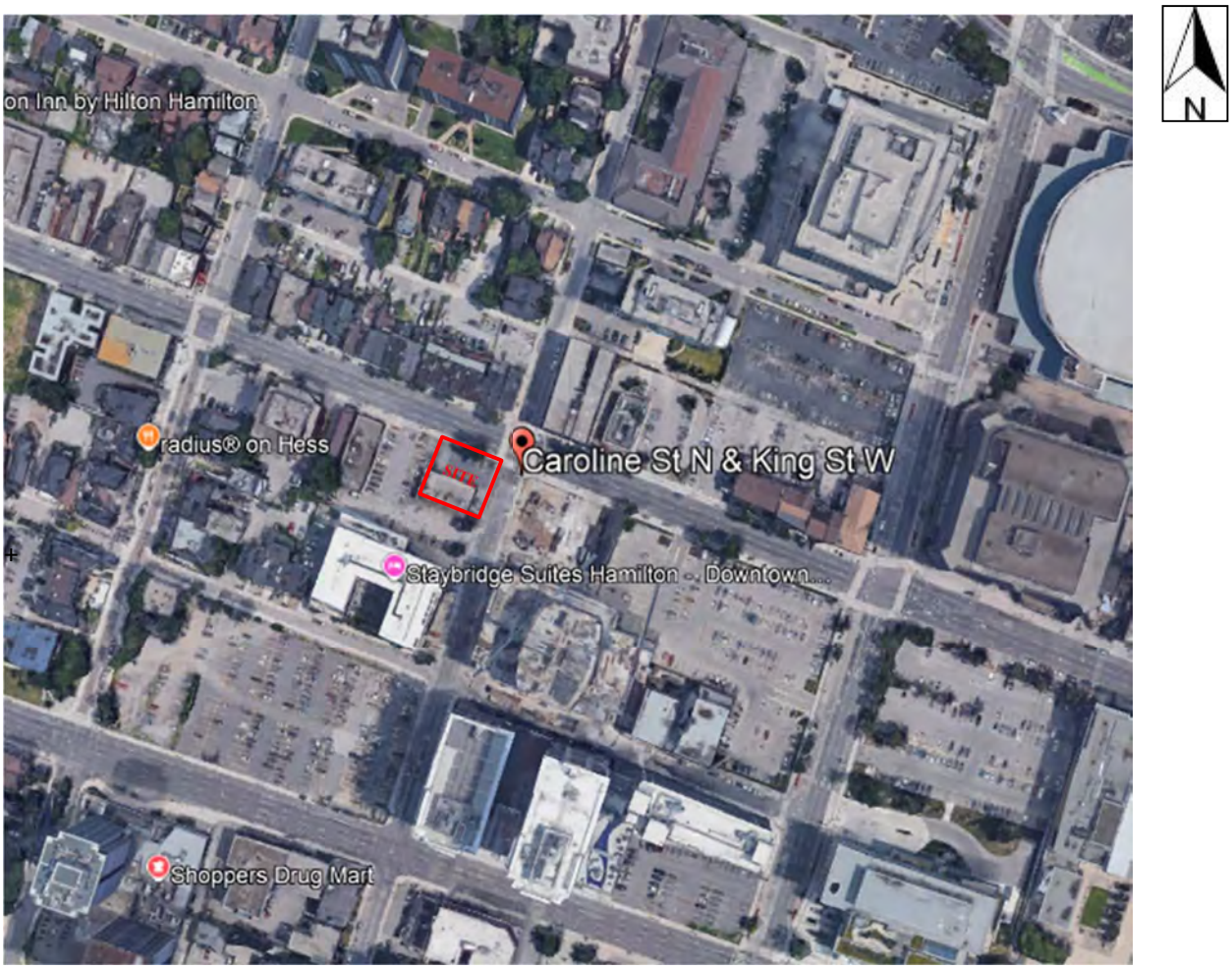
- As per the site plan prepared by SAPLYS Architects Inc., the proposed mixed-use development has a total GFA of 7,585 m^2 with 77 residential units and 1 unit of retail and office with a total of 21 proposed parking spaces located at the 3-level basement parking.
- Trip rates were obtained based on the ITE manuals, the subject site is expected to generate approximately 37 two-way auto trips in the weekday AM and 46 two-way auto trips in the weekday PM peak hours.
- The intersections in the study area are expected to operate at an acceptable capacity. It should be noted that the existing and total conditions are showing similar results, indicating the site has a minor impact on the study intersections.

- Based on our review of the City's Zoning By-Law dated April 2024, the proposed parking rate of 21 spaces conforms to the minimum and maximum parking rate requirements.
- The vehicle turning templates indicate that the proposed driveways and internal drive aisles can accommodate the design vehicles and access and circulate the site without conflict.
- Transportation Demand Management infrastructure (sidewalks, nearby bus stops, bicycle parking, etc.) is well established within and around the subject site as well.

Respectfully submitted,

Anil Seegobin, P. Eng.
Partner, Engineer
Trans-Plan Transportation Inc.
Transportation Consultants

Figure 1 – Site Location



Source: Google Earth

Figure 2 – Site Plan

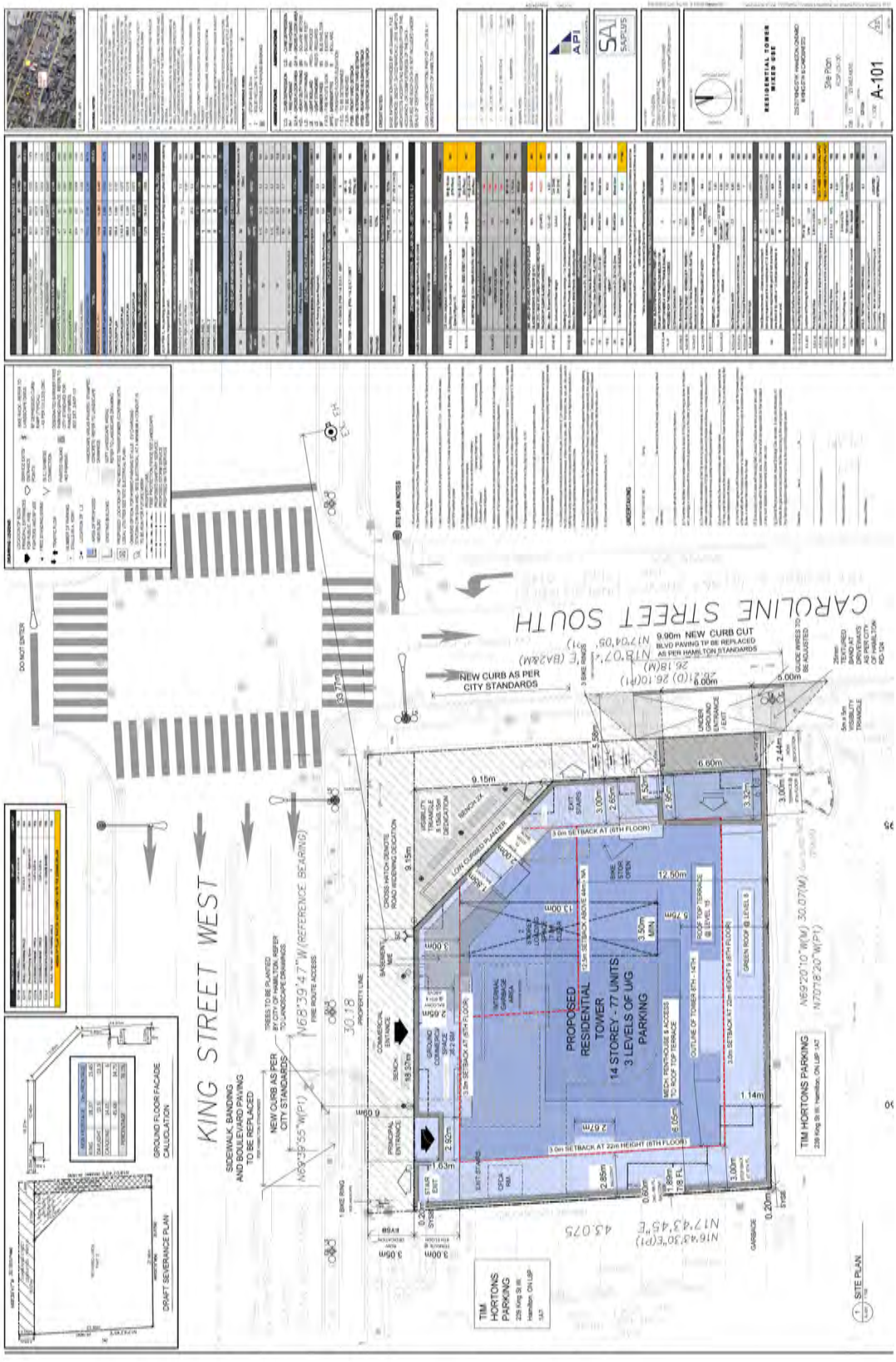


Figure 3: Existing Study Area Roadway Characteristics

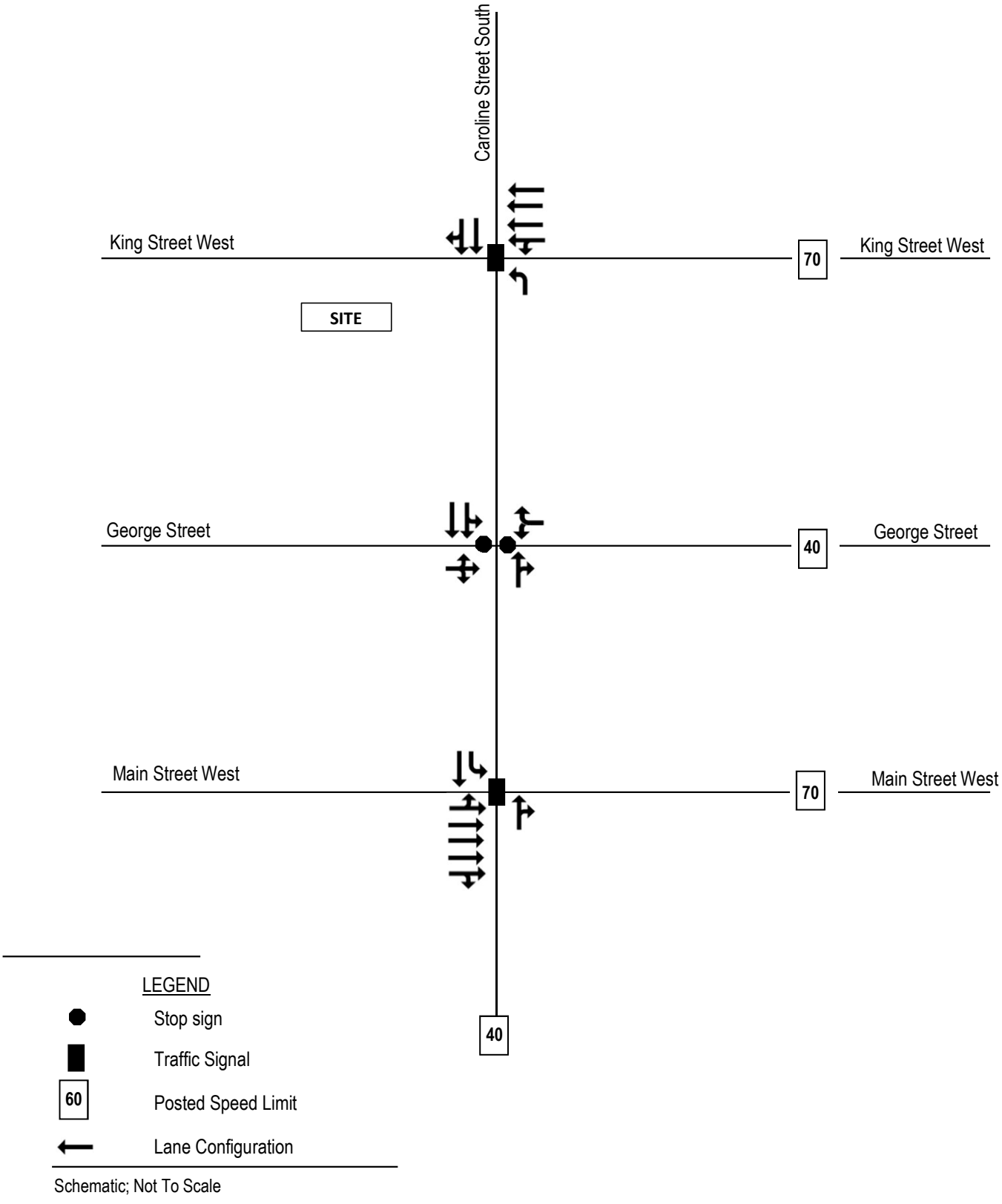


Figure 4: Existing Traffic Volumes, Weekday AM and PM Peak Hours

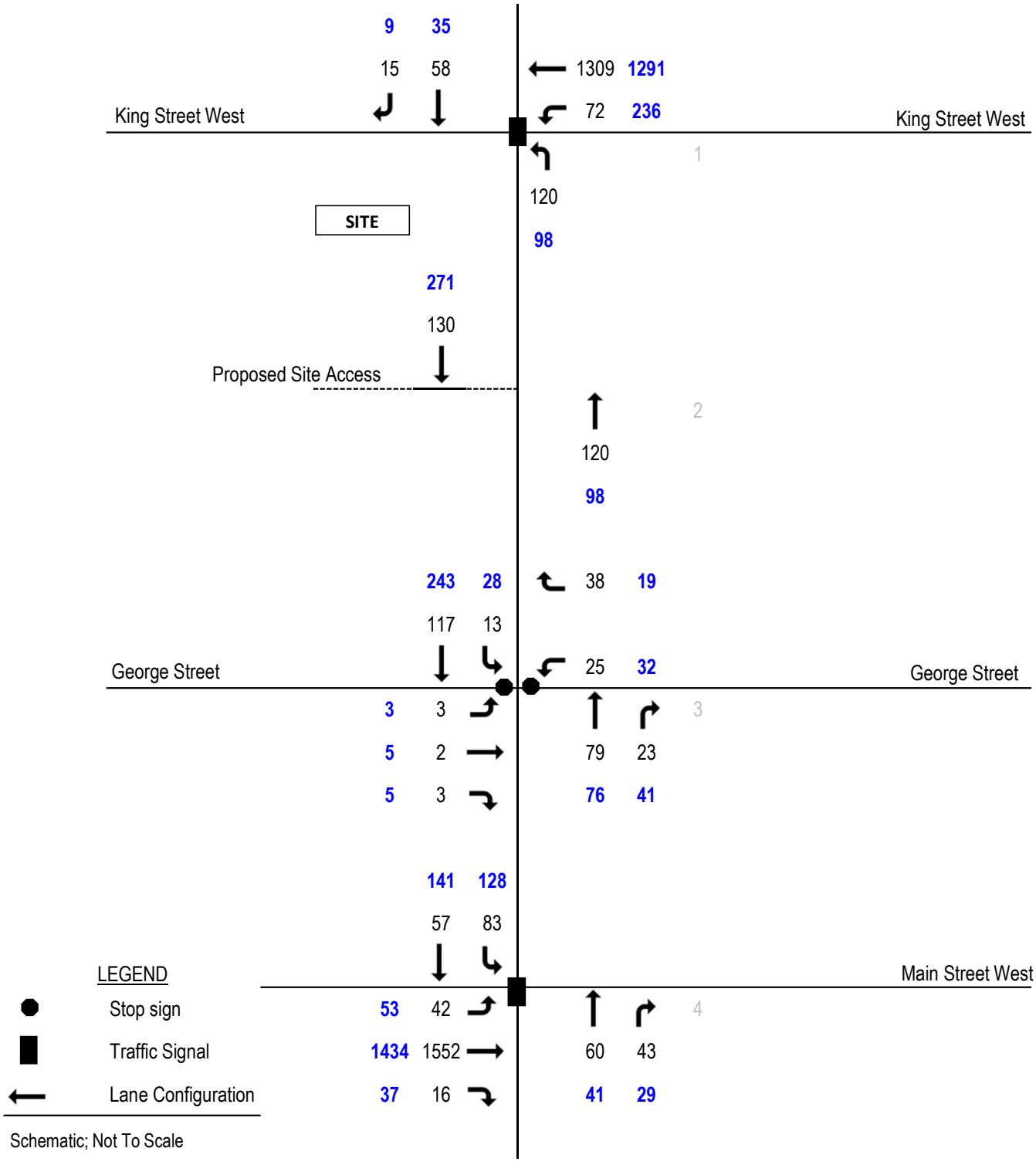


Figure 5: Future Background 2031 Traffic Volumes, Weekday AM and PM Peak Hours

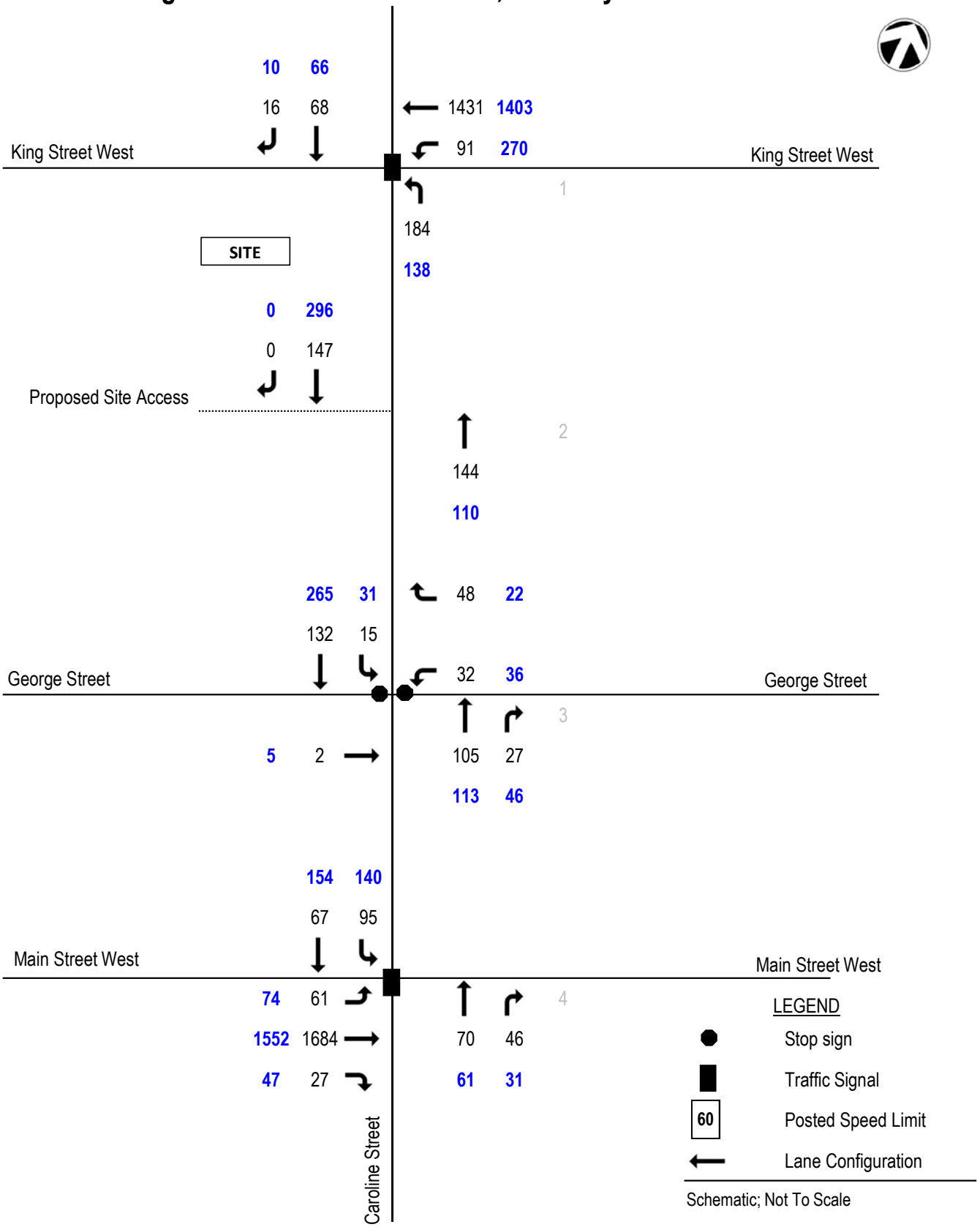


Figure 6: Site Traffic Assignment, Weekday AM and PM Peak Hours

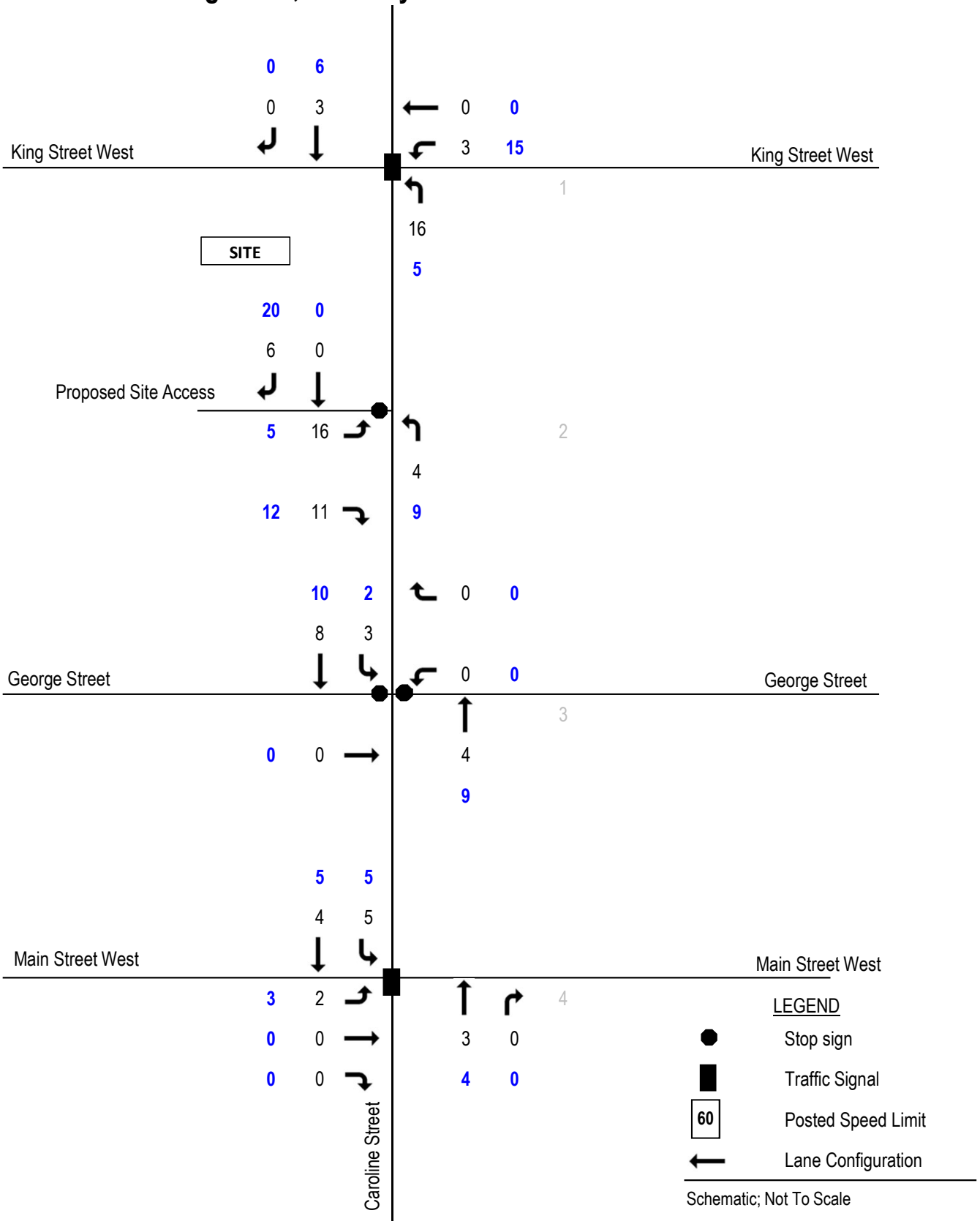
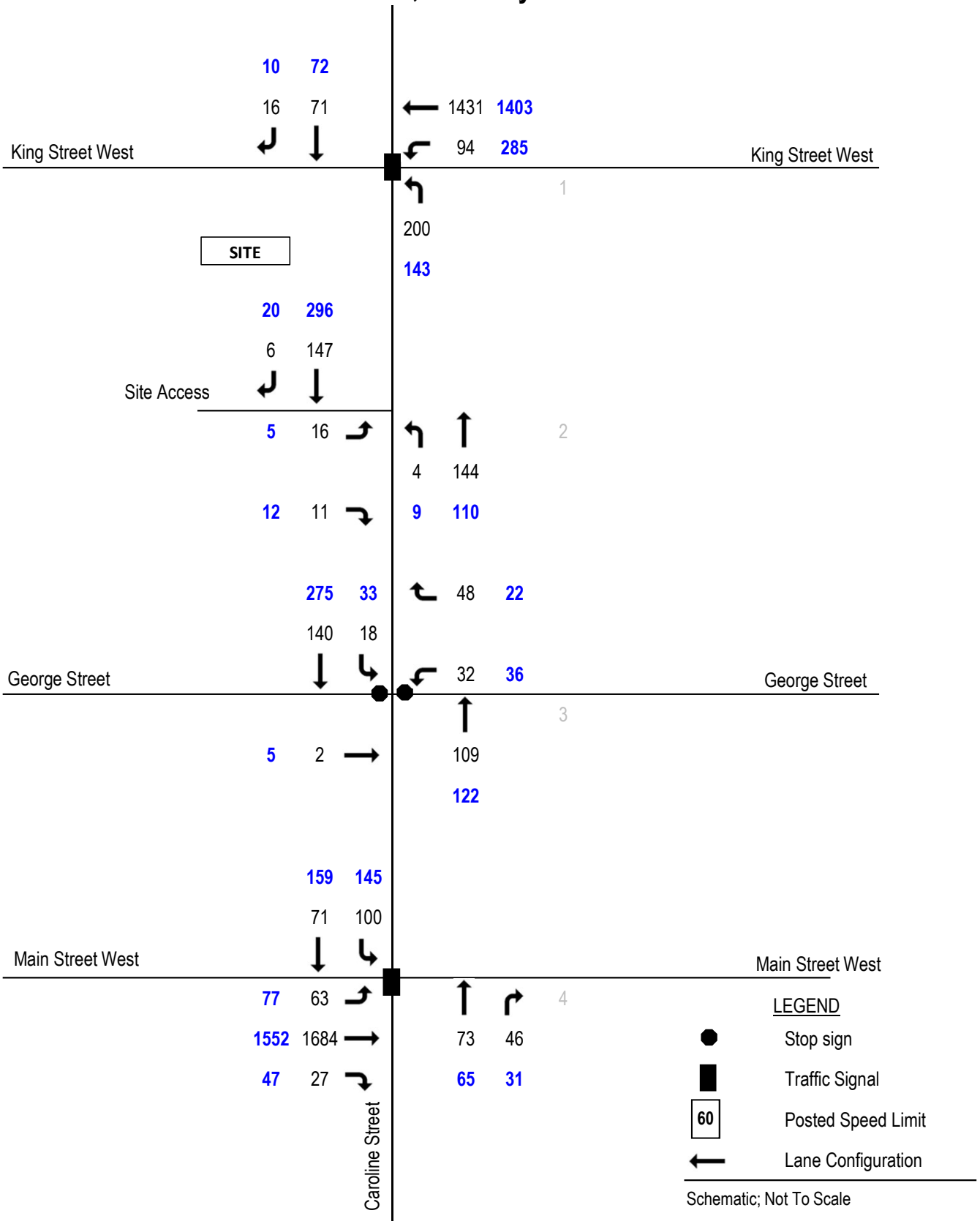


Figure 7: Future Total 2031 Traffic Volumes, Weekday AM and PM Peak Hours



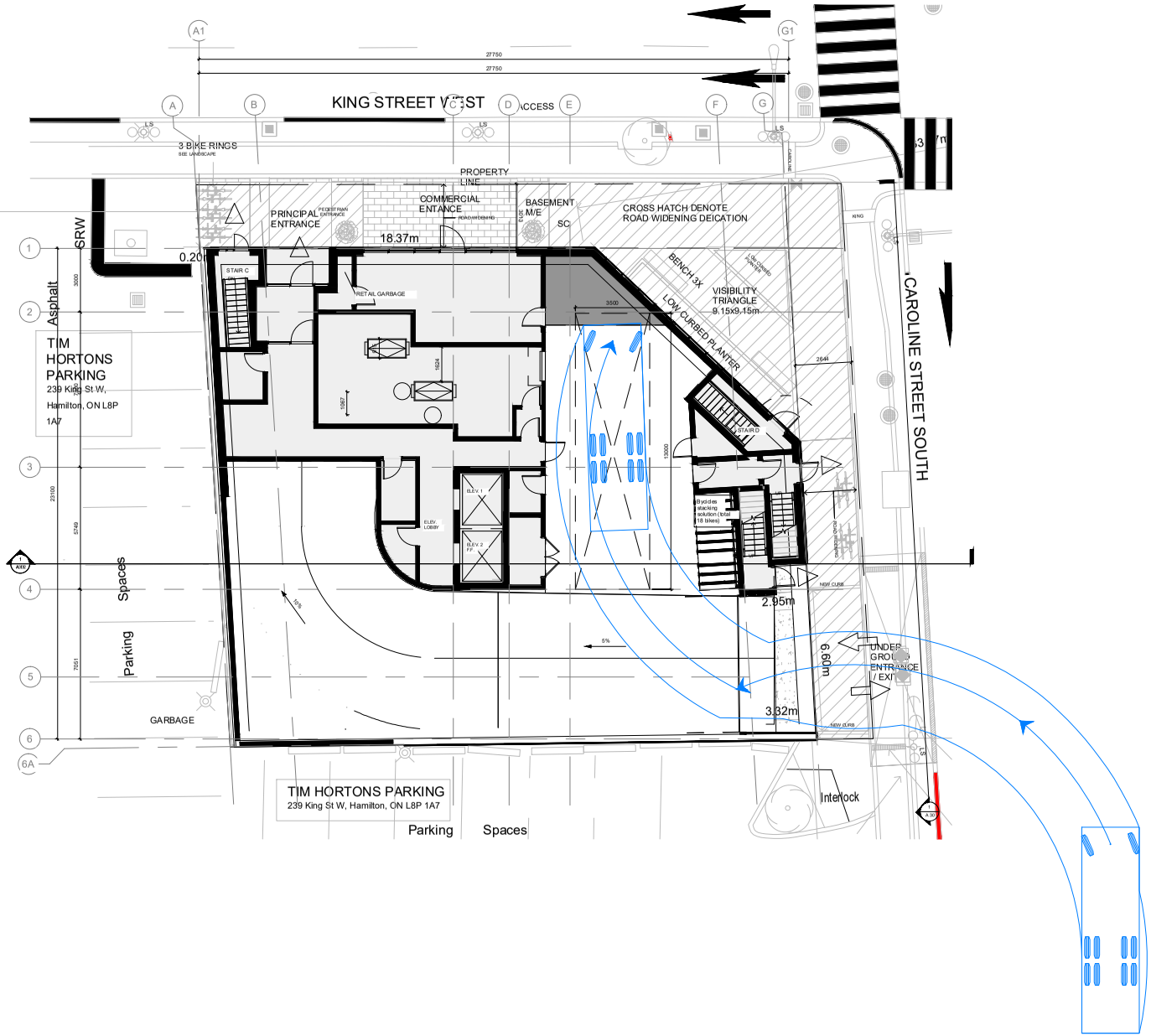
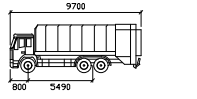


Figure 08 - Waste Collection Vehicle Accessing Loading Space (Front Load)

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



CONSTRUCTION NORTH

TRUE NORTH

Source: Site Plan by API Development Consultants Inc.., September 2024

SCALE: 1:300 UNITS: meter

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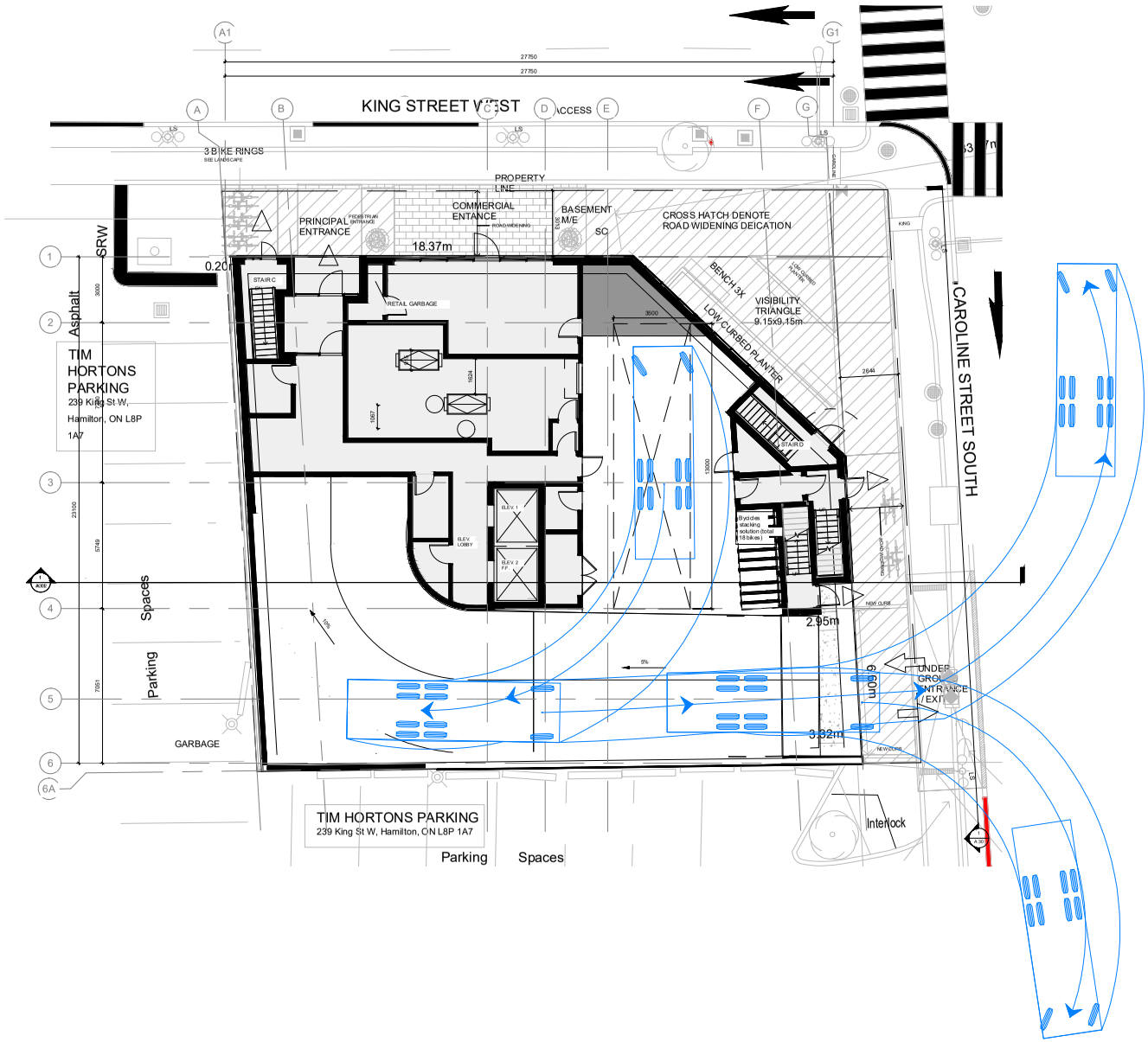
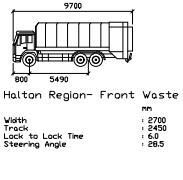


Figure 09 - Waste Collection Vehicle Exiting Loading Space (Front Load)

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



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SCALE: 1:300 UNITS: meter

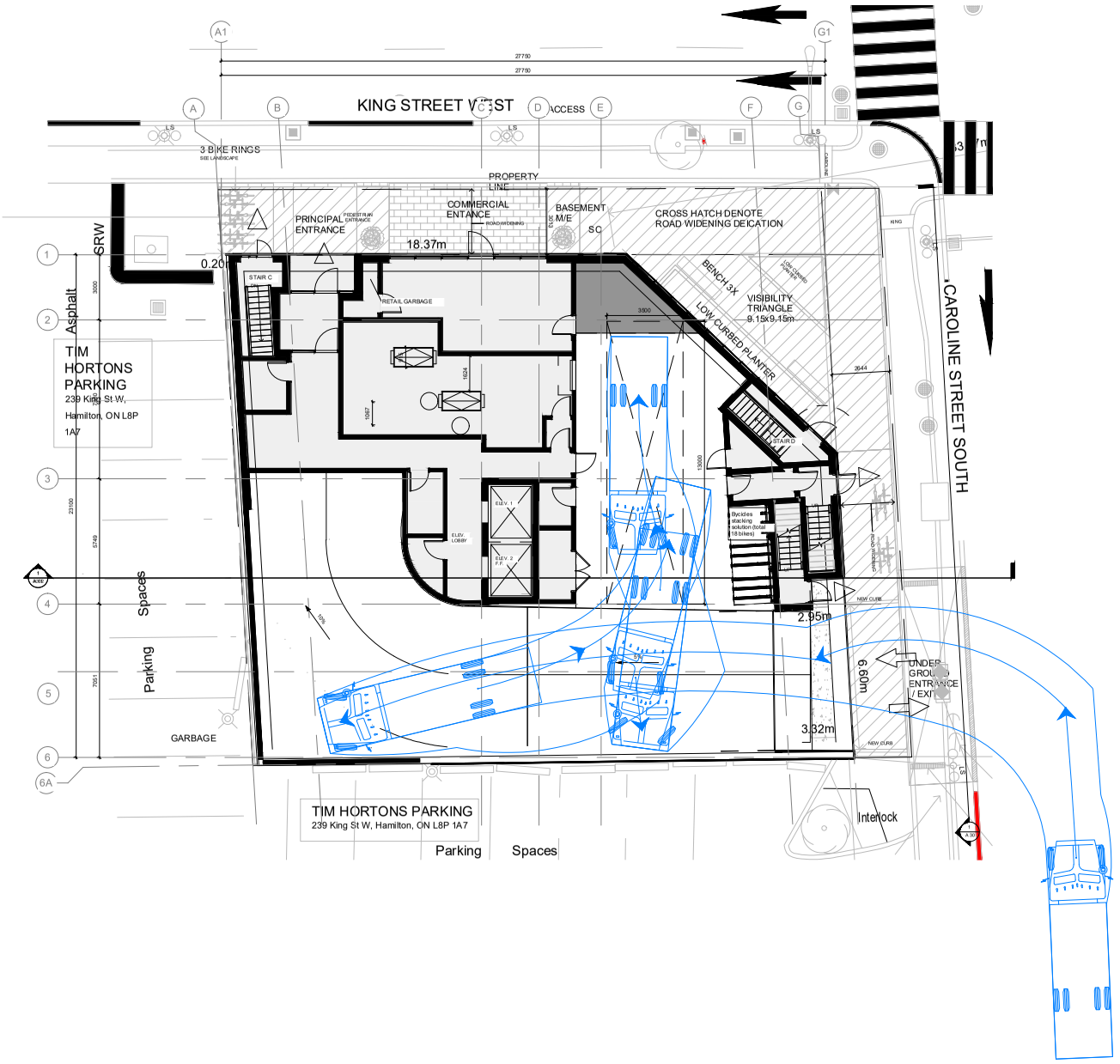
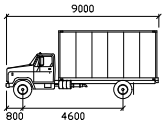


Figure 10 - Loading Vehicle Accessing Loading Space

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



CONSTRUCTION NORTH

TRUE NORTH

Source: Site Plan by API Development Consultants Inc.., September 2024

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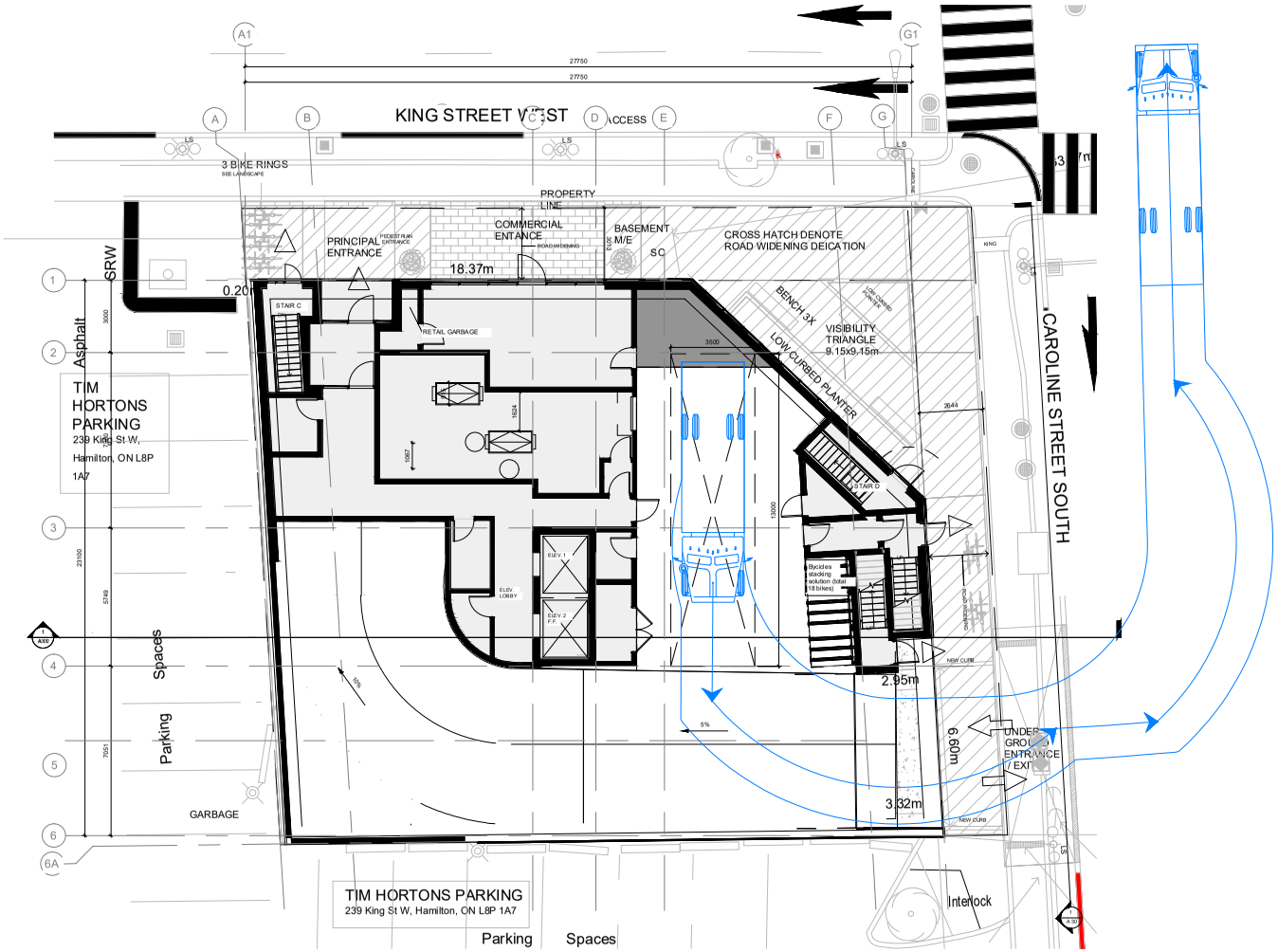
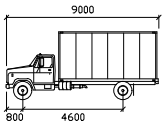


Figure 11 - Loading Vehicle Exiting Loading Space

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



MSU 9m

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Track	: 2600
Lock to Lock Time	6.0
Steering Angle	: 40.1

CONSTRUCTION NORTH

TRUE NORTH

Source: Site Plan by API Development Consultants Inc.., September 2024

SCALE: 1:300 UNITS: meter

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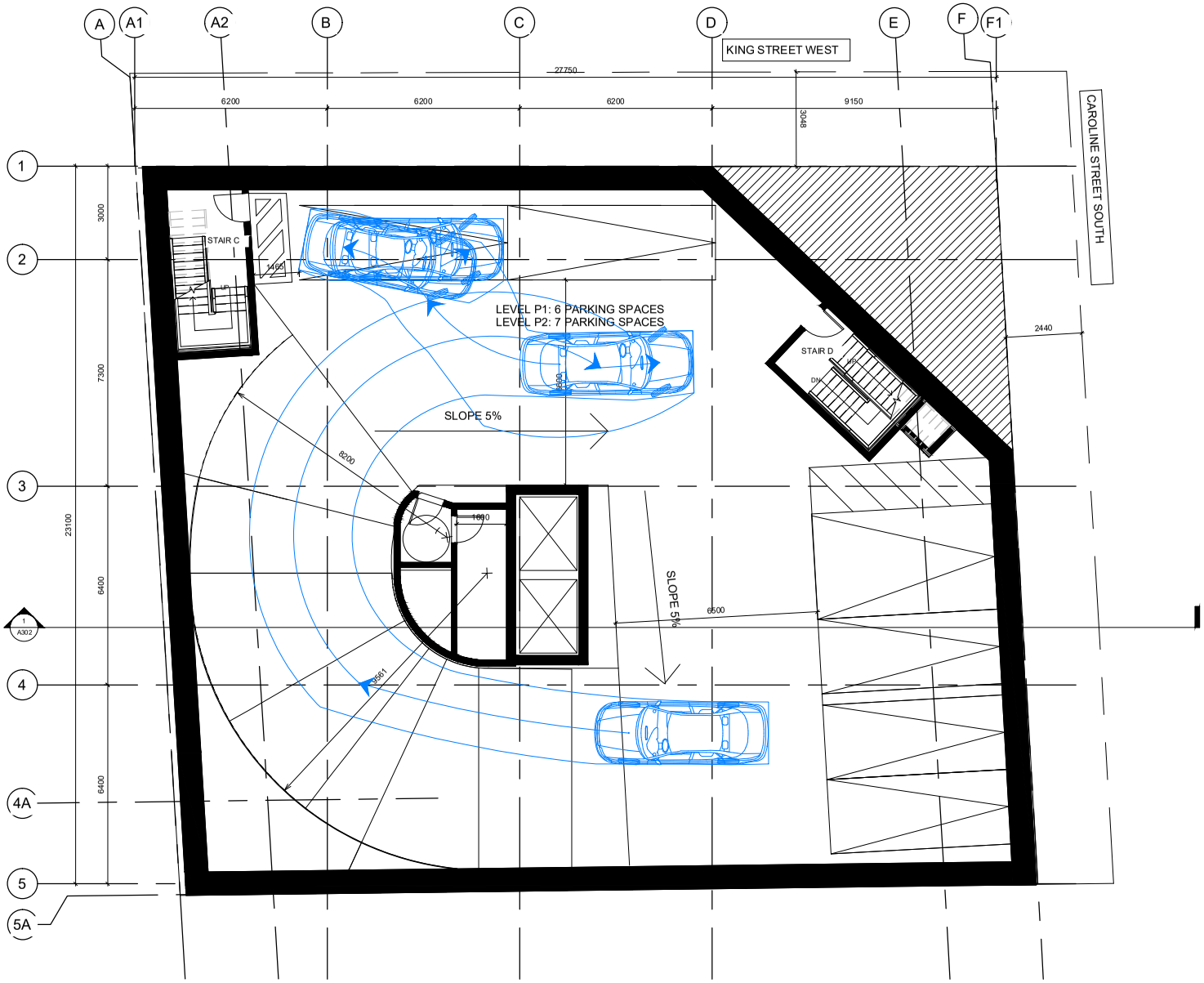
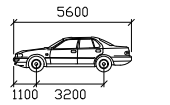


Figure 12 - Passenger Vehicle Accessing Parking Space from Ground Floor

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



P

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Width	: 2000
Track	: 2000
Lock to Lock Time	6.0
Steering Angle	: 35.9

CONSTRUCTION NORTH

TRUE NORTH

Source: Site Plan by API Development Consultants Inc.., September 2024

SCALE: 1:200 UNITS: meter

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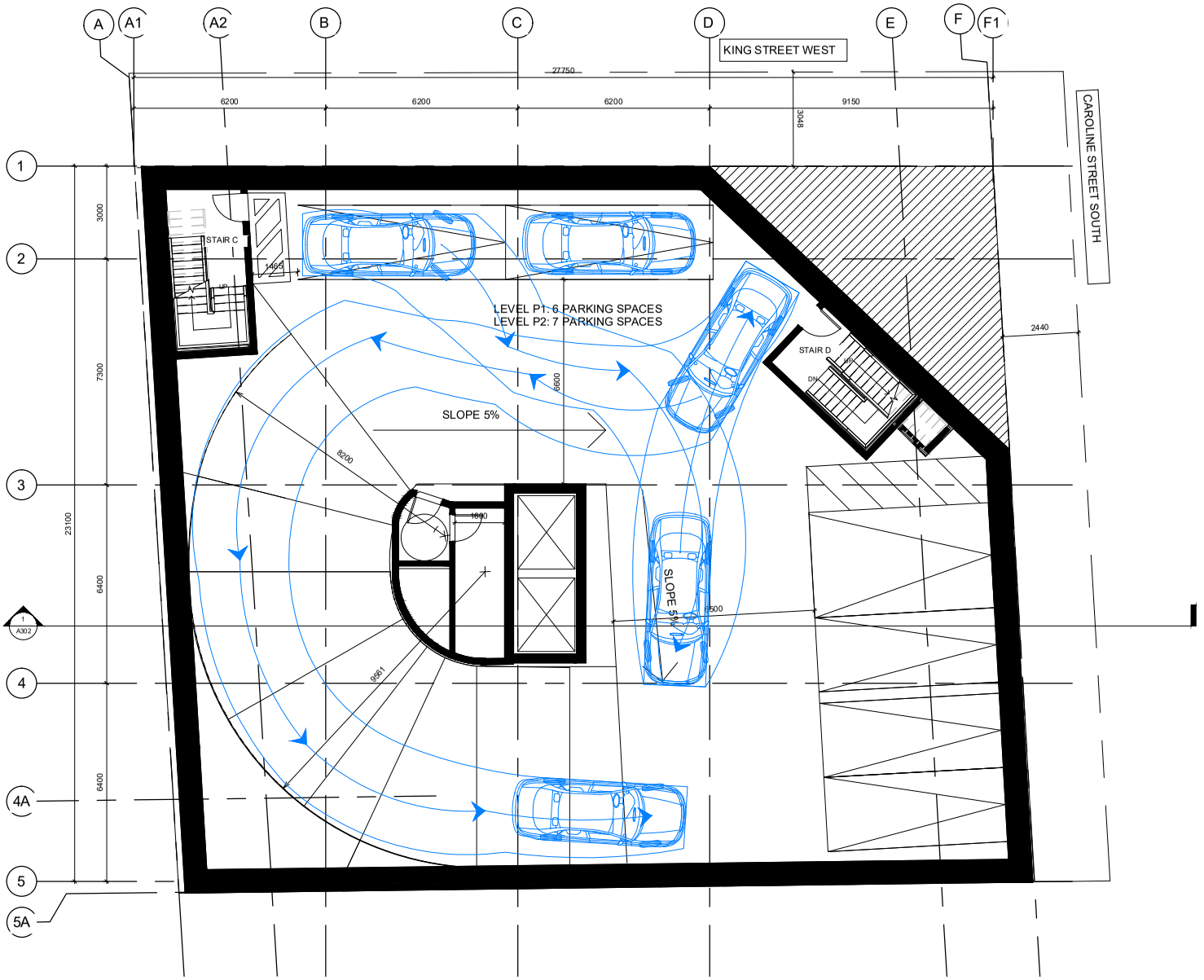
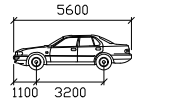


Figure 13 - Passenger Vehicle Exiting Parking Space

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



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Width	: 2000
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Lock to Lock Time	6.0
Steering Angle	: 35.9

CONSTRUCTION NORTH

TRUE NORTH

Source: Site Plan by API Development Consultants Inc.., September 2024

SCALE: 1:200 UNITS: meter

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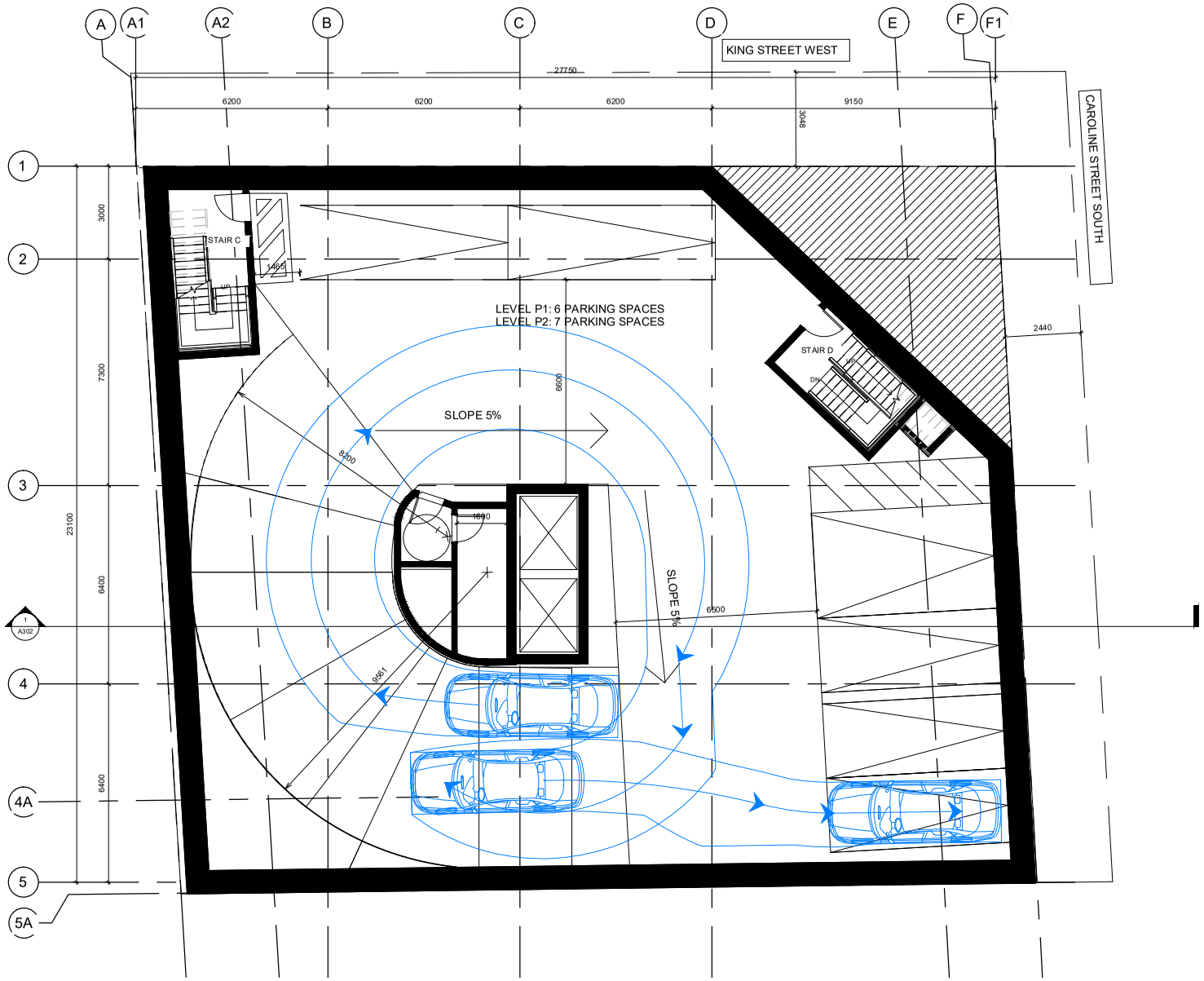
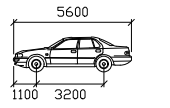


Figure 14 - Passenger Vehicle Accessing Parking Space from Ground Floor

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



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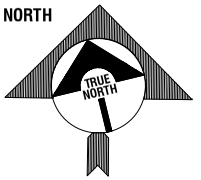
Width	: 2000
Track	: 2000
Lock to Lock Time	6.0
Steering Angle	: 35.9

CONSTRUCTION NORTH



Source: Site Plan by API Development Consultants Inc.., September 2024

SCALE: 1:200 UNITS: meter

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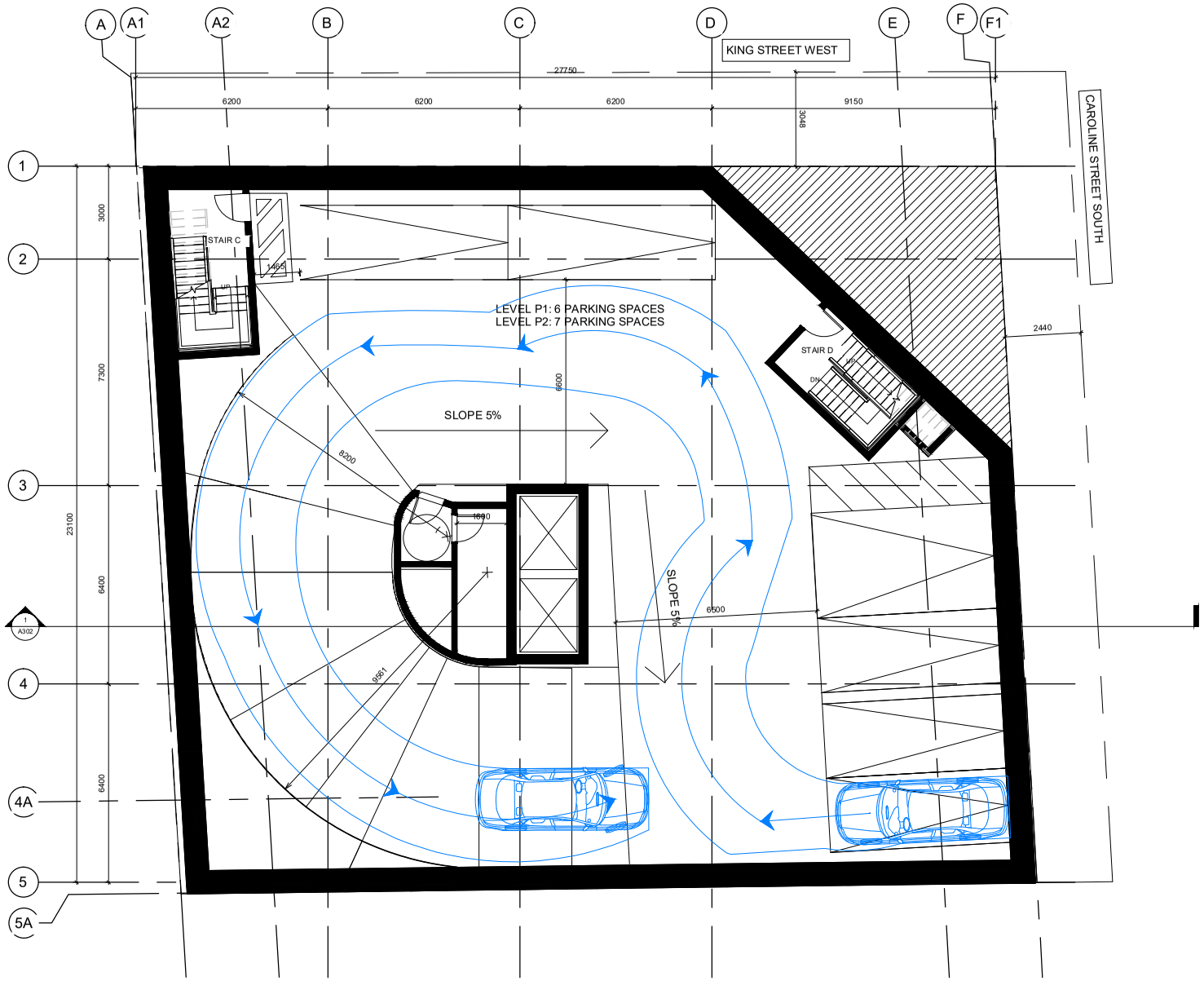
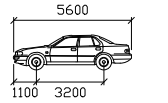


Figure 15 - Passenger Vehicle Exiting Parking Space

PROPOSED MIXED-USED DEVELOPMENT
235 KING STREET WEST,
CITY OF HAMILTON, ON



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Width	: 2000
Track	: 2000
Lock to Lock Time	6.0
Steering Angle	: 35.9

CONSTRUCTION NORTH

TRUE NORTH

Source: Site Plan by API Development Consultants Inc.., September 2024

SCALE: 1:200 UNITS: meter

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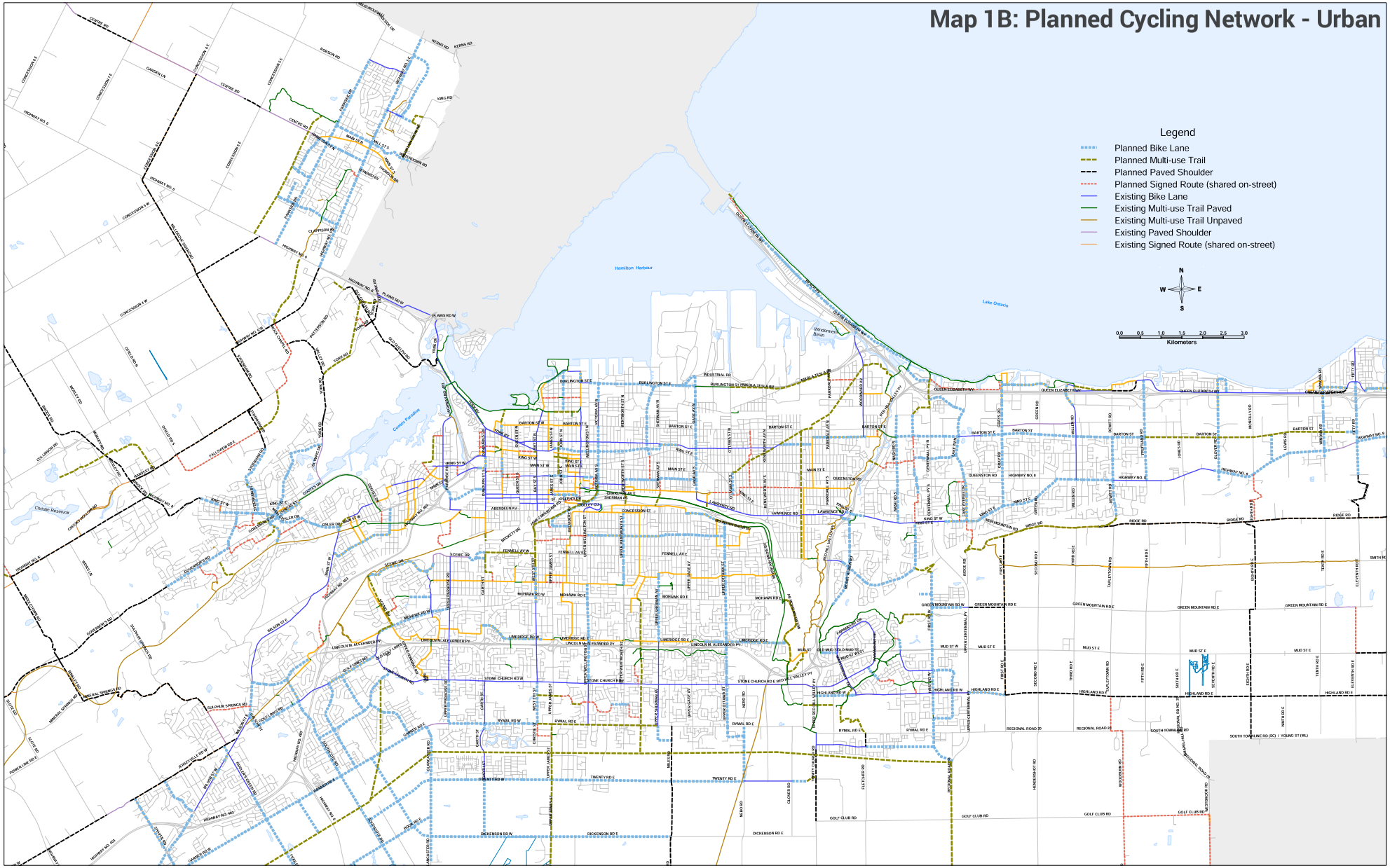
FIGURE 16 : EXISTING AND PLANNED CYCLING NETWORK



APPENDICES

Appendix A – Turning Movement Counts & Signal Timing Plans

Appendix B – Background Traffic Information

Appendix C – Transportation Tomorrow Survey Data

Appendix D – Capacity Analysis Sheets

Appendix E – Level of Service Definitions

Appendix F - City of Hamilton’s Zoning By-law Excerpts

Appendix G - City of Hamilton's Planned Cycling Network

Appendix H - City of Hamilton’s TDM Initiatives for Mixed Use Developments

APPENDIX A

Turning Movement Counts and Signal Timing Plans

Turning Movement Count Diagram

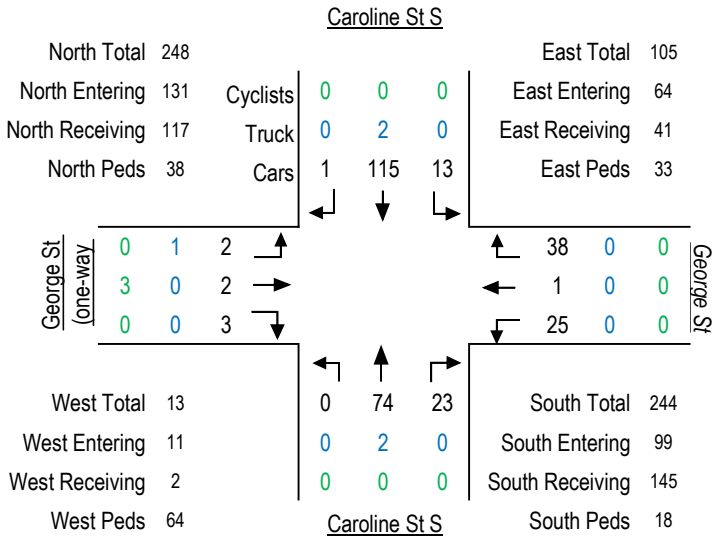
Intersection: Caroline Street South and George Street

Intersection ID:

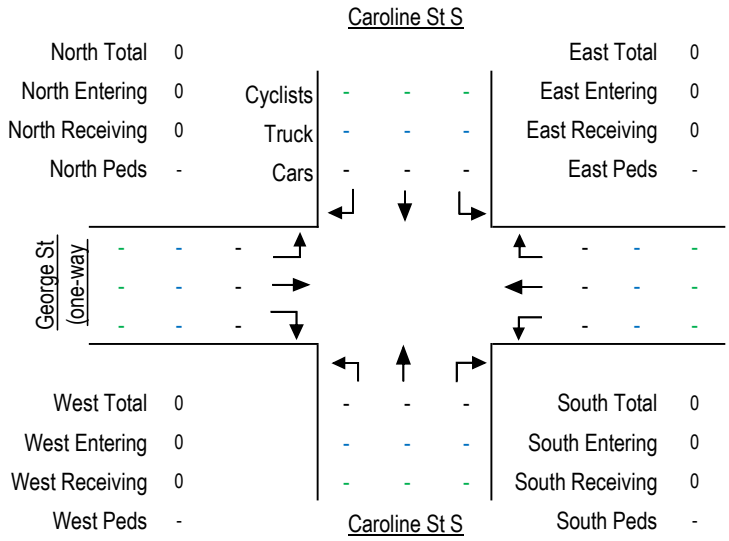
Municipality: Hamilton, Ontario

Date: Thursday, September 12, 2024

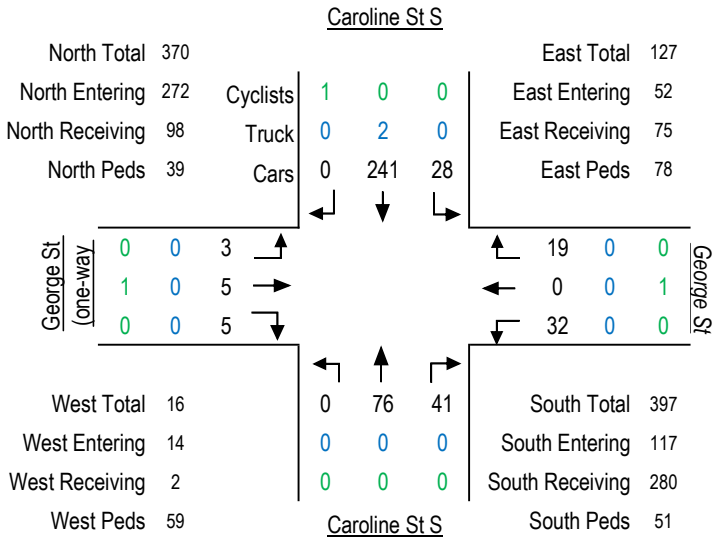
AM Peak Hour: 8:00 to 9:00



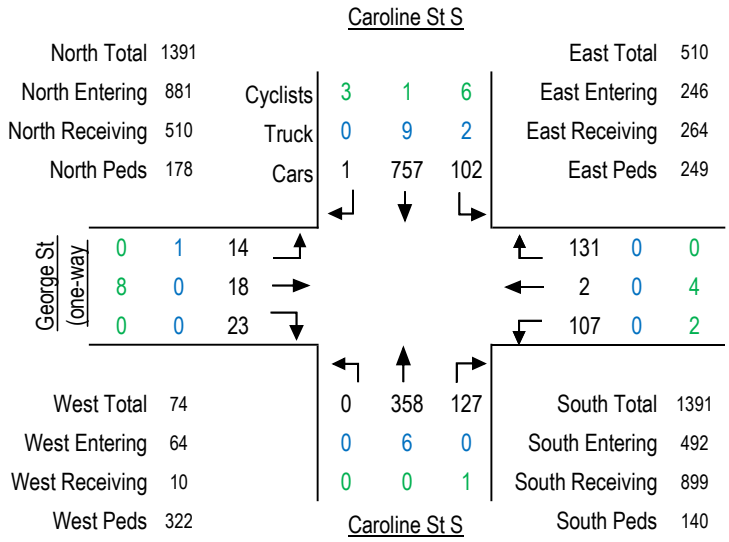
MD Peak Hour: - to -



PM Peak Hour: 16:30 to 17:30



Total 8-Hour Count



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Turning Movement Count Diagram

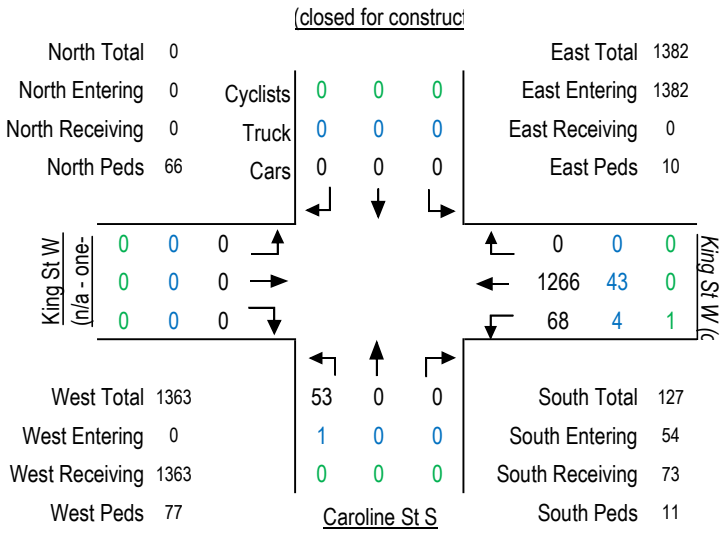
Intersection: Caroline Street South and King Street West

Intersection ID:

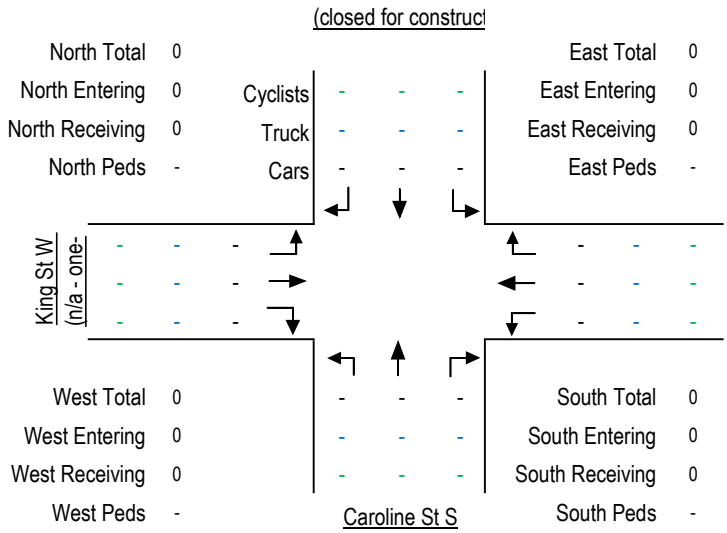
Municipality: Hamilton, Ontario

Date: Thursday, September 12, 2024

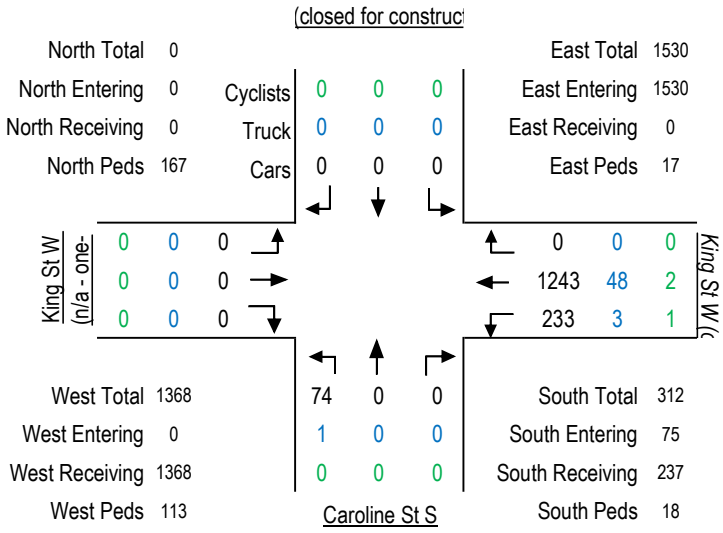
AM Peak Hour: 7:00 to 8:00



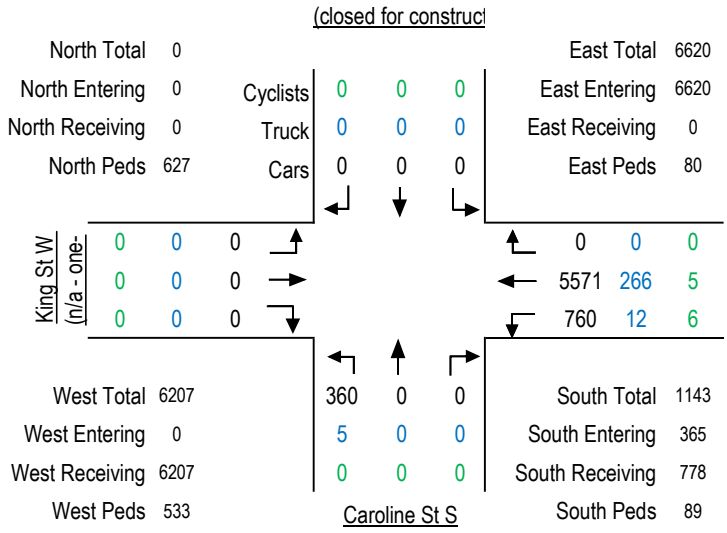
MD Peak Hour: - to -



PM Peak Hour: 16:15 to 17:15



Total 8-Hour Count



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Turning Movement Count Diagram

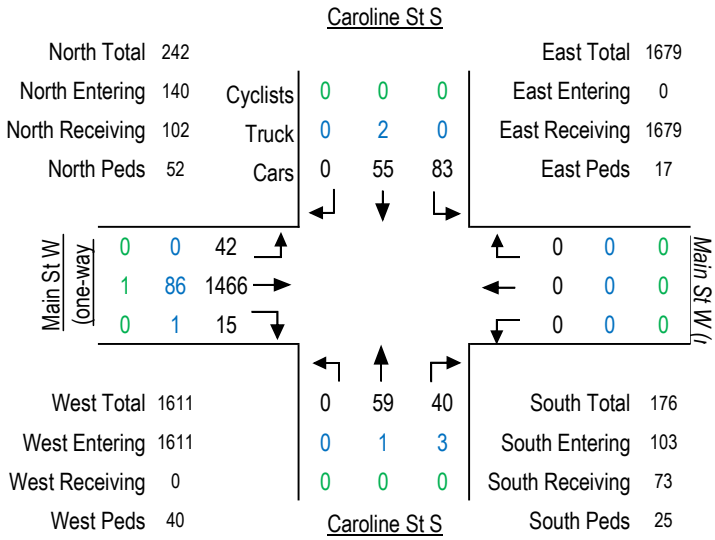
Intersection: Caroline Street South and Main Street West

Intersection ID:

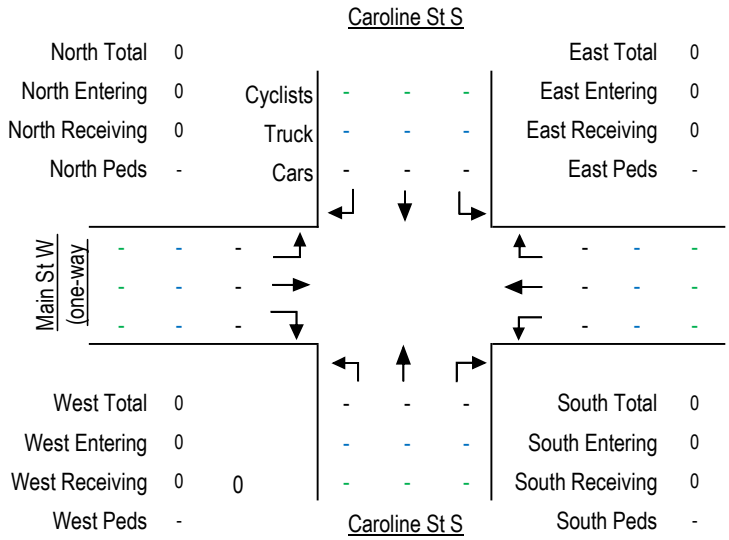
Municipality: Hamilton, Ontario

Date: Thursday, September 12, 2024

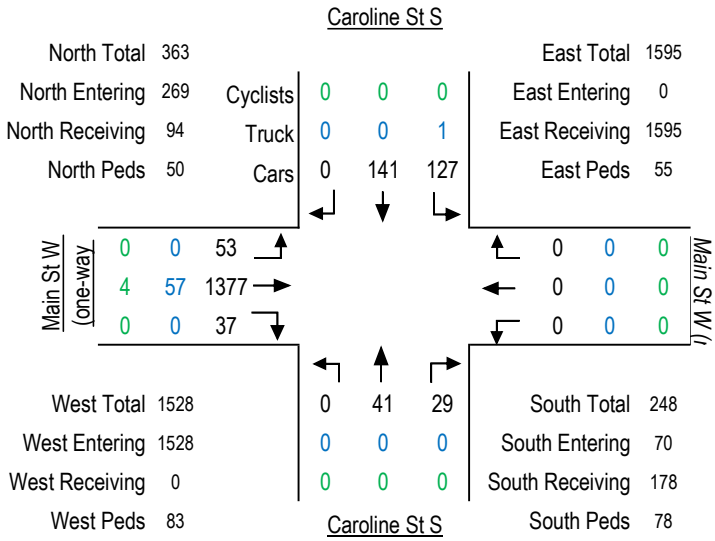
AM Peak Hour: 8:00 to 9:00



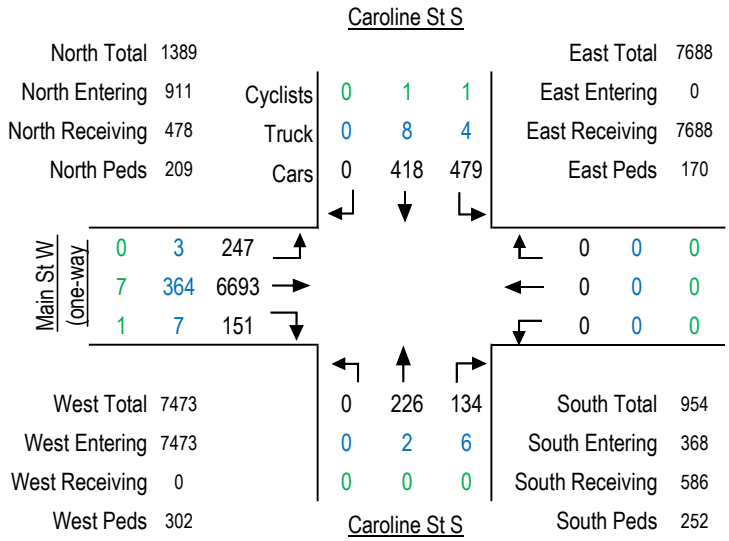
MD Peak Hour: - to -



PM Peak Hour: 16:45 to 17:45



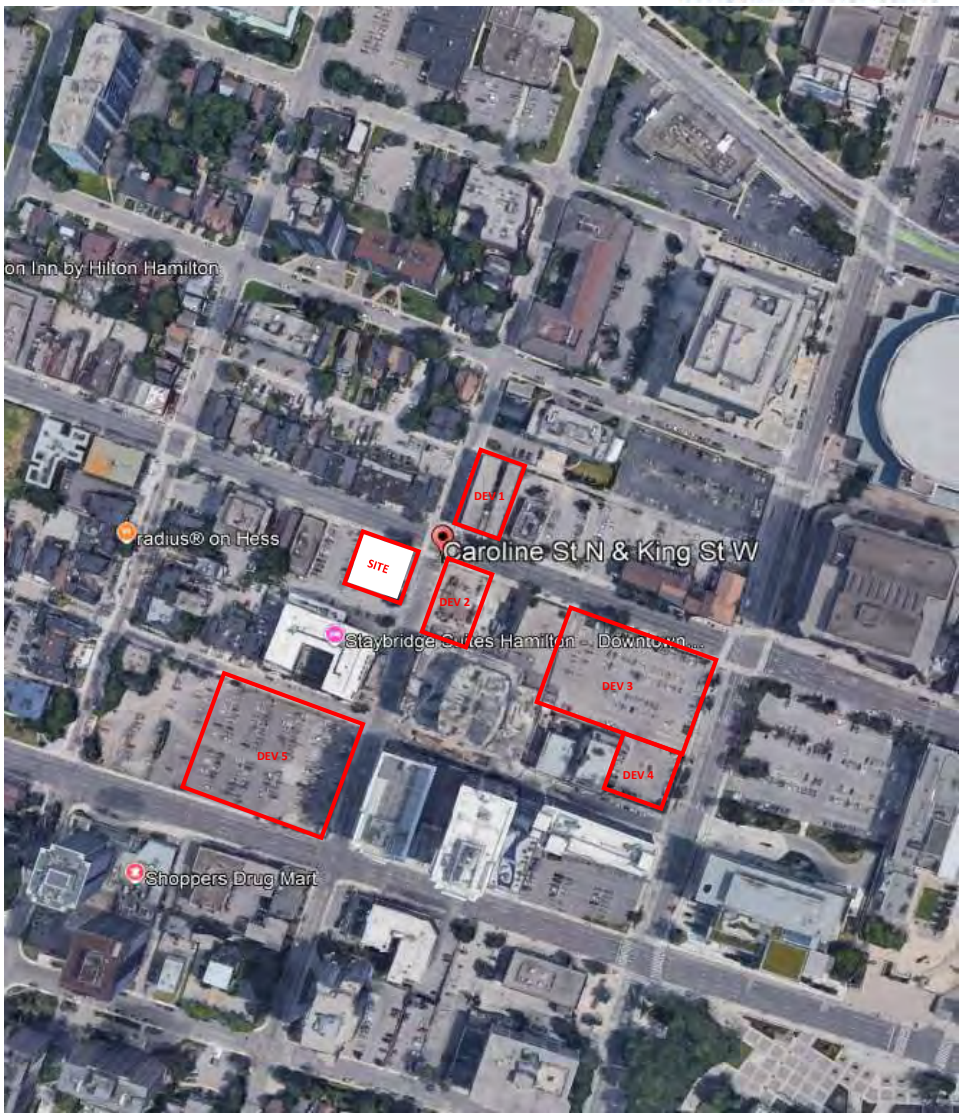
Total 8-Hour Count



APPENDIX B

Background Traffic Information

Background Development Map



Source : Google Earth

No.	File Number	Address	Description
1	ZAH-23-018	206 King Street West	To construct a 9 storey tower atop a four 4 storey base for a total of 13 storeys (43m). The proposal will provide for 122 residential units with 138m2 of commercial space at grade.
2	ZAD-23-030	213 King Street West	To develop a 30-storey mixed-use tower, with residential units, and retail frontage along King St W. A 110-room hotel is proposed with 241 dwelling units and 227 parking spaces, which consists of a total 343 units with 492 bedrooms.
3	DA-20-058	191 King Street West	To construct a 453 unit (639 bed) student residence building consisting of a 30 storey tower above a two to nine storey podium. A total of 266 parking spaces are proposed.
4	FC-19-067	22 Bay Street South	To develop the lands with a 29 storeys mixed use building with commercial/retail at grade and 285 residential units above
5	DA-20-076	166-190 Main St West	To construct a mixed-use development consisting of two 28 storey towers and one 27 storey tower above two base buildings. A total of 826 dwelling units, 749 sq.m. of commercial space and 531 parking spaces

Source : Development Applications, City of Hamilton

Background Site Trip Generation

DEV 1

Land Use	Dwelling Units / GFA		Weekday AM Peak Hour In	Weekday AM Peak Hour Out	Weekday AM Peak Hour Total	Weekday PM Peak Hour In	Weekday PM Peak Hour Out	Weekday PM Peak Hour Total
Multifamily Housing - High Rise (LUC 222)	122.00	Dir. Distr.	26%	74%	100%	62%	38%	100%
		Equation	T = 0.22 (X) + 18.85			T = 0.26 (X) + 23.12		
		Rate	0.1	0.28	0.38	0.28	0.17	0.45
		Trips	**12**	**34**	**46**	**34**	**21**	**55**
Strip Retail Plaza (<40k) (LUC 822)	1.49	Dir. Distr.	60%	40%	100%	59%	41%	100%
		Equation	Ln(T) = 0.66 Ln (X) + 1.84			Ln(T) = 0.71 Ln (X) + 2.72		
		Rate	3.37	2.02	2.36	1.35	0.67	6.59
		Trips	**5**	**3**	**8**	**2**	**1**	**3**
		Total Trips	**17**	**37**	**54**	**36**	**22**	**58**

DEV 2

Land Use	Dwelling Units		Weekday AM Peak Hour In	Weekday AM Peak Hour Out	Weekday AM Peak Hour Total	Weekday PM Peak Hour In	Weekday PM Peak Hour Out	Weekday PM Peak Hour Total
Multifamily Housing - High Rise (LUC 222)	343.00	Dir. Distr.	26%	74%	100%	62%	38%	100%
		Equation	T = 0.22 (X) + 18.85			T = 0.26 (X) + 23.12		
		Rate	0.07	0.2	0.27	0.2	0.13	0.33
		Trips	**24**	**70**	**94**	**69**	**43**	**112**

DEV 3

Land Use	Bedrooms		Weekday AM Peak Hour In	Weekday AM Peak Hour Out	Weekday AM Peak Hour Total	Weekday PM Peak Hour In	Weekday PM Peak Hour Out	Weekday PM Peak Hour Total
Off-Campus Student Apartment (High Rise) (LUC 227)	639.00	Dir. Distr.	26%	74%	100%	62%	38%	100%
		Equation		N/A			N/A	
		Rate	0	0.01	0.01	0.03	0.02	0.04
		Trips	**2**	**5**	**7**	**16**	**10**	**26**

DEV 4

Land Use	Dwelling Units		Weekday AM Peak Hour In	Weekday AM Peak Hour Out	Weekday AM Peak Hour Total	Weekday PM Peak Hour In	Weekday PM Peak Hour Out	Weekday PM Peak Hour Total
Multifamily Housing - High Rise (LUC 222)	285.00	Dir. Distr.	26%	74%	100%	62%	38%	100%
		Equation	T = 0.22 (X) + 18.85			T = 0.26 (X) + 23.12		
		Rate	0.07	0.21	0.29	0.21	0.13	0.34
		Trips	**21**	**61**	**82**	**60**	**37**	**97**

DEV 5

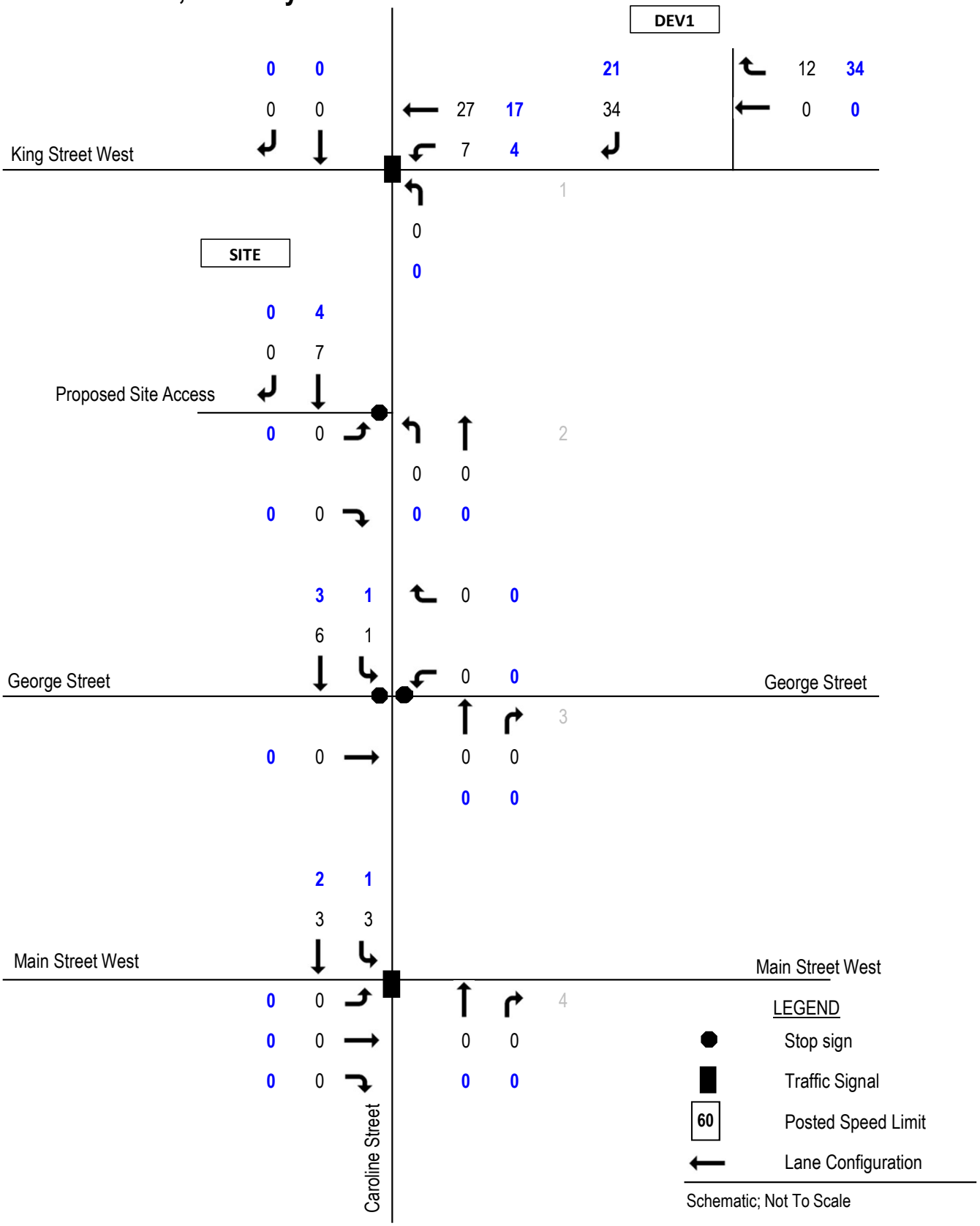
Land Use	Dwelling Units / GFA		Weekday AM Peak Hour In	Weekday AM Peak Hour Out	Weekday AM Peak Hour Total	Weekday PM Peak Hour In	Weekday PM Peak Hour Out	Weekday PM Peak Hour Total
Multifamily Housing - High Rise (LUC 222)	826.00	Dir. Distr.	26%	74%	100%	62%	38%	100%
		Equation	T = 0.22 (X) + 18.85			T = 0.26 (X) + 23.12		
		Rate	0.06	0.18	0.24	0.18	0.11	0.29
		Trips	**52**	**149**	**201**	**148**	**90**	**238**
Strip Retail Plaza (<40k) (LUC 822)	8.06	Dir. Distr.	60%	40%	100%	59%	41%	100%
		Equation	Ln(T) = 0.66 Ln (X) + 1.84			Ln(T) = 0.71 Ln (X) + 2.72		
		Rate	1.86	1.24	2.36	0.25	0.12	6.59
		Trips	**15**	**10**	**25**	**2**	**1**	**3**
		Total Trips	**67**	**159**	**226**	**150**	**91**	**241**

TRANSPORTATION STUDY

Proposed Mixed-use Development

235 King Street West, Hamilton, ON

DEV 1: Traffic Volumes, Weekday AM and PM Peak Hours

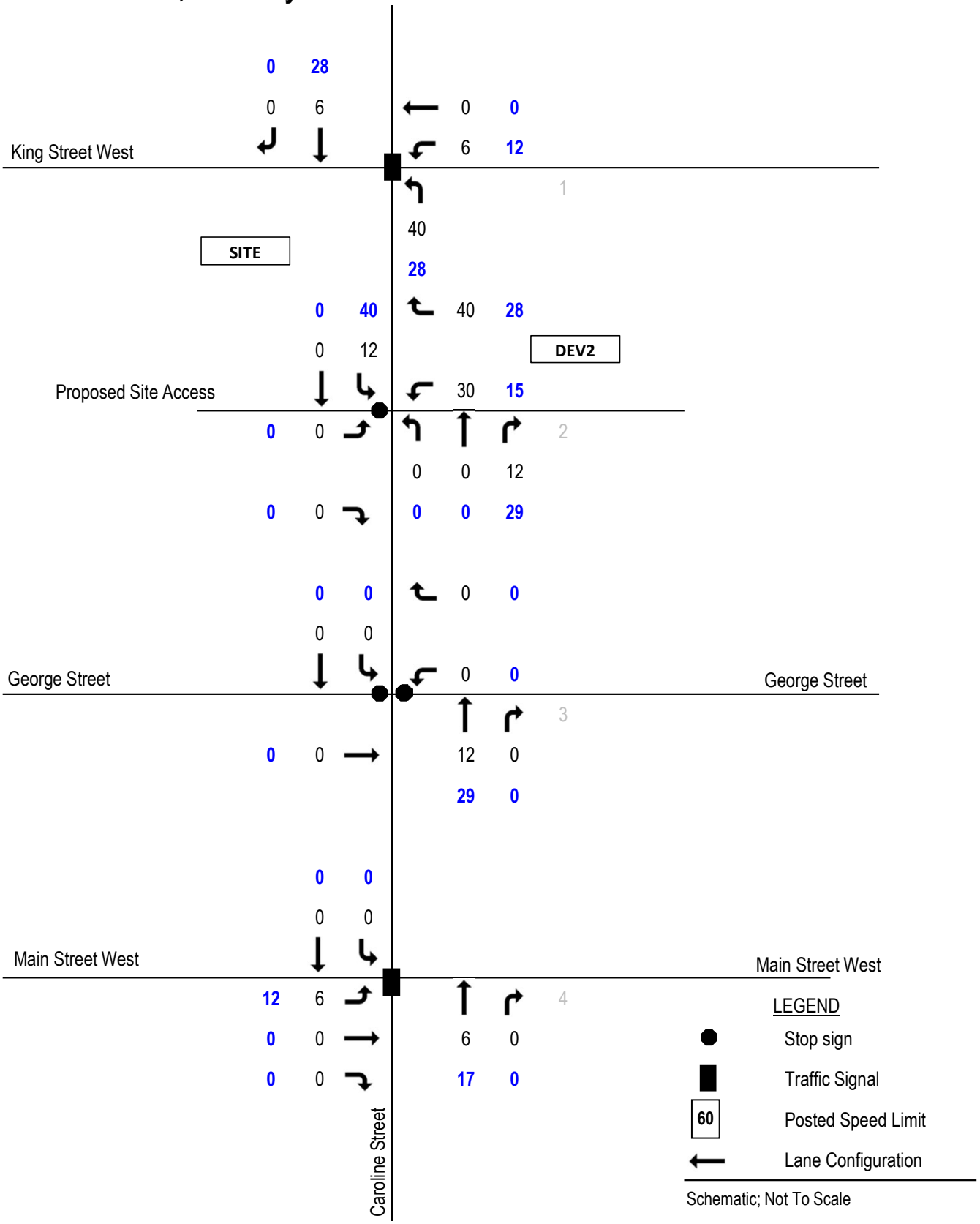


TRANSPORTATION STUDY

Proposed Mixed-use Development

235 King Street West, Hamilton, ON

DEV 2: Traffic Volumes, Weekday AM and PM Peak Hours

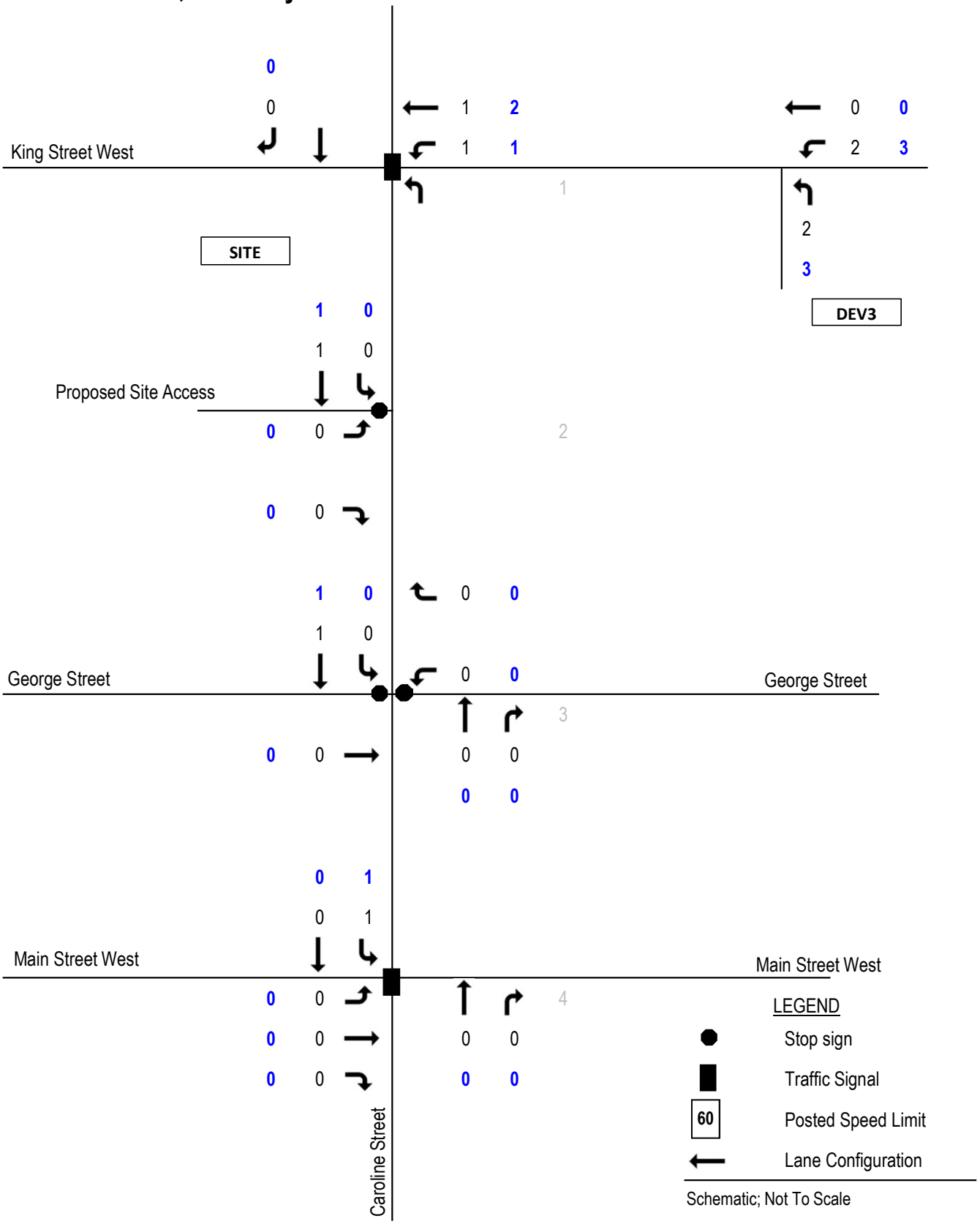


TRANSPORTATION STUDY

Proposed Mixed-use Development

235 King Street West, Hamilton, ON

DEV 3: Traffic Volumes, Weekday AM and PM Peak Hours

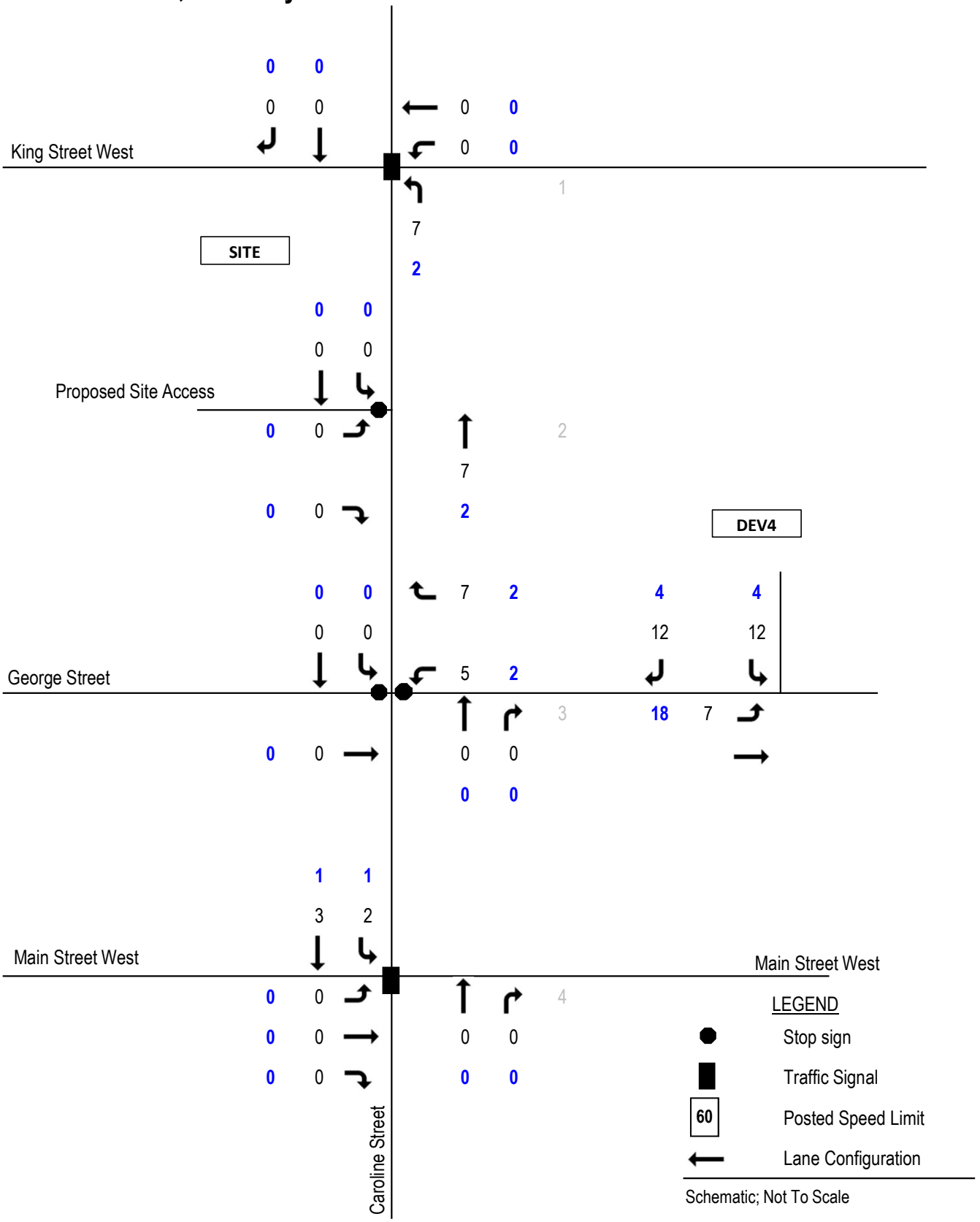


TRANSPORTATION STUDY

Proposed Mixed-use Development

235 King Street West, Hamilton, ON

DEV 4: Traffic Volumes, Weekday AM and PM Peak Hours

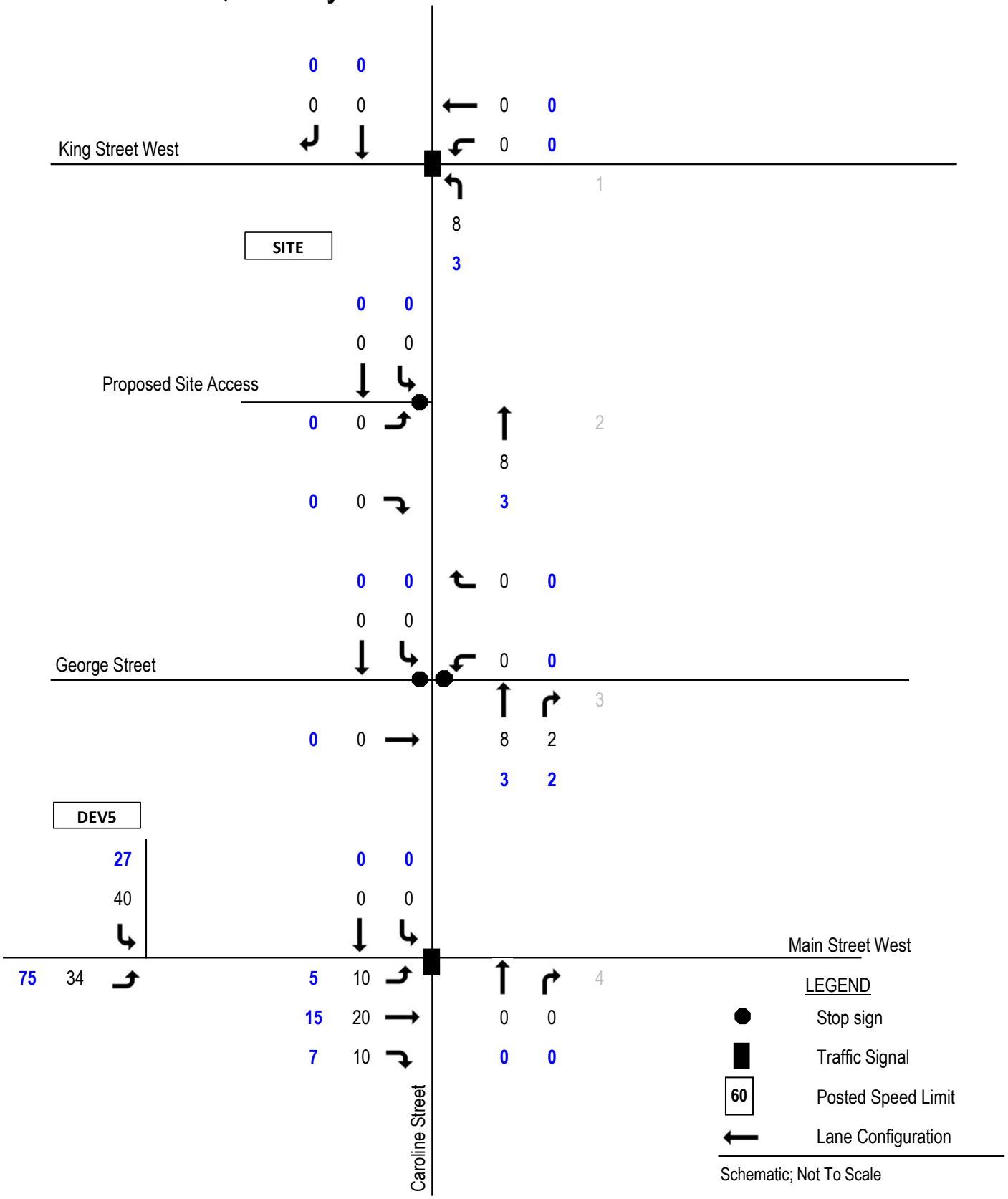


TRANSPORTATION STUDY

Proposed Mixed-use Development

235 King Street West, Hamilton, ON

DEV 5: Traffic Volumes, Weekday AM and PM Peak Hours



APPENDIX C

Transportation Tomorrow Survey Data

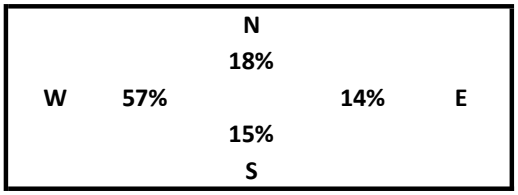
Wed Sep 18 2024 20:55:20
Cross Tabulation Query Form - Trip - 2016 v1.1
Row: Ward number of origin - ward_orig
Column: Primary travel mode of trip - mode_prime
Filters:
Ward number of origin - ward_orig In 171
and
Start time of trip - start_time In 600-900
Trip 2016

Transit excluding GO Rail	Cycle	Auto Driver	Go Rail only	Joint GO Rail and L	Motorcycle	Other	Auto Passenger	School Bus	Taxi Passenger	Walk	total
2479	976	7814	124	23	6	10	1007	218	24	3186	15867
15.62%	6.15%	49.25%	0.78%	0.14%	0.04%	0.06%	6.35%	1.37%	0.15%	20.08%	100.00%

Driver	**Passenger**	**Transit**	**Go Train**	**Cycle**	**Walk**	**Other**	**Total**
7820	1249	2479	147	976	3186	10	15867
49.28%	7.87%	15.62%	0.93%	6.15%	20.08%	0.06%	100.00%

Mode of Travel		Weekday AM Peak Hour			Weekday PM Peak Hour		
Mode	Percentage	In	Out	Total	In	Out	Total
Driver	49%	6	16	22	17	10	27
Passenger	8%	1	3	4	3	2	5
Transit	16%	2	5	7	5	3	8
GO Train	1%	0	0	0	0	0	0
Cycle	6%	1	2	3	2	1	3
Walk	20%	2	6	8	7	4	11
Other	0%	12	32	44	34	20	54
Total Trips for All Modes							
		12	32	44	34	20	54

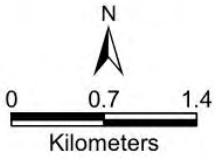
Tue Sep 17 2024 19:39:43
Cross Tabulation Query Form - Trip - 2016 v1.1
Row: Planning district of origin - pd_orig
Column: Planning district of destination - pd_dest
Filters:
Ward number of origin - ward_orig In 171
and
Start time of trip - start_time In 600-900
Trip 2016



TRANS-PLAN

Origin Zone	No. of Trips to Ward 171	Percent of Trips to Ward	Location respect to site
PD 1 of Toronto	293	2%	N
PD 4 of Toronto	15	0%	N
PD 7 of Toronto	35	0%	N
PD 8 of Toronto	34	0%	N
PD 9 of Toronto	11	0%	N
PD 10 of Toronto	124	1%	N
East Gwillimbury	38	0%	N
Brampton	34	0%	N
Mississauga	315	2%	N
Halton Hills	29	0%	W
Milton	40	0%	N
Oakville	212	1%	N
Burlington	1191	7%	N
Flamborough	275	2%	W
Dundas	501	3%	W
Ancaster	382	2%	S
Glanbrook	31	0%	S
Stoney Creek	243	1%	E
Hamilton			
171	6542	38%	W
172	2193	13%	INTERNAL
173	531	3%	E
174	522	3%	E
175	170	1%	E
176	272	2%	E
177	486	3%	S
178	837	5%	S
179	22	0%	E
180	124	1%	E
181	31	0%	S
182	382	2%	S
183	501	3%	W
184	122	1%	W
185	154	1%	N
Grimsby	20	0%	E
St. Catharines	83	0%	E
Waterloo	50	0%	W
Kitchener	26	0%	N
Cambridge	123	1%	W
City of Guelph	29	0%	N
Oxford	52	0%	W
Brantford	59	0%	W
External	44	0%	N
	17,178	**100%**	

CITY OF HAMILTON
WARD 2



WARD 2

HOUSEHOLD CHARACTERISTICS

Households	Dwelling Type			Household Size					Number of Available Vehicles					Household Averages				
	House	Townhouse	Apartment	1	2	3	4	5+	0	1	2	3	4+	Persons	Workers	Drivers	Vehicles	Trips/Day
21,700	18%	4%	78%	52%	28%	11%	5%	4%	37%	47%	13%	3%	0%	1.8	1.1	1.2	0.8	3.7

POPULATION CHARACTERISTICS

Population	Age							Daily Trips per Person (age 11+)	Daily Work Trips per Worker	Population	Employment Type			Student	Licensed	Transit Pass
	0-10	11-15	16-25	26-45	46-64	65+	Median				Full Time	Part Time	At Home			
										Male						
										20,200	42%	9%	4%	20%	67%	33%
										Female						
39,700	8%	4%	13%	35%	26%	14%	37.7	2.2	0.73	19,500	35%	15%	3%	18%	59%	39%

TRIPS MADE BY RESIDENTS OF CITY OF HAMILTON - WARD 2

Time Period	Trips	% 24hr	Trip Purpose				Mode of Travel						Median Trip Length (km)			
			HB-W	HB-S	HB-D	N-HB	Driver	Pass.	Transit	GO Train	Walk & Cycle	Other	Driver	Pass.	Transit	GO Train
6-9 AM	15,800	19.5%	58%	18%	17%	8%	47%	10%	18%	3%	18%	2%	6.5	3.3	3.2	58.2
24 Hrs	81,200		34%	10%	41%	15%	51%	11%	18%	2%	17%	2%	5.3	4.1	3.5	58.7

TRIPS MADE TO CITY OF HAMILTON - WARD 2 - BY RESIDENTS OF THE TTS AREA

Time Period	Trips	% 24 hr	Trip Purpose				Mode of Travel						Median Trip Length (km)			
			Work	School	Home	Other	Driver	Pass.	Transit	GO Train	Walk & Cycle	Other	Driver	Pass.	Transit	GO Train
6-9 AM	27,800	28.2%	79%	4%	3%	14%	66%	9%	12%	0%	13%	0%	8.7	6.2	5.3	40.5
24 Hrs	98,300		32%	1%	35%	31%	57%	12%	15%	1%	14%	2%	6.3	5.3	4.0	58.2

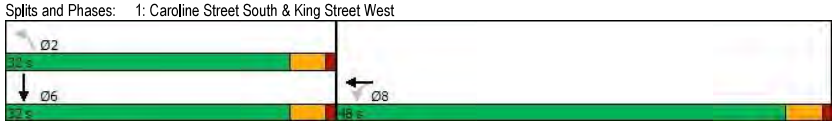
APPENDIX D

Capacity Analysis Sheets

Lane Group	WBT	NBL	SBT
Lane Configurations			
Traffic Volume (vph)	1309	120	58
Future Volume (vph)	1309	120	58
Turn Type	NA	Perm	NA
Protected Phases	8		6
Permitted Phases		2	
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	48.0	32.0	32.0
Total Split (%)	60.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	Max	Max
Act Effct Green (s)	21.1	27.6	27.6
Actuated g/C Ratio	0.37	0.48	0.48
v/c Ratio	0.63	0.27	0.05
Control Delay	16.3	11.7	7.9
Queue Delay	0.0	0.0	0.0
Total Delay	16.3	11.7	7.9
LOS	B	B	A
Approach Delay	16.3		7.9
Approach LOS	B		A

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 57.7			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 40.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Caroline Street South & King Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	72	1309	0	120	0	0	0	58	15
Future Volume (vph)	0	0	0	72	1309	0	120	0	0	0	58	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5				4.5	
Lane Util. Factor					0.86		1.00				0.95	
Frpb, ped/bikes					1.00		1.00				1.00	
Flpb, ped/bikes					1.00		0.99				1.00	
Frt					1.00		1.00				0.97	
Flt Protected					1.00		0.95				1.00	
Satd. Flow (prot)					6316		1754				3432	
Flt Permitted					1.00		0.70				1.00	
Satd. Flow (perm)					6316		1298				3432	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.92	0.72	0.92	0.72	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	76	1378	0	167	0	0	0	63	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	1454	0	167	0	0	0	71	0
Confl. Peds. (#/hr)				11			10					
Heavy Vehicles (%)	2%	2%	2%	6%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type				Perm	NA		Perm				NA	
Protected Phases					8						6	
Permitted Phases				8			2					
Actuated Green, G (s)					21.1		27.6				27.6	
Effective Green, g (s)					21.1		27.6				27.6	
Actuated g/C Ratio					0.37		0.48				0.48	
Clearance Time (s)					4.5		4.5				4.5	
Vehicle Extension (s)					3.0		3.0				3.0	
Lane Grp Cap (vph)					2309		620				1641	
v/s Ratio Prot											0.02	
v/s Ratio Perm					0.23		c0.13					
v/c Ratio					0.63		0.27				0.04	
Uniform Delay, d1					15.1		9.0				8.0	
Progression Factor					1.00		1.00				1.00	
Incremental Delay, d2					0.5		1.1				0.0	
Delay (s)					15.6		10.1				8.1	
Level of Service					B		B				A	
Approach Delay (s)		0.0			15.6			10.1			8.1	
Approach LOS		A			B			B			A	

Intersection Summary					
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	57.7	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	40.5%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2	3	25	0	38	0	79	23	13	117	0
Future Volume (Veh/h)	3	2	3	25	0	38	0	79	23	13	117	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.69	0.69	0.69	0.76	0.76	0.76	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	4	3	4	33	0	50	0	86	25	15	139	0
Pedestrians					64			18			38	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					5			2			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								74			92	
pX, platoon unblocked												
vC, conflicting volume	356	344	88	286	332	200	139			175		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	356	344	88	286	332	200	139			175		
tC, single (s)	8.2	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.8	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	100	94	100	93	100			99		
cM capacity (veh/h)	433	545	946	572	554	745	1457			1338		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	11	83	111	61	93
Volume Left	4	33	0	15	0
Volume Right	4	50	25	0	0
cSH	580	665	1700	1338	1700
Volume to Capacity	0.02	0.12	0.07	0.01	0.05
Queue Length 95th (m)	0.5	3.4	0.0	0.3	0.0
Control Delay (s)	11.3	11.2	0.0	2.0	0.0
Lane LOS	B	B		A	
Approach Delay (s)	11.3	11.2	0.0	0.8	
Approach LOS	B	B			

Intersection Summary					
Average Delay	3.3				
Intersection Capacity Utilization	30.7%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1552	60	83	57
Future Volume (vph)	1552	60	83	57
Turn Type	NA	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5
Total Split (s)	37.0	29.0	14.0	43.0
Total Split (%)	46.3%	36.3%	17.5%	53.8%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	25.4	28.8	38.6	38.6
Actuated g/C Ratio	0.35	0.39	0.53	0.53
v/c Ratio	0.66	0.17	0.16	0.07
Control Delay	21.3	12.8	10.6	10.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.3	12.8	10.6	10.1
LOS	C	B	B	B
Approach Delay	21.3	12.8		10.4
Approach LOS	C	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 73.1			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 19.8		Intersection LOS: B	
Intersection Capacity Utilization 41.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Caroline Street South & Main Street West

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1552	16	0	0	0	0	60	43	83	57	0
Future Volume (vph)	42	1552	16	0	0	0	0	60	43	83	57	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.81						1.00		1.00	1.00	
Frpb, ped/bikes		1.00						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.98	1.00	
Frt		1.00						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		7229						1679		1768	1827	
Flt Permitted		1.00						1.00		0.59	1.00	
Satd. Flow (perm)		7229						1679		1094	1827	
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.92	0.86	0.86	0.86	0.81	0.81	0.81
Adj. Flow (vph)	43	1600	16	0	0	0	0	70	50	102	70	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	28	0	0	0	0
Lane Group Flow (vph)	0	1657	0	0	0	0	0	92	0	102	70	0
Confl. Peds. (#/hr)	52		25						40	40		
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	0%	2%	7%	0%	4%	0%
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		25.4						28.8		39.6	39.6	
Effective Green, g (s)		25.4						28.8		39.6	39.6	
Actuated g/C Ratio		0.34						0.39		0.54	0.54	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2481						653		642	977	
v/s Ratio Prot								0.05		c0.01	0.04	
v/s Ratio Perm		0.23								c0.07		
v/c Ratio		0.67						0.14		0.16	0.07	
Uniform Delay, d1		20.7						14.6		8.6	8.3	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.7						0.5		0.1	0.1	
Delay (s)		21.4						15.1		8.8	8.5	
Level of Service		C						B		A	A	
Approach Delay (s)		21.4			0.0			15.1			8.6	
Approach LOS		C			A			B			A	

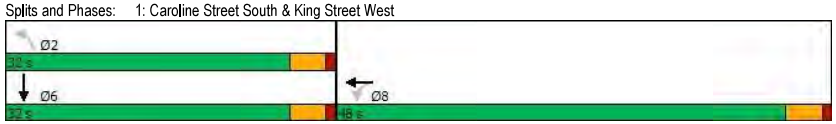
Intersection Summary				
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.38			
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	WBT	NBL	SBT
Lane Configurations			
Traffic Volume (vph)	1291	98	35
Future Volume (vph)	1291	98	35
Turn Type	NA	Perm	NA
Protected Phases	8		6
Permitted Phases		2	
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	48.0	32.0	32.0
Total Split (%)	60.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	Max	Max
Act Effct Green (s)	24.3	27.6	27.6
Actuated g/C Ratio	0.40	0.45	0.45
v/c Ratio	0.65	0.23	0.03
Control Delay	16.1	12.9	9.3
Queue Delay	0.0	0.0	0.0
Total Delay	16.1	12.9	9.3
LOS	B	B	A
Approach Delay	16.1		9.3
Approach LOS	B		A

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 61			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 41.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Caroline Street South & King Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	236	1291	0	98	0	0	0	35	9
Future Volume (vph)	0	0	0	236	1291	0	98	0	0	0	35	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5				4.5	
Lane Util. Factor					0.86		1.00				0.95	
Frpb, ped/bikes					1.00		1.00				1.00	
Flpb, ped/bikes					1.00		0.98				1.00	
Frt					1.00		1.00				0.97	
Flt Protected					0.99		0.95				1.00	
Satd. Flow (prot)					6247		1758				3429	
Flt Permitted					0.99		0.72				1.00	
Satd. Flow (perm)					6247		1340				3429	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.71	0.71	0.71	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	251	1373	0	138	0	0	0	38	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	0	1624	0	138	0	0	0	43	0
Confl. Peds. (#/hr)				18			17					
Heavy Vehicles (%)	2%	2%	2%	1%	4%	2%	1%	2%	0%	2%	2%	2%
Turn Type				Perm	NA		Perm				NA	
Protected Phases					8						6	
Permitted Phases				8			2					
Actuated Green, G (s)					24.3		27.6				27.6	
Effective Green, g (s)					24.3		27.6				27.6	
Actuated g/C Ratio					0.40		0.45				0.45	
Clearance Time (s)					4.5		4.5				4.5	
Vehicle Extension (s)					3.0		3.0				3.0	
Lane Grp Cap (vph)					2492		607				1554	
v/s Ratio Prot											0.01	
v/s Ratio Perm					0.26		c0.10					
v/c Ratio					0.65		0.23				0.03	
Uniform Delay, d1					14.9		10.1				9.2	
Progression Factor					1.00		1.00				1.00	
Incremental Delay, d2					0.6		0.9				0.0	
Delay (s)					15.5		11.0				9.3	
Level of Service					B		B				A	
Approach Delay (s)		0.0			15.5			11.0			9.3	
Approach LOS		A			B			B			A	

Intersection Summary					
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	60.9	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	41.5%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	5	5	32	0	19	0	76	41	28	243	0
Future Volume (Veh/h)	3	5	5	32	0	19	0	76	41	28	243	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.70	0.70	0.70	0.76	0.76	0.76	0.89	0.89	0.89	0.83	0.83	0.83
Hourly flow rate (vph)	4	7	7	42	0	25	0	85	46	34	293	0
Pedestrians					59			51			39	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					5			4			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								74			92	
pX, platoon unblocked												
vC, conflicting volume	533	551	198	443	528	206	293			190		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	533	551	198	443	528	206	293			190		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	98	99	90	100	97	100			97		
cM capacity (veh/h)	383	412	782	423	425	742	1280			1327		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	18	67	131	132	195
Volume Left	4	42	0	34	0
Volume Right	7	25	46	0	0
cSH	495	504	1700	1327	1700
Volume to Capacity	0.04	0.13	0.08	0.03	0.11
Queue Length 95th (m)	0.9	3.7	0.0	0.6	0.0
Control Delay (s)	12.5	13.2	0.0	2.2	0.0
Lane LOS	B	B		A	
Approach Delay (s)	12.5	13.2	0.0	0.9	
Approach LOS	B	B			

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	31.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1434	41	128	141
Future Volume (vph)	1434	41	128	141
Turn Type	NA	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5
Total Split (s)	36.0	29.0	15.0	44.0
Total Split (%)	45.0%	36.3%	18.8%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	23.0	26.8	39.6	39.6
Actuated g/C Ratio	0.32	0.37	0.55	0.55
v/c Ratio	0.65	0.11	0.21	0.16
Control Delay	22.0	12.1	9.7	9.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.0	12.1	9.7	9.3
LOS	C	B	A	A
Approach Delay	22.0	12.1		9.5
Approach LOS	C	B		A

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 71.6			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 39.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Caroline Street South & Main Street West

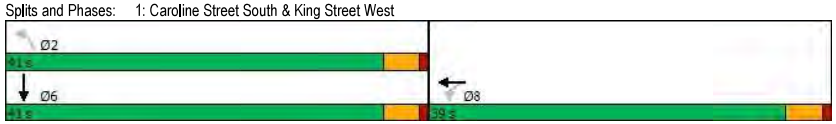
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1434	37	0	0	0	0	41	29	128	141	0
Future Volume (vph)	53	1434	37	0	0	0	0	41	29	128	141	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.81						1.00		1.00	1.00	
Frt		1.00						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		7376						1795		1787	1900	
Flt Permitted		1.00						1.00		0.60	1.00	
Satd. Flow (perm)		7376						1795		1138	1900	
Peak-hour factor, PHF	0.99	0.99	0.99	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86
Adj. Flow (vph)	54	1448	37	0	0	0	0	46	32	149	164	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	1534	0	0	0	0	0	58	0	149	164	0
Heavy Vehicles (%)	0%	4%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		23.0						26.8		39.6	39.6	
Effective Green, g (s)		23.0						26.8		39.6	39.6	
Actuated g/C Ratio		0.32						0.37		0.55	0.55	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2369						671		704	1050	
v/s Ratio Prot								0.03		c0.02	0.09	
v/s Ratio Perm		0.21								c0.09		
v/c Ratio		0.65						0.09		0.21	0.16	
Uniform Delay, d1		20.8						14.5		8.0	7.8	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.6						0.3		0.2	0.3	
Delay (s)		21.4						14.7		8.1	8.1	
Level of Service		C						B		A	A	
Approach Delay (s)		21.4			0.0			14.7			8.1	
Approach LOS		C			A			B			A	

Intersection Summary				
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.40			
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	39.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	WBT	NBL	SBT
Lane Configurations			
Traffic Volume (vph)	1431	184	68
Future Volume (vph)	1431	184	68
Turn Type	NA	Perm	NA
Protected Phases	8		6
Permitted Phases		2	
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	39.0	41.0	41.0
Total Split (%)	48.8%	51.3%	51.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	Max	Max
Act Effct Green (s)	26.8	36.7	36.7
Actuated g/C Ratio	0.37	0.51	0.51
v/c Ratio	0.69	0.40	0.05
Control Delay	20.8	14.6	9.7
Queue Delay	0.0	0.0	0.0
Total Delay	20.8	14.6	9.7
LOS	C	B	A
Approach Delay	20.8		9.7
Approach LOS	C		A

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 72.5			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 47.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Caroline Street South & King Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	91	1431	0	184	0	0	0	68	16
Future Volume (vph)	0	0	0	91	1431	0	184	0	0	0	68	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5				4.5	
Lane Util. Factor					0.86		1.00				0.95	
Frpb, ped/bikes					1.00		1.00				1.00	
Flpb, ped/bikes					1.00		0.99				1.00	
Frt					1.00		1.00				0.97	
Flt Protected					1.00		0.95				1.00	
Satd. Flow (prot)					6307		1751				3440	
Flt Permitted					1.00		0.69				1.00	
Satd. Flow (perm)					6307		1281				3440	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.92	0.72	0.92	0.72	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	96	1506	0	256	0	0	0	74	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	0	1602	0	256	0	0	0	87	0
Confl. Peds. (#/hr)				11			10					
Heavy Vehicles (%)	2%	2%	2%	6%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type				Perm	NA		Perm				NA	
Protected Phases					8						6	
Permitted Phases				8			2					
Actuated Green, G (s)					26.8		36.7				36.7	
Effective Green, g (s)					26.8		36.7				36.7	
Actuated g/C Ratio					0.37		0.51				0.51	
Clearance Time (s)					4.5		4.5				4.5	
Vehicle Extension (s)					3.0		3.0				3.0	
Lane Grp Cap (vph)					2331		648				1741	
v/s Ratio Prot											0.03	
v/s Ratio Perm					0.25		c0.20					
v/c Ratio					0.69		0.40				0.05	
Uniform Delay, d1					19.3		11.0				9.1	
Progression Factor					1.00		1.00				1.00	
Incremental Delay, d2					0.9		1.8				0.1	
Delay (s)					20.2		12.9				9.1	
Level of Service					C		B				A	
Approach Delay (s)		0.0			20.2			12.9			9.1	
Approach LOS		A			C			B			A	

Intersection Summary					
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.52				
Actuated Cycle Length (s)	72.5	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	47.9%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	144	147	0
Future Volume (Veh/h)	0	0	0	144	147	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	157	160	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	23	
pX, platoon unblocked	0.99	0.99	0.99			
vC, conflicting volume	317	160	160			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300	141	141			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	682	894	1422			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	157	160
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1422	1700
Volume to Capacity	0.00	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	0	32	0	48	0	105	27	15	132	0
Future Volume (Veh/h)	0	2	0	32	0	48	0	105	27	15	132	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.69	0.69	0.69	0.76	0.76	0.76	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	3	0	42	0	63	0	114	29	18	157	0
Pedestrians					64			18			38	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					5			2			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								74			92	
pX, platoon unblocked												
vC, conflicting volume	422	400	96	326	386	230	157			207		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	422	400	96	326	386	230	157			207		
tC, single (s)	8.2	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.8	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	92	100	91	100			99		
cM capacity (veh/h)	375	505	933	536	515	713	1435			1303		

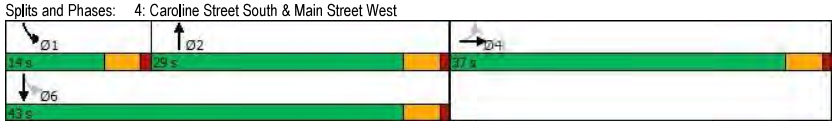
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	3	105	143	70	105
Volume Left	0	42	0	18	0
Volume Right	0	63	29	0	0
cSH	505	630	1700	1303	1700
Volume to Capacity	0.01	0.17	0.08	0.01	0.06
Queue Length 95th (m)	0.1	4.8	0.0	0.3	0.0
Control Delay (s)	12.2	11.9	0.0	2.1	0.0
Lane LOS	B	B		A	
Approach Delay (s)	12.2	11.9	0.0	0.8	
Approach LOS	B	B			

Intersection Summary				
Average Delay		3.4		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1684	70	95	67
Future Volume (vph)	1684	70	95	67
Turn Type	NA	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5
Total Split (s)	37.0	29.0	14.0	43.0
Total Split (%)	46.3%	36.3%	17.5%	53.8%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	28.0	28.5	38.6	38.6
Actuated g/C Ratio	0.37	0.38	0.51	0.51
v/c Ratio	0.68	0.20	0.19	0.09
Control Delay	21.3	14.7	11.6	11.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.3	14.7	11.6	11.0
LOS	C	B	B	B
Approach Delay	21.3	14.7		11.4
Approach LOS	C	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 75.7			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 20.0		Intersection LOS: C	
Intersection Capacity Utilization 43.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Caroline Street South & Main Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1684	27	0	0	0	0	70	46	95	67	0
Future Volume (vph)	61	1684	27	0	0	0	0	70	46	95	67	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.81						1.00		1.00	1.00	
Frpb, ped/bikes		1.00						0.98		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.98	1.00	
Frt		1.00						0.95		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		7215						1687		1768	1827	
Flt Permitted		1.00						1.00		0.58	1.00	
Satd. Flow (perm)		7215						1687		1079	1827	
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.92	0.86	0.86	0.86	0.81	0.81	0.81
Adj. Flow (vph)	63	1736	28	0	0	0	0	81	53	117	83	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	26	0	0	0	0
Lane Group Flow (vph)	0	1824	0	0	0	0	0	108	0	117	83	0
Confl. Peds. (#/hr)	52		25						40	40		
Heavy Vehicles (%)	0%	6%	0%	2%	2%	2%	0%	2%	7%	0%	4%	0%
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		28.0						28.5		39.6	39.6	
Effective Green, g (s)		28.0						28.5		39.6	39.6	
Actuated g/C Ratio		0.37						0.37		0.52	0.52	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2637						627		617	944	
v/s Ratio Prot								0.06		c0.02	0.05	
v/s Ratio Perm		0.25								c0.08		
v/c Ratio		0.69						0.17		0.19	0.09	
Uniform Delay, d1		20.6						16.1		9.7	9.4	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.8						0.6		0.2	0.2	
Delay (s)		21.4						16.7		9.9	9.5	
Level of Service		C						B		A	A	
Approach Delay (s)		21.4			0.0			16.7			9.7	
Approach LOS		C			A			B			A	

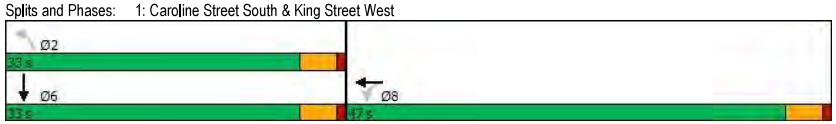
Intersection Summary					
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.42				
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	13.5		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	WBT	NBL	SBT
Lane Configurations			
Traffic Volume (vph)	1403	138	66
Future Volume (vph)	1403	138	66
Turn Type	NA	Perm	NA
Protected Phases	8		6
Permitted Phases		2	
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	47.0	33.0	33.0
Total Split (%)	58.8%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	Max	Max
Act Effct Green (s)	27.7	28.7	28.7
Actuated g/C Ratio	0.42	0.44	0.44
v/c Ratio	0.68	0.34	0.05
Control Delay	16.5	15.8	11.0
Queue Delay	0.0	0.0	0.0
Total Delay	16.5	15.8	11.0
LOS	B	B	B
Approach Delay	16.5		11.0
Approach LOS	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 65.4			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 48.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Caroline Street South & King Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	270	1403	0	138	0	0	0	66	10
Future Volume (vph)	0	0	0	270	1403	0	138	0	0	0	66	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5				4.5	
Lane Util. Factor					0.86		1.00				0.95	
Frpb, ped/bikes					1.00		1.00				1.00	
Flpb, ped/bikes					0.99		0.98				1.00	
Frt					1.00		1.00				0.98	
Flt Protected					0.99		0.95				1.00	
Satd. Flow (prot)					6230		1758				3469	
Flt Permitted					0.99		0.70				1.00	
Satd. Flow (perm)					6230		1296				3469	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.71	0.71	0.71	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	287	1493	0	194	0	0	0	72	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	1780	0	194	0	0	0	77	0
Confl. Peds. (#/hr)				18			17					
Heavy Vehicles (%)	2%	2%	2%	1%	4%	2%	1%	2%	0%	2%	2%	2%
Turn Type				Perm	NA		Perm				NA	
Protected Phases					8						6	
Permitted Phases				8			2					
Actuated Green, G (s)					27.7		28.7				28.7	
Effective Green, g (s)					27.7		28.7				28.7	
Actuated g/C Ratio					0.42		0.44				0.44	
Clearance Time (s)					4.5		4.5				4.5	
Vehicle Extension (s)					3.0		3.0				3.0	
Lane Grp Cap (vph)					2638		568				1522	
v/s Ratio Prot											0.02	
v/s Ratio Perm					0.29		c0.15					
v/c Ratio					0.67		0.34				0.05	
Uniform Delay, d1					15.2		12.1				10.5	
Progression Factor					1.00		1.00				1.00	
Incremental Delay, d2					0.7		1.6				0.1	
Delay (s)					15.9		13.7				10.6	
Level of Service					B		B				B	
Approach Delay (s)		0.0			15.9			13.7			10.6	
Approach LOS		A			B			B			B	

Intersection Summary					
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.50				
Actuated Cycle Length (s)	65.4	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	48.4%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	110	296	0
Future Volume (Veh/h)	0	0	0	110	296	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	120	322	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	23	
pX, platoon unblocked	0.99	0.99	0.99			
vC, conflicting volume	442	322	322			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427	305	305			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	576	724	1238			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	120	322
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1238	1700
Volume to Capacity	0.00	0.00	0.19
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	5	0	36	0	22	0	113	46	31	265	0
Future Volume (Veh/h)	0	5	0	36	0	22	0	113	46	31	265	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.70	0.70	0.70	0.76	0.76	0.76	0.89	0.89	0.89	0.83	0.83	0.83
Hourly flow rate (vph)	0	7	0	47	0	29	0	127	52	37	319	0
Pedestrians					59			51			39	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					5			4			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								74			92	
pX, platoon unblocked												
vC, conflicting volume	614	631	210	500	605	251	319			238		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	614	631	210	500	605	251	319			238		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	88	100	96	100			97		
cM capacity (veh/h)	332	370	767	387	383	694	1252			1275		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	7	76	179	143	213
Volume Left	0	47	0	37	0
Volume Right	0	29	52	0	0
cSH	370	466	1700	1275	1700
Volume to Capacity	0.02	0.16	0.11	0.03	0.13
Queue Length 95th (m)	0.5	4.6	0.0	0.7	0.0
Control Delay (s)	14.9	14.2	0.0	2.2	0.0
Lane LOS	B	B		A	
Approach Delay (s)	14.9	14.2	0.0	0.9	
Approach LOS	B	B			

Intersection Summary				
Average Delay		2.4		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1552	61	140	154
Future Volume (vph)	1552	61	140	154
Turn Type	NA	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5
Total Split (s)	36.0	29.0	15.0	44.0
Total Split (%)	45.0%	36.3%	18.8%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	25.4	26.4	39.6	39.6
Actuated g/C Ratio	0.34	0.36	0.53	0.53
v/c Ratio	0.67	0.15	0.24	0.18
Control Delay	21.8	14.2	10.8	10.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.8	14.2	10.8	10.4
LOS	C	B	B	B
Approach Delay	21.8	14.2		10.6
Approach LOS	C	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 74.1			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 41.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Caroline Street South & Main Street West

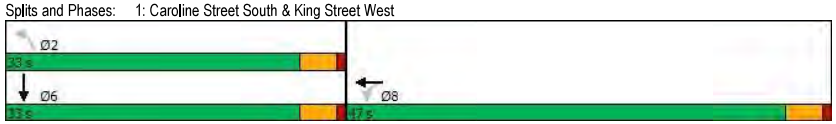
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	1552	47	0	0	0	0	61	31	140	154	0
Future Volume (vph)	74	1552	47	0	0	0	0	61	31	140	154	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.81						1.00		1.00	1.00	
Frt		1.00						0.95		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		7372						1814		1787	1900	
Flt Permitted		1.00						1.00		0.59	1.00	
Satd. Flow (perm)		7372						1814		1111	1900	
Peak-hour factor, PHF	0.99	0.99	0.99	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86
Adj. Flow (vph)	75	1568	47	0	0	0	0	68	34	163	179	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	21	0	0	0	0
Lane Group Flow (vph)	0	1684	0	0	0	0	0	81	0	163	179	0
Heavy Vehicles (%)	0%	4%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		25.4						26.4		39.6	39.6	
Effective Green, g (s)		25.4						26.4		39.6	39.6	
Actuated g/C Ratio		0.34						0.36		0.54	0.54	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2530						647		674	1016	
v/s Ratio Prot								0.04		c0.03	0.09	
v/s Ratio Perm		0.23								c0.10		
v/c Ratio		0.67						0.13		0.24	0.18	
Uniform Delay, d1		20.7						16.0		9.0	8.8	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.7						0.4		0.2	0.4	
Delay (s)		21.4						16.4		9.1	9.2	
Level of Service		C						B		A	A	
Approach Delay (s)		21.4			0.0			16.4			9.2	
Approach LOS		C			A			B			A	

Intersection Summary					
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	74.0	Sum of lost time (s)		13.5	
Intersection Capacity Utilization	41.4%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	WBT	NBL	SBT
Lane Configurations			
Traffic Volume (vph)	1431	200	71
Future Volume (vph)	1431	200	71
Turn Type	NA	Perm	NA
Protected Phases	8		6
Permitted Phases		2	
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	47.0	33.0	33.0
Total Split (%)	58.8%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	Max	Max
Act Effct Green (s)	24.6	28.7	28.7
Actuated g/C Ratio	0.39	0.46	0.46
v/c Ratio	0.66	0.48	0.06
Control Delay	16.6	16.4	9.4
Queue Delay	0.0	0.0	0.0
Total Delay	16.6	16.4	9.4
LOS	B	B	A
Approach Delay	16.6		9.4
Approach LOS	B		A

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 62.3			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 47.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Caroline Street South & King Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	94	1431	0	200	0	0	0	71	16
Future Volume (vph)	0	0	0	94	1431	0	200	0	0	0	71	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5				4.5	
Lane Util. Factor					0.86		1.00				0.95	
Frpb, ped/bikes					1.00		1.00				1.00	
Flpb, ped/bikes					1.00		0.98				1.00	
Frt					1.00		1.00				0.97	
Flt Protected					1.00		0.95				1.00	
Satd. Flow (prot)					6264		1759				3443	
Flt Permitted					1.00		0.69				1.00	
Satd. Flow (perm)					6264		1283				3443	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.71	0.71	0.71	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	100	1522	0	282	0	0	0	77	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	0	0	1622	0	282	0	0	0	85	0
Confl. Peds. (#/hr)				18			17					
Heavy Vehicles (%)	2%	2%	2%	1%	4%	2%	1%	2%	0%	2%	2%	2%
Turn Type				Perm	NA		Perm				NA	
Protected Phases					8						6	
Permitted Phases				8			2					
Actuated Green, G (s)					24.6		28.6				28.6	
Effective Green, g (s)					24.6		28.6				28.6	
Actuated g/C Ratio					0.40		0.46				0.46	
Clearance Time (s)					4.5		4.5				4.5	
Vehicle Extension (s)					3.0		3.0				3.0	
Lane Grp Cap (vph)					2477		589				1583	
v/s Ratio Prot											0.02	
v/s Ratio Perm					0.26		c0.22					
v/c Ratio					0.65		0.48				0.05	
Uniform Delay, d1					15.3		11.6				9.3	
Progression Factor					1.00		1.00				1.00	
Incremental Delay, d2					0.6		2.8				0.1	
Delay (s)					16.0		14.4				9.4	
Level of Service					B		B				A	
Approach Delay (s)		0.0			16.0			14.4			9.4	
Approach LOS		A			B			B			A	

Intersection Summary					
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.56				
Actuated Cycle Length (s)	62.2	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	47.0%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	11	4	144	147	6
Future Volume (Veh/h)	16	11	4	144	147	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	12	4	157	160	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	23	
pX, platoon unblocked	0.98	0.98	0.98			
vC, conflicting volume	328	164	167			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310	142	146			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	670	891	1414			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	29	161	167
Volume Left	17	4	0
Volume Right	12	0	7
cSH	747	1414	1700
Volume to Capacity	0.04	0.00	0.10
Queue Length 95th (m)	1.0	0.1	0.0
Control Delay (s)	10.0	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	10.0	0.2	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		0.9		
Intersection Capacity Utilization	20.8%	ICU Level of Service		A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	0	32	0	48	0	109	0	18	140	0
Future Volume (Veh/h)	0	2	0	32	0	48	0	109	0	18	140	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.70	0.70	0.70	0.76	0.76	0.76	0.89	0.89	0.89	0.83	0.83	0.83
Hourly flow rate (vph)	0	3	0	42	0	63	0	122	0	22	169	0
Pedestrians					59			51			39	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					5			4			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								74			92	
pX, platoon unblocked												
vC, conflicting volume	437	394	136	362	394	220	169			181		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	437	394	136	362	394	220	169			181		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	92	100	91	100			98		
cM capacity (veh/h)	427	510	857	494	510	727	1421			1337		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	3	105	122	78	113
Volume Left	0	42	0	22	0
Volume Right	0	63	0	0	0
cSH	510	612	1700	1337	1700
Volume to Capacity	0.01	0.17	0.07	0.02	0.07
Queue Length 95th (m)	0.1	4.9	0.0	0.4	0.0
Control Delay (s)	12.1	12.1	0.0	2.3	0.0
Lane LOS	B	B		A	
Approach Delay (s)	12.1	12.1	0.0	0.9	
Approach LOS	B	B			

Intersection Summary				
Average Delay		3.5		
Intersection Capacity Utilization	32.3%	ICU Level of Service		A
Analysis Period (min)		15		

Lane Group	EBT	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1684	73	100	71
Future Volume (vph)	1684	73	100	71
Turn Type	NA	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5
Total Split (s)	36.0	29.0	15.0	44.0
Total Split (%)	45.0%	36.3%	18.8%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	27.2	29.3	39.6	39.6
Actuated g/C Ratio	0.36	0.39	0.52	0.52
v/c Ratio	0.68	0.18	0.18	0.08
Control Delay	21.8	14.2	11.0	10.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.8	14.2	11.0	10.4
LOS	C	B	B	B
Approach Delay	21.8	14.2		10.7
Approach LOS	C	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 75.8			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 40.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Caroline Street South & Main Street West

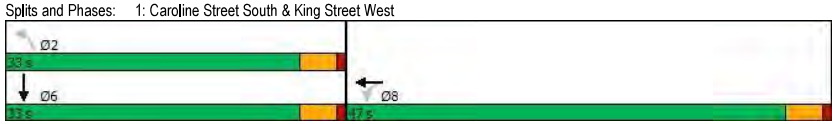
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	1684	27	0	0	0	0	73	46	100	71	0
Future Volume (vph)	63	1684	27	0	0	0	0	73	46	100	71	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.81						1.00		1.00	1.00	
Frt		1.00						0.95		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		7384						1801		1787	1900	
Flt Permitted		1.00						1.00		0.58	1.00	
Satd. Flow (perm)		7384						1801		1097	1900	
Peak-hour factor, PHF	0.99	0.99	0.99	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86
Adj. Flow (vph)	64	1701	27	0	0	0	0	81	51	116	83	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	1789	0	0	0	0	0	107	0	116	83	0
Heavy Vehicles (%)	0%	4%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		27.2						29.3		40.6	40.6	
Effective Green, g (s)		27.2						29.3		40.6	40.6	
Actuated g/C Ratio		0.35						0.38		0.53	0.53	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2615						687		641	1004	
v/s Ratio Prot								0.06		c0.02	0.04	
v/s Ratio Perm		0.24								c0.08		
v/c Ratio		0.68						0.16		0.18	0.08	
Uniform Delay, d1		21.1						15.6		9.3	8.9	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.8						0.5		0.1	0.2	
Delay (s)		21.9						16.1		9.4	9.1	
Level of Service		C						B		A	A	
Approach Delay (s)		21.9			0.0			16.1			9.3	
Approach LOS		C			A			B			A	

Intersection Summary					
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.41				
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	13.5		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	WBT	NBL	SBT
Lane Configurations			
Traffic Volume (vph)	1403	143	72
Future Volume (vph)	1403	143	72
Turn Type	NA	Perm	NA
Protected Phases	8		6
Permitted Phases		2	
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	47.0	33.0	33.0
Total Split (%)	58.8%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	Max	Max
Act Effct Green (s)	28.0	28.7	28.7
Actuated g/C Ratio	0.43	0.44	0.44
v/c Ratio	0.68	0.36	0.06
Control Delay	16.4	16.3	11.4
Queue Delay	0.0	0.0	0.0
Total Delay	16.4	16.3	11.4
LOS	B	B	B
Approach Delay	16.4		11.4
Approach LOS	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 65.7			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Caroline Street South & King Street West



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	285	1403	0	143	0	0	0	72	10
Future Volume (vph)	0	0	0	285	1403	0	143	0	0	0	72	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5				4.5	
Lane Util. Factor					0.86		1.00				0.95	
Frpb, ped/bikes					1.00		1.00				1.00	
Flpb, ped/bikes					1.00		0.98				1.00	
Frt					1.00		1.00				0.98	
Flt Protected					0.99		0.95				1.00	
Satd. Flow (prot)					6242		1758				3474	
Flt Permitted					0.99		0.70				1.00	
Satd. Flow (perm)					6242		1288				3474	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.71	0.71	0.71	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	303	1493	0	201	0	0	0	78	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	1796	0	201	0	0	0	83	0
Confl. Peds. (#/hr)				18			17					
Heavy Vehicles (%)	2%	2%	2%	1%	4%	2%	1%	2%	0%	2%	2%	2%
Turn Type				Perm	NA		Perm				NA	
Protected Phases					8						6	
Permitted Phases				8			2					
Actuated Green, G (s)					28.0		28.7				28.7	
Effective Green, g (s)					28.0		28.7				28.7	
Actuated g/C Ratio					0.43		0.44				0.44	
Clearance Time (s)					4.5		4.5				4.5	
Vehicle Extension (s)					3.0		3.0				3.0	
Lane Grp Cap (vph)					2660		562				1517	
v/s Ratio Prot											0.02	
v/s Ratio Perm					0.29		c0.16					
v/c Ratio					0.68		0.36				0.05	
Uniform Delay, d1					15.2		12.3				10.7	
Progression Factor					1.00		1.00				1.00	
Incremental Delay, d2					0.7		1.8				0.1	
Delay (s)					15.9		14.1				10.7	
Level of Service					B		B				B	
Approach Delay (s)		0.0			15.9			14.1			10.7	
Approach LOS		A			B			B			B	

Intersection Summary					
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.51				
Actuated Cycle Length (s)	65.7	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	46.3%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	12	9	110	296	20
Future Volume (Veh/h)	5	12	9	110	296	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	13	10	120	322	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				143	23	
pX, platoon unblocked						
vC, conflicting volume	473	172	344			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	473	172	344			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	99			
cM capacity (veh/h)	516	842	1212			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	18	130	215	129
Volume Left	5	10	0	0
Volume Right	13	0	0	22
cSH	716	1212	1700	1700
Volume to Capacity	0.03	0.01	0.13	0.08
Queue Length 95th (m)	0.6	0.2	0.0	0.0
Control Delay (s)	10.2	0.7	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.2	0.7	0.0	
Approach LOS	B			

Intersection Summary				
Average Delay			0.6	
Intersection Capacity Utilization			23.2%	ICU Level of Service A
Analysis Period (min)			15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	5	0	36	0	22	0	122	0	33	275	0
Future Volume (Veh/h)	0	5	0	36	0	22	0	122	0	33	275	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.70	0.70	0.70	0.76	0.76	0.76	0.89	0.89	0.89	0.83	0.83	0.83
Hourly flow rate (vph)	0	7	0	47	0	29	0	137	0	40	331	0
Pedestrians					59			51			39	
Lane Width (m)					3.6			3.6			3.6	
Walking Speed (m/s)					1.2			1.2			1.2	
Percent Blockage					5			4			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								74			92	
pX, platoon unblocked												
vC, conflicting volume	616	607	216	496	607	235	331			196		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	616	607	216	496	607	235	331			196		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	88	100	96	100			97		
cM capacity (veh/h)	331	381	760	389	381	711	1240			1321		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	7	76	137	150	221
Volume Left	0	47	0	40	0
Volume Right	0	29	0	0	0
cSH	381	471	1700	1321	1700
Volume to Capacity	0.02	0.16	0.08	0.03	0.13
Queue Length 95th (m)	0.4	4.6	0.0	0.7	0.0
Control Delay (s)	14.6	14.1	0.0	2.3	0.0
Lane LOS	B	B		A	
Approach Delay (s)	14.6	14.1	0.0	0.9	
Approach LOS	B	B			

Intersection Summary				
Average Delay			2.6	
Intersection Capacity Utilization			43.7%	ICU Level of Service A
Analysis Period (min)			15	

Lane Group	EBT	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1552	65	145	159
Future Volume (vph)	1552	65	145	159
Turn Type	NA	NA	pm+pt	NA
Protected Phases	4	2	1	6
Permitted Phases			6	
Detector Phase	4	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5
Total Split (s)	36.0	29.0	15.0	44.0
Total Split (%)	45.0%	36.3%	18.8%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	25.5	26.3	39.6	39.6
Actuated g/C Ratio	0.34	0.35	0.53	0.53
v/c Ratio	0.67	0.16	0.25	0.18
Control Delay	21.9	14.6	10.9	10.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.9	14.6	10.9	10.4
LOS	C	B	B	B
Approach Delay	21.9	14.6		10.6
Approach LOS	C	B		B

Intersection Summary			
Cycle Length: 80			
Actuated Cycle Length: 74.1			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Caroline Street South & Main Street West

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	1552	47	0	0	0	0	65	31	145	159	0
Future Volume (vph)	77	1552	47	0	0	0	0	65	31	145	159	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.81						1.00		1.00	1.00	
Frt		1.00						0.96		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		7372						1818		1787	1900	
Flt Permitted		1.00						1.00		0.59	1.00	
Satd. Flow (perm)		7372						1818		1106	1900	
Peak-hour factor, PHF	0.99	0.99	0.99	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86
Adj. Flow (vph)	78	1568	47	0	0	0	0	72	34	169	185	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	1687	0	0	0	0	0	86	0	169	185	0
Heavy Vehicles (%)	0%	4%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4									6		
Actuated Green, G (s)		25.5						26.3		39.6	39.6	
Effective Green, g (s)		25.5						26.3		39.6	39.6	
Actuated g/C Ratio		0.34						0.35		0.53	0.53	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2536						645		671	1015	
v/s Ratio Prot								0.05		c0.03	0.10	
v/s Ratio Perm		0.23								c0.10		
v/c Ratio		0.67						0.13		0.25	0.18	
Uniform Delay, d1		20.7						16.2		9.0	8.9	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.7						0.4		0.2	0.4	
Delay (s)		21.3						16.6		9.2	9.3	
Level of Service		C						B		A	A	
Approach Delay (s)		21.3			0.0			16.6			9.3	
Approach LOS		C			A			B			A	

Intersection Summary					
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.44				
Actuated Cycle Length (s)	74.1	Sum of lost time (s)		13.5	
Intersection Capacity Utilization	41.8%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

APPENDIX E

Level of Service Definitions

LEVEL OF SERVICE ANALYSIS AT SIGNALIZED INTERSECTIONS

To assist in clarifying the arithmetic analysis associated with traffic engineering, it is often useful to refer to "Level of Service". The term Level of Service implies a qualitative measure of traffic flow at an intersection. It is dependent upon vehicle delay and vehicle queue lengths at the approaches. Specifically, Level of Service criteria are stated in terms of the average stopped delay per vehicle for a 15-minute analysis period. The following table describes the characteristics of each level:

Level of Service	Features	Stopped Delay per Vehicle (sec)
A	At this level of service, almost no signal phase is fully utilized by traffic. Very seldom does a vehicle wait longer than one red indication. The approach appears open, turning movements are easily made and drivers have freedom of operation.	≤ 5.0
B	At this level, an occasional signal phase is fully utilized and many phases approach full use. Many drivers begin to feel somewhat restricted within platoons of vehicles approaching the intersection.	> 5.0 and ≤ 15.0
C	At this level, the operation is stable though with more frequent fully utilized signal phases. Drivers feel more restricted and occasionally may have to wait more than one red signal indication, and queues may develop behind turning vehicles. This level is normally employed in urban intersection design.	> 15.0 and ≤ 25.0
D	At this level, the motorist experiences increasing restriction and instability of flow. There are substantial delays to approaching vehicles during short peaks within the peak period, but there are enough cycles with lower demand to permit occasional clearance of developing queues and prevent excessive backups.	> 25.0 and ≤ 40.0
E	At this level, capacity is reached. There are long queues of vehicles waiting upstream of the intersection and delays to vehicles may extend to several signal cycles.	> 40.0 and ≤ 60.0
F	At this level, saturation occurs, with vehicle demand exceeding the available capacity.	> 60.0

LEVEL OF SERVICE ANALYSIS AT UNSIGNALIZED INTERSECTIONS[1]

The term "level of service" implies a qualitative measure of traffic flow at an intersection. It is dependent upon the vehicle delay and vehicle queue lengths at approaches. The level of service at unsignalized intersections is often related to the delay accumulated by flows on the minor streets, caused by all other conflicting movements. The following table describes the characteristics of each level.

Level of Service	Features
A	Little or no traffic delay occurs. Approaches appear open, turning movements are easily made, and drivers have freedom of operation.
B	Short traffic delays occur. Many drivers begin to feel somewhat restricted in terms of freedom of operation.
C	Average traffic delays occur. Operations are generally stable, but drivers emerging from the minor street may experience difficulty in completing their movement. This may occasionally impact on the stability of flow on the major street.
D	Long traffic delays occur. Motorists emerging from the minor street experience significant restriction and frustration. Drivers on the major street will experience congestion and delay as drivers emerging from the minor street interfere with the major through movements.
E	Very long traffic delays occur. Operations approach the capacity of the intersection.
F	Saturation occurs, with vehicle demand exceeding the available capacity. Very long traffic delays occur.

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(1) Highway Capacity Manual - Special Report No. 209, Transportation Research Board, 1985.

APPENDIX F

City of Hamilton's Zoning By-Law Excerpts

a) Parking Rate Areas

Where this By-law indicates that a Parking Rate Area (PRA) applies for the purpose of calculating a parking requirement or permission, such Parking Rate Area shall apply to lands and shall be indicated as Parking Rate Area (PRA1), (PRA2) and (PRA3) on Schedule "A" – Zoning Maps.

b) Application of Parking Rate Areas

Where a parking rate or requirement contained in this By-law does not contain reference to a Parking Rate Area (PRA), such parking rate shall apply to all lands throughout the City. Only where a parking rate refers to a specific Parking Rate Area, and where such use is located within that specified Parking Rate Area, shall there be any modification to the parking rate, and only in the manner prescribed.

5.7.1 MINIMUM REQUIRED PARKING RATE SCHEDULE

a) Minimum Required Parking Rate Schedule

Parking spaces shall be provided in the minimum quantity specified in Column 2 hereunder for each use listed in Column 1:

Column 1	Column 2
i. Residential Uses	
Single Detached Dwelling; Semi-Detached Dwelling; Street Townhouse Dwelling	a) In PRA 1, no parking spaces are required.
	b) In all other areas, 1 per unit.
Duplex Dwelling	a) In PRA 1, no parking spaces are required.
	b) In all other areas, a total of 1 parking space.
Additional Dwelling Unit; Additional Dwelling Unit - Detached	a) In PRA 1, PRA 2 or PRA 3, no parking spaces are required.
	b) In all other areas, 1 per unit.

	floor area which accommodates the Office component of the use.
Waste Management Facility; Waste Processing Facility; Waste Transfer Facility; Hazardous Waste Management Facility; and Waste Disposal Facility	3.33 for each 100.0 square metres of gross floor area which accommodates the Office component of the use.
vi. Agricultural Uses	
Agriculture, except for a specific Agriculture use noted below	No parking is required.
Single Detached Farm Dwelling	1 space per unit.
Aquaponics; Cannabis Growing and Harvesting Facility; Greenhouses	a) In an A1, A2, E1, or E2 Zone, no parking is required.
	b) In all other areas, 3.33 for each 100.0 square metres of gross floor area which accommodates the Office component of the use, plus 0.5 for each 100.0 square metres of gross floor area, which accommodates the remainder of the use.
Farm Product Supply Dealer	3.33 for each 100.0 square metres of gross floor area which accommodates the Showroom component of the use.
Kennel	3.33 for each 100.0 square metres of gross floor area which accommodates the Office and Retail component of the use.

5.7.2 MAXIMUM PERMITTED PARKING RATE SCHEDULE

a) Maximum Permitted Parking Rate Schedule

For any use listed in Column 1, the number of parking spaces provided shall not exceed the number in Column 2:

Column 1	Column 2
i. Residential Uses	
Multiple Dwelling, and Dwelling Unit, Mixed Use, where the total number of such units is 5 or greater	a) In PRA 1, 1 space per unit, inclusive of resident and visitor parking spaces.
	b) In PRA 2, 1.25 spaces per unit, inclusive of resident and visitor parking spaces.
	c) In PRA 3, 2 spaces per unit, inclusive of resident and visitor parking spaces.

5.7.3 MINIMUM ACCESSIBLE PARKING RATE SCHEDULE

a) Minimum Accessible Parking Rate Schedules

The minimum number of accessible parking spaces which must be provided shall be the greater minimum number resulting from the calculations in Sections 5.7.3 b) and 5.7.3 c) below, with numeric fractions rounded up in accordance with Section 5.1.1 c) ii) and iii).

b) Minimum Accessible Parking Calculation 1 - Proportionate to Parking Provision

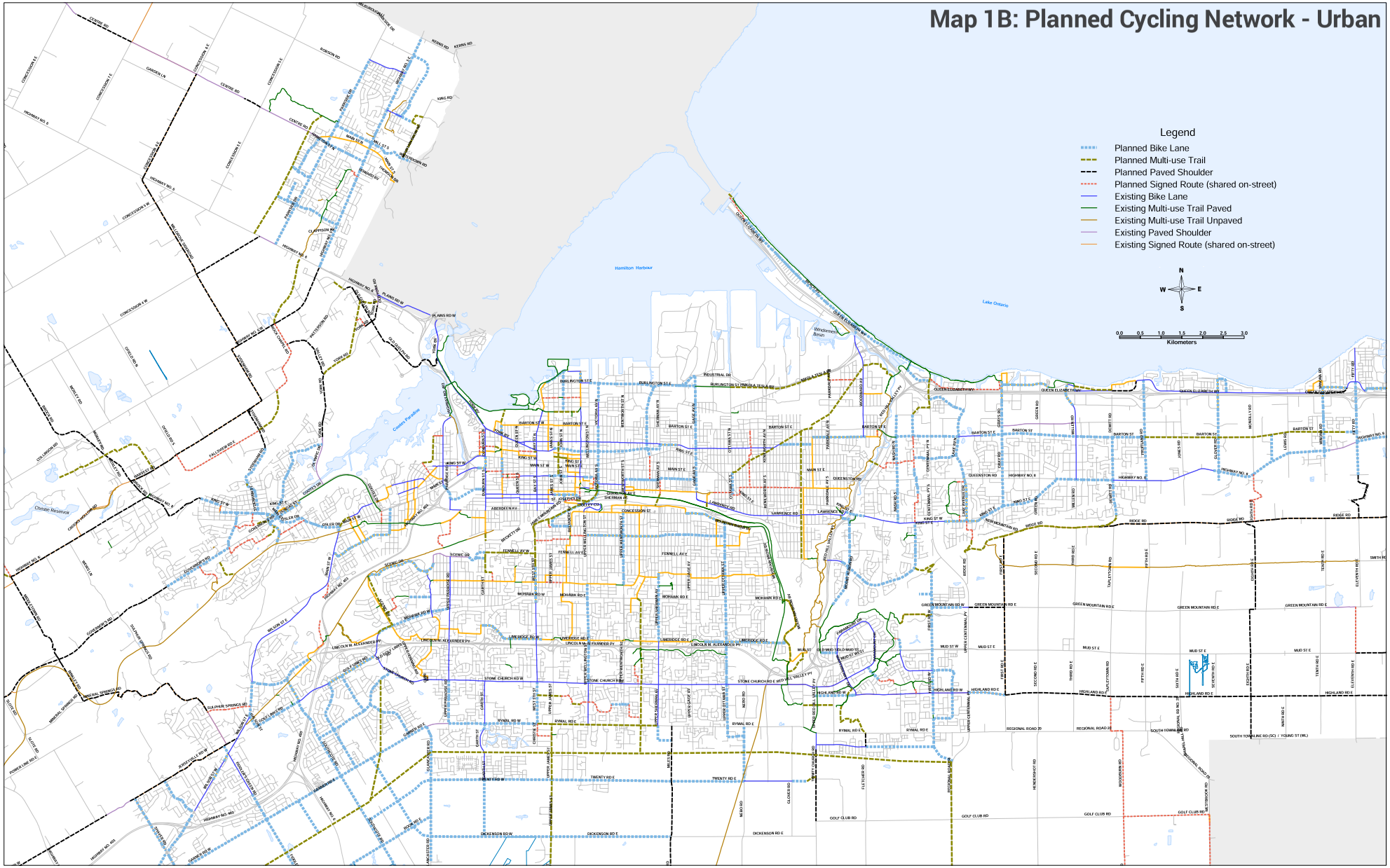
On a lot containing 5 or more parking spaces, a minimum number of the parking spaces provided shall meet the requirements of the Minimum Accessible Parking Rate Schedule below:

Column 1 Total Number of Parking Spaces Provided	Column 2 Minimum Number of Accessible Parking Spaces
5 – 100 spaces	Minimum 4% of the total number of parking spaces provided;
101 – 200 spaces	Minimum 1 space + 3% of the total number of parking spaces provided;
201 - 1000 spaces	Minimum 2 spaces + 2% of the total number of parking spaces provided; and,
1000 or more spaces	Minimum 11 + 1% of the total number of required parking spaces.

APPENDIX G

City of Hamilton's Planned Cycling Network

Map 1B: Planned Cycling Network - Urban



APPENDIX H

City of Hamilton's TDM Initiatives for Mixed Use Developments

3.A Residential

Category	TDM Initiative	Single family home development	Multiple family (low-medium density)	Multiple family (high density)
Cycling	Visible, well-lit, short-term bicycle parking for visitors (above minimum provisions or recommendations)	●	●	●
	Secure, indoor bicycle parking storage spaces for tenants/residents	-	●	●
	Ensure development connects to bicycle network	●	-	-
Walking	Safe, attractive and direct walkways for pedestrians linking building entrances with public sidewalks and with key destinations such as schools	●	●	●
	Enhanced pedestrian amenities on-site (benches, landscaping, lighting)	●	●	●
Transit	Enhance walking routes between main building entrance(s) and transit stops/stations	-	●	●
	Provide weather-protected waiting areas	○	●	●
	Bicycle parking located at or near transit stops	○	●	●
	Provision of transit information on-site and adjacent to stops/stations	●	●	●
	Implement transit priority measures (queue jump lanes, traffic signal priority, bus only lanes)	●	-	-
Parking	Provide no more than the minimum number of required spaces for residents and visitors	●	●	●
	Reduced minimum parking requirements based on proximity to transit	-	●	●
	Cash-in-lieu of parking to fund public parking or fund sustainable transportation	-	○	●
	Shared parking with nearby developments or on-street spaces	-	○	●
	Reduced minimum parking requirements based on provision of dedicated carshare vehicle parking spaces	-	●	●
	Unbundle parking costs from unit costs	-	○	●
Carshare/ Bikeshare	On-site carshare vehicle(s)	○	●	●
	On-site bikeshare facility	○	●	●
Wayfinding and Travel Planning	Travel planning resources for residents (individualized marketing, active transportation maps, community resources)	●	●	●
	Wayfinding signage to major destinations such as schools, public amenities, and commercial areas	●	○	○
Education/ Promotion, Incentives	Contribute to building a strong TDM brand	-	●	●
	Include transit and active transportation maps, annual transit passes, carshare memberships, and/or bikeshare memberships with new home/condo purchase	●	●	●

Legend: ○ Low Priority ● High Priority

MB1 | Urban Planning

Planning Justification Report and Urban Design Brief

215 – 217 King Street West
Hamilton, ON

Prepared for:

The City of Hamilton
October 2024

Table of Contents

A. Introduction

MB1 Development Consulting Inc. ("MB1") has been retained by owners of the 215 – 217 King Street West in the City of Hamilton (the "Subject Property") to prepare this joint Planning Justification Report and Urban Design Brief with respect to the development proposal for the Subject Property. Pursuant to Section 3.2.6.1 of Chapter F of the Urban Hamilton Official Plan (UHOP), the Urban Design Analysis in this report has been prepared to demonstrate how the proposal for the Subject Property is consistent with the design principles and policies identified in UHOP and the applicable design guidelines.

B. Existing and Planned Context

B.1 Site Location and Existing Site Conditions

The Subject Property is located at 215 - 217 King Street West in the City of Hamilton, which is on the southwest corner of the intersection of King Street West and Caroline Street South, as illustrated in **Figure 1**. The Subject Property has frontage of 30.18 metres along King Street West and 26.1 metres along Caroline Street South.

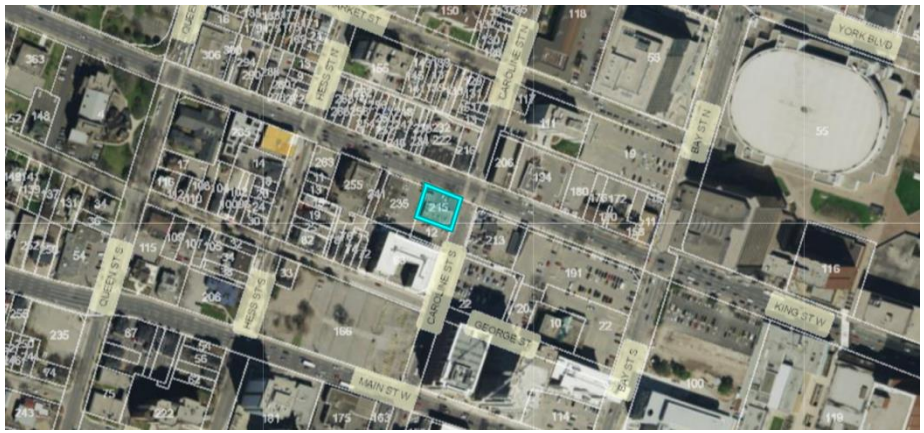


Figure 1 – Site Location

The Subject Property is located in the Downtown Hamilton Urban Growth Centre and along a Priority Transit Corridor. **Figure 2** identifies the Urban Hamilton Official Plan (UHOP) designations that apply to this property. The Subject Property is zoned "D2 (Downtown Mixed Use - Pedestrian Focus)". Schedule F includes Special Figures to Zoning By-Law 05-200 with the following being applicable to the Subject Property:

- Maximum Building Height of 83 metres;
- Delineated Heritage Character Zone;
- Minimum Building Base Façade Height of 16 metres for properties fronting on King Street West in the vicinity of the Subject Property.

Schedule E (Urban Structure):	Downtown Urban Growth Centre (Node)
Schedule E-1 (Urban Land Use Designations):	Downtown Mixed Use Area
Schedule C (Functional Road Classification):	Major Arterial (King Street West)
Volume 2, Appendix A:	Downtown Hamilton Secondary Plan Area
Downtown Hamilton Secondary Plan Land Use Plan (Map B.6.1-1):	Downtown Mixed Use (Pedestrian Focus)
Downtown Hamilton Secondary Plan Maximum Building Heights (Map B.6.1-2):	High-rise 2
Downtown Hamilton Secondary Plan Higher Order Transit (Appendix A):	Priority Transit Corridor *Higher Order Transit Station located at Queen St S/King St W (less than 2 blocks west of Subject Property)
Downtown Hamilton Secondary Plan Viewshed Analysis (Appendix C):	Locations Where There May Be Impacts to Views

Figure 2 – UHOP Designations Applicable to Subject Property

This property is currently occupied by a 1-storey retail building and surface parking area, as illustrated in the street view in **Figure 3** and aerial photo in **Figure 4**. The existing building is located towards the rear of the property with surface parking along the King Street West and Caroline Street frontages.

Figure 3 – Existing Street View of Subject Property

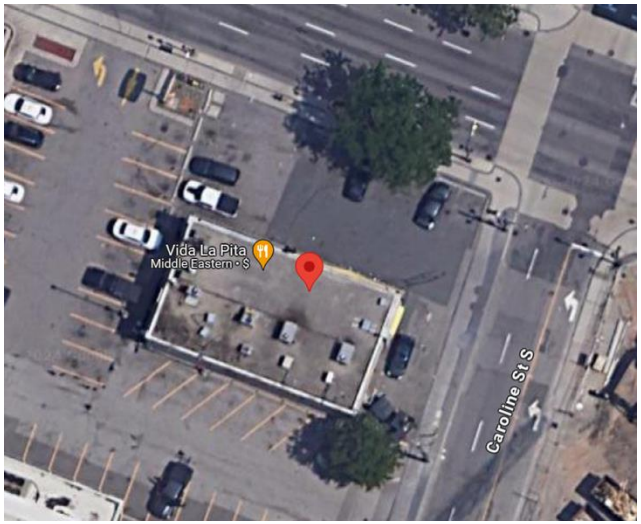


Figure 4 – Existing Aerial View of Subject Property

B.2 Adjacent Land Use

The properties immediately adjacent to the Subject Property include the following:

- To the north: 2 and 3-storey mixed-use buildings on the north side of King Street West (**Figure 5**);
- To the east: Multi-storey mixed-use buildings on the east side of Caroline Street South (**Figure 6**);
- To the south: 7-storey Staybridge Suites hotel (**Figure 7**); and
- To the west: 1-storey commercial building and surface parking lot (**Figure 8**).

Figure 5 – Street View of Mixed-Use Buildings to North of Subject Property

Figure 6 – Mixed-Use Buildings to East of Subject Property

Figure 7 – Staybridge Suites Hotel to South of Subject Property

Figure 8 – Commercial Property and Surface Parking Lot to West of Subject Property

A

B.3 Surrounding Neighbourhood Character

The Subject Property is located in the Downtown Hamilton Urban Growth Centre and directly on a Priority Transit Corridor. The land use and built form in the surrounding neighbourhood includes a variety of existing and proposed residential, commercial and mixed-use character, including the properties illustrated on **Figure 9** and on **Figures 10 through 14**. Many of these existing multi-storey residential, commercial and mixed buildings are located immediately adjacent to low-rise, low-density structures of 2 or 3 storeys in height.

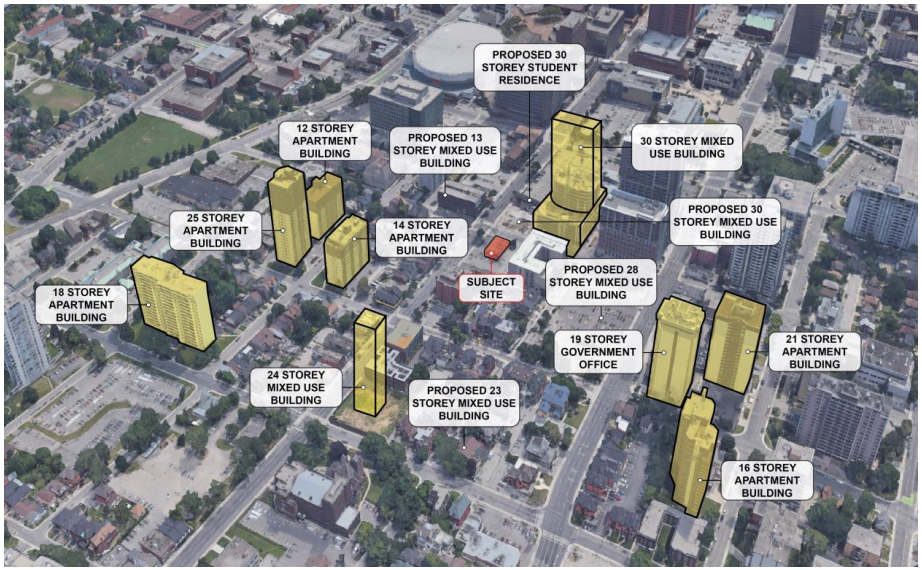


Figure 9 – Location of Surrounding Medium and High-Rise Properties

Figure 10 – Hampton Inn (NW Corner of King Street/Queen Street North)

Figure 11 – Mixed-Use Building on southeast corner of King Street East/Queen Street North

Figure 12– 7-Storey Residential Building at 255 King Street West

Figure 13 – 13-Storey Residential Building at 155 Market Street

Figure 14 – 11-Storey Residential Building at 33 Caroline Street South

C. Development Proposal

C.1 Proposal Details

The proposal for the Subject Property is a 14-storey mixed use building with 77 residential dwelling units above grade (floors 2 to 14) and 38.17 m^2 (410.9 ft^2) ground floor retail space, which will increase the number of people living and working in Downtown Hamilton and along a Priority Transit Corridor. The proposed height, massing, scale and character is consistent and compatible with existing properties and proposed development immediately adjacent to the Subject Property and within the surrounding neighbourhood.

C.2 Design Vision/Intent

The intent of the development proposal is to achieve a high-rise mixed-use development in Downtown Hamilton that is compatible with the surrounding neighbourhood character and is consistent with the City's land use planning and urban design principles as set out in the Urban Hamilton Official Plan and the Downtown Hamilton Tall Buildings Guidelines. As outlined in detail in this report, the design vision for the Subject Property incorporates the following key principles:

- Pedestrian and transit-oriented design through building orientation, placement and access;
- Transition of height and massing to adjacent properties and the public realm, including stepbacks above the building base;
- Respect for and compatibility with existing built form and land use, including heritage character;
- Establishing strong street edges through building placement/setbacks and design, including materials, articulation, windows and glazing, ground floor retail and the location of primary building entrances; and
- Prominence of building and pedestrian spaces with parking, vehicular circulation, storage, loading and service areas screened from view in the public realm and on adjacent properties.

D. Land Use Planning Analysis

D.1 Provincial Policy Statement, 2020 (PPS 2020)

D.1.1 Policy Overview

The Subject Property is located within the existing "Settlement Area", which is defined as follows in Section 6.0 of PPS 2020 as "urban areas and rural settlement areas within municipalities (such as cities, towns, villages and hamlets) that are: a) built-up areas where development is concentrated and which have a mix of land uses; and b) lands which have been designated in an official plan for development over the long-term planning horizon."

Part IV includes the Vision for Ontario's Land Use Planning System with section 1.0 containing policies related to Building Strong Healthy Communities. Section 1.1.1 indicates that healthy, liveable and safe communities are sustained by:

a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
b) accommodating an appropriate affordable and market-based range and mix of residential types (including single-detached, additional residential units, multi-unit housing, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs;
c) avoiding development and land use patterns which may cause environmental or public health and safety concerns;

e) promoting the integration of land use planning, growth management, transit-supportive development, intensification and infrastructure planning to achieve cost-effective development patterns, optimization of transit investments, and standards to minimize land consumption and servicing costs;
h) promoting development and land use patterns that conserve biodiversity.

Section 1.1.3 provides the following policies for Settlement Areas:

- 1.1.3.1 Settlement areas shall be the focus of growth and development.
- 1.1.3.2 Land use patterns within settlement areas shall be based on densities and a mix of land uses which:

a) efficiently use land and resources;
b) are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;
e) support active transportation;
f) are transit-supportive, where transit is planned, exists or may be developed.

Land use patterns within settlement areas shall also be based on a range of uses and opportunities for intensification and redevelopment in accordance with the criteria in policy 1.1.3.3, where this can be accommodated.

- 1.1.3.3 Planning authorities shall identify appropriate locations and promote opportunities for transit-supportive development, accommodating a significant supply and range of housing options through intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.
- 1.1.3.4 Appropriate development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety.
- 1.1.3.5 Planning authorities shall establish and implement minimum targets for intensification and redevelopment within built-up areas, based on local conditions. However, where provincial targets are established through provincial plans, the provincial target shall represent the minimum target for affected areas.
- 1.1.3.6 New development taking place in designated growth areas should occur adjacent to the existing built-up area and should have a compact form, mix of uses and densities that allow for the efficient use of land, infrastructure and public service facilities.

With respect to Housing, section 1.4.3 indicates that planning authorities shall provide for an appropriate range and mix of housing options and densities to meet projected market-based and affordable housing needs of current and future residents of the regional market area by:

a) establishing and implementing minimum targets for the provision of housing which is affordable to low and moderate income households and

which aligns with applicable housing and homelessness plans. However, where planning is conducted by an upper-tier municipality, the upper-tier municipality in consultation with the lower-tier municipalities may identify a higher target(s) which shall represent the minimum target(s) for these lower-tier municipalities;
b) permitting and facilitating:

1. all housing options required to meet the social, health, economic and well-being requirements of current and future residents, including special needs requirements and needs arising from demographic changes and employment opportunities; and
2. all types of residential intensification, including additional residential units, and redevelopment in accordance with policy 1.1.3.3;

c) directing the development of new housing towards locations where appropriate levels of infrastructure and public service facilities are or will be available to support current and projected needs;
d) promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation and transit in areas where it exists or is to be developed;
e) requiring transit-supportive development and prioritizing intensification, including potential air rights development, in proximity to transit, including corridors and stations; and
f) establishing development standards for residential intensification, redevelopment and new residential development which minimize the cost of housing and facilitate compact form, while maintaining appropriate levels of public health and safety.

Section 1.6 includes policies for Infrastructure and Public Service Facilities, including the following Transportation Systems policies:

- 1.6.7.2 Efficient use should be made of existing and planned infrastructure, including through the use of transportation demand management strategies, where feasible.
- 1.6.7.4 A land use pattern, density and mix of uses should be promoted that minimize the length and number of vehicle trips and support current and future use of transit and active transportation.

As outlined in Section 1.7.1, long-term economic prosperity should be supported by:

a) promoting opportunities for economic development and community investment-readiness;
b) encouraging residential uses to respond to dynamic market-based needs and provide necessary housing supply and range of housing options for a diverse workforce;
c) optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;
d) maintaining and, where possible, enhancing the vitality and viability of downtowns and main streets;
e) encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes;

g) providing for an efficient, cost-effective, reliable multimodal transportation system that is integrated with adjacent systems and those of other jurisdictions, and is appropriate to address projected needs to support the movement of goods and people;
i) sustaining and enhancing the viability of the agricultural system through protecting agricultural resources, minimizing land use conflicts, providing opportunities to support local food, and maintaining and improving the agri-food network.

D.1.2 Policy Analysis

It is my opinion that the development proposal is consistent with the applicable objectives and policies of PPS 2020 on the following basis:

- The proposal represents more efficient use of land in the existing settlement area and Downtown Urban Growth Centre that will generate considerably incremental property tax revenue for the City of Hamilton;
- The number of residential dwelling units and types available in the Downtown Urban Growth Centre will be increased on a property located on a Priority Transit Network;
- There will be no adverse impacts to existing natural heritage features or areas; and
- As outlined in detail in this report, the proposed building will be compatible with the surrounding land uses and structures in terms of height, density, built form character, setbacks and transition.

D.2 A Place to Grow – Growth Plan for the Greater Golden Horseshoe, 2020

D.2.1 Policy Overview

The Subject Property is located within the "Delineated Built-Up Area" and the Downtown Hamilton Urban Growth Centre. The Subject Property is also located on a "Priority Transit Corridor" identified on Schedule 5 of the Growth Plan.

Section 1.2.1 contains the following Guiding Principles:

- Support the achievement of complete communities that are designed to support healthy and active living and meet people's needs for daily living throughout an entire lifetime.
- Prioritize intensification and higher densities in strategic growth areas to make efficient use of land and infrastructure and support transit viability.
- Support a range and mix of housing options, including additional residential units and affordable housing, to serve all sizes, incomes, and ages of households.
- Improve the integration of land use planning with planning and investment in infrastructure and public service facilities, including integrated service delivery through community hubs, by all levels of government.
- Protect and enhance natural heritage, hydrologic, and landform systems, features, and functions.

Section 2.2 contains policies for Where and How to Grow, including the following policies for Managing Growth in Section 2.2.1:

- 2. Forecasted growth to the horizon of this Plan will be allocated based on the following:

a) the vast majority of growth will be directed to settlement areas that:

i. have a delineated built boundary;
ii. have existing or planned municipal water and wastewater systems; and
iii. can support the achievement of complete communities;

c) within settlement areas, growth will be focused in:

i. delineated built-up areas;
ii. strategic growth areas;
iii. locations with existing or planned transit, with a priority on higher order transit where it exists or is planned; and
iv. areas with existing or planned public service facilities.

- 3. Upper- and single-tier municipalities will undertake integrated planning to manage forecasted growth to the horizon of this Plan, which will:

a) establish a hierarchy of settlement areas, and of areas within settlement areas, in accordance with policy 2.2.1.2;
b) be supported by planning for infrastructure and public service facilities by considering the full life cycle costs of these assets and developing options to pay for these costs over the long-term;
c) provide direction for an urban form that will optimize infrastructure, particularly along transit and transportation corridors, to support the achievement of complete communities through a more compact built form.

- 4. Applying the policies of this Plan will support the achievement of complete communities that:

a) feature a diverse mix of land uses, including residential and employment uses, and convenient access to local stores, services, and public service facilities;
c) provide a diverse range and mix of housing options, including additional residential units and affordable housing, to accommodate people at all stages of life, and to accommodate the needs of all household sizes and incomes;
d) expand convenient access to:

i. a range of transportation options, including options for the safe, comfortable and convenient use of active transportation;
iii. an appropriate supply of safe, publicly-accessible open spaces, parks, trails, and other recreational facilities.

e) provide for a more compact built form and a vibrant public realm, including public open spaces.

Section 2.2.3 specifically relates to Urban Growth Centres. Section 2.2.3.1 indicates that Urban Growth Centres will be planned:

a) as focal areas for investment in regional public service facilities, as well as commercial, recreational, cultural, and entertainment uses;
b) to accommodate and support the transit network at the regional scale and provide connection points for inter- and intra-regional transit;
c) to serve as high-density major employment centres that will attract provincially, nationally, or internationally significant employment uses; and
d) to accommodate significant population and employment growth.

Section 2.2.3.2 establishes a minimum density target for Downtown Hamilton of 200 residents and jobs combined per hectare by 2031 or earlier.

Building on these policies are the following policies for Transit Corridors and Station Areas in Section 2.2.4:

- 2. For major transit station areas on priority transit corridors or subway lines, upper- and single-tier municipalities, in consultation with lower-tier municipalities, will delineate the boundaries of major transit station areas in a transit-supportive manner that maximizes the size of the area and the number of potential transit users that are within walking distance of the station.
- 3. Major transit station areas on priority transit corridors or subway lines will be planned for a minimum density target of:

b) 160 residents and jobs combined per hectare for those that are served by light rail transit or bus rapid transit.

- 9. Within all major transit station areas, development will be supported, where appropriate, by:

a) planning for a diverse mix of uses, including additional residential units and affordable housing, to support existing and planned transit service levels;
b) fostering collaboration between public and private sectors, such as joint development projects;
c) providing alternative development standards, such as reduced parking standards; and
d) prohibiting land uses and built form that would adversely affect the achievement of transit-supportive densities.

- 10. Lands adjacent to or near to existing and planned frequent transit should be planned to be transit-supportive and supportive of active transportation and a range and mix of uses and activities.

Finally, section 2.2.6.1 (a)(i) indicates that municipalities, including the City of Hamilton, by supporting housing choice through the achievement of the minimum intensification and density targets in this Plan, as well as the other policies of this Plan by identifying a diverse range and mix of housing options and densities, including additional residential units and affordable housing to meet projected needs of current and future residents.

D.2.2 Policy Analysis

It is my opinion that the development proposal conforms to the applicable policies of the Growth Plan for the following reasons:

- The proposal will support the achievement of complete communities and prioritize intensification in the Downtown Urban Growth Centre and along a Priority Transit Network;
- The range and mix of housing options in the community will be increased relative to existing conditions;
- There will be no impact to existing natural heritage, hydrologic, and landform systems, features, and functions;
- The Subject Property is in a strategic growth area (Downtown Urban Growth Centre) and will support the achievement of complete communities by incorporating residential dwelling units and ground floor commercial area in conjunction with being located on a Priority Transit Network; and
- The proposal will directly support the growth targets for Downtown Hamilton and the Priority Transit Network.

D.3 Urban Hamilton Official Plan

D.3.1 Policy Overview

<u>Chapter A - Introduction</u>

Chapter A of the Urban Hamilton Official Plan (UHOP) includes the Introduction to the Plan, including the following principles set out in section 1.4:

- compact and healthy urban communities that provide opportunities to live, work, play, and learn;
- balanced transportation networks that offer choice so people can walk, cycle, take transit, or drive, and recognize the importance of goods movement to our local economy;
- a growing, strong, prosperous and diverse economy;
- financial stability; and,
- strategic and wise use of infrastructure services and existing built environment.

Among the Nine Directions to Guide Development set out in section 2.1 (Vision 2020) are the following:

- Direction #1 Encourage a compatible mix of uses in neighbourhoods that provide opportunities to live, work, and play;
- Direction #2 Concentrate new development within existing built-up areas and within a firm urban boundary;
- Direction #6 Expand transportation options that encourage travel by foot, bike and transit and enhance efficient inter-regional transportation connections;
- Direction #7 Maximize the use of existing buildings, infrastructure and vacant or abandoned land; and

- Direction #9 Maintain and create attractive public and private spaces and respect the unique character of existing buildings, neighbourhoods and settlements.

Chapter B – Communities

Section 2.4 provides policies for Residential Intensification, including the following General Residential Intensification Policies in Section 2.4.1:

- 2.4.1.1 Residential intensification shall be encouraged throughout the entire built-up area, in accordance with the policies of Chapter E – Urban Systems and Designations and Chapter F – Implementation.
- 2.4.1.2 The City's primary intensification areas shall be the Urban Nodes and Urban Corridors as illustrated on Schedule E – Urban Structure and as further defined in secondary plans and corridor studies for these areas, included in Volume 2.
- 2.4.1.3 The residential intensification target specified in Policy A.2.3.3.4 shall generally be distributed through the built-up areas follows:

a) The Downtown Urban Growth Centre shall be planned to accommodate approximately 20% of the intensification target;
b) The Urban Nodes and Urban Corridors identified in Section E.2.0 - Urban Structure, excluding the Downtown Urban Growth Centre, shall be planned to accommodate approximately 40% of the residential intensification target; and
c) 40% of the residential intensification target is anticipated to occur within the Neighbourhoods as illustrated on Schedule E – Urban Structure.

- 2.4.1.4 Residential intensification developments shall be evaluated based on the following criteria:

a) a balanced evaluation of the criteria in b) through g), as follows;
b) the relationship of the proposal to existing neighbourhood character so that it maintains, and where possible, enhances and builds upon desirable established patterns and built form;
c) the development's contribution to maintaining and achieving a range of dwelling types and tenures;
d) the compatible integration of the development with the surrounding area in terms of use, scale, form and character. In this regard, the City encourages the use of innovative and creative urban design techniques;
e) the development's contribution to achieving the planned urban structure as described in Section E.2.0 – Urban Structure;
f) infrastructure and transportation capacity; and,
g) the ability of the development to comply with all applicable policies.

Section 3.0 relates to Quality of Life and Complete Communities. The Housing Policies in Section 3.2 include the following Urban Housing Goals:

- 3.2.1.1 Provide for a range of housing types, forms, and densities to meet the social, health and well-being requirements of all current and future residents;
- 3.2.1.2 Provide housing within complete communities; and
- 3.2.1.6 Increase the mix and range of housing types, forms, tenures, densities, affordability levels, and housing with supports throughout the urban area of the City.

These policies are reinforced by Section 3.2.4.1, which states: "The development of a full range of housing forms, types, and densities shall be provided for and promoted throughout the City of Hamilton through residential intensification and new development. A full range of housing forms, types, and densities means the full spectrum of physical housing types including single detached dwellings, semi-detached dwellings, duplexes, townhouses of various types (street, block, stacked), apartments and other forms of multiple dwellings, and lodging houses, built at a range of densities."

Chapter C – City Wide Systems and Designations

Within Chapter C are the following policy goals for the Integrated Transportation Network as set out in Section 4.1:

- 4.1.2 Recognize the relationship of transportation and land use planning in connecting communities, land uses and activities and the role of the integrated transportation network in creating complete communities and improving overall quality of life.
- 4.1.4 Plan urban areas so that travel by automobile is an option not a necessity.
- 4.1.7 Facilitate an increase in active transportation in the City and contribute to transportation demand management initiatives.

The following policies are also included in Section 4.2:

- 4.2.3 All land use planning and design decisions shall be coordinated with, and consider, the integrated transportation network goals and policies of Section C.4.0 – Integrated Transportation Network.
- 4.2.8 New secondary plans and designs for major transit generators shall incorporate the following design directions:

c) organization of land uses in a manner that reduces automobile dependence and improves modal choice and the movement of goods;
d) placement of higher density land uses near existing and planned transit stop/station locations.

- 4.2.11 The City shall encourage new development to be located and designed to minimize walking distances to existing or planned transit and facilitate the efficient movement of goods where feasible.

Chapter E – Urban Systems and Designations

The Urban Systems and Designations of the Official Plan have been established to achieve the following goals set out section E1.0:

a) Designate land uses to facilitate the development of a node and corridor based urban structure.
b) Support and facilitate development and investment that contributes to the development of the overall urban structure.
c) Develop compact, mixed use urban environments that support transit and active transportation.

d) Develop complete communities where people can live, work, learn, and play.
e) Plan and designate lands for a range of housing types and densities, taking into account affordable housing needs.
f) Promote and support design which enhances and respects the character of existing neighbourhoods and creates vibrant, dynamic, and liveable urban places.
g) Promote and support appropriate residential intensification throughout the urban area and focused in Urban Nodes and Urban Corridors.
h) Recognize that Hamilton's neighbourhoods are stable, not static.
i) Protect and enhance a system of linked natural areas.
j) Protect Hamilton's existing and planned Employment Areas.
k) Plan for and promote the Downtown Urban Growth Centre as the pre-eminent centre in Hamilton for commercial and office development.

These goals are supported by the following Urban Structure Principles in Section 2.1:

a) Nodes and corridors are the focus of reurbanization activities (i.e. population growth, private and public redevelopment, and infrastructure investment).
b) Nodes and corridors provide focal points of activity for Hamilton's local communities and neighbourhoods.
c) Nodes and corridors are connected to each other and are internally served by various modes of transportation, including higher order transit.
d) Nodes and corridors provide a vibrant pedestrian environment and facilitate active transportation through careful attention to urban design.
e) Nodes and corridors evolve with higher residential densities and mixed use developments to achieve their planned functions and support transit.

The Subject Property is located in an Urban Node, more specifically the Downtown Urban Growth Centre. Section 2.3.1 provides the following policies for this Urban Node:

- 2.3.1.2 The Downtown Urban Growth Centre shall be the pre-eminent node in Hamilton due to its scale, density, range of uses, function and identity by residents of the City as the Downtown and accordingly, it shall be planned for a range of uses appropriate to its role as the City's pre-eminent node.
- 2.3.1.6 The Downtown Urban Growth Centre shall function as a residential neighbourhood with a large and diverse population. A range of housing types, including affordable housing and housing with supports, shall be encouraged as set out in the Downtown Hamilton Secondary Plan and other associated secondary plans and policies of this Plan.
- 2.3.1.8 The Downtown Urban Growth Centre shall function as a major transit hub for the City with a GO rail station and higher order transit systems extending out from the Centre.
- 2.3.1.9 The Downtown Urban Growth Centre shall generally have the higher density within the City with a minimum overall density of 250 persons and jobs per hectare. Overall density in excess of this target may be achievable and warranted. Increases to this density target shall be considered as part of a review of the Downtown Hamilton Secondary Plan. The density targets shall be evaluated

based, in part, on the results of the Downtown Office Strategy and the impacts on existing infrastructure and transportation networks.

- 2.3.1.10 It is anticipated that the Downtown Urban Growth Centre will accommodate approximately 20% of the City-wide residential intensification over the time period of this Plan which equates to a range of 5,000 to 6,000 dwelling units.
- 2.3.1.11 The Downtown Urban Growth Centre shall be planned and encouraged to accommodate in excess of 100,000 square metres of retail floor space.
- 2.3.1.12 Detailed policies on permitted building heights and densities shall be set out in the Downtown Hamilton Secondary Plan, other secondary plans covering lands within the Downtown Urban Growth Centre, and other policies of this Plan.
- 2.3.1.13 The Downtown Urban Growth Centre shall be designed with a strong pedestrian focus to create a comfortable and animated pedestrian environment.
- 2.3.1.14 The Downtown Urban Growth Centre shall be designed to accommodate all modes of transportation with a focus on transit and active transportation including pedestrian and cycling trips within the Downtown and between the Downtown and the surrounding Neighbourhoods.
- 2.3.1.16 Reduced parking requirements shall be considered to encourage a broader range of uses and densities and to support transit.

Given the location of the Subject Property on a Major Arterial and Priority Transit Corridor, the following policies of Section 2.4 (Urban Corridors) apply:

- 2.4.3 Urban Corridors shall be the location for a range of higher density land uses along the corridor, including mixed uses where feasible, supported by higher order transit on the Primary Corridors.
- 2.4.8 Primary Corridors shall be served by the higher order of transit service. Secondary Corridors may be served by a higher order transit service.
- 2.4.10 The built form along the Urban Corridors shall generally consist of low to mid rise forms, but will vary along the length of the corridors with some areas permitted to accommodate high density and high rise built form. The Primary Corridors shall have a greater proportion of the corridor length in retail and mixed use forms, while the Secondary Corridors shall generally accommodate retail and mixed use forms in small clusters along the corridors with medium density housing located between the clusters.
- 2.4.11 Urban Corridors shall be a focus for intensification through the Neighbourhoods which they traverse. However, it is anticipated that intensification will also occur within the surrounding Neighbourhoods, particularly on sites along other arterial roads that are not designated as Urban Corridors.
- 2.4.16 New development shall respect the existing built form of adjacent neighbourhoods where appropriate by providing a gradation in building height. New development shall locate and be designed to minimize the effects of shadowing and overview on properties in adjacent neighbourhoods.
- 2.4.17 Reductions in parking requirements shall be considered in order to encourage a broader range of uses and densities to support existing and planned transit routes.

The commercial and mixed use designation policies are set out in Section E4.0, which include the following policy goals:

- 4.1.1 Create and retain vibrant mixed use areas that accommodate a range of uses and are accessible by automobile, transit, and active transportation.
- 4.1.2 Direct the majority of retail commercial uses to mixed use areas that are well served by transit and serve as a central place for the City, a portion of the City, or for one or more neighbourhoods.
- 4.1.3 Create comfortable, walkable and stimulating pedestrian streets along key roads within the mixed use areas.
- 4.1.4 Maintain an appropriate distribution of retail and commercial services in each neighbourhood in order to meet the day-to-day and weekly shopping needs of residents and in locations which are highly accessible by active transportation, and transit, as well as the automobile.
- 4.1.5 Maintain an appropriate distribution of retail and commercial services across the City to meet the discretionary and occasional shopping needs of the public in locations highly accessible by transit as well as the automobile.
- 4.1.6 Direct land extensive retail uses which require outdoor storage or sales to areas designated Arterial Commercial areas.

The policies for the Downtown Mixed Use Designation are provided in Section 4.4 and include the following:

- 4.4.3 Increasing the number of people who work and live the Downtown shall enhance the day and night activity and contribute to its planned function as a vibrant people place.
- 4.4.4 The following uses shall be permitted on lands designated Downtown Mixed Use on Schedule E-1 – Urban Land Use Designations: e) residential uses.
- 4.4.5 Notwithstanding Policy E.4.4.4, the full range of uses shall not be permitted throughout the lands designated Downtown Mixed Use. The Downtown Secondary Plan and zoning by-law establish more detailed land use designations and permitted uses which apply to specific areas of the Downtown.
- 4.4.7 Permitted density and heights shall be set out in the secondary plan for the lands designated Downtown Mixed Use.
- 4.4.8 Within the area designated Downtown Mixed Use, a higher density form of housing shall be encouraged, including affordable housing, that may be integrated with business uses including retail and service commercial establishments on the ground floor, as further set out in the Downtown Secondary Plan.
- 4.4.9 Permitted uses shall be located in both single and mixed use buildings.
- 4.4.10 The Downtown Mixed Use area shall be designed as a pedestrian focused area with a high level of pedestrian comfort and amenities. Buildings shall generally be situated close to and oriented to the street. Retail buildings shall have store fronts and other active uses opening onto the sidewalk. On the pedestrian focus streets, new development shall enhance pedestrian comfort and street activity and where possible increase the built block face. New

development in other areas of the Downtown Mixed Use area should create a comfortable pedestrian environment.

- 4.4.11 Building mass shall consider the pedestrian nature of the area designated Downtown Mixed Use. Massing techniques such as stepped back or terraced floors may be required.
- 4.4.12 Streetscape plans shall provide details for upgraded streetscape treatments, especially on pedestrian focus streets.
- 4.4.13 Streets within the Downtown Mixed Use area shall be designed to accommodate the automobile, transit and active transportation, including pedestrian and bicycle trips within the Downtown and from the surrounding Neighbourhoods. Along pedestrian focus streets, sidewalk widths shall be maximized where possible and a broad range of sidewalk activities, permitted where space allows, to promote sidewalk cafés, sidewalk kiosks, street vendors, and performers.
- 4.4.14 Reduced parking requirements shall be considered in recognition of the high level of transit service to the area designated Downtown Mixed Use.

D.3.2 Policy Analysis

UHOP contains numerous objectives and policies that are applicable to the Subject Property and the proposed development. The following is an analysis of the key principles and hallmarks that can be established from these objectives and policies.

- Complete Communities

UHOP includes the following definition of "Complete Communities", which is drawn from the Growth Plan: "Complete communities meet people's needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided." This concept speaks to incorporating all of the elements needed for daily living within the community, including housing, shopping, services, education, recreation and transportation.

It is my opinion that the development proposal conforms to the concept of Complete Communities and will directly implement the associated UHOP policies. The proposal is for a 14-storey mixed use building that includes ground floor retail and 3 levels of underground parking. The Subject Property is located within the Downtown Urban Growth Centre, which has been identified as the priority location for growth and intensification in the City of Hamilton. The proposal will add 68 residential dwelling units on a property currently occupied by a 1-storey commercial building while also incorporating retail uses on the ground floor. The Subject Property is also located within an area with convenient access to shopping, services and other requirements for daily living, including being directly located on a Priority Transit Corridor with a Higher Order Transit Station located less than 2 blocks to the west. The proposal will increase the number of people living in the most important node and along one of the most important corridors in the City while supporting existing transit, pedestrian and municipal infrastructure.

- Transit-Supportive Development

UHOP incorporates many policies seeking to achieve a balanced, multi-modal transportation system that supports transit, pedestrians and active modes of transportation. UHOP defines "Transit-Supportive: as follows: "Makes transit viable and improves the quality of the experience of using transit. When used in reference to development, it often refers to compact, mixed-use development that has a high level of employment and residential densities to support frequent transit service. When used in reference to urban design, it often refers to design principles that make development more accessible for transit users, such as roads laid out in a grid network rather than a discontinuous network; pedestrian-friendly built environment along roads to encourage walking to transit; reduced setbacks and placing parking at the sides/rear of buildings; and improved access between arterial roads and interior blocks in residential areas."

It is my opinion that the development proposal represents transit-supportive development as envisioned and defined in UHOP. The proposed mixed use building will add 68 new residential dwelling units in conjunction with ground floor commercial space that will support the Priority Transit Corridor on King Street. The proposed building will make more efficient use of the Subject Property through a 14-storey dwelling that respects and reinforces the surrounding built form context and incorporates parking below grade, as opposed to the current conditions with surface parking fronting onto King Street.

- Compact and Efficient Use of Land and Structures

The Subject Property is currently occupied by a one-storey commercial building with surface parking oriented along King Street. The surrounding context is characterized predominantly by multi-storey mixed-use buildings that are reflective of the character of the area as part of the Downtown Urban Growth Centre. However, to achieve the growth targets established for this area, it is necessary to make more efficient use of efficient land and structures to achieve infill residential and commercial intensification. The development proposal will significantly increase the number of dwelling units and scale of built form on the Subject Property that respects and reinforces its surrounding context and is appropriate in the Downtown Urban Growth Centre and along a Priority Transit Corridor.

- Compatibility and Respect for Community Character

UHOP seeks development and land use that is compatible with adjacent land uses in terms of use, form, scale and character. This is achieved through such considerations as creating transitions in scale to neighbouring buildings, ensuring adequate privacy and sunlight to neighbouring properties and minimizing the impacts of shadows and wind conditions. The over-riding objective is to ensure that infill development and intensification in the Downtown Urban Growth Centre balances the objectives of complete communities and transit-supportive development with respectful and compatible land use and built form.

- Intensification Focus on Nodes and Corridors

The UHOP intensification strategy clearly focuses on nodes and corridors, particularly the Downtown Urban Growth Centre. While growth and

intensification across the entire urban area is promoted, with the aim of recognizing that neighbourhoods are stable but not static, the Downtown Urban Growth Centre is the highest priority in terms of intensification, followed by the City's hierarchy of nodes and corridors.

The Subject Property is not only located in the Downtown Urban Growth Centre, but also on a Priority Transit Corridor and less than 2 blocks from the Higher Order Transit Station at Queen Street South and King Street West. Thus, this property is appropriate for the highest intensity of development in terms of height, density, massing and lot coverage.

- Availability of Housing

UHOP seeks to increase not only the number of dwelling units available in the Downtown Urban Growth Centre, but also the variety of unit types and building typology. The proposal will add 68 dwelling units on the Subject Property while maintaining ground floor commercial area. These units will vary in size to accommodate different resident needs.

D.4 City of Hamilton Zoning By-Law 05-200

D.4.1 Policy Overview

The D2 (Downtown Mixed Use - Pedestrian Focus) on the Subject Property permits a wide range of commercial and institutional uses, in addition to above-grade residential dwelling units. The maximum height is set at 83 metres on Figure 1 in conjunction with a minimum Building Base Façade Height of 16 metres for properties fronting on King Street West. No minimum building setbacks are set in this zoning designation, but the following maximum setbacks to the street lines are provided:

- Maximum 2.0 metres for any portion of building below 11.0 metres in height, except where a visibility triangle shall be provided for a driveway access;
- Maximum setback of 6.0 metres for that portion of a building providing an access driveway to a garage.

The Zoning By-Law also includes the following built form regulations for new development:

- Rooftop mechanical equipment shall be located and/or screened from view of any abutting street;
- No parking or aisles shall be located between the required building façade and the front lot line or flankage lot line;
- A minimum of one principal entrance shall be provided: 1. within the ground floor building façade setback the least distance from a street; and, 2. shall be accessible from the building façade with direct access from the public sidewalk;
- Outdoor Storage: i) No outdoor storage of goods, materials, or equipment shall be permitted. ii) the outdoor display of goods or materials for retail purposes accessory to a retail use shall only be permitted in a front yard or flankage yard.

The zoning is subject to a number of holding provisions that limit development to a certain list of uses and maximum height of 22 metres or

less on the Subject Property until such time as a number of conditions are satisfied, including the following:

- That the landowner demonstrate that sufficient land assembly has occurred to achieve the minimum lot area requirement and lot frontage requirement in accordance with Section 6.0 of this By-law.
- That the landowner demonstrate that the proposal conforms to the policies of the Downtown Hamilton Secondary Plan by submitting the following studies: 1. Shadow Impact Study; 2. Pedestrian Level Wind Study; 3. Visual Impact Assessment; 4. Traffic Impact Study; and, 5. Functional Servicing Report;
- That the landowner demonstrate that the proposed development does not exceed the height of the Niagara Escarpment;
- That conditional site plan approval be received, which shall address matters including but not limited to Design Review Panel advice;
- That the landowner shall be required to enter into a Section 37 Agreement to secure provision of Community Benefits;
- That the landowner demonstrate that how any development having the effect of removing all or part of rental housing comprised of three or more units will be replaced; and
- That the landowner enter into an Agreement with the City of Hamilton.

D.4.2 Policy Analysis

The proposed mixed use building with ground floor commercial uses is permitted under the prevailing Zoning By-Law regulations. The proposed maximum building height also complies with the maximum permitted in Figure 1 and includes the required minimum building base height. However, the holding provisions on the property must be lifted to allow the development proceed.

It is my opinion that the development proposal is consistent with PPS 2020, conforms to the Growth Plan and conforms to the applicable policies of UHOP. On this basis, it is my opinion that it is appropriate that the holding provisions be amended to facilitate the development proposal and implement the policy intent of UHOP. The applications submitted to the City of Hamilton include the studies required to demonstrate that the proposal conforms to the policies of the Downtown Hamilton Secondary Plan and that the proposed height is appropriate relative to the Niagara Escarpment. It is also my understanding that the applicant will obtain the necessary form of site plan approval and enter into the agreements required under the holding provisions.

E. Urban Design Analysis

E.1 Urban Hamilton Official Plan

D.1.1 Chapter B – Communities

- 2.4.1 General Residential Intensification Policies
  - 2.4.1.4 Residential intensification developments within the built-up area shall be evaluated based on the following criteria:

b) the relationship of the proposed development to existing neighbourhood character so that it builds upon desirable established patterns and built form;
d) the compatible integration of the proposed development with the surrounding area in terms of use, scale, form and character. In this regard, the City encourages the use of innovative and creative urban design techniques.

- 3.3.1 Urban Design Goals
  - 3.3.1.1 Enhance the sense of community pride and identification by creating and maintaining unique places.
  - 3.3.1.2 Provide and create quality spaces in all public and private development.
  - 3.3.1.3 Create pedestrian oriented places that are safe, accessible, connected, and easy to navigate for people of all abilities.
  - 3.3.1.4 Create communities that are transit-supportive and promote active transportation.
  - 3.3.1.5 Ensure that new development is compatible with and enhances the character of the existing environment and locale.
  - 3.3.1.6 Create places that are adaptable and flexible to accommodate future demographic and environmental changes, including the impacts of a changing climate.
  - 3.3.1.7 Promote development and spaces that respect natural processes and features and contribute to environmental sustainability.
  - 3.3.1.8 Promote intensification that makes appropriate and innovative use of buildings and sites and is compatible in form and function to the character of existing communities and neighbourhoods.
  - 3.3.1.9 Encourage innovative community design and technologies.
  - 3.3.1.10 Create urban places and spaces that improve air quality and support active, healthy lifestyles that reduce greenhouse gas emissions and are resistant to the impacts of climate change.

- 3.3.2 General Policies and Principles
  - 3.3.2.3 Urban design should foster a sense of community pride and identity by:

a) respecting existing character, development patterns, built form, and landscape;
b) promoting quality design consistent with the locale and surrounding environment;
c) recognizing and protecting the cultural history of the City and its communities;
d) conserving and respecting the existing built heritage features of the City and its communities;
e) conserving, maintaining, and enhancing the natural heritage and topographic features of the City and its communities;
f) demonstrating sensitivity toward community identity through an understanding of the character of a place, context and setting in both the public and private realm;

g) contributing to the character and ambiance of the community through appropriate design of streetscapes and amenity areas;
h) respecting prominent sites, views, and vistas in the City; and,
i) incorporating public art installations as an integral part of urban design.

- 3.3.2.4 Quality spaces physically and visually connect the public and private realms. Public and private development and redevelopment should create quality spaces by:

a) organizing space in a logical manner through the design, placement, and construction of new buildings, streets, structures, and landscaping;
b) recognizing that every new building or structure is part of a greater whole that contributes to the overall appearance and visual cohesiveness of the urban fabric;
c) using materials that are consistent and compatible with the surrounding context in the design of new buildings;
d) creating streets as public spaces that are accessible to all;
e) creating a continuous animated street edge in urban environments;
f) including transitional areas between the public and private spaces where possible through use of features such as landscaping, planters, porches, canopies, and/or stairs;
g) creating public spaces that are human-scale, comfortable, and publicly visible with ample building openings and glazing;
h) creating, reinforcing, and emphasizing important public vistas and view corridors; and,
i) minimizing excessive street noise and stationary noise source levels through the design, placement, and construction of buildings and landscaping.

- 3.3.2.5 Places that are safe, accessible, connected and easy to navigate shall be created by using the following design applications, where appropriate:

a) connecting buildings and spaces through an efficient, intuitive, and safe network of streets, roads, alleys, lanes, sidewalks, pathways, and trails;
b) providing connections and access to all buildings and places for all users, regardless of age and physical ability;
c) ensuring building entrances are visible from the street and promoting shelter at entrance ways;
d) integrating conveniently located public transit and cycling infrastructure with existing and new development;
e) providing appropriate way-finding signage considering size, placement, and material that clearly identifies publicly accessible landmarks, pathways, intersections, cycling and transit routes, and significant natural and cultural heritage features;
f) providing pedestrian-scale lighting;
g) designing streets and promoting development that provides real and perceived safety for all users of the road network;
h) including urban braille components in streetscape improvements;
i) considering traffic calming techniques in redevelopment projects and secondary planning; and,
j) creating places and spaces which are publicly visible and safe.

- 3.3.2.6 Where it has been determined through the policies of this Plan that compatibility with the surrounding areas is desirable, new development and redevelopment should enhance the character of the existing environment by:

a) complementing and animating existing surroundings through building design and placement as well as through placement of pedestrian amenities;
b) respecting the existing cultural and natural heritage features of the existing environment by re-using, adapting, and incorporating existing characteristics;
c) allowing built form to evolve over time through additions and alterations that are in harmony with existing architectural massing and style;
d) complementing the existing massing patterns, rhythm, character, colour, and surrounding context; and,
e) encouraging a harmonious and compatible approach to infilling by minimizing the impacts of shadowing and maximizing light to adjacent properties and the public realm.

- 3.3.3 Built Form
  - 3.3.3.2 New development shall be designed to minimize impact on neighbouring buildings and public spaces by:

a) creating transitions in scale to neighbouring buildings;
b) ensuring adequate privacy and sunlight to neighbouring properties; and,
c) minimizing the impacts of shadows and wind conditions.

  - 3.3.3.3 New development shall be massed to respect existing and planned street proportions.
  - 3.3.3.4 New development shall define the street through consistent setbacks and building elevations. Design directions for setbacks and heights are found in Chapter E – Urban Systems and Designations and in the Zoning By-law.
  - 3.3.3.5 Built form shall create comfortable pedestrian environments by:

a) locating principal façades and primary building entrances parallel to and as close to the street as possible;
b) including ample glazing on ground floors to create visibility to and from the public sidewalk;
c) including a quality landscape edge along frontages where buildings are set back from the street;
d) locating surface parking to the sides or rear of sites or buildings, where appropriate; and,
e) using design techniques, such as building step-backs, to maximize sunlight to pedestrian areas.

- 3.3.7 Storage, Service and Loading Areas
  - 3.3.7.1 Service and loading areas shall be located away from streets so as to minimize disruption or conflicts with adjacent land uses and pedestrian routes and shall be screened as necessary from views from the public right-of-way.

- 3.3.7.2 Service and loading areas shall be buffered to reduce visual and noise impacts, particularly when located adjacent to residential areas. Buffering methods should include berms, tree and shrub plantings, noise walls, fences, and/or the use of quality construction materials and methods.
- 3.3.7.3 Outside storage areas shall be sited and organized to reduce their potential negative impacts on the streetscape. Open storage areas should be located in the rear or side yards and screened from public view or from views from adjacent properties.
- 3.3.7.4 Outside storage and loading areas shall be paved with a hard surface to reduce dust and promote improved air quality.

The development proposal for the Subject Property is consistent with these UHOP Communities policies on the following basis:

- **The proposed building height, density, scale, massing and placement on the Subject Property is consistent and compatible with the existing land use and built form character of immediately adjacent properties and properties in the immediate neighbourhood context, as illustrated in the rendering Figure 15 and the street elevations includes in Figures 16 through 19;**
- **The proposed building height and massing is reduced by a 3-metre stepback at levels 6-14 along King Street West and Caroline Street South and a 3-meter stepback at levels 8-14 along the west side and south (rear) yard as illustrated in the rendering in Figure 20 and the isometric views included in Figure 21;**
- **The proposed building is oriented to King Street and Caroline Street, including the principal entrance from King Street, with outdoor amenity areas between the building and street edge that include landscaping, hardscaping and street furniture; this also provides an attractive and pedestrian-friendly private-public interface; these design features are illustrated in Figure 22;**
- **Parking is fully accommodated in three below grade levels and screened from view in the public realm and on neighbouring properties as illustrated in the parking level plans in Figure 23;**
- **The 5-storey base of the proposed building provides a transition in height towards the property lines, particularly the 7-storey Staybridge Suites hotel to the south;**
- **The surface parking areas on the adjacent properties to the west and south provide spatial separation to the neighbouring structures in conjunction with the height transition down from 14 storeys to 5 storeys at the building base;**
- **Transition to the 2 and 3-storey mixed use buildings north of the Subject Property is provided by the 5-storey building base height and the spatial separation provided by the King Street corridor;**
- **The proposed building will bring the building wall to the street edge in a location consistent with existing structures in the surrounding community and eliminate the surface parking area currently located between the building and street;**
- **The proposed building height and massing, including the tapering and transition of height above the 5-storey base, maintains the views along the King Street corridor;**

- **The materials and architectural character of the proposed building are consistent with the existing structures along King Street and in the surrounding community;**
- **The ground floor includes retail space with large windows and glazing, in conjunction with the primary entrance to the building, which provides for an animated street edge and relationship to the public realm, as illustrated in Figure 24;**
- **The primary entrance to the building is on King Street, which provides direct and convenient access to the existing sidewalks and transit service/stops along this corridor;**
- **All service, loading and storage, including garbage and recycling, will occur within the interior of the ground floor the building and accessed from the driveway to the building on Caroline Street as illustrated on the ground floor plan in Figure 25; and**
- **The shadow and sun study prepared for the proposal illustrates that the building will result in minimal shadow impacts to neighbouring properties relative to existing conditions due to the design of the proposed dwelling and the presence of existing high-rise buildings, particularly the 30-storey dwelling immediately to the east. The results of the shadow study are provided in Figure 26 and Figure 27.**

Figure 15 – Rendering of Proposed Building and Adjacent Properties (looking east along King Street)

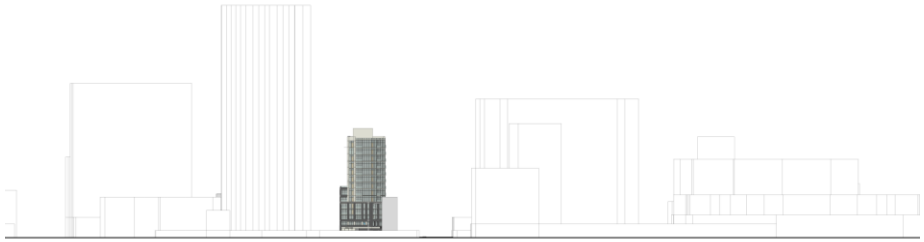


Figure 16 – Street Elevation (looking east along King Street)

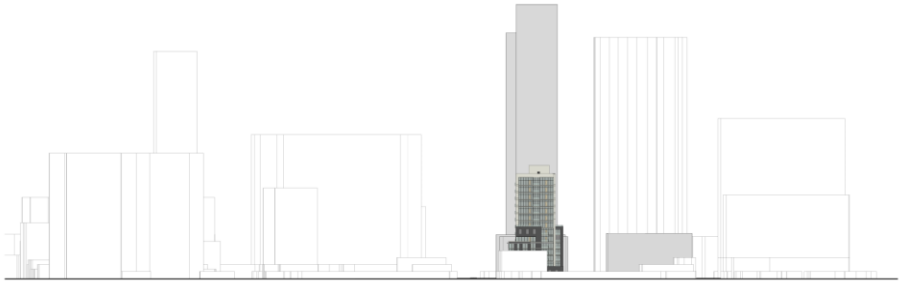


Figure 17 – Street Elevation (looking west along King Street)

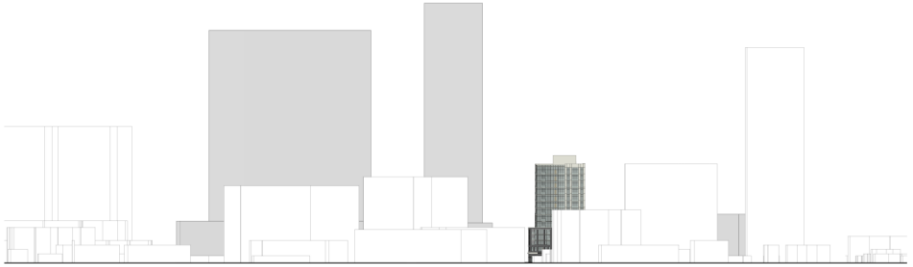


Figure 18 – Street Elevation (looking north along Caroline Street)

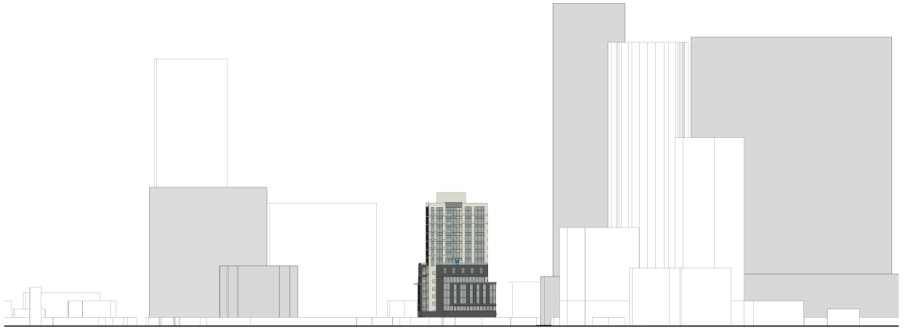


Figure 19 – Street Elevation (looking south along Caroline Street)

Figure 20 – Rendering of Proposed Building

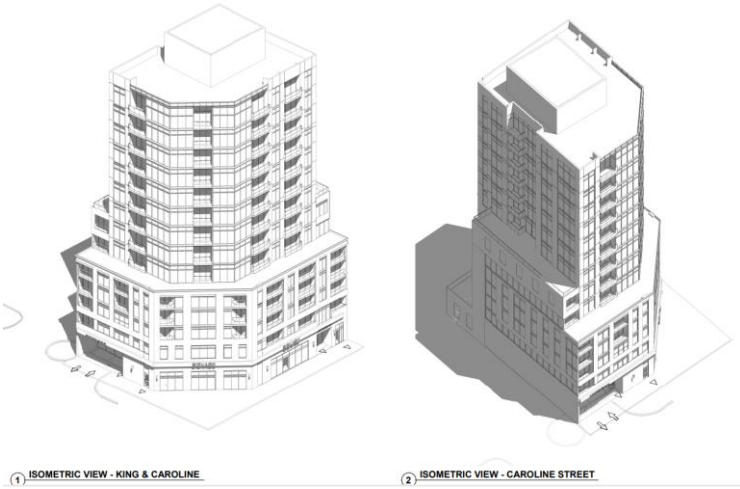


Figure 21 – Isometric Views of Proposed Building Height/Massing

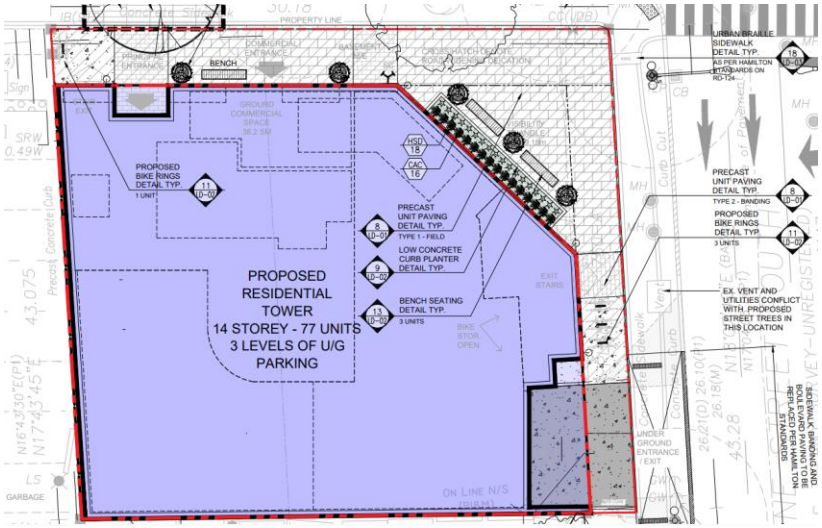


Figure 22 – Proposed Amenity and Landscaped Area at Building Entrance and Street Edge

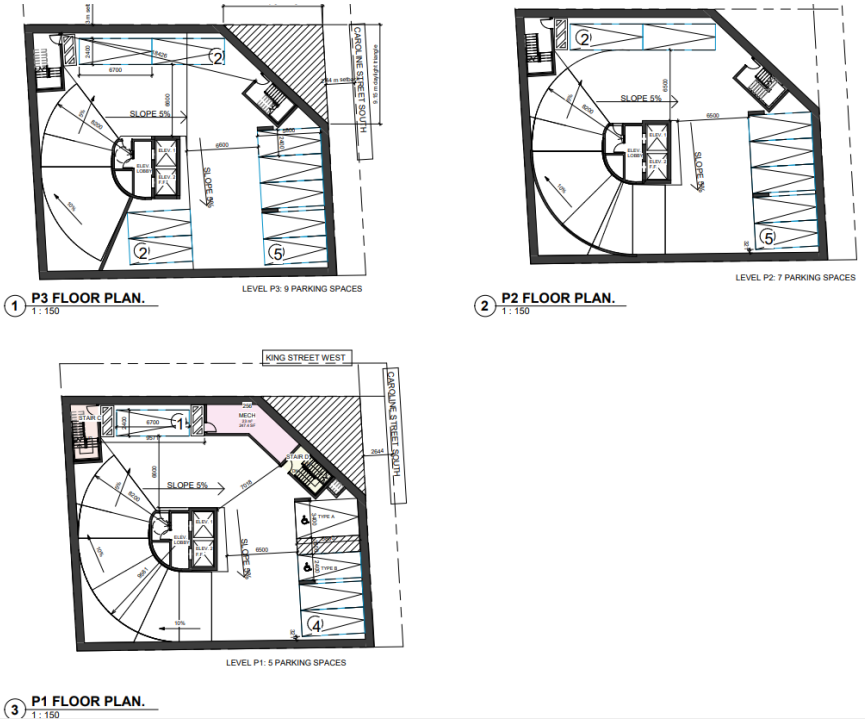


Figure 23 – Below Grade Parking Level Plans

Figure 24 – Animated Street Edge at Ground Level Retail and Primary Building Entrance

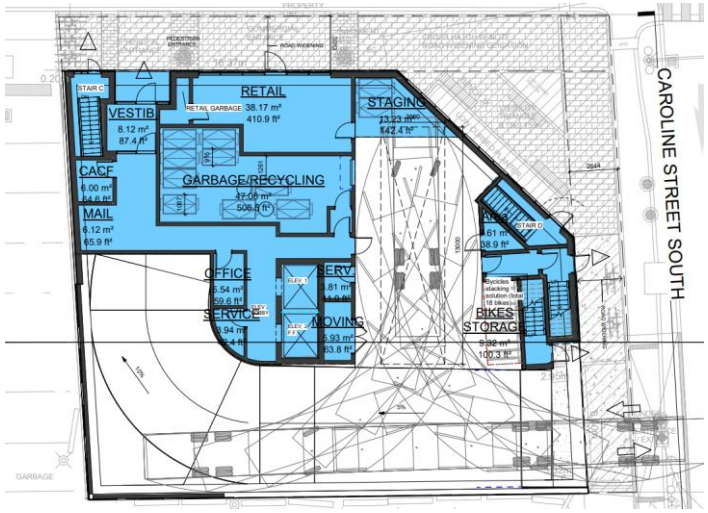


Figure 25 – Proposed Ground Floor Plan

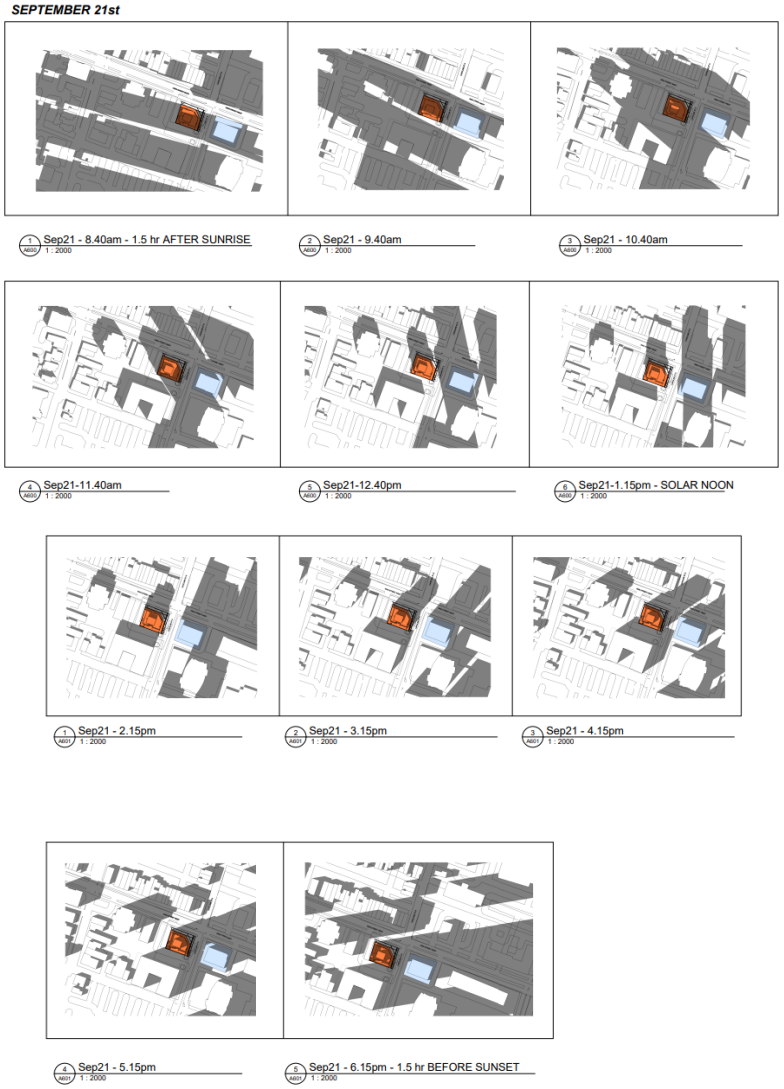


Figure 26 – Shadow Study (fall equinox)

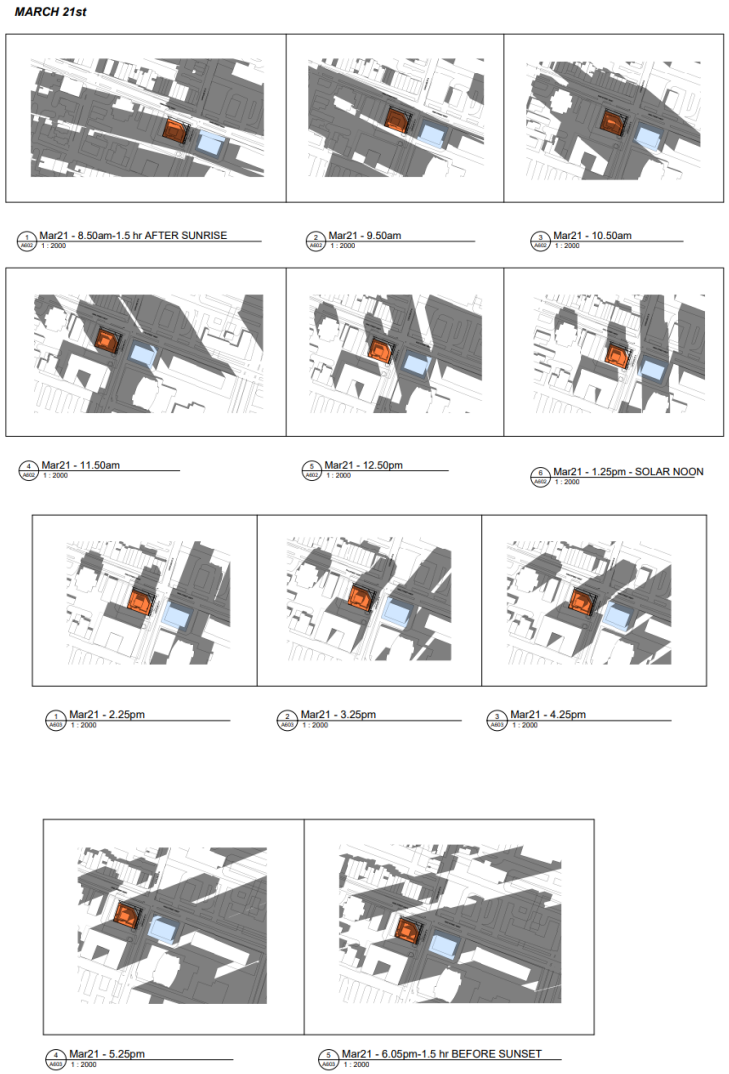


Figure 27 – Shadow Study (spring equinox)

D.1.2 Chapter E – Urban Systems and Designations

The following sections in Chapter E (Urban Systems and Designations) are relevant to this Urban Design Analysis:

- 2.4 Urban Corridors
  - 2.4.14 Urban Corridors shall provide a comfortable and attractive pedestrian experience.
  - 2.4.16 New development shall respect the existing built form of adjacent neighbourhoods where appropriate by providing a gradation in building height. New development shall locate and be designed to minimize the effects of shadowing and overview on properties in adjacent neighbourhoods.

- 4.3 Pedestrian Focus Streets
  - 4.3.4 In addition to the policies of the specific Commercial and Mixed Use designations, the following policies shall apply to pedestrian focus streets:

a) A minimum of 75% of the block face located between two roads shall be developed with buildings.
b) Buildings shall be built up to the streetline and parking, driveways or lanes shall not be permitted between the buildings and the street, except as set out in E.4.3.4 g).

c) Each building or store front shall face onto the pedestrian focus street with the main entrance of each building or store and substantial fenestration facing on to the street.
d) Notwithstanding Policy E.4.6.9 Mixed Use – Medium Density Designation, only commercial uses shall be permitted on the ground floor, and a place of worship and day nursery shall only be permitted above the ground floor of a building facing a Pedestrian Focus Street.
e) On-street parking shall be provided where feasible and appropriate.
f) A minimum height of two storeys shall be encouraged.
g) Single use buildings exceeding a ground floor area of 5,000 square metres shall generally be directed to the interior of a property with smaller stores oriented onto the pedestrian focus street in front of the larger stores. Alternatively, larger stores could be located up to the streetline provided they are lined with smaller stores, multiple entrances, or other similar means to animate the streetscape.
h) Sidewalks shall be required on both sides of the street and shall be of sufficient width to:

i) accommodate anticipated pedestrian volumes;
ii) comfortably and safely accommodate the needs of persons with disabilities and seniors;
iii) ensure sufficient space for coordinated street furnishings, public utilities, and tree plantings; and,
iv) accommodate sidewalk cafés, kiosks, and street vendors where possible.

i) Transit shelters and stops shall be provided, where appropriate;
j) New buildings and spaces shall be designed to reflect a human scale of development, contribute to public safety and security, and create a signficantly enhanced pedestrian environment.
k) New buildings shall be encouraged to have awnings, canopies, arcades, or front porches to provide weather protection.
l) Hotels shall be encouraged to locate on pedestrian focus streets with the main façade and entrance facing the pedestrian focus street. The main automobile arrival areas may be located on a pedestrian focus street provided the pedestrian circulation is accommodated.

- 4.4 Downtown Mixed Use Designation
  - 4.4.10 The Downtown Mixed Use area shall be designed as a pedestrian focused area with a high level of pedestrian comfort and amenities. Buildings shall generally be situated close to and oriented to the street. Retail buildings shall have store- fronts and other active uses opening onto the sidewalk. On the pedestrian focus streets, new development shall enhance pedestrian comfort and street activity and where possible increase the built block face. New development in other areas of the Downtown Mixed Use area should create a comfortable pedestrian environment.
  - 4.4.11 Building mass shall consider the pedestrian nature of the area designated Downtown Mixed Use. Massing

techniques such as stepped back or terraced floors may be required.

- 4.4.12 Streetscape plans shall provide details for upgraded streetscape treatments, especially on pedestrian focus streets.
- 4.4.13 Streets within the Downtown Mixed Use area shall be designed to accommodate the automobile, transit and active transportation, including pedestrian and bicycle trips within the Downtown and from the surrounding Neighbourhoods. Along pedestrian focus streets, sidewalk widths shall be maximized where possible and a broad range of sidewalk activities, permitted where space allows, to promote sidewalk cafés, sidewalk kiosks, street vendors, and performers.
- 4.4.14 Reduced parking requirements shall be considered in recognition of the high level of transit service to the area designated Downtown Mixed Use.

The development proposal for the Subject Property is consistent with these UHOP Urban Systems and Designations policies on the following basis:

- **The landscaping and amenity area proposed between the building and street will provide a comfortable and attractive pedestrian experience and transition to the public realm;**
- **The proposed building has been located to provide a consistent streetwall that frames the entire street edge along both King Street and Caroline Street, and provides an animated facade characterized by retail space, windows and glazing;**
- **The proposed building height and massing is consistent and compatible with the existing built form character of adjacent properties and other properties in the surrounding neighbourhood;**
- **The primary building entrance is on King Street and provides access to the retail floor areas and the common areas of the residential dwelling units located above grade;**
- **The proposed building incorporates a stepbacks and gradation of height and massing above the fifth floor that provides for appropriate transition to neighbouring properties;**
- **The proposed building is oriented towards pedestrian and transit use with parking, vehicular activity and service/loading/storage activity occurring within the interior of the building and screened from view.**

D.1.3 Volume 2, Chapter B – Hamilton Secondary Plans

The following sections in Volume 2, Chapter B (Hamilton Secondary Plans) are relevant to this Urban Design Analysis, specifically Section 6.1 (Downtown Hamilton Secondary Plan):

- 6.1.4 General Land Use Policies
    - 6.1.4.6 When considering an application for development, the following matters shall be evaluated:

a) compatibility with adjacent land uses including matters such as shadowing, grading, overlook, noise, lighting, traffic and other impacts;
b) the consideration of transition in height to adjacent and existing buildings;
c) that height, massing, scale and arrangement of the buildings and structures are compatible with adjacent development and sympathetic to the character and heritage of the neighbourhood; and,
d) the conservation of on-site and adjacent cultural heritage resources.

- 6.1.4.12 Building heights are identified on Map B.6.1.2 – Downtown Hamilton Building Heights and the maximum heights for each area shall fall into the following categories:
  e) High Rise 2 – up to 30 storeys.

- 6.1.4.18 The following policies shall apply to High-rise (tall) buildings:

a) a tall building is any building that is greater than 12 storeys in height;
b) new tall buildings shall be no greater than the height of the top of the Escarpment as measured between Queen Street and Victoria Avenue;
c) a tall building is typically defined as having a building base component (also known as podium), a tower component and tower top, however, Policies B.6.1.4.18 through B.6.1.4.24 shall also apply to other typologies of a tall building;
d) a building base is defined as the lower storeys of a tall building which are intended to frame the public realm with good street proportion and pedestrian scale or contains streetwall heights that respect the scale and built form character of the existing context through design, articulation, and use of the ground floor;
e) a tower is defined as the storeys above the building base; and,
f) the tower top is defined as the uppermost floors of the building including rooftop mechanical or telecommunications equipment, signage and amenity space. This portion of the building shall have a distinctive presence in Hamilton's skyline by employing interesting architectural features and roof treatments.

- 6.1.4.19 The Downtown Hamilton Tall Building Guidelines shall apply to tall building development and shall be used by City Staff when evaluating tall building development proposals.
- 6.1.4.20 In addition to Policy B.6.1.4.19 above, it is not the intent of the Downtown Hamilton Tall Building Guidelines to limit creativity and innovation in design. Where it can be demonstrated that an alternative built form achieves the intent of the Downtown Hamilton Tall Building Guidelines, alternative built forms shall be permitted, subject to demonstrating good planning principles and meeting the intent and vision of the policies of this Plan.
- 6.1.4.21 Tall building development shall require transition to adjacent existing and planned low-rise and mid-rise buildings through the application of separation distances, setbacks, and stepbacks in accordance with Policies B.6.1.4.31 through B.6.1.4.39 of this Plan and as informed by the Downtown Hamilton Tall Building Guidelines.
- 6.1.4.22 Not every site in the Downtown identified as High-rise 1 or High-rise 2 can accommodate a tall building or is a suitable

site for a tall building. The Tall Building Guidelines and Zoning By-law, shall establish the minimum criteria for assessing the suitability of an individual site for a tall building.

- 6.1.4.23 All tall buildings shall meet the following requirements:

a) the building base shall be designed to:

i) fit harmoniously within the context of neighbouring streetwall heights. Where there is no consistent streetwall height context for the area, the streetwall height shall be established in a manner that maintains a comfortable pedestrian scale and appropriate street proportion;
ii) reduce and mitigate wind impacts on the public realm, including streets, sidewalks, parks and open spaces, and privately owned publicly accessible spaces. Pedestrian level wind conditions shall be suitable for sitting and standing, with higher standards applied to parks and open spaces and Pedestrian Focus Streets; and,
iii) minimize shadows, in accordance with Policies B.6.1.4.34 through B.6.1.4.39 of this Plan, to preserve the utility of sidewalks, parks, public and private open spaces, school yards and buildings, childcare centres, playgrounds, sitting areas, patios, and other similar uses.

b) the building base may be required to setback at grade to achieve access to sunlight on sidewalks, parks, public and private open spaces, schoolyards and buildings, childcare centres, playgrounds, sitting areas, patios, and other similar uses;
c) tall building development shall provide setbacks from the lot line to the building face of the tower and adequate separation distance between towers on the same lot. These lot line tower setbacks shall ensure that individual tall buildings within a city block and the cumulative effect of multiple tall buildings within a block contribute to creating a strong and healthy neighbourhood by fitting in with the existing and/or planned context. Providing adequate space between towers shall:

i) enhance the ability to provide a high-quality, comfortable public realm;
ii) protect development potential of other sites within blocks;
iii) provide access to sunlight on sidewalks, parks, public and private open spaces, school yards and buildings;
iv) provide access to natural light and a reasonable level of privacy for occupants of tall buildings;
v) provide pedestrian-level views of the sky between towers particularly as experienced from adjacent streets, parks and open spaces, and views between towers for occupants of tall buildings;
vi) limit the impacts of uncomfortable wind conditions on streets, parks, open spaces, and surrounding properties; and,
vii) provide appropriate transitions to adjacent lower-scale planned context, built heritage resources, and cultural heritage landscapes.

d) as building heights increase, greater setbacks may be required from the tower to the lot line to achieve the requirements of Policy B.6.1.4.23 c).

- 6.1.4.25 In addition to Section B.3.3 – Urban Design Policies of Volume 1, development in the Downtown shall achieve the following:

a) eliminating expanses of blank walls;
b) integrating roof top design and function with the surrounding buildings and public spaces. This shall be achieved through:

i) integrating roof design with the building architecture;
ii) designing the tower top of tall buildings so that they are a recognizable landmark that contributes to an iconic and distinctive skyline;
iii) ensuring that roof top mechanical equipment, as well as stair and elevator towers, are sized and located so that they are screened from view from the street;
iv) developing rooftop terraces, gardens, and associated landscape areas for private amenity areas, climate enhancement and for storm water management; and,
v) incorporating best practices and appropriate technology to reduce energy consumption and improve air quality.

- 6.1.4.26 All development shall be oriented toward the surrounding streets and shall include direct pedestrian access, including barrier free access from grade level, to the principle entrances.
- 6.1.4.27 All development shall be built close to the street line. Additional setbacks may be permitted, based on the locational context, to protect significant views, to protect cultural heritage resources, to accommodate pedestrian amenities such as street plantings and enhanced landscaping, wider sidewalks, open space, outdoor cafés, seating areas, transit shelters, bicycle parking, and other public amenities.
- 6.1.4.28 All development shall:

a) be massed to frame streets in a way that respects and supports the adjacent street proportions;
b) be compatible with the context of the surrounding neighbourhood;
c) contribute to high quality spaces within the surrounding public realm; and,
d) provide high quality spaces within the buildings themselves.

- 6.1.4.29 Residential development shall provide amenity space within new developments in the form of private or semi-private parkettes, rooftop gardens or internalized open spaces within courtyard areas created by new buildings.
- 6.1.4.30 Development shall incorporate high quality durable building materials for aesthetics, fire suppression, and energy efficiency.
- 6.1.4.31 Development shall provide built form transition in scale through a variety of design methods including angular planes, location and orientation of the building, and the use of setbacks and stepbacks of building mass.
- 6.1.4.32 Transition between development, and adjacent streets, parks or open spaces shall ensure access to sunlight and sky view.
- 6.1.4.33 Development shall be required to provide transition in scale, within the development site, as a result of any of the following:

a) the development is of greater intensity and scale than the adjacent existing scale, or where appropriate, the planned built form context;
b) the development is adjacent to a cultural heritage resource or a cultural heritage landscape; or,
c) the development is adjacent to existing or planned parks, or open spaces.

- 6.1.4.34 Development shall, to the satisfaction of the City, through building massing and orientation, minimize shadows on public sidewalks, parks, public and private open spaces, school yards and buildings, childcare centres, playgrounds, sitting areas, patios and other similar amenities.
- 6.1.4.35 Proposed development shall allow for a minimum of 3 hours of sun coverage between 10:00 a.m. and 4:00 p.m. as measured on March 21st to September 21st on public sidewalks, and public and private outdoor amenity areas such as patios, sitting areas, and other similar areas.
- 6.1.4.36 Proposed development shall allow for a minimum of 50% sun coverage at all times of the day as measured on March 21st to September 21st on public plazas, existing and planned parks, and open spaces, school yards, and playgrounds.
- 6.1.4.38 Buildings shall be sited, massed and designed to reduce and mitigate wind impacts on the public realm, including streets, sidewalks, parks, and open spaces. Pedestrian wind levels shall be suitable for sitting and standing. Higher standards may be required for development adjacent to parks and open spaces, and along Pedestrian Focus Streets.
- 6.1.4.39 Proponents shall be required to submit a Shadow Impact Study and a Pedestrian Level Wind Study, in accordance with Chapter F – Implementation Polices of Volume 1, to demonstrate that the height, orientation, design and massing of a building or structure does not unduly overshadow, block light, result in the loss of privacy of adjacent residential uses, or create uncomfortable or unsafe wind conditions. Studies shall be completed to the satisfaction of the City and shall demonstrate conformity with Policies 6.1.4.34 through 6.1.4.38.
- 6.1.4.40 There shall be no vehicular surface parking along the street frontage.
- 6.1.4.41 Above-ground vehicular parking shall be fronted by permitted uses other than parking at street level and upper storeys shall be screened from view from the street.

- 6.1.6 Downtown Mixed Use Designation

  - 6.1.6.2 A portion of the lands designated Downtown Mixed Use are also identified as Pedestrian Focus Streets on Map B.6.1.1 – Downtown Hamilton Secondary Plan - Land Use Plan. In addition to Section E.4.3 – Pedestrian Focus Streets of Volume 1, the following policies shall apply to areas identified as Pedestrian Focus Streets:

a) the vision for Pedestrian Focus Streets is to complete the streetwall and provide an uninterrupted building line at the street level through compatible development and infill development along the corridor;

b) notwithstanding Policy E.4.3.4 f) of Volume 1, all development shall be a minimum height of three storeys;
c) the height of new buildings and additions shall be consistent with the traditional streetwall height at the street line;
d) taller building masses shall be sufficiently stepped back from the street to avoid interference with the perceived massing of the street as primarily a low to mid-rise corridor;
e) the articulation of façades shall retain a similar rhythm and scale to the street front shops in its surroundings;
f) the articulation of the façade of new buildings shall reflect or complement the traditional patterns of fenestration in adjacent buildings;
g) limited articulation of the front façades may be permitted in order to create sheltered areas at ground level or to allow for the incorporation of architectural design elements and access to significant views, provided that the sense of enclosure is maintained and that the articulation does not detract from the retention of the traditional building line;
h) the ground floor frontage shall be clearly articulated in the massing of the façade, substantially glazed, with generous floor-to-floor heights and designed to accommodate signage;
i) where possible, buildings shall be constructed to the side lot line in order to maintain the sense of enclosure and avoid gaps in the streetscape; and,
j) to maintain the architecture and heritage character of the Gore, between James Street and Catharine Street, traditional materials of stone, wood and brick shall be used; other materials may be allowed provided that they are visually harmonious with adjacent buildings in accordance with the Heritage Character Design Guidelines. visually harmonious with adjacent buildings in accordance with the Heritage Character Design Guidelines.

The development proposal for the Subject Property is consistent with these UHOP policies for the Downtown Hamilton Secondary Plan area on the following basis:

- **The proposed building design incorporates stepbacks and height gradation to provide transition to neighbouring properties in conjunction with spatial separation provided by King Street and Caroline Street to the north and east respectively, and the surface parking areas to the west and south;**
- **The proposed building placement, height, massing and density is compatible with the existing and planned built form character along the King Street corridor and in this neighbourhood;**
- **The Heritage Impact Assessment prepared by API Development Consultants Inc. Establishes that the proposed development represents: "respectful densification opportunity for the Downtown Core, making sapient use of materials that recall the immediate surroundings (red brick and glazing), whilst maintaining a recognizable contemporary language that does not leave room for doubt in terms of temporal placement. In other words, it does not attempt to mimic older details and creating fake historical elements, yet it inserts itself comfortably within the heritage area all the while offering a link between past and present."**

- **The proposed building base will fit harmoniously within the context of neighbouring streetwall heights and will maintain a comfortable pedestrian scale and appropriate street proportion;**
- **Stepbacks are provided on the tower above the fifth floor to provide transition to neighbouring properties and mitigate shadow and wind impacts;**
- **The building facades (illustrated in the elevations in Figure 28) include a variety of colours, material, articulation and fenestration to break up the massing of the building and avoid the appearance of blank or expansive walls;**
- **The roof plan incorporates a mechanical room that will screen all equipment from view; the roof plan also includes an outdoor amenity area that includes landscaping and seating, as illustrated in Figure 29;**
- **The proposed building will be located close to the street line with the primary building entrance on King Street and providing direct pedestrian access to the sidewalk and transit service;**
- **The proposal incorporates stepbacks and gradation of building height and orients the building height and massing in a manner that takes advantage of the spatial separation provided by King Street, Caroline Street and the surface parking areas to the west and south;**
- **The proposed building will result in minimal adverse impacts to existing sun and shadow conditions based on the orientation and design of the building and the presence of existing high-rise buildings on adjacent properties that establish the existing sun-shadow characteristics;**
- **There will be no surface parking on the Subject Property and all parking and vehicular activity will occur within the existing of the building structure.**

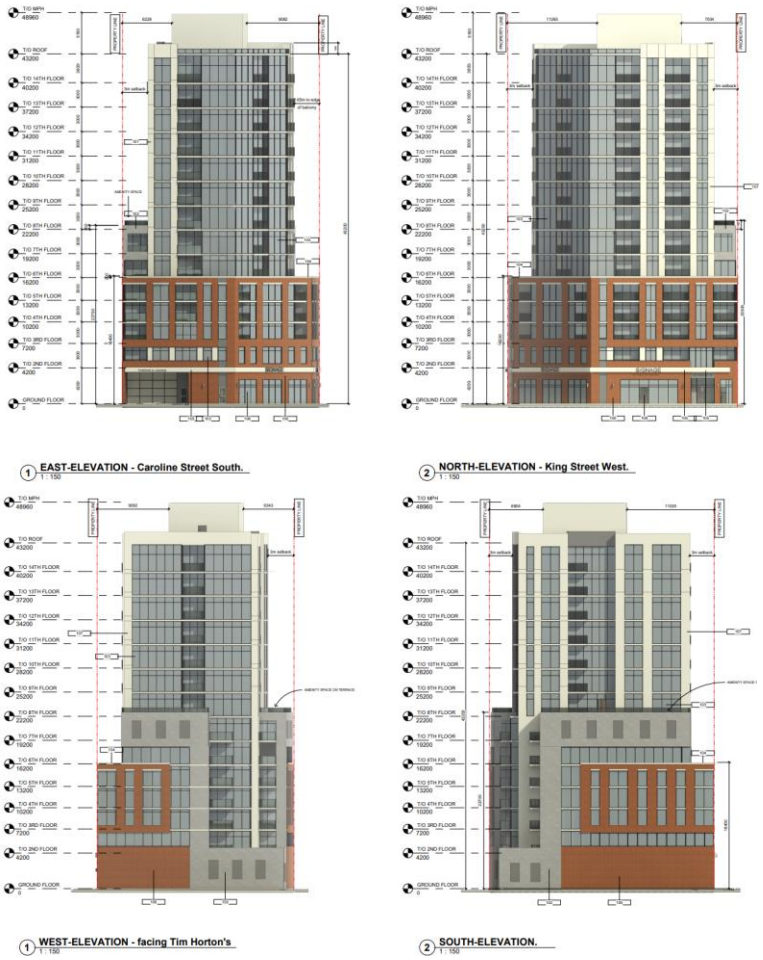


Figure 28 – Proposed Building Elevations

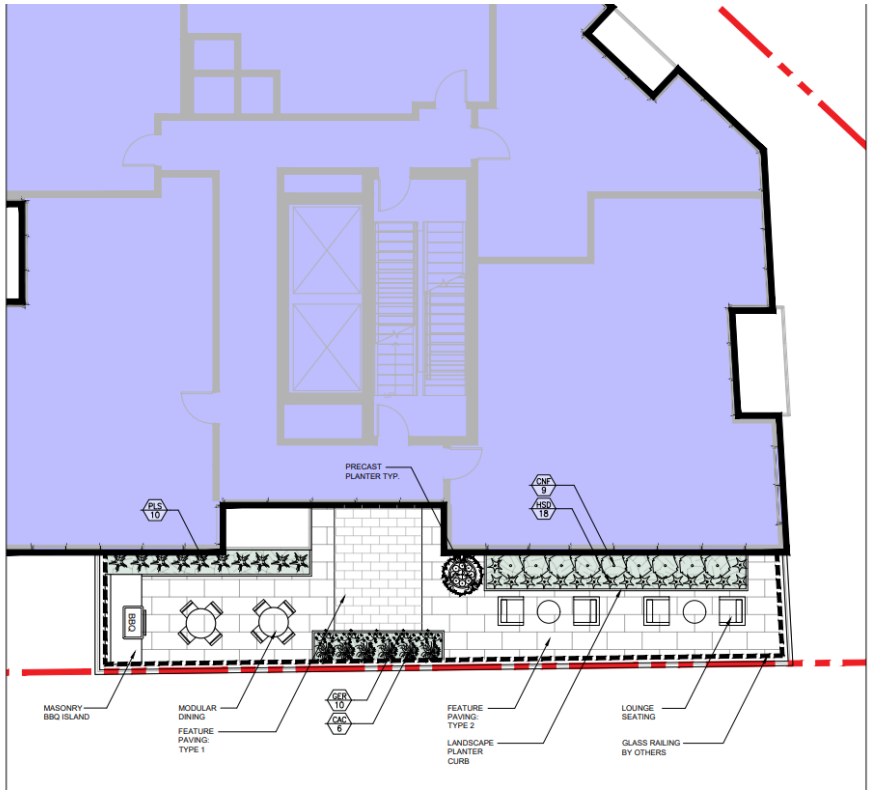


Figure 29 – Rooftop Amenity Area

D.2 Downtown Hamilton Tall Buildings Guidelines

The Downtown Hamilton Tall Building Guidelines is a reference document intended to guide the design of tall buildings within Downtown and build on existing plans and policies, including UHOP.

- 2.0 Site Character & Local Context

The Subject Property is located within the "Prime Retail Streets" Character Area of the Guidelines, specifically for King Street. As set out in Section 2.2, new development in this Character Area shall meet the following design priorities:

a. New buildings shall match the streetwall height of existing buildings;
b. Taller building masses shall be sufficiently stepped back from the street to avoid interference with the perceived massing of the street as a low to mid-rise corridor;
c. Development should minimize shadows and wind impacts on sidewalks through building massing and orientation;
d. Buildings shall be built tight to the streetline and align with adjacent façades, noting the ultimate right-of-way line. In order to coordinate with the public right-of-way widenings designated by the Official Plan, buildings will be reviewed on a site-by-site-basis by City staff;
e. The articulation of façades shall retain a similar rhythm and scale as the street front shops in its surroundings;
f. Ground floors will predominantly be occupied by street-oriented commercial uses. Therefore, the ground floor frontage shall be clearly articulated in the massing of the façade, substantially glazed, with generous floor-to-floor heights and designed to accommodate signage;
g. Upper floors of buildings along King and James Streets shall include a variety of uses (office, commercial, residential and

live/work arrangements) which will be reflected by the diversity in the façade;

h. h. For the first 3-4 floors, new buildings shall use façade solutions compatible with existing materials of adjacent buildings: brick, stone, decorative treatments, etc.;
i. No additional on-street parking will generally be granted; new development shall provide sufficient parking either underground or at the rear of the property; and,
j. Loading areas shall be located off of the retail street, ideally at the rear of buildings.

It is also noted in this section that properties should have a frontage range of 4 metres to 80 metres and a depth range of 20 metres to 97 metres.

The development proposal is consistent with these design priorities on the following basis:

- **The proposed streetwall is consistent with the height and character of other existing and proposed mid and high-rise buildings immediately adjacent to the Subject Property and within the surrounding neighbourhood context;**
- **The proposed building incorporates stepbacks above the fifth storey that reduce the overall massing and provide transition to adjacent properties;**
- **Minimal adverse shadow impacts are anticipated on neighbouring properties and the public realm due to the design elements that have been incorporated into the proposed building and the shadow characteristics associated with existing buildings on adjacent properties;**
- **The proposed building will be located close to the street line of both King Street and Caroline Street with no parking or vehicular activity in between the building and street;**
- **The proposed building incorporates a variety of building materials, articulation and fenestration to animate and break up the overall building massing;**
- **The ground floor includes retail floor space and common areas associated with the above-grade residential dwelling units; the ground floor is directly accessible from the primary entrance on King Street; and**
- **All parking, service, loading and storage activities will take place within the building structure, including 3 levels of below grade parking.**

- 3.0 Contextual Considerations
  - 3.1 Heritage Conservation

New development shall meet the following design principles:

a. Conservation and retention of existing cultural heritage resources should be a priority;
b. Building bases should respect the grain and scale of the surrounding historic fabric;
c. When an existing building is adapted/incorporated into the base of a tall building, the size and shape of the original window openings and entrances should be maintained;

d. Symmetry features of original design and construction should be maintained;
e. Vertical and/or horizontal demarcation devices should be maintained where possible;
f. New buildings should demonstrate similar proportions and massing of adjacent heritage structures and continue the rhythm of the traditional street façade; further, the streetscape rhythm may be maintained and defined by respecting the existing historic vertical fabric, horizontal bays and materiality;
g. Tall buildings should not visually impede the setting or view of listed/ designated heritage buildings, including the concentration of heritage buildings around the Gore; and,
h. Modern approaches to building design are a suitable option as long as they respect and enhance the existing historic character of adjacent buildings.

The Heritage Impact Assessment prepared by API Development Consultants Inc. has identified evaluated the development proposal within its cultural heritage context and established the following:

- **The proposed building has been designed with a podium that establishes a relationship with both the past of the site and the nearby heritage buildings and provides a more appropriate approach to the building from a pedestrian point of view;**
- **The new building would not isolate nor hinder the access to any heritage property since it is not immediately surrounded by any designated or registered property on its side of the street;**
- **The registered properties across the street from the Subject Property will benefit in terms of overall aesthetic improvements to the streetscape.**
- **The new building will also replace the existing one-storey rundown building and partially block views of the chain hotel right behind it on 20 Caroline Street South.**

- 3.2 Neighbourhood Transition

To ensure that new development is sensitive to and compatible with the existing or planned low-rise residential neighbourhoods, tall buildings should be designed to transition in scale towards existing or planned low-rise residential and existing or planned open space areas. Tall buildings should be designed to:

a. limit the maximum height, including mechanical units, balconies, railings, overhangs and other projections, and employ measures such as the use of setbacks, stepbacks and building articulation to minimize shadow impact on properties;
b. transition to the height of adjacent, existing residential development. The portion of the building base adjacent to the low-rise residential building should not exceed the height of the adjacent development;

c. the tower portion of a building should be set back a minimum of 12.5m (excluding balconies) from the property line adjacent to residential neighbourhood to mitigate shadow impact and protect privacy and overlook.

The development proposal incorporates a 5-storey base that provides appropriate transition to the 7-storey hotel to the south with stepbacks above the fifth storey. The Subject Property is also not located adjacent to any low-rise, low-density residential development. The 30-storey residential building to the east is significantly greater in height and massing the proposed building and will not require transition from the Subject Property. The 1-storey commercial building to the west is spatially separated by the existing surface parking lot. The 2 and 3-storey mixed use buildings on the north side of King Street West will benefit from the stepbacks of the proposed building and the spatial separation provided by the King Street corridor.

- 3.4 Vibrant Streets

New Development shall meet the following design principles:

a. Along main retail streets, including James Street and King Street, ground floors of tall buildings should be designed to facilitate an active interface with the street through the use of: clear glazing, multiple entrances, generous ground floor heights, and be generally flush with the sidewalk;

b. In areas where there are no active uses at grade, the articulation of the façade shall provide an active frontage through the use of: fenestration, grade related units, architectural articulation, canopies, etc.;

c. Residential and mixed use development should locate common areas and amenities at grade to provide animation and overlook on the street;

d. Where residential units are at-grade, they should be designed to provide overlook onto and address the street; however, privacy should be maintained through the use of a 1.5 to 3.0 m setback from the property line, landscape buffer of a maximum height of 1.5 m, and/or grade separation to the unit entrance, when zoning permits; any stairs or ramps to access the units shall occur within the private property;

e. Building entrances should be emphasized as a focal point of a building's façade and be placed in highly visible locations where they have the ability to animate a longer stretch of street;

f. Driveways are discouraged on primary streets. Loading and servicing are not permitted on primary streets; and,

g. Tall buildings should be oriented and massed to minimize shadow impacts on the public realm. It should be demonstrated that the full width of the sidewalk in the context of the development shall allow for a minimum of 3 hours of sun coverage between 10:00 am and 4:00 pm as measured from March 21st to September 21st.

The proposal is consistent with the Vibrant Streets principles for the following reasons:

- **The ground floor has been designed to incorporate retail floor area in conjunction with common areas of the above-grade dwelling units; the ground floor is animated by a variety of materials, building articulation, glazing and windows that provide an attractive interface with the street and public realm;**
- **The primary building entrance is located at a prominent location along the King Street facade in proximity to the intersection with Caroline Street;**
- **The driveway to the below grade parking and at-grade service area is located on Caroline Street at the rear of the Subject Property and provides access only to the interior of the building, with all parking, loading, storage and service activities screened from view;**
- **The proposed building will have minimal adverse shadow impacts due to the design elements of the building and the shadow characteristics of the existing high-rise buildings adjacent to the Subject Property.**

  - 3.5 Transit Proximity

a. Integrate public transit stop amenities (benches, shelters) within the site and building design;
b. Corner site developments around existing and proposed transit stops present an opportunity for corner plazas; the building massing at lower levels of tall buildings should frame and define the public space as well as invite pedestrian use;
c. Tall buildings should incorporate active frontages with clear glazing at grade to serve transit users;
d. Tall buildings should provide barrier-free and universal access between buildings and station areas, where applicable - refer to City's Urban Braille System Guidelines;
e. Tall buildings should include retail development along King Street and James Street North/South to service transit users;
f. Unique tall buildings and design is encouraged to act as focal points along transit lines; and,
g. Buildings along transit lines are highly visible and susceptible to become landmarks (see 3.6); it is highly encouraged to maximize the remarkable scale and singular materials of tall buildings to produce a unique design that will act as a focal point in the street.

The proposed building will take advantage of its location on a Priority Transit Corridor and at the corner of the intersection of King Street West and Caroline Street North. The primary building entrance on King Street will allow for direct and convenient pedestrian access to the existing sidewalks on both sides of King Street and Caroline Street and the transit stops at the intersection. The proposal also incorporates landscaping and street furniture at the corner and along both street frontages to enhance the quality of the pedestrian environment. The building is placed close to both streets to provide a strong and constant street edge that is animated with a variety of materials and fenestration. The ground floor also incorporates retail floor area to serve the needs of pedestrians and transit users.

- 3.6 Views and Landmarks

In order to respond to the city's unique conditions and features:

a. Any development application shall identify, maintain and enhance viewing opportunities towards the Escarpment;
b. Tall buildings should be located in a fashion that preserves key views to existing landmarks and termini to and from the Downtown;
c. Tall buildings shall contribute to an interesting skyline and be sufficiently spaced apart to minimize the loss of sky views;
d. The silhouette of existing important landmark buildings should be protected, and the view corridor leading to them should remain legible;
e. Tower step backs should be increased to preserve the view to an existing important local landmark; Tall Buildings within Downtown Hamilton should respond to the city's unique topography and landscape, including the Escarpment and the Waterfront.
f. Views of the Escarpment should be preserved; and,
g. An assessment of impact on views to/from the Escarpment will be required as part of development applications.

The proposed building height and massing, including the stepbacks above the fifth storey, will contribute to a building that is consistent with the existing skyline of Downtown Hamilton and will not adversely impact view corridors relative to existing conditions.

- 4.0 Building Articulation
  - 4.2 Site Organization & Building Base
    - 4.2.1 Building Base Placement & Setbacks

a. Building bases should generally be placed parallel to the property line and/or centreline of the street, in a fashion that brings uniformity to the built form and frame the street;
b. The façades of the building base should align with adjacent building façades and align with the existing street wall; if there is none, a new street wall should be designed in coordination with adjacent blocks;
c. In the Lister Block area, buildings should be sited along the front property line in order to provide an uninterrupted building line;
d. In the Gore area, buildings should be sited along the front property line to provide a consistent frame for Gore Park and to retain the traditional building line;
e. Along Prime Retail Streets including James Street and King Street (east of Catharine Street and west of Bay Street) buildings should maintain the traditional building line to provide a continuous edge at the street level;

f. Maximum setbacks from a street line are permitted as follows (in accordance with Zoning By-Law 05-200):

- 2.0 metres for the first storey, except where a visibility triangle shall be provided for a driveway access;
- 6.0 metres for that portion of a building providing an access driveway to a garage;

g. Greater setbacks may be required if the existing building line does not provide sufficient space for pedestrians (refer to section 5.2.) or to accommodate building entrances, covered walkways or an enhanced pedestrian environment;
h. Greater setbacks may be permitted in order to accommodate additional public realm areas, including open space, cafes and other amenities. It is recommended in areas with high pedestrian activity, particularly for buildings fronting on King Street and Bay Street (Civic Cultural Area), Main Street corridor and The Gore. This space should complement the public realm within the adjacent public right-of-way; and,
i. In The Gore area, buildings will be constructed to the side lot line in order to maintain the sense of enclosure and avoid gaps in the streetscape.

The proposal is consistent with these design principles on the following basis:

- **The proposed building faces will be parallel to King Street and Caroline Street and provide setbacks to these streets that are consistent and harmonious with existing structures in the surrounding area and along the King Street corridor.**
- **The ground floor and building base up to the fifth floor will be constructed at the property line with the building set back 3 metres from the property line at the sixth floor and above.**

- 4.2.2 Building Base Height & Scale

a. Façade height should reflect the existing adjacent building façade height but not be lower than 7.5 m for any portion of a building along a streetline;
b. Maximum building base height at the streetline should be equal to the width of the right-of-way to ensure sunlight access to the sidewalk across the street;
c. For corner sites, where buildings have multiple street frontages, the scale and form of the building base should respond to each facing condition;
d. Along main retail streets, including James Street and King Street, the minimum height of a building base should be 3 - 4 storeys in keeping with the built form typology of the street;
e. Higher floor-to-floor heights are encouraged on the ground floors to accommodate flexible uses such as commercial, office or institutional uses over time;
f. Minimum floor-to-floor height for grade-related retail floors should be 4.5 m;

g. Minimum width of the ground floor façade shall be equal to 75% or more of the measurement of the front lot line; and,
h. A minimum of 75% of the front façade of the building shall align with the minimum setback required by zoning at the ground level.

The proposal is consistent with these design principles on the following basis:

- **The proposed building facade height is consistent with the existing adjacent structures to the east (30-storey tower) and south (7-storey hotel);**
- **The proposal responds to the corner location by providing facades along the entirety of frontage and animating these facades along both King Street West and Caroline Street North;**
- **The 5-storey building base exceeds the minimum identified for King Street and is consistent with existing and proposed buildings on adjacent properties and in the surrounding neighbourhood;**
- **The ground floor ceiling height of 4.2 metres is 1.2 metres greater than the typical height of the above-grade floors in order to provide flexibility of a variety of commercial uses;**
- **The building base will be constructed up to the property line and will provide a consistent facade for 100% of the property line along King Street and Caroline Street.**

- 4.2.3 Building Entrances

a. For Prime Retail Streets, provide a direct, accessible entrance to each ground floor retail unit;
b. For larger tenancies, divide the façade into narrower bays to include multiple secondary entrances;
c. For corner lots, animate both sidewalks with the main building entrance;
d. Weather protection features such as canopies, awnings and overhangs should be incorporated within the overall design of the building and provided at major building entrances;
e. Entrances to multi-residential and office complexes should maximize the height of the ground floor to create welcoming entry points into the lobby area;
f. Transparent glazing and translucent materials should be integrated in lobbies to enhance visibility, surveillance, interest, and activity at the ground level;
g. Where residential uses are located above at-grade commercial/retail uses, a separate entrance should be provided, clearly differentiated from entrances to commercial/retail units; and,
h. Tall buildings should provide barrier-free and universal access, as per the Accessibility for Ontarians with Disabilities Act (AODA); additionally, refer to City's Urban Braille System Guidelines.

The proposal is consistent with these design principles on the following basis:

- **The proposed commercial floor area on the ground floor has a direct entrance from the King Street frontage of the building;**
- **The building is designed to address the corner by providing facades along King Street West and Caroline Street North, as well as an angled facade oriented towards the intersection;**
- **Greater ceiling heights of 4.2 metres (compared to 3 metres for levels above grade) are proposed in conjunction with large windows and glazing that animate and enhance the quality of the ground floor;**
- **A separate but direct and convenient entrance from King Street is provided for the above-grade residential dwelling units and the common areas.**

- 4.2.4 Façade Articulation

a. No blank walls permitted along street frontages or on side walls visible from the street and alleys; corner lots would need to address both façades by providing active frontage along both sides;
b. For exterior side walls visible until new construction occurs in neighbouring sites, an interim solution is required to mitigate the impact on the street, such as public art interventions or cladding;
c. Where possible, a minimum of 25% of the façade of the second and third storeys shall be composed of windows;
d. Residential façades should be massed volumetrically (projections, setbacks and overhangs) to create an engaging and continuous interface with the street;
e. Throughout the Downtown no building face along a public street should generally be longer than 70 m; buildings over 40 m in length shall break up their perceived mass with articulation and/or changes in materials;
f. Balconies should be recessed and/or integrated into the building façade in order to stylize the silhouette of the tall building; in the context of a Downtown, they provide more flexibility for activating the ground plane and façade of the building. Projected balconies may be used on building corners to emphasize the corner;
g. In order to visually enhance the active frontage of main retail streets, including James Street and King Street:

i. a minimum of 60% of the area of the ground floor façade shall be comprised of clear glazed windows;
ii. window and door frames should be comprised of clear glazed transoms and sidelights; doors with at least 50% clear glazing, and a sill up to 0.6 m in height are permitted to be included in the calculation of the clear glazed area whereas signage and opaque/ spandrel glazing shall not be included in the calculation of the clear glazed area;
iii. where possible, avoid balconies for the first 3 storeys and provide recessed balconies for 4-6 storeys, as a means of strengthening the streetwall;

The proposal is consistent with these design principles on the following basis:

- **The proposal incorporates facades with large windows, glazing, variety of materials and colours and building articulation on all facades, including facing the intersection;**
- **The percentage of all facades that is composed of windows exceeds 25%;**
- **The facades of the residential dwelling units above grade are animated by building articulation, balconies and a variety of colours and materials, including different materials for the building base compared to levels at the sixth storey and above;**
- **Where balconies are provided, they are recessed into the building massing to provide variety in the facade without projecting from the main building walls;**
- **The area of the ground floor facade exceeds 50% and includes windows that are greater in height to correspond to the increase floor-to-ceiling height.**

- 4.2.5 Public – Private Transitions

a. Provide barrier-free, universal access;
b. Align public entrances (commercial/retail uses; shared lobbies) flush with and accessible from public sidewalks;
c. Grade separation (up to 0.9 m) may be utilized to further delineate the transition between public and private realms, so long as the unit is barrier-free and universally accessible from another access point;
d. Avoid use of retaining walls, exterior cases, or impermeable fences;
e. Provide a setback of 2-3 m from the front property line for private entrances, ensuring that the combined total of the pedestrian clearway plus setback is minimum 5 m (when zoning permits);
f. Setbacks from a public sidewalk or open space should be designed to complement and enhance the public realm;
g. Soft landscape design elements, such as planters or permeable low fences, may be incorporated in the setback zone to highlight the threshold between public and private realm; and
h. Provide appropriate screening of private dwelling units with soft landscaping, while ensuring views to streets and open spaces are maintained for natural surveillance (refer to 3.4.c).

- 4.2.6 Site Servicing, Access & Parking

a. Bike parking and amenities should be provided close to building entrances, should be protected from weather and visible from the building interior. Long term bicycle storage within the building is encouraged;
b. Garage, servicing and loading area entrances should be located at the rear of buildings and designed to limit interference with pedestrian and cyclist movement;
c. New development is encouraged to introduce preferential parking for carpooling or car share as a means of reducing private automobile use;

d. High-quality architectural treatment and landscape design should be employed to screen parking, servicing, and loading areas from public view. These areas should be appropriately lit, have clear access and egress points and while screened, maintain visibility for safety and security purposes;
e. Fences and other screening devices should not be taller than 1.5 m and use a combination of artistic and decorative materials, details and textures that bring delight to the passerby. Incorporating vegetation is highly encouraged;
f. Utilities such as mechanical and electrical equipment, elevator housing, and ventilation units should be screened from view and acoustically dampened;
g. Landscape Design and treatment for areas that function as both pedestrian amenity and servicing access, must be legible as a multi-use space;
h. Above-grade parking structures should be fronted by permitted uses other than parking at street level. Upper storeys should be screened from view from the street.

The proposal is consistent with these design principles on the following basis:

- **Indoor bicycle parking is provided on the ground floor adjacent to the Caroline Street building access;**
- **The garage, servicing and loading area entrance is located on Caroline Street towards the rear of the Subject Property;**
- **All parking is located in the below grade parking structures and accessed from the garage driveway;**
- **All service, loading and storage occurs on the ground floor within the interior of the building and screened from view in the public realm and on adjacent properties.**

- 4.2.9 Materials and Detailing

a. Use beautiful, durable, high quality and sustainable materials;
b. Materials shall be appropriate to their use and locational context, as well as be complementary with the expressions of the street as a whole, particularly at the building base;
c. A variety of materials and colour palettes between blocks is encouraged to enhance visual interest along the street. Careful attention should be paid to the detailing, connection and juncture of the materials when it is being installed or implemented;
d. Materials for floors above the base may differ from the first floor materials, and use the contrast as a means of articulating the different parts of the building. Nonetheless, compatibility and transition between materials shall be considered to respect the rhythm and proportions of the lower floors;
e. Side and rear façades shall include materials of equal quality to the front façade;
f. Materials that give the impression of low quality, inelegance or being outdated shall be avoided. This includes concrete

blocks, residential-type metal siding, large quantities of highly reflective and mirror finishes for glazing, or finish effects that simulate another material;

g. Avoid monotonous use of materials and flat detailing;
h. Design the first 10-12 m to adhere to Bird Friendly best practices by incorporating sunshades or louvers, visual markers within large glazed areas, and non-reflective glazing to minimize the potential for bird strikes; and,
i. Façade systems and materials are essential in the design of resource-efficient, high-performing, cost-effective buildings. Choose sustainable materials by:

i. prioritizing building materials and products that are extracted and manufactured within the region; and,
ii. developing a life cycle assessment of the building to determine the holistic environmental impacts of material selection for structure and assembly

The proposal is consistent with these design principles on the following basis:

- **Building materials and colours have been selected based on the character of the surrounding neighbourhood, particularly with consideration for the Heritage characteristics of these properties;**
- **A variety of materials and colours have been selected for all of the building facades, including variety in the building base versus the floors at the sixth floor and above.**

- 4.3 Building Tower
  - 4.3.1 Tower Floorplate Size & Shape

a. The maximum gross floor area for the floor plate of the tower portion of a tall building proposed should not exceed 750 square metres for residential purposes and 850 square metres for offices, excluding balconies; however, in small sites, smaller floorplates may be required when applying all appropriate setbacks. Larger floorplates may only be permitted where the other guidelines of this document can be met to the City's satisfaction;
b. The maximum floorplate of the tower portion of major office and non-residential tall buildings will be evaluated in accordance with the applicable guidelines of this document to ensure impacts with respect to shadow, transition to adjacent uses and the general scale are addressed; and,
c. Towers shall have a "lighter" appearance in general, which may be achieved with material selection as well as tower top design - refer to section 4.4.

The residential floor plates range between 489 m^2 and 556 m^2 for the building base and 331 m^2 to 435 m^2 for the tower above, which reflects the stepping back of the floor area above the building base to provide transition to neighbouring properties and the public realm. Lighter coloured materials are also used on the higher levels in the tower of the building.

- 4.3.2 Placement, Stepbacks & Separation Distances

a. Towers should be arranged to minimize shadow and adverse wind impacts on adjacent properties and public spaces, including streets, parks and open spaces, and other shadow sensitive areas such as school yards and outdoor amenity areas;
b. Towers should be arranged to maintain sky views, including views from the Gore Park area;
c. Towers should be stepped back a minimum of 3 m from the building base along all streets;
d. Increased stepbacks might be considered when a tall building incorporates a heritage building;
e. Increased tower setback should be considered to preserve the view to a local landmark;
f. Offsetting and staggering towers is preferred to add variation and visual interest, to facilitate sunlight and sky views and mitigate wind impacts; and,
g. Towers should be separated by at least 25 m with a minimum 12.5 m setback from the side and rear property lines to allow for adequate light, views and privacy.

The proposed tower has been stepped back 3 metres from the building base, which will be constructed up to the property line, to provide transition to neighbouring lands and also reduce the overall building scale and massing.

- 4.3.3 Orientation & Articulation

a. The tower portion of a tall building should be slender in form in order to reduce the overall perception of mass;
b. The tower portion of a tall building should be oriented to maximize building efficiency performance;
c. Each façade of the tower should respond to changes in solar orientation and to adjacent context;
d. Windows with operable panes and high quality finishes should be included to promote natural ventilation and help reduce use of mechanical heating and cooling;
e. Tall building towers should be shaped to minimize microclimate impacts (wind effects; shadowing) on nearby areas;
f. Upper levels should be setback with balconies to create visual interest and overlook onto the public street;
g. Balconies should be a minimum 1.5 m in depth;
h. Balconies and terraces should be designed as cohesive elements of the building, as described in section 4.2.4.f;
i. Along Prime Retail Streets, including James Street and King Street, projected balconies are discouraged as they may detract from the streetwall and impinge on the streetscape; recessed balconies may be appropriate above the third storey; and
j. The starting point when designing a sustainable energy system is to consider the passive solar design of the building. A good ventilation and daylighting strategy shall be

supported by the articulation of the façade and the approach to fenestration:

i. ensure the energy efficiency of the building envelope by minimizing the ratio of the area of windows, sidelights, skylights, glazing in doors and sliding glass doors to the gross area of peripheral walls;
ii. windows must see the light of day;
iii. glazing should transmit light; iv. operable windows may be used in lieu of controls for occupants; and,
iv. consider hardware-incorporation of integral blinds to control light and heat gain, etc.

The proposal is consistent with these design principles on the following basis:

- **The proposed tower is stepped back to reduce its mass and proportion relative to the base;**
- **Balconies are provided on the upper levels to provide private outdoor amenity areas and also animate the building facades;**
- **The balconies are recessed into the building, as opposed to projecting from the main walls, in order to avoid contributing to additional building massing.**

- 4.3 Tower Top

a. Rooftop mechanical equipment, as well as stair and elevator towers, should be sized and located and/or screened from view, in order to protect or enhance views of the Downtown from other buildings and the public street;
b. Rooftop mechanical equipment, as well as stair and elevator towers should be sized and located so that they are screened from view from the street;
c. Mechanical penthouses as well as signage shall be well-integrated into the overall massing of the building and clad in materials that are consistent with the quality of the entire building;
d. Community outdoor space and green roofs are encouraged (refer to Section 4.2.8 Private Open Spaces);
e. Decorative lighting could be included within the tower design but over lighting or up lighting should be avoided;
f. The use of energy efficient fixtures (such as LEDs) and programmable fixtures which can be dimmed or turned off are encouraged;
g. Design strategies should be employed to lighten tower top volumes and provide a termination to the continuous mid-volume of the tower, in order to create a visually attractive skyline profile, such as stepbacks and other architectural treatments in the upper most floors;
h. The tower top should be integrated with the tower and building architecture;
i. Where located at a gateway intersection or terminating view, the tower top is encouraged to act as a recognizable landmark with signature features defining its importance; and,

j. In addition to meeting the performance standards and guidelines contained within this document, the maximum tall building height within the Downtown should be no greater than the height of the top of the Escarpment. Given that the elevation increases gradually towards the Escarpment, buildings may potentially be taller the farther away they are from the Escarpment (refer to sections 2.1 and 2.12 of the Study).

The proposed tower top includes a mechanical room that encloses are screens all rooftop equipment and is clad with colour and materials that incorporate this room into the overall building character. The roof also includes outdoor amenity area for residents to enjoy that provides seating and landscaping.

- 5.0 Public Realm Interface
  - 5.1 Streetscape & Landscape Design

a. At-grade levels of the building fronting the landscape setback should address the street with the presence of building entrances and fenestration;
b. When grade-related residential units are facing a public street, a minimum 3.0 m landscaped setback is recommended to protect privacy. Profuse vegetation, minor changes in elevation, short fences and porch structures may populate the space;
c. Landscape areas should clearly be designed as publicly accessible, and changes of elevation greater than 50 cm should not be permitted;
d. Natural features and landscapes, such as existing trees, should be protected and maintained where possible;
e. In limited landscape areas, colourful flowers, grasses and shrubs are encouraged to highlight the presence of the landscape feature despite the constrained space;
f. If appropriate (based on use and scale), accent lighting and seating should be provided;
g. Where space permits, new trees should be planted to improve the microclimate and urban canopy;
h. Sufficient soil depth must be provided (through use of soil bridging, soil cells or other best practices) especially in areas where parking garages extend beyond the building façade at the underground level; a minimum soil volume of 20 m3 per tree, or 30 m3 for two trees in a shared trench should be provided;
i. Permeable paving materials or appropriate storm water management systems (bioswales) should take preference over asphalt to increase site permeability and management of storm water runoff; and,
j. Conform with universal design standards, as per the Accessibility for Ontarians with Disabilities Act (AODA); additionally, refer to City's Urban Braille System Guidelines.

  - 5.2 Sidewalk Zone

As redevelopment proceeds in the Downtown, there is an opportunity to complement the existing sidewalks through:

a. Integrating design elements such as canopies and arcades to protect pedestrians from the elements (wind, rain, snow, sun);
b. Incorporating landscape treatment, including public art, furniture and planting;
c. Providing a barrier-free environment that facilitates flexible use of the space as a whole, as per the Accessibility for Ontarians with Disabilities Act (AODA); additionally, refer to City's Urban Braille System Guidelines;
d. The use of permeable pavement where possible;
e. Wider streets with high volume traffic should consider additional sidewalk width to improve and ensure pedestrian safety and comfort; additionally, it is recommended to locate elements to buffer pedestrians from the roadway, whether it is a tree zone, furniture zone or street parking - refer to City's Coordinated Street Furniture Guidelines; and
f. The desired condition is 2 m width for the sidewalk zone, and 6 m for the boulevard total.

    - 5.3 Pedestrian Weather Protection & Wind Effects

a. Siting, massing, orientation and articulation of the building base and tower can help mitigate adverse wind effects such as accelerated winds and down drafts;
b. Integrated design elements such as canopies, overhangs and arcades to protect pedestrians from the elements (wind, rain, snow, sun) are encouraged;
c. Permanent weather protection is encouraged particularly along commercial and mixed-use street frontages;
d. For canopies and overhangs, a maximum height of 6 m and minimum width of 3 m is preferred;
e. Consistency with pedestrian weather protection elements of neighbouring buildings is encouraged;
f. Where feasible, buildings should be oriented to take advantage of solar energy and minimize the effects of wind to create comfortable and inviting open spaces for a variety of seasons; and,
g. Wind targets shall meet the widely accepted Lawson Comfort Criteria. The massing of new buildings should be evaluated based on the wind effects on adjacent open spaces and pedestrian areas.

E. Conclusions

- It is my opinion that the development proposal:
    - Is consistent with the Provincial Policy Statement, 2020;
    - Conforms to the Growth Plan for the Greater Golden Horseshoe;
    - Conforms to the policy intent of the Urban Hamilton Official Plan land use planning and urban design policies;
    - Complies with the urban design-related regulations of Zoning By-Law 05-200;

  - Is consistent with the City-Wide Corridor Planning Principles and Design Guidelines;
  - Is consistent with the City of Hamilton Site Plan Guidelines; and
  - Is consistent with the Transit Oriented Development Guidelines for Hamilton.
- The proposed development has been designed with a high level of attention to the applicable urban design intent, objectives and policies established by the City of Hamilton.
- It is my opinion that the development proposal is consistent with the design principles and policies identified in the Urban Hamilton Official Plan and Downtown Hamilton Tall Buildings Guidelines.
- It is my opinion that the development proposal will result in land use and built form that is safe, attractive and compatible with the existing uses on neighbouring properties and will enhance the overall built form character and quality of the community.

Regards,

Michael Barton, MCIP, RPP

TORONTO INSPECTION LTD.
GEO-ENVIRONMENTAL CONSULTANTS

DRAFT REPORT ON
PRELIMINARY GEOTECHNICAL INVESTIGATION
217 KING STREET WEST
HAMILTON, ONTARIO

REPORT NO.: 5525W-21-GA
REPORT DATE: MARCH 15, 2021

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Toronto Inspection Ltd.

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1.0 INTRODUCTION

Toronto Inspection Ltd. was retained by API Development Consultants Inc. (hereinafter referred to as the 'Client') to conduct a preliminary geotechnical investigation at a property located at 217 King Street West in Hamilton, Ontario (hereinafter described as "the Site").

The purpose of the investigation was to determine the subsoil and groundwater conditions affecting the design and construction of the proposed fourteen storey building with two levels of underground parking. In particular, preliminary geotechnical data was to be provided for:

- General founding conditions
- Preliminary design bearing pressures
- Construction recommendations
- Excavation recommendations

This report is provided on the basis of the above terms of reference and on an assumption that the design of the building will be in accordance with the applicable building codes and standards. If there are any changes in the design features relevant to the geotechnical analysis, our office should be consulted to review the design and to confirm the recommendations and comments provided in the report.

2.0 SITE CONDITION

The Site is a 1,300m^2 property located at the southwest corner of King Street West and Caroline Street South in Hamilton, Ontario. At the time of the investigation, the middle portion of the Site was occupied by a one storey commercial building. The site gradient was generally flat.

The adjacent property to the south was occupied by a 7-storey part 1-storey building, and the adjacent property to the west was a parking lot. The properties across the street to the north and east were occupied by commercial buildings.

3.0 INVESTIGATION PROCEDURE

The field work for the investigation was carried out on February 23 and 24, 2021, and consisted of drilling three sampled boreholes. The boreholes (21BH -1 to 21BH-3) were advanced using a truck mounted drill rig, equipped with continuous flight solid stem augers and sampling rods, supplied and operated by a specialist drilling contractor. Soil samples were retrieved from the boreholes at 0.76m intervals for the top 3.5m, and 1.5m intervals thereafter, using a split spoon sampler in conjunction with Standard Penetration Tests using a driving energy of 475 joules (350 ft-lbs).

The soil samples were identified and logged in the field and were carefully bagged for later visual identification and laboratory testing, including moisture content determination and grain size analysis.

Groundwater observations were made in the boreholes during and upon the completion of drilling.

The borehole locations, established in the field by our site personnel, are shown on the appended Borehole Location Plan, Drawing No. 1.

The ground elevations at the borehole locations were interpolated from the spot elevations shown on the "Surveyors Real Property Report – Part 1, Plan of Part of Lots 10 and 11, George S. Tiffany Survey, Unregistered, South Side King Street Between Hess and Caroline Streets, City of Hamilton", survey completed on January 12, 2021 by ERTL Surveyors OLS, provided to our office by the Client.

4.0 SUMMARIZED SUBSURFACE CONDITIONS

Reference is made to the appended Borehole Location Plan (Drawing No. 1) and Log of Boreholes (Drawing Nos. 2 to 4) for details of the soil classification, inferred stratigraphy, and groundwater observations.

The subsoils, below the pavement at the borehole locations, consisted of fill material, overlying deposits of silty sand, sand and gravelly sand. Brief descriptions of the subsurface materials, encountered at the borehole locations, are as follows:

4.1 Surface Course

A pavement, consisting of 50mm to 75mm thick asphalt on a 250mm to 450mm thick granular base, was contacted at the ground surface at the borehole locations.

4.2 Fill

Underlying the pavement, a layer of fill was encountered at the borehole locations. The fill consisted of silty sand with some topsoil and brick fragments. The fill at the borehole locations extended to depths of between 1.4m and 2.9m from grade.

Based on the Standard Penetration N-values of 1 to 39 blows for a penetration of 300mm, the fill is considered to be in a very loose to dense condition.

The in-situ moisture content of the soil samples retrieved from the fill ranged from 4% to 17%, indicating moist to very moist conditions.

4.3 Silty Sand

A native deposit of silty sand was contacted below the fill at a depth of 1.4m from grade at the locations of boreholes 21BH-1 and 21BH-3. This reddish brown deposit contained seams of fine sand. The silty sand extended to a depth 2.5m from grade at the locations of boreholes 21BH-1 and 21BH-3.

Based on the Standard Penetration N-values of 3 to 11 blows for a penetration of 300mm, the relative density of the silty sand was very loose to compact.

The in-situ moisture content of the soil samples retrieved from the silty sand ranged from 11% to 16%, indicating moist to very moist conditions.

4.4 Sand

A native deposit of sand was contacted below the fill at a depth of 2.9m from grade at the location of borehole 21BH-2, and below the silty sand at a depth of 2.5m from grade at the locations of boreholes 21BH-1 and 21BH-3. This reddish brown deposit consisted of fine to medium grained sand, with trace to some gravel and some seams of silt. The sand extended to a depth of 7.0m from grade at the borehole locations.

Based on the Standard Penetration N-values of 11 to 62 blows for a penetration of 300mm, the relative density of the silty sand was compact to very dense.

The in-situ moisture content of the soil samples retrieved from the sand ranged from 4% to 14%, indicating moist to very moist conditions. A grain size analysis was conducted on a sample of the sand deposit, obtained from borehole 21BH-1, sample SS6 at a depth of 4.6m, using mechanical sieves. The grain size distribution is shown on the appended Figure No. 1.

4.5 Gravelly Sand

A deposit of gravelly sand was contacted below the sand at a depth of 7.0m from grade at the borehole locations. This brown to reddish brown deposit consisted of well graded sand with sub-rounded gravel and some silt. The boreholes were terminated in the gravelly sand at a depth of between 10.0m and 11.1m grade.

Based on the Standard Penetration N-values of more than 100 blows for a penetration of 300mm, the relative density of the gravelly sand was very dense.

The in-situ moisture content of the soil samples retrieved from the gravelly sand ranged from 2% to 6%, indicating moist conditions. A grain size analysis was conducted on a sample of the gravelly sand deposit, obtained from borehole 21BH-3, sample SS8 at a depth of 7.6m, using mechanical sieves. The grain size distribution is shown on the appended Figure No. 1.

Auger refusal was encountered in the boreholes at depths of between 10.0m and 11.1m from grade.

4.6 Groundwater

No free water was encountered in any of the boreholes. Borehole 21BH-3 was dry and open to the full depth, and boreholes 21BH-1 and 21BH-2 were dry to the cave in depths of 11.1m and 9.8m, respectively, on completion of drilling.

For the proposed two levels of underground parking, we recommend that monitoring wells be installed the Site and the groundwater conditions monitored, preferably for a period of a minimum of one year, to determine the static groundwater conditions and the seasonal fluctuations. The decision for temporary and / permanent groundwater control should be made based on this study.

5.0 RECOMMENDATIONS

It is understood that the existing one storey building will be removed and the Site will be redeveloped for a 14 storey building with two levels of underground parking. No details of the proposed redevelopment were available at the time of this report, except that the finished floor of the lower parking level is proposed to be located 6.4m below grade. The founding levels of the spread footings are assumed to be 0.6m lower than the above proposed lower parking level, i.e. at or below depths of 7.0m below the existing ground level. However, the elevator and the surrounding foundations are anticipated to be deeper than the above assumed founding levels, at depths of approximately 9.0m below the existing ground level.

Based on the subsoils encountered at the borehole locations, our comments and recommendations for the design and construction of the structures are as follows:

5.1 Site Preparation

The existing building, including all foundations, the pavements, and any vegetation remains should be removed. The contractor must also allow for the removal of any deleterious fill and materials with high moisture and/or organic content, if encountered during the construction, as directed by a geotechnical engineer / technician from ***Toronto Inspection Ltd.***

5.2 Preliminary Foundation Recommendations

The subsoil at and below the assumed founding depths of 7.0m to 9.0m from grade are anticipated to consist of very dense gravelly sand deposit at the borehole. Locations. Provided that the groundwater table is maintained a minimum of 1m below the slab-on-grade elevation, the structure can be founded on spread / strip foundations.

Conventional spread and strip footings, founded in the undisturbed gravelly sand deposit, for two levels of underground parking, at or below depths of 7.0m to 9.0m below the existing grade at the borehole locations, can be designed using the following preliminary bearing pressures:

- 400 kPa at Serviceability Limit State (SLS)
- 600 kPa at Factored Ultimate Limit State (ULS)

The total and differential settlement of the new foundations, under the above

recommended preliminary bearing pressures at Serviceability Limit State, will not exceed 25 mm and 20 mm, respectively.

It is noted that the soil bearing capacity is generally reduced by one half if the bearing surface is close to the water table.

All perimeter footings or any footings, which may be exposed to freezing penetration, should be placed below the frost penetration depth of 1.2 m below the outside grade or be provided with an equivalent thermal protection.

There is no official rule governing the footing depth for a fully enclosed unheated garage. Unmonitored experience in the past has shown that footing depths of less than the frost penetration depths 1.2 m have been adequate. For the two levels of underground parking, the interior columns / walls and the perimeter wall footings can be founded at depths of 0.8m and 0.6m, respectively, below the top of the lower level garage slab. However, footings adjacent to the fresh air ducts, the entrance of the garage and any other areas which may be exposed to the outside, a minimum frost cover of 1.2 m should be provided. In addition, a nominal 50 mm of Styrofoam insulation should be provided under the floor slab within the close proximity to the fresh air ducts.

Alternatively, a deep foundation, using concrete cast in place caissons, could potentially be founded in the gravelly sand. However, this is dependent on the location of the ground water table. The use of caissons in wet/saturated sand/gravelly sand is not recommended due to the potential for boiling at the base of the caisson. It is noted that auger refusal was encountered in the boreholes at a depth of between 10.0m and 11.3m, and there is a possibility that the auger refusal was due to bedrock. Caissons founded on bedrock generally provide high bearing capacities, and we recommend that this possibility be investigated. The use of driven piles is not recommended due to ground vibrations that could potentially have an adverse effect on the surrounding buildings.

In view of the foregoing discussion, ***Toronto Inspection Ltd.*** recommends that a supplementary geotechnical investigation be carried out to verify the soil or rock conditions at depth and determine the location of the ground water table. The supplementary investigation should comprise at least two sampled boreholes to a depth of at least 15m. If bedrock is encountered, coring should be carried out for at least 1.5m of intact rock. A monitoring well should be installed in each of the boreholes, and the ground water level should be monitored preferably for a period of

one year. Based on the findings of the supplementary investigation, and once details of the proposed development are available, ***Toronto Inspection Ltd.*** will provide recommendations on the foundation solution and the bearing pressures.

5.3 Basement Floor

The subsoil under the proposed slab-on-grade for two levels of underground parking is anticipated to consist of compact to dense sand deposit. Provided that the groundwater table is maintained a minimum of 1m below The slab-on-grade elevation, the floor slab of the proposed building can be designed and constructed as a conventional slab-on-grade method.

The exposed subgrade should be inspected by a geotechnical technician from ***Toronto Inspection Ltd.*** Any compressible, loose or weak spots observed during the inspection should be sub-excavated to a firm ground. Any new fill below the floor slab should consist of organic free soils, compacted to at least 98% SPMDD.

A granular base course, consisting of at least of 150 mm of Granular A (OPSS Form 1010) or its approved equivalent, should be provided between the subsoil and the slab-on-grade as a moisture barrier. The granular base should be compacted to at least 100% of its Standard Proctor maximum dry density. It may be necessary to install the subfloor drains. We recommend that provisions should be made in the budget to install the subfloor drains.

5.4 Earthquake Consideration

The Ontario Building Code requires that all buildings be designed to resist earthquake forces. In accordance with Table 4.1.8.4.A of the Ontario Building Code, the Site classification for the Seismic Site Response is Class 'C' (Very Dense Soil).

The acceleration and velocity based site coefficients, Fa and Fv, should conform to Tables 4.1.8.4.B and 4.1.8.4.C. These values should be reviewed by the Structural Engineer.

5.5 Lateral Earth Pressure

Where subsurface walls will retain unbalanced loads, the lateral earth pressure in the overburden may be computed using the following equation:

$$P = K (\gamma H + q)$$

where	P =	Lateral earth pressure	kPa
	K =	Lateral earth pressure coefficient	0.5
	γ =	Bulk unit weight of the soil	21.0 kN/m^3
	H =	Depth of the wall below the finish grade	m
	q =	Surcharge loads adjacent to the basement wall	kPa

The equation assumes that a permanent free draining system will be provided to prevent the buildup of hydrostatic pressure next to the wall. The recommended backfill and drainage system, at the open cut excavation, are shown on the attached Figure No. 2. At the shoring locations, the recommended permanent perimeter drainage system is shown on the attached Figure No. 3.

5.6 Excavation and Groundwater Control

The requirement for dewatering will depend on the location of the ground water table. Monitoring wells should, therefore, be installed during the supplementary investigation.

It is understood that the footprint of the underground parking will extend very close to the property line. Temporary shoring will, therefore, be required to support the vertical faces of the excavation. The temporary shoring should be designed by an experienced shoring company. The surcharge loading from the neighboring properties should be taken into account for the design of the temporary shoring system.

In addition, the founding elevations of the neighboring structures should be verified by the client/designer, prior to the design of the shoring system and the perimeter walls of the property. We strongly recommend that a pre-construction survey of neighboring properties be conducted to prevent any future legal problems.

6.0 GENERAL STATEMENT OF LIMITATION

The comments and recommendations presented in this report are based on the subsoil and ground water conditions shown in the borehole logs, prepared by ***Toronto Inspection Ltd.*** and by others, at the borehole locations indicated in the borehole location plan, and are intended for the guidance of the design engineer. It is noted that the soil and the ground water conditions between and beyond the borehole locations may differ from those shown in the borehole logs and may become apparent during construction. Any contractor bidding on, or undertaking the works, should decide on their own investigation and interpretations of the groundwater and the soil conditions between the borehole locations.

Any use and / or the interpretation of the data presented in this report, and any decisions made on it by the third party are responsibility of the third parties. The responsibility of ***Toronto Inspection Ltd.*** is limited to the interpretation of the soil and ground water conditions shown in the borehole logs. ***Toronto Inspection Ltd.*** accepts no responsibility for the loss of time and damages, if any, suffered by the third party as a result of decisions or actions based on this report.

Any legal actions arising directly or indirectly from this work and/or ***Toronto Inspection Ltd.'s*** performance of the services shall be filed no longer than two years from the date of ***Toronto Inspection Ltd.'s*** substantial completion of the services. ***Toronto Inspection Ltd.*** shall not be responsible to the client for lost revenues, loss of profits, cost of content, claims of customers, or other special indirect, consequential or punitive damages.

To the fullest extent permitted by law, the client's maximum aggregate recovery against ***Toronto Inspection Ltd.***, its directors, employees, sub-contractors and representatives, for any and all claims by clients for all causes including, but not limited to, claims of breach of contract, breach of warranty and /or negligence, shall be the amount of the fee paid to ***Toronto Inspection Ltd.*** for its professional services rendered under the agreement with respect to the particular site which is the subject of the claim by the client.

Yours very truly,
TORONTO INSPECTION LTD.

DRAFT

Rene Quiambao, P.Eng.
Senior Engineer

Toronto Inspection Ltd.

Drawings

Borehole Location Plan
Borehole Logs

Source: City of Hamilton Interactive Map (2017)

LEGEND:

Borehole Location

Approximate Site Boundary

NOT TO SCALE

TorontoInspection LTD.
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Markham, Ontario
L3R 9X2
Tel: 905-940 8509 Fax: 905-940 8192 Email : TIL@torontoinspection.com

TITLE:	Borehole Location Plan
LOCATION:	217 King Street West, Hamilton, Ontario

PROJECT NO.	DATE :	DRAWING NO:
5525W-21-GA	March 2021	1

Project No. 5525W-21-GA

Log of Borehole 21BH-1

Dwg No. 2

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 217 King Street West, Hamilton, Ontario

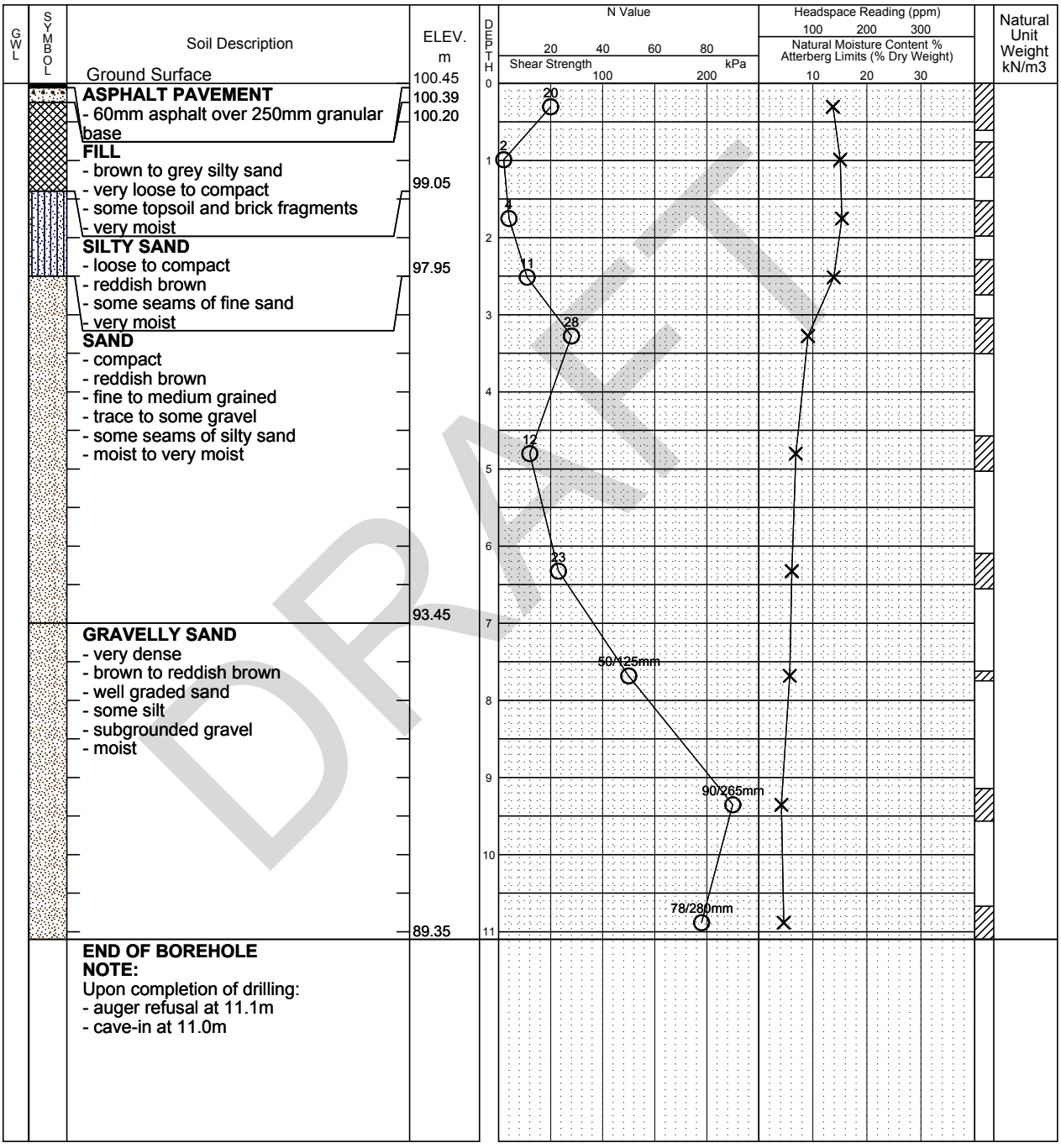
Date Drilled: 2/23/21

Drill Type: Truck Mounted Drill Rig

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Headspace Reading (ppm)
Natural Moisture
Plastic and Liquid Limit
Unconfined Compression % Strain at Failure
Penetrometer



LGBE3 5525W-21-GA.GPJ 3/10/21

NOTE: THE BOREHOLE DATA NEEDS INTERPRETATION ASSISTANCE BY TORONTO INSPECTION LTD. BEFORE USE BY OTHERS

Toronto Inspection Ltd.

Time	Water Level (m)	Depth to Cave (m)

Project No. 5525W-21-GA

Log of Borehole 21BH-2

Dwg No. 3

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 217 King Street West, Hamilton, Ontario

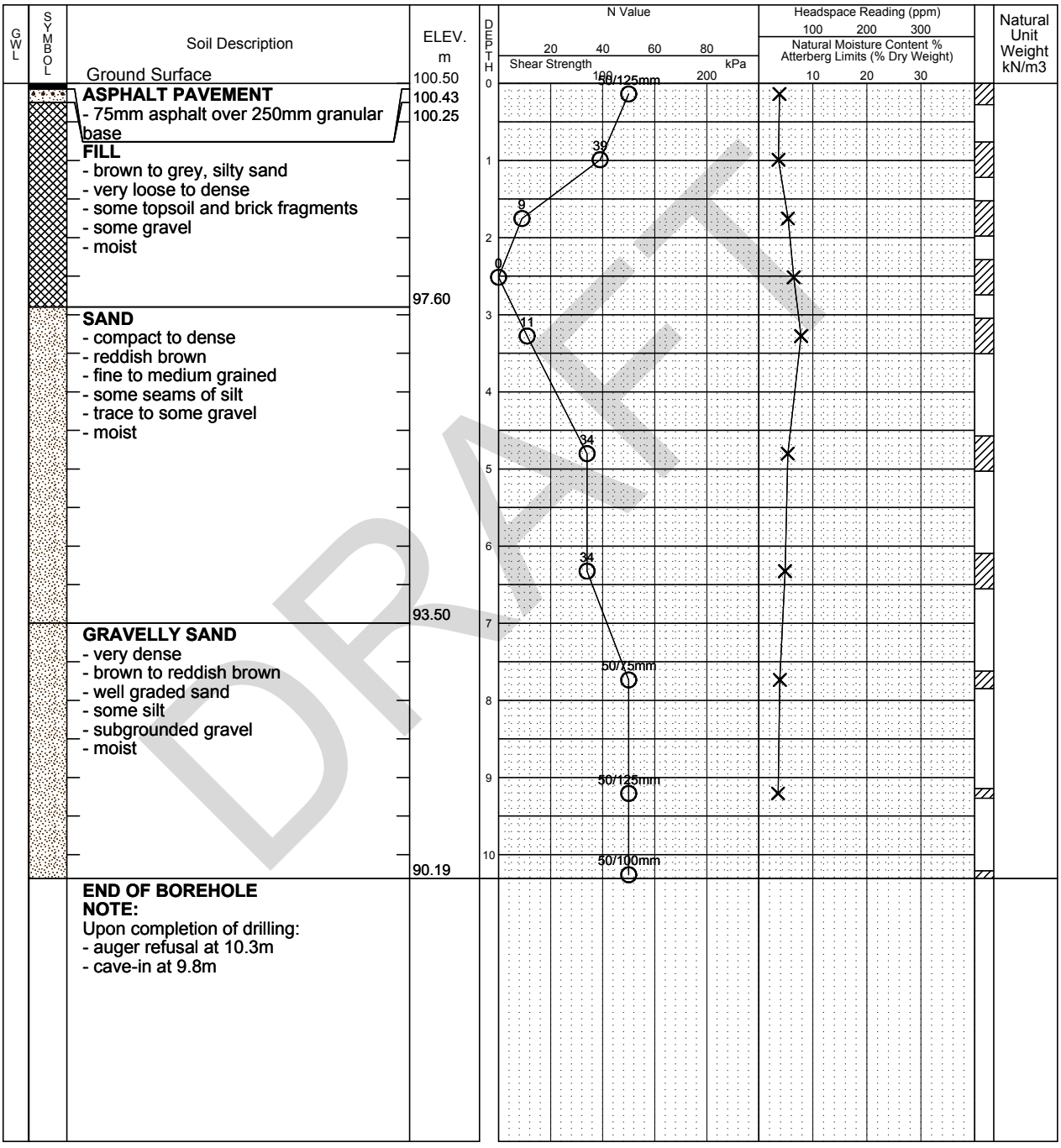
Date Drilled: 2/23/21

Drill Type: Truck Mounted Drill Rig

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test ✚ S

Headspace Reading (ppm) •
Natural Moisture ×
Plastic and Liquid Limit |—|
Unconfined Compression % Strain at Failure ⊗
Penetrometer ▲



LGBE3 5525W-21-GA.GPJ 3/10/21

NOTE: THE BOREHOLE DATA NEEDS INTERPRETATION ASSISTANCE BY TORONTO INSPECTION LTD. BEFORE USE BY OTHERS

Toronto Inspection Ltd.

Time	Water Level (m)	Depth to Cave (m)

Project No. 5525W-21-GA

Log of Borehole 21BH-3

Dwg No. 4

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 217 King Street West, Hamilton, Ontario

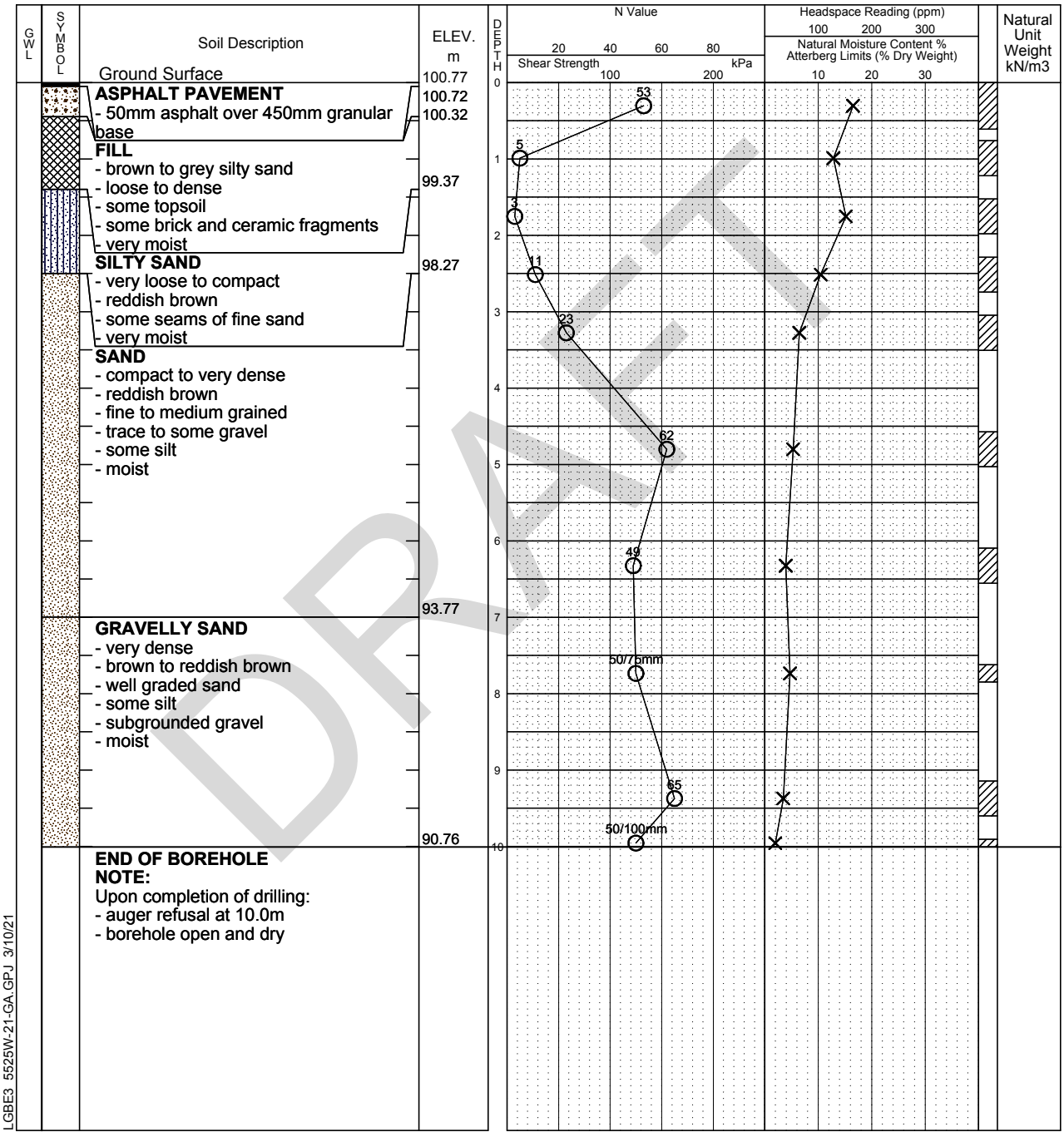
Date Drilled: 2/24/21

Drill Type: Truck Mounted Drill Rig

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test ✚ S

Headspace Reading (ppm) •
Natural Moisture ×
Plastic and Liquid Limit |—|
Unconfined Compression / % Strain at Failure ⊗
Penetrometer ▲



LGBE3 5525W-21-GA.GPJ 3/10/21

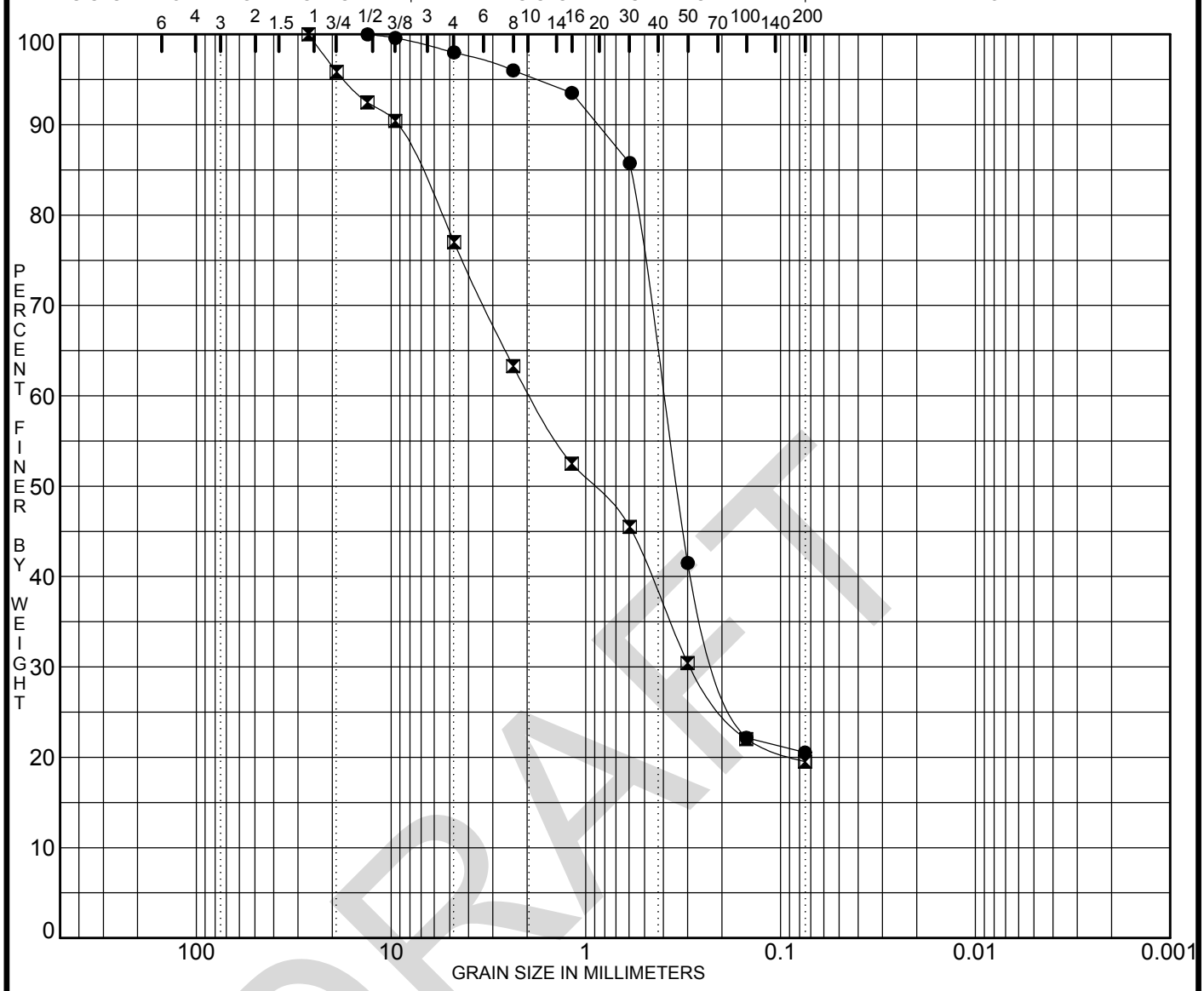
NOTE: THE BOREHOLE DATA NEEDS INTERPRETATION ASSISTANCE BY TORONTO INSPECTION LTD. BEFORE USE BY OTHERS

Toronto Inspection Ltd.

Time	Water Level (m)	Depth to Cave (m)

Figures

Grain Size Distribution
Details of Perimeter Subdrain and Basement Backfill
Permanent Perimeter Drainage System



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	MC%	LL	PL	PI	Cc	Cu
●	**21BH-1**	**4.6**							
⊠	**21BH-3**	**7.6**							

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**21BH-1**	**4.6**	**13.20**	**0.40**	**0.199**		**2.0**	**77.5**	**20.5**	
⊠	**21BH-3**	**7.6**	**26.50**	**1.91**	**0.290**		**23.0**	**57.5**	**19.5**	

PROJECT **Geotechnical Investigation - 217 King Street West, Hamilton, Ontario**

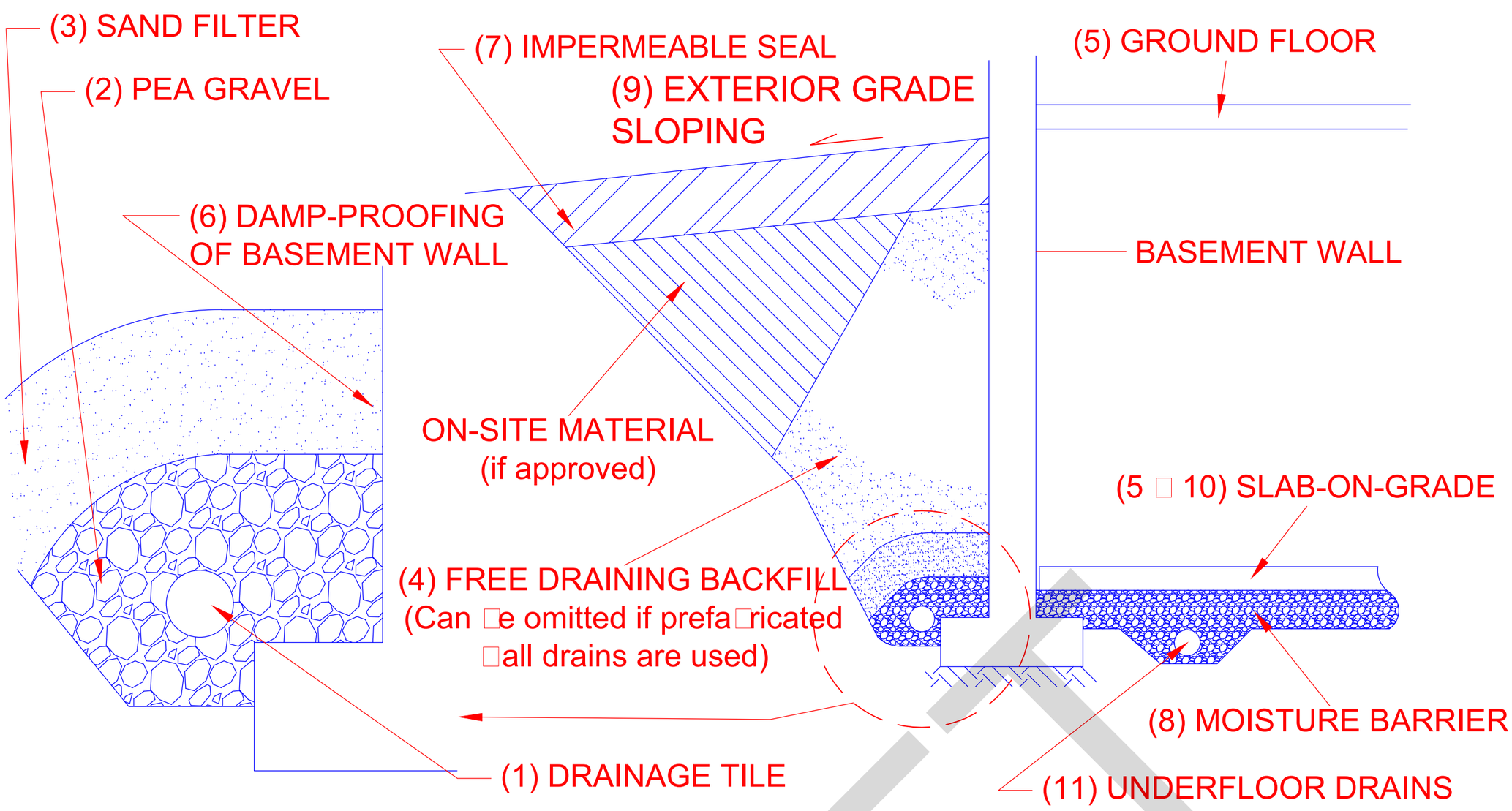
JOB NO. **5525W-21-GA**

DATE **3/8/21**

GRADATION CURVES

FIGURE NO.1

Toronto Inspection Ltd.



Notes:

1. **Drainage tile**: consist of 100mm (4") diameter □eeping tile or e□uivalent perforated pipe leading to a positive sump or outlet. invert to □e at minimum of 150mm (6") □elo□ underside of □asement floor level.
2. **Pea gravel**: at 150mm (6") on the top and sides of drain. If drain is not placed on footing, provide 100mm (4") of pea gravel □elo□ drain. The pea gravel may □e replaced □y 20mm clear stone provided that the drain is covered □y a porous geotextile mem□rane of Terrafix 270 R or e□uivalent.
3. **Filter material**: consists of C.S.A. fine concrete aggregate. A minimum of 300mm (12") on the top and sides of gravel. This may □e replaced □y an approved porous geotextile mem□rane of Terrafix 270R or e□uivalent.
4. **Free-draining backfill**: OPSS Granular B or e□uivalent, compacted to 93 to 95□ (maximum) Standard Proctor Density. Do not ocmpact closer than 1.8m (6ft.) from □all □ith heavy e□uipment. This may □e replaced □y on site material if prefa□icated □all drains (Miradrain) extending from the finished grade to the □ottom of the □asement □all are used.
5. **Do not backfill** until the □all is supported □y the □asement floor sla□ and ground floor framing, or ade□uate □racing.
6. **Damp-proofing** of the □asement □all is re□ured □efore □ackfilling.
7. **Impermeable backfill seal** of compacted clay, clayey silt or e□uivalent. If the original soil in the vicinity is a free draining sand, the seal may □e omitted.
8. **Moisture barrier**: consists of 20mm clear stone or compacted OPSS Granular A, or e□uivalent. The thickness of this layer to □e 150mm (6") minimum.
9. **Exterior Grade**: slope a□ay from □asement □all on all the sides of the □uilding.
10. **Slab-on-grade** should not □e structurally connected to □alls or foundations.
11. **Underfloor drains** * should □e placed in parallel ro□s at 6-8m (20-25 ft.) centre, on 100mm (4") of pea gravel □ith 150mm (6") of pea gravel on top and sides. The invert should □e at least 300mm (12") □elo□ the underside of the floor sla□. The drains should □e connected to positive sumps or outlets. Do not connect the underfloor drains to the perimeter drains.

□ Underfloor drains can □e deleted □here not re□uired.

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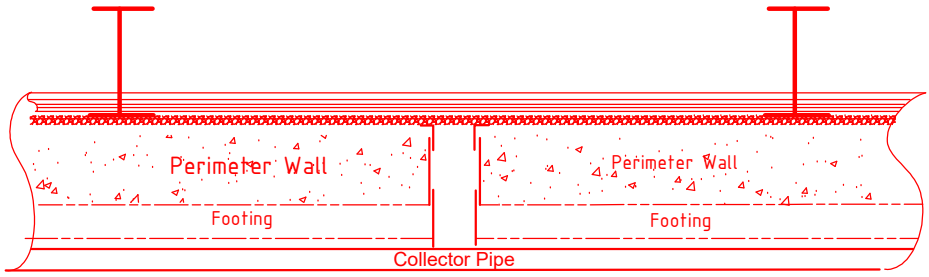
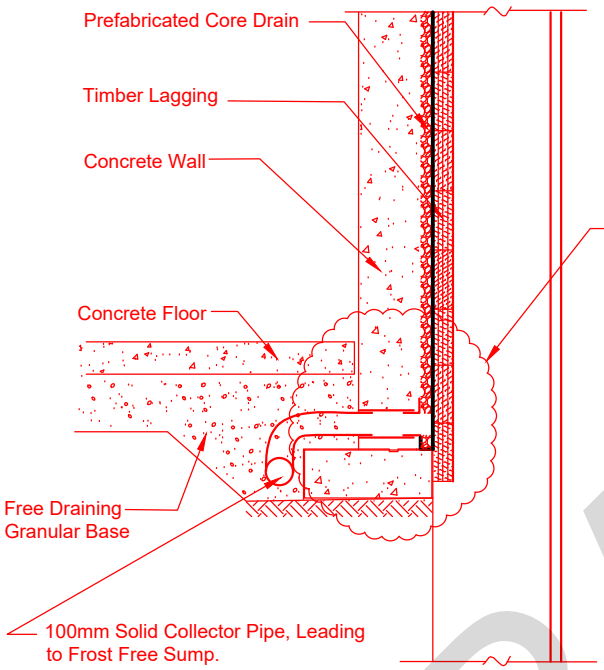
110 Konrad Cresent, Unit 16, Markham, Ontario L3R 9X2
Tel: 905-940 8509 Fax: 905-940 8192

TITLE:
Details of Perimeter Su□drain and Basement Backfill

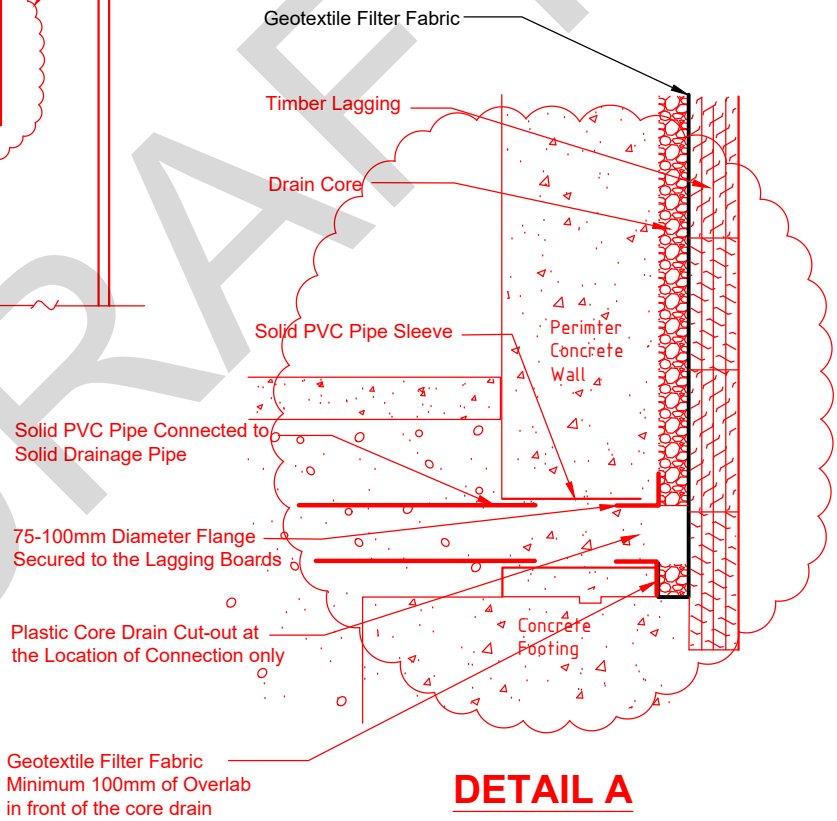
FIGURE NO.
2



PLAN



TYPICAL SECTION



DETAIL A

Note:

1. A continuous blanket of prefabricated drainage system, Miradrain 6000 or equivalent, should extend continuously from the top of footings to approximately 1.2m below the ground surface.
2. All joints of the Miradrain should be taped. All openings, including the exposed end above the footing, must be covered with filter fabic to prevent intrusion of concrete into the core of the drain.
3. The backfill behind the lagging must be free draining. Filter fabric or straw should be used to prevent loss of fines behind the lagging.
4. The perimeter drainage and subfloor drainage systems must be kept separate.

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TITLE:
Permanent Perimeter Drainage System

FIGURE NO.
3

Celebrating 20 YEARS of Service Excellence 1996–2016

DRAFT: 15 JUNE 2022

STAGE 1 ARCHAEOLOGICAL ASSESSMENT

API Development Consultants Inc., 215-217 King Street West, Part of Lot 16, Concession 2 (Geographic Township of Barton, County of Wentworth), City of Hamilton (AMICK Corporate File #: 2022-702/MHSTCI File #: P058-2151-2022)

SUBMITTED TO:
Ontario Ministry of Heritage, Sport, Tourism and Culture Industries
(MHSTCI)

&

API Development Consultants Inc.
Darius Saplys
Shareholder-Director of Operations
905-337-7249 (Ext 202)
905-616-7463 (Direct)
www.apidevelopmentconsultants.net

SUBMITTED BY:
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Phone: (519) 432-4435
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www.amick.ca

LICENSEE:
Michael B. Henry CD BA FRAI FRSA (P058)

PIF NUMBER: P058-2151-2022

CORPORATE PROJECT NUMBER: 2022-702

15 JUNE 2022

TABLE OF CONTENTS

PROJECT PERSONNEL

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Marilyn Cornies (MHSTCI Professional Archaeologist Licence #P038)

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Melissa Maclean BBA email mmaclean@amick.ca

PROJECT COORDINATOR

Michael Henry (MHSTCI Professional Archaeologist Licence #P058)

PROJECT LICENSEE ARCHAEOLOGIST

Michael Henry (MHSTCI Professional Archaeologist Licence #P058)

PROJECT FIELD DIRECTORS

Alex Cassidy-Neumiller (MHSTCI Applied Research Archaeologist Licence #R1311)

PROJECT REPORT PREPARATION & GRAPHICS

Olivia Vieira, Sheri Kapahnke

PROJECT PHOTOGRAPHY

Alex Cassidy-Neumiller (MHSTCI Applied Research Archaeologist Licence #R1311)

EXECUTIVE SUMMARY

This report describes the results of the 2022 Stage 1 Archaeological Background Study of 215-217 King Street West, Part of Lot 16, Concession 2 (Geographic Township of Barton, County of Wentworth), City of Hamilton, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and was conducted under Professional Archaeologist License #P058 issued to Michael Henry by the Minister of Heritage, Sport, Tourism and Culture Industries (MHSTCI) for the Province of Ontario. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the Ontario Heritage Act (RSO 1990a).

The entirety of the study area is approximately 0.10 hectares (ha) in area and includes within it a parking lot and a building which contains a Vida La Pita and a Big Bee Convenience store. The study area is bounded on the north by King St W, on the east by Caroline St S, on the south by a parking lot and Staybridge Suites Hamilton and on the west by a Tim Hortons and a parking lot. AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1 Archaeological Background Study of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. Following the criteria outlined by MHSTCI (2011) for determining archaeological potential, portions of the study area were determined as having archaeological potential for Pre-contact and Post-contact archaeological resources. Consequently, this report is being prepared in advance of the planning process for this property.

The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 1 Archaeological Background Study on 18 May 2022. A property inspection and photographic documentation of the study area was completed on 5 May 2022. All records, documentation, field notes, photographs, and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the MHSTCI on behalf of the government and citizens of Ontario.

The study area has been identified as a property that exhibits major subsurface disturbances not viable for assessment which include parking lot and large structure. Consequently, there appears to be no remaining potential to yield archaeological deposits of Cultural Heritage Value or Interest (CHVI) within the limits of the study area. Therefore, the objectives of the Stage 1 Background Study have been met and in accordance with the results of this investigation, the following recommendations are made:

1. *Due to previous extensive subsurface disturbances and landscape alterations throughout the study area, the proposed undertaking no longer retains potential for archaeological resources.*
2. *No further archaeological assessment of the study area is warranted.*
3. *The Provincial interest with respect to archaeological resources within the limits of the study area has been addressed.*

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

This report describes the results of the 2022 Stage 1 Archaeological Background Study of 215-217 King Street West, Part of Lot 16, Concession 2 (Geographic Township of Barton, County of Wentworth), City of Hamilton, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and was conducted under Professional Archaeologist License #P058 issued to Michael Henry by the Minister of Heritage, Sport, Tourism and Culture Industries (MHSTCI) for the Province of Ontario. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011) and the Ontario Heritage Act (RSO 1990a).

The entirety of the study area is approximately 0.10 hectares (ha) in area and includes within it a parking lot and a building which contains a Vida La Pita and a Big Bee Convenience store. The study area is bounded on the north by King St W, on the east by Caroline St S, on the south by a parking lot and Staybridge Suites Hamilton and on the west by a Tim Hortons and a parking lot. AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1 Archaeological Background Study of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. Following the criteria outlined by MHSTCI (2011) for determining archaeological potential, portions of the study area were determined as having archaeological potential for Pre-contact and Post-contact archaeological resources. Consequently, this report is being prepared in advance of the planning process for this property.

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The proposed development of the study area includes a 14-storey residential tower. A preliminary plan of the proposed development has been submitted together with this report to MHSTCI for review and reproduced within this report as Map 3.

1.2 HISTORICAL CONTEXT

1.2.1 PRE-CONTACT LAND-USE OUTLINE

Table 1 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17th century. This general

cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and as a very broad outline to illustrate the relationships of broad cultural groups and time periods.

TABLE 1 PRE-CONTACT CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO

Years ago	Period	Southern Ontario
250	Terminal Woodland	Ontario and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point, Saugeen, Point Peninsula, and Meadowood Cultures
3000 4000 5000 6000	Archaic	Laurentian Culture
7000 8000 9000 10000 11000	Palaeo-Indian	Plano and Clovis Cultures
		(Wright 1972)

What follows is an outline of Aboriginal occupation in the area during the Pre-Contact Era from the earliest known period, about 9000 B.C. up to approximately 1650 AD.

1.2.1.1 PALEO-INDIAN PERIOD (APPROXIMATELY 9000-7500 B.C.)

North of Lake Ontario, evidence suggests that early occupation began around 9000 B.C. People probably began to move into this area as the glaciers retreated and glacial lake levels began to recede. The early occupation of the area probably occurred in conjunction with environmental conditions that would be comparable to modern Sub-Arctic conditions. Due to the great antiquity of these sites, and the relatively small populations likely involved, evidence of these early inhabitants is sparse and generally limited to tools produced from stone or to by-products of the manufacture of these implements.

1.2.1.2 ARCHAIC PERIOD (APPROXIMATELY 8000-1000 B.C.)

By about 8000 B.C. the gradual transition from a post glacial tundra-like environment to an essentially modern environment was largely complete. Prior to European clearance of the landscape for timber and cultivation, the area was characterized by forest. The Archaic Period is the longest and the most apparently stable of the cultural periods identified through archaeology. The Archaic Period is divided into the Early, Middle and Late Sub-Periods, each represented by specific styles in projectile point manufacture. Many more sites of this period are found throughout Ontario, than of the Palaeo-Indian Period. This is probably a reflection of two factors: the longer period of time reflected in these sites, and a greater population density. The greater population was likely the result of a more diversified

subsistence strategy carried out in an environment offering a greater variety of abundant resources (Smith 2002:58-59).

Current interpretations suggest that the Archaic Period populations followed a seasonal cycle of resource exploitation. Although similar in concept to the practices speculated for the big game hunters of the Palaeo-Indian Period, the Archaic populations utilized a much broader range of resources, particularly with respect to plants. It is suggested that in the spring and early summer, bands would gather at the mouths of rivers and at rapids to take advantage of fish spawning runs. Later in the summer and into the fall season, smaller groups would move to areas of wetlands to harvest nuts and wild rice. During the winter, they would break into yet smaller groups probably based on the nuclear family and perhaps some additional relatives to move into the interior for hunting. The result of such practices would be to create a distribution of sites across much of the landscape (Smith 2002: 59-60).

The material culture of this period is much more extensive than that of the Palaeo-Indians. Stylistic changes between Sub-Periods and cultural groups are apparent, although the overall quality in production of chipped lithic tools seems to decline. This period sees the introduction of ground stone technology in the form of celts (axes and adzes), manos and metates for grinding nuts and fibres, and decorative items like gorgets, pendants, birdstones, and bannerstones. Bone tools are also evident from this time period. Their presence may be a result of better preservation from these more recent sites rather than a lack of such items in earlier occupations. In addition, copper and exotic chert types appear during the period and are indicative of extensive trading (Smith 2002: 58-59).

1.2.1.3 WOODLAND PERIOD (APPROXIMATELY 1000 B.C.-1650 A.D.)

The primary difference in archaeological assemblages that differentiates the beginning of the Woodland Period from the Archaic Period is the introduction of ceramics to Ontario populations. This division is probably not a reflection of any substantive cultural changes, as the earliest sites of this period seem to be in all other respects a continuation of the Archaic mode of life with ceramics added as a novel technology. The seasonally based system of resource exploitation and associated population mobility persists for at least 1500 years into the Woodland Period (Smith 2002: 61-62).

The Early Woodland Sub-Period dates from about 1000-400 B.C. Many of the artifacts from this time are similar to the late Archaic and suggest a direct cultural continuity between these two temporal divisions. The introduction of pottery represents and entirely new technology that was probably acquired through contact with more southerly populations from which it likely originates (Smith 2002:62).

The Middle Woodland Sub-Period dates from about 400 B.C.-800 A.D. Within the region including the study area, a complex emerged at this time termed “Point Peninsula.” Point Peninsula pottery reflects a greater sophistication in pottery manufacture compared with the earlier industry. The paste and temper of the new pottery is finer and new decorative techniques such as dentate and pseudo-scallop stamping appear. There is a noted Hopewellian influence in southern Ontario populations at this time. Hopewell influences

from south of the Great Lakes include a widespread trade in exotic materials and the presence of distinct Hopewell style artifacts such as platform pipes, copper or silver panpipe covers and shark's teeth. The populations of the Middle Woodland participated in a trade network that extended well beyond the Great Lakes Region.

The Late Woodland Sub-Period dates from about 500-1650 A.D. The Late Woodland includes four separate phases: Princess Point, Early Ontario Iroquoian, Middle Ontario Iroquoian and Late Ontario Iroquoian.

The Princess Point phase dates to approximately 500-1000 A.D. Pottery of this phase is distinguished from earlier technology in that it is produced by the paddle method instead of coil and the decoration is characterized by the cord wrapped stick technique. Ceramic smoking pipes appear at this time in noticeable quantities. Princess Point sites cluster along major stream valleys and wetland areas. Maize cultivation is introduced by these people to Ontario. These people were not fully committed to horticulture and seemed to be experimenting with maize production. They generally adhere to the seasonal pattern of occupation practiced by earlier occupations, perhaps staying at certain locales repeatedly and for a larger portion of each year (Smith 2002: 65-66).

The Early Ontario Iroquoian stage dates to approximately 950-1050 A.D. This stage marks the beginning of a cultural development that led to the historically documented Ontario Iroquoian groups that were first contacted by Europeans during the early 1600s (Petun, Neutral, and Huron). At this stage formal semi-sedentary villages emerge. The Early stage of this cultural development is divided into two cultural groups in southern Ontario. The areas occupied by each being roughly divided by the Niagara Escarpment. To the west were located the Glen Meyer populations, and to the east were situated the Pickering people (Smith 2002: 67).

The Middle Ontario Iroquoian stage dates to approximately 1300-1400 A.D. This stage is divided into two sub-stages. The first is the Uren sub-stage lasting from approximately 1300-1350 A.D. The second of the two sub-stages is known as the Middleport sub-stage lasting from roughly 1350-1400 A.D. Villages tend to be larger throughout this stage than formerly (Smith 2002: 67).

The Late Ontario Iroquoian stage dates to approximately 1400-1650 A.D. During this time the cultural divisions identified by early European explorers are under development and the geographic distribution of these groups within southern Ontario begins to be defined.

1.2.2 Post-Contact Land Use Outline

The townships in the area of Lake Ontario called the Head-of-the-Lake were first surveyed and named between 1788 and 1793. In 1802 the Home and Niagara Districts were created, at this time the Niagara District consisted of the counties of Haldimand and Lincoln, areas that included much of what later became Wentworth County. In 1816 the Gore district was created and consisted of two counties, Wentworth and Halton. Wentworth at this time

consisted of the townships of Saltfleet, Barton, Binbrook, Glanford and Ancaster (City of Hamilton 2010).

Augustus Jones first surveyed Barton Township in 1791. By the time of the survey there was already a significant number of settlers (my.tbaytel.net). The township was named after Barton upon Humber in Lincolnshire England and was originally established within Lincoln Township in 1791. By 1816 Barton Township was part of Wentworth County. By 1960 the township of Barton was annexed to the City of Hamilton. Hamilton was incorporated in 1846 as a city (myhamilton.ca).

Map 2 is a facsimile segment from the Map of the County of Wentworth, Canada West (Surtees 1859). Map 2 illustrates the location of the study area and environs as of 1859. The study area is shown to be situated within the town plot of Hamilton. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. Settlement roads are depicted as adjacent to the study area to the north and east. These roads are presently known as King St W and Caroline St N.

Map 3 is facsimile segment from Illustrated Historical Atlas of the County of Wentworth (Page & Smith 1875). Map 3 illustrates the location of the study area and environs as of 1875. The study area is shown to be situated within the town plot of Hamilton. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. Settlement roads are depicted as adjacent to the study area to the north and east. These roads are presently known as King St W and Caroline St N.

A plan of the study area is included within this report as Map 4. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 5 & 6.

1.2.3 Summary of Historical Context

The brief overview of readily available documentary evidence indicates that the study area is situated within an area that was close to historic transportation routes and therefore has potential for sites relating to early Post-contact settlement in the region. However, it was still predominantly rural in character and the likelihood of locating significant Post-contact archaeological deposits of cultural heritage value or interest (CHVI) on a very small parcel of the original township lot is not likely. Background research indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of chert and a major water way, Burlington Bay of Lake Ontario.

1.3 Archaeological Context

The study area is located near central Hamilton and is bounded on the north by King St W, on the east by Caroline St S, on the south by a parking lot and Staybridge Suites Hamilton and on the west by a Tim Hortons and a parking lot.

A parking lot and a building which contains a Vida La Pita and a Big Bee Convenience store are present within the study area. The study area does not contain any areas of steep slope nor ploughable lands.

1.3.1 Physiographic Region

The study area is located in the Iroquois Plain, which is located on the lowland bordering Lake Ontario. This area used to be under Lake Iroquois and the old shorelines can easily be identified based on unique features such as cliffs, beaches, bars and boulder pavements. Due to the fact that this physiographic region was under a lake, the conditions of the soil and landscape vary greatly from land smoothed by wave action to cliffs. Soil types range from a sandy base to a clay base, with poor drainage in some areas. The Iroquois Plains consists of the area from the Niagara River to the Trent River and around the western end of Lake Ontario. (Chapman and Putnam 1984: 190-196).

1.3.2 Surface Water

There are no water sources located near or within the study area.

1.3.3 Lithic Sources

The study area is located near to the Lockport Formation which has outcrops of Ancaster chert. Lockport - Ancaster chert is a member of the Middle Silurian Lockport Formation and can be found from Niagara up the escarpment to the Hamilton area (Armstrong 2018:70; Eley and von Bitter 1989:20). It is medium grey in colouration and usually includes darker carbonate mottling with light quartz grains and “rusting” from iron oxide inclusions (Armstrong 2018:71). Ancaster chert usually has white to light grey patination and lustre varies from dull to earthy to vitreous (Armstrong 2018:71). The closest known outcrops of Ancaster chert are located approximately 6.8 kilometers north of the study area. It is also located 3.15 km from an Ancaster chert bed.

1.3.4 Registered Archaeological Sites

The Archaeological Sites Database administered by the MHSTCI indicates that there are seven (7) previously documented sites within 1 kilometre of the study area. However, it must be noted that this assumes the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MHSTCI. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

1.3.4.1 Pre-contact Registered Sites

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result, it was determined that one (1) archaeological site relating directly to Pre-contact habitation/activity had been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that Pre-contact people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity. Even in cases where one or more assessments may have been conducted in close proximity to a proposed landscape alteration, an extensive area of physical archaeological assessment coverage is required throughout the region to produce a representative sample of all potentially available archaeological data in order to provide any meaningful evidence to construct a pattern of land use and settlement in the past. One (1) of these sites (AhGx-224) are multi-component sites listed as both Pre-contact and Post-contact sites. All previously registered Pre-contact sites are briefly described below in Table 2:

Table 2 Pre-contact Sites within 1km

Borden #	Site Name	Time Period	Affinity	Site Type
AhGx-224	Whitehern	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	Unknown, homestead

One of the above noted archaeological sites may be situated within 300 metres of the study area. Therefore, it demonstrates archaeological potential for further archaeological resources related to Pre-contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

1.3.4.2 Post-contact Registered Sites

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result, it was determined that seven (7) archaeological sites relating directly to Post-contact habitation/activity had been formally registered within the immediate vicinity of the study area. One (1) of these sites (AhGx-224) are multi-component sites listed as both Pre-contact and Post-contact sites. All previously registered Post-contact sites are briefly described below in Table 3:

Table 3 Post-contact Sites within 1km

Borden #	Site Name	Time Period	Affinity	Site Type
AhGx-765		Post-Contact	Euro-Canadian	house
AhGx-736		Post-Contact	Euro-Canadian	House
AhGx-683	Loretto	Post-Contact	Euro-Canadian	Homestead
AhGx-645	Victoria Park	Post-Contact	Euro-Canadian	Military, park

AhGx-560	Tecumseh Street Stone Arch	Post-Contact	Euro-Canadian	
AhGx-25	Dundurn Park	Post-Contact	Other Euro-Canadian, Unknown	
AhGx-224	Whitehern	Post-Contact, Pre-Contact	Aboriginal, Euro-Canadian	Unknown, homestead

One of the above noted archaeological sites may be situated within 300 metres of the study area. Therefore, it demonstrates archaeological potential for further archaeological resources related to Post-contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

1.3.4.3 Registered Sites of Unknown Cultural Affiliation

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result, it was determined that none (0) archaeological sites of unknown cultural affiliation have been formally registered within the immediate vicinity of the study area.

1.3.4 Previous Archaeological Assessments

On the basis of information supplied by MHSTCI, no archaeological assessments have been conducted within 50 metres of the study area. AMICK Consultants Limited assumes no responsibility for the accuracy of previous assessments, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MHSTCI. In addition, it must also be noted that the lack of formerly documented previous assessments does not indicate that no assessments have been conducted.

1.3.4.1 Previous Regional Archaeological Potential Modelling

The study area is situated within an area subject to an archaeological master plan or a similar regional overview study. Amongst other initiatives, the City of Hamilton Archaeology Management Plan was compiled to provide guidance on the management of archaeology within the City of Hamilton: "It outlines the City's roles and responsibilities, and provides the policy and protocol form implementation, ensuring that the management of archaeology is systematic and consistent across the City's jurisdiction" (2012: 1). Various potential layers comparing and documenting known archaeological sites, soil types, proximity to water, and the effects of modern previous development were all buffered into a composite potential. For a detailed account of how these layers were developed, refer to the Hamilton Archaeology Management Plan (City of Hamilton, 2012: Appendix A). Based on the composite potential modeling weighed against an potential integrity model, the majority of current study area was

found to be within an area of archaeological potential. The City of Hamilton's Archaeological Potential Modelling has been reproduced in Map 8 of this report.

1.3.5 Historic Plaques

There are no relevant plaques associated with the study area, which would suggest an activity or occupation within, or near, the study area that may indicate potential for associated archaeological resources of significant CHVI.

1.3.6 Summary of Archaeological Context

The study area contains a parking lot and a building which contains a Vida La Pita and a Big Bee Convenience store. The study area does not contain any areas of steep slope nor ploughable lands.

Background research indicates that the entire study area has seen significant previous disturbances which have removed all archaeological potential within the study area.

Current conditions within the study area indicate that the property has no archaeological potential and does not require Stage 2 Property Assessment as the entire study area is covered in asphalt and a structure which are not viable for assessment and their construction have removed any archaeological potential.

Background research also indicates that the study area is situated in the Iroquois Plain physiographic region, which is characterized by a sandy or clay base. In addition, the study area is located near to the Lockport Formation which has outcrops of Ancaster chert.

A total of 7 previously registered archaeological sites have been documented within 1km of the study area. Of these, 1 are Pre-contact and 7 are Post-contact. One of these sites (AhGx-224) are located within 300m of the study area and, therefore, do demonstrate archaeological potential for further archaeological resources of Pre-contact/Post-contact activity and occupation with respect to the archaeological assessment of the current study area.

The study area is situated within an area subject to an archaeological master plan or a similar regional overview study. There are no relevant plaques associated with the study area.

The study area has potential for archaeological resources of Native origins based on proximity to previously registered archaeological sites of Pre-contact origins. Background research also suggests potential for archaeological resources of Post-contact origins based on proximity to previously registered archaeological sites of Post-contact origins, historic structures illustrated on historic maps and proximity to a historic roadway. However, the study are is entirely disturbed and therefore, potential has been removed.

2.0 PROPERTY INSPECTION

A property inspection was carried out in compliance with Standards and Guidelines for Consultant Archaeologists (MTC 2011) to document the existing conditions of the study area to facilitate the Stage 2 Property Assessment. All areas of the study area were visually inspected and select features were photographed as a representative sample of each area defined within Maps 5 and 6. Observations made of conditions within the study area at the time of the inspection were used to inform the requirement for Stage 2 Property Assessment for portions of the study area as well as to aid in the determination of appropriate Stage 2 Property Assessment strategies. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Maps 5 & 6 of this report.

The documentation produced during the field investigation conducted in support of this report includes: one page of photo log, one page of field notes, and 6 digital photographs.

3.0 ANALYSIS AND CONCLUSIONS

3.1 STAGE 1 ANALYSIS AND CONCLUSIONS

3.1.1 CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics include:

1) Within 300m of Previously Identified Archaeological Sites

2) Within 300m of Primary Water Sources (e.g., lakes, rivers, streams, and creeks)

3) Within 300m of Secondary Water Sources (e.g., intermittent streams and creeks, springs, marshes, and swamps)

4) Within 300 m of Features Indicating Past Water Sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches)

5) Within 300m of an Accessible or Inaccessible Shoreline (e.g., high bluffs, swamp, or marsh fields by the edge of a lake, sandbars stretching into marsh)

6) Elevated Topography (e.g., eskers, drumlins, large knolls, and plateaux)

7) Pockets of Well-drained Sandy Soil, especially near areas of heavy soil or rocky ground.

8) Distinctive Land Formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.

9) Resource Areas, including:
   - food or medicinal plants (e.g., migratory routes, spawning areas, and prairie)
   - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
   - resources of importance to early Post-contact industry (e.g., logging, prospecting, and mining)

10) Within 300m of Areas of Early Post-contact Settlement, including:
   - military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes)
   - early wharf or dock complexes, pioneer churches and early cemeteries

11) Within 100m of Early Historical Transportation Routes (e.g., trails, passes, roads, railways, portage routes)

12) Heritage Property – A property listed on a municipal register or designated under the Ontario Heritage Act or is a federal, provincial, or municipal historic landmark or site.

13) Documented Historical or Archaeological Sites – property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

The study area is within 300 metres of a previously registered site with Pre-Contact and Post-Context artifacts. The study area is situated within the town plot of Hamilton illustrated on the historic atlas maps of 1859 & 1875. The study area is situated within 100m of an early settlement road that appears on the historic atlas maps of 1859 & 1875.

3.1.2 CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which archaeological potential has been removed (MTC 2011). These characteristics include:

1) Quarrying

2) Major Landscaping Involving Grading Below Topsoil

3) Building Footprints

4) Sewage and Infrastructure Development

The study area contains is entirely disturbed and not viable for Stage 2 assessment as it is covered in a parking lot and a building.

3.1.3 SUMMARY OF ARCHAEOLOGICAL POTENTIAL

Table 4 below summarizes the evaluation criteria of the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) together with the results of the Stage 1 Background Study for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to previously registered archaeological sites, and proximity to historic settlement area and roads.

TABLE 4 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

FEATURE OF ARCHAEOLOGICAL POTENTIAL		YES	NO	N/A	COMMENT
1	Known archaeological sites within 300m	**Y**			If Yes, potential determined
PHYSICAL FEATURES					
2	Is there water on or near the property?		**N**		If Yes, what kind of water?
2a	Primary water source within 300 m. (lakeshore, river, large creek, etc.)		**N**		If Yes, potential determined
2b	Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)		**N**		If Yes, potential determined
2c	Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)		**N**		If Yes, potential determined
2d	Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)		**N**		If Yes, potential determined
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		**N**		If Yes, and Yes for any of 4-9, potential determined
4	Pockets of sandy soil in a clay or rocky area		**N**		If Yes and Yes for any of 3, 5-9, potential determined
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		**N**		If Yes and Yes for any of 3-4, 6-9, potential determined
HISTORIC/PREHISTORIC USE FEATURES					
6	Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		**N**		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7	Early Post-contact settlement area within 300 m.	**Y**			If Yes, and Yes for any of 3-6, 8-9, potential determined
8	Historic Transportation route within 100 m. (historic road, trail, portage, rail corridors, etc.)	**Y**			If Yes, and Yes for any 3-7 or 9, potential determined
9	Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)		**N**		If Yes and, Yes to any of 3-8, potential determined
APPLICATION-SPECIFIC INFORMATION					
10	Local knowledge (local heritage organizations, Pre-contact, etc.)		**N**		If Yes, potential determined
11	Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)	**Y**			If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**
If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**
If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

4.0 RECOMMENDATIONS

4.1 STAGE 1 RECOMMENDATIONS

The study area has been identified as a property that exhibits major landscape alterations and subsurface disturbances which include asphalt parking lot and structure. Consequently, there appears to be no remaining potential to yield archaeological deposits of Cultural Heritage Value or Interest (CHVI) within the limits of the study area. Therefore, the objectives of the Stage 1 Background Study have been met and in accordance with the results of this investigation, the following recommendations are made:

1. *Due to previous extensive subsurface disturbances and landscape alterations throughout the study area, the proposed undertaking no longer retains potential for archaeological resources.*
2. *No further archaeological assessment of the study area is warranted.*
3. *The Provincial interest with respect to archaeological resources within the limits of the study area has been addressed.*

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

a. *This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c. 0.18. The report is reviewed to ensure that it complies with the standards and guidelines issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.*

b. *It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.*

c. *Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario*

Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.

d. *The Cemeteries Act, R.S.O. 1990, c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.*

e. *Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.*

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NOISE & VIBRATION IMPACT STUDY

"HAMILTON RESIDENTIAL/RETAIL"
18-STOREY MIXED USE BUILDING
215-217 KING STREET WEST
HAMILTON, ON

Prepared for:

API Development Consultants
1464 Cornwall Road, Unit 7
Oakville, ON
L6J 7W5

Prepared By:

Melissa MacLean, Vice President
Qualified Acoustical Consultant

Our File No: 23-4005
January 2023

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Hamilton, ON
L8W 3K0

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1.0 INTRODUCTION

dBA Acoustical Consulting Inc. has been retained to provide a noise impact study on behalf of API Development Consultants, for the proposed 18-storey mixed-use building, located at the southwest corner of King Street West and Caroline Street South, Hamilton, ON. The purpose of the study is to determine the noise impact from King Street West, Caroline Street South, and Main Street West vehicular traffic, Hamilton LRT, and area stationary noise sources, that may impact the proposed residential building as required for site plan approval for the City of Hamilton.

This study will detail the noise impact relative to the site plan and recommend noise control measures necessary (if applicable) to meet Ministry of Environment, Conversation, and Parks, (MECP) Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Hamilton.

Vibration is considered in this report for the Hamilton LRT system. Aircraft is not a concern as the development is located outside the NEF 25 contour of the area Airports. See Figure 1 Site Location.

2.0 SITE DESCRIPTION

The proposed mixed-use development is located on the southwest corner of King Street West and Caroline Street South. A site visit confirmed area stationary noise sources in the general area of the proposed development have no acoustical impact. See Figure 2 Site Plan

Proposed for the development is an 18-storey mixed use building consisting of 85 residential units, 3 levels of underground parking and retail space on level 1 as well as office spaces and indoor amenity areas on level 2. Proposed are outdoor terraces and balconies that do not exceed 4m in depth and therefore are not considered outdoor amenity areas, however, are required to have safety railings. Proposed on the northeast portion of the rooftop is an outdoor amenity area (OLA) and is addressed later in this report.

To the east of the building, across Caroline Street South is a 30-storey mixed-use building (213 King Street West) that is currently under development. A large residential apartment building, located at 20-22 George Street, will abut the 30-storey mixed use building with a podium adjoining the two buildings and together these buildings will provide ample shielding from King Street West and Main Street West vehicular traffic.

To the south of the proposed development is Staybridge Suites (20 Caroline Street South), a large 6-storey hotel. This building will provide ample shielding from Main Street West traffic sources for the south wall.

King Street West is a one-way, 4-lane roadway running west with a posted speed of 50 km/hr and is considered a heavy truck route in this area and is located approximately 15m north of the proposed development. King Street West is a major traffic noise source for this proposed development.

Caroline Street South is a two-way, 3-lane roadway running north and south to the proposed site and is not considered a heavy truck route and is located approximately 15m east of the proposed development with a posted speed limit of 40 km/hr.

Main Street West is a one-way, 4-lane roadway running east with a posted speed of 50 km/hr, is considered a heavy truck route in this area and is located approximately 139m south of the proposed development.

The proposed development is located within a mixed-use zoned area. To the immediate northeast and northwest are 2.5-storey residential/commercial properties. Located to the west of the development are commercial properties. Site Location is attached as Figure 1.

3.0 NOISE IMPACT ASSESSMENT

3.1 NOISE CRITERIA

The MECP specifies limits for road noise relative to new residential developments. The MECP Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning, specifies the criteria, summarized as follows:

TABLE 1- Road Traffic Sound Levels Limits	
Time Period	Leq (dBA)
07:00 – 23:00 (16 hr.)	55 Outdoor Living area
07:00 – 23:00 (16 hr.)	55 Plane of Window
23:00 – 07:00 (8 hr.)	50 Plane of Bedroom window

Where noise levels estimated at the Plane of the Window (POW) are equal to or less than the values listed in Table 1, no noise control measures are required. Where noise levels exceed Table 1 values, the following action is required:

TABLE 2 –Noise Control Requirements		
Time Period	Noise Level Leq (dBA)	Action Required
07:00 - 23:00 Daytime (OLA)	56 to 60	Warning Clause Type "A"
	> 60	Barrier & Warning Clause Type "B"
07:00 – 23:00 Daytime (POW)	>55	Provision for A/C, Warning Clause "C"
	>65	Central A/C, Warning Clause "D"
	>65	Building Component Specification
23:00 to 07:00 Nighttime (POW)	> 50	Provision for A/C and Warning Clause Type "C"
	> 60	Building Component Specification
	> 60	Central Air and Warning Clause Type "D"

Where nighttime noise levels exceed 60 dBA, building components must be designed to meet Table 3 indoor sound level limits.

TABLE 3 - Indoor Road Sound Levels Limits	
Indoor Location	Leq (dBA)
	Road
Living/Dining/Bedroom (7:00 – 23:00)	45
Living/Dining/Bedroom (23:00 - 07:00)	40

3.2 ROAD NOISE

Predicted road traffic noise levels were calculated for King Street West, Caroline Street South and Main Street West, the main road noise sources in the proposed site area. The 2019 AADT road traffic volumes were used for all roadways and were sourced from the City of Hamilton AADT Transportation Data Management System Online Map. See Appendix "A".

The MECP computer program STAMSON version 5.04 was used to carry out prediction calculations (See Appendix "A"). Traffic data is summarized in Table 4. The daytime/nighttime volume ratios relative to all roadways are calculated using a 90/10 split and a 16/8 hr assessment as required by the MECP.

The percentage of annual growth for all roadways were figured at 2% over 14 years. The AADT (Annual Average Daily Traffic) volumes used are reflective of the worst-case scenario. Truck volumes were factored at 2% medium and 2% heavy of the total vehicle volumes for King Street West and Main Street West. Caroline Street South truck volumes were factored at 1% medium and 1% heavy of the total vehicle volumes. Calculated noise levels were modeled at 10 receptor locations representative of the Plain of the Window (POW) of the exterior building facades at specific floors. (See Figure 3 Receptor Locations).

TABLE 4 – Future Road Traffic Volumes

King Street West	AADT 33975 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	29355	612	612
Night	3262	68	68
Caroline Street South	AADT 7076 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	6241	64	64
Night	693	7	7
Main Street West	AADT 41349 Vehicles		
	Cars	Medium Trucks	Heavy Trucks
Day	35725	744	744
Night	3969	83	83

The following Table 5A represents the free field noise levels of future road traffic from King Street West at 10 receptor locations, including the rooftop OLA.

TABLE 5A – Predicted Free Field Future Traffic Noise for King Street West (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 - 3rd Floor North Façade (8m)	68 dBA	61 dBA
R2 - 18th Floor North Façade (54m)	69 dBA	62 dBA
R3 - 3rd Floor East Façade (8m)	60 dBA	54 dBA
R4 – 18th Floor East Façade (54m)	63 dBA	56 dBA
R5 - 3rd Floor West Façade (8m)	60 dBA	54 dBA
R6 - 18th Floor West Façade (54m)	63 dBA	56 dBA
R7 - 3rd Floor South Façade (8m)	56 dBA	49 dBA
R8 - 18th Floor South Façade (54m)	58 dBA	52 dBA
R9 – Rooftop OLA (57m) unmitigated	69 dBA	N/A
R10 – Rooftop OLA (57m) mitigated (0.91m) (3 ft)	52 dBA	N/A

The following Table 5B represents the free field noise levels of future road traffic from Caroline Street South at 10 receptor locations, including the rooftop OLA.

TABLE 5B – Predicted Free Field Future Traffic Noise for Caroline Street South (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 - 3rd Floor North Façade (8m)	54 dBA	48 dBA
R2 - 18th Floor North Façade (54m)	55 dBA	49 dBA
R3 - 3rd Floor East Façade (8m)	57 dBA	51 dBA
R4 – 18th Floor East Façade (54m)	58 dBA	52 dBA
R5 - 3rd Floor West Façade (8m)	38 dBA	32 dBA
R6 - 18th Floor West Façade (54m)	42 dBA	35 dBA
R7 - 3rd Floor South Façade (8m)	51 dBA	44 dBA
R8 - 18th Floor South Façade (54m)	53 dBA	47 dBA
R9 – Rooftop OLA (57m) unmitigated	58 dBA	N/A
R10 – Rooftop OLA (57m) mitigated (0.91m) (3 ft)	41 dBA	N/A

The following Table 5C represents the free field noise levels of future road traffic from Main Street West at 10 receptor locations, including the rooftop OLA.

TABLE 5C – Predicted Free Field Future Traffic Noise for Main Street West (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 - 3rd Floor North Façade (8m)	46 dBA	43 dBA
R2 - 18th Floor North Façade (54m)	54 dBA	48 dBA
R3 - 3rd Floor East Façade (8m)	49 dBA	43 dBA
R4 – 18th Floor East Façade (54m)	54 dBA	48 dBA
R5 - 3rd Floor West Façade (8m)	51 dBA	45 dBA
R6 - 18th Floor West Façade (54m)	57 dBA	50 dBA
R7 - 3rd Floor South Façade (8m)	53 dBA	46 dBA
R8 - 18th Floor South Façade (54m)	58 dBA	52 dBA
R9 – Rooftop OLA (57m) unmitigated	54 dBA	N/A
R10 – Rooftop OLA (57m) mitigated (0.91m) (3 ft)	38 dBA	N/A

The following Table 5D represents the combined noise levels for all roadways at 10 receptor locations, including the rooftop OLA.

TABLE 5C – Predicted Free Field Future Traffic Noise COMBINED (dBA)		
Location	07:00 – 23:00	23:00 – 07:00
R1 - 3rd Floor North Façade (8m)	68 dBA	61 dBA
R2 - 18th Floor North Façade (54m)	69 dBA	63 dBA
R3 - 3rd Floor East Façade (8m)	62 dBA	56 dBA
R4 – 18th Floor East Façade (54m)	65 dBA	58 dBA
R5 - 3rd Floor West Façade (8m)	61 dBA	54 dBA
R6 - 18th Floor West Façade (54m)	64 dBA	57 dBA
R7 - 3rd Floor South Façade (8m)	58 dBA	62 dBA
R8 - 18th Floor South Façade (54m)	62 dBA	55 dBA
R9 – Rooftop OLA (57m) unmitigated	69 dBA	N/A
R10 – Rooftop OLA (57m) mitigated (0.91m) (3 ft)	52 dBA	N/A

3.3 VIBRATION

The City of Hamilton Construction Management Plan 2022 requires pre-condition surveys of area buildings within the area of influence (to be established), noise and vibration protocol, shoring approval and vibration monitoring during shoring and all heavy construction activities. Further information will be provided prior to the issuance of a building permit or as The City of Hamilton staff require the documents for approval.

4.0 RECOMMENDATIONS - NOISE CONTROL

4.1 OUTDOOR LIVING AREAS

Calculated road noise levels for the proposed development exceed the 55 dBA daytime criteria outlined in Table 1.

A rooftop outdoor amenity area is proposed for the northeast portion of the building. Noise impact from King Street West will have an acoustical impact on this amenity space and requires a minimum 0.91m (3 ft) safety railing or equivalent to achieve a noise barrier surface density as noted below. See Figure 4- Noise Barrier Location.

In compliance with MECP guidelines, the noise barrier must have a minimum surface density of 20 kg/m^2 and be designed and constructed with no cracks or gaps. Any gap under the noise barrier that is necessary for drainage purposes must be minimized and must not distract from the acoustical performance. In addition to the recommended physical controls, specifically worded warning clauses are mandatory.

4.2 INDOOR NOISE LEVELS

Calculated nighttime road noise levels at the Plane of Window (POW) exceed the 50 dBA criteria outlined in Table 1 for indoor space for residential units

Specific building components (walls, windows, doors etc.) are required and confirmed for all façades of the 30-storey mixed-use development, using the STC (Sound Transmission Class) method. Building design specifications were not made available and STC value calculations (Sound Transmission Class) method are summarized in Table 6 following.

Whereas the highest traffic noise level is 69 dBA, it is recommended that all exterior windows, for the north, south, east and west facades achieve a STC 34 window configuration as this would be cost effective for the builder and reduces the possibility of error during installation.

TABLE 8 –Window, Door, & Wall Construction Example Requirements

LOCATIONS	STC Acoustically Tested Windows	STC Patio Door	STC Exterior Walls
All Units	Example	Example	Example
Bedroom	34	34	STC-43
Living room	34	34	STC-43

5.0 VENTILATION / WARNING CLAUSES

Ventilation and warning clause requirements are required for this project as noted in Table 7 following.

TABLE 7 - Ventilation and Warning Clause Requirements		
LOCATION	VENTILATION	WARNING CLAUSE
All Units	Central Air Conditioning	Warning Clause "B" & "D"

TYPE B:

"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the buildings units, sound levels due to increasing road traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the Municipality's and the MECP's noise criteria."

TYPE D:

"This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the Municipality's and the MECP's noise criteria."

6.0 HAMILTON LRT SYSTEM

The City of Hamilton is proposing an LRT system that will operate east and west along King Street East. An Addendum to this noise and vibration study was submitted on April 2, 2019, and further information has been received from the City of Hamilton LRT system department and attached and/or addressed in this report. The proposed Hamilton LRT system will have a station at this location and the train speed may be lower than 40km as it will have to slowdown for the stop.

6.1 LRT NOISE CHARACTERISTICS

In a detailed noise & vibration report supplied to us from the City of Hamilton regarding the predicted noise and vibration levels emanating from the proposed LRT, it is estimated that noise levels resulting from a single train (LRT) is equivalent to two medium trucks which can be estimated to be the actual sound levels expected from the LRT. This is a slight overestimation and is considered the wort-case scenario. The Stamson traffic calculations attached in Appendix "A" have included a higher value of trucks to account for the increase of trucks.

"Noise and Vibration Impact Assessment Proposed Light Rail Transit System"
Prepared by J.E Coulter Associates Limited
Dated: August 2, 2011

- **Page 9, Section 4.2.1 Light Rail Vehicle Noise Characteristics**

"…Modelling each LRV consist (train) as two medium trucks slightly overestimates the LRT system noise but can be representative of the actual sound levels that can be expected from this technology."

- **Page 13, Number 6**

"Due to the nature of sound, changes in traffic volumes of +25%/-20% would change the overall sound levels by 1dB only."

The noise study supplied for this development by dBA Acoustical Consultants Inc., had taken into consideration increased traffic noise levels (LRT included) greater than a 10-year growth to account for the proposed LRT till year 2028. We have projected for a higher STC (Sound Transmission Class) value for windows and walls in the range of 2-3 dBA in consideration of the traffic noise increase as a result of the LRT.

Once the building designs have been confirmed, appropriate STC values must be re-calculated and achieved which an Acoustical Certificate must be issued prior to the issuance of a building permit and occupancy permit building permit.

It was confirmed via email by Greg MacDonald, Senior Project Manager, Planning, Light Rail Transit Office for the City of Hamilton that during peak time headway, there would be a train every 6 minutes. This translates to 20 trains hour with 10 of those train trips passing "closer" to the subject lands that the other 10.

6.2 LRT VIBRATION CHARACTERISTICS

The vibration levels generated by the LRT are considered very minimal. As the LRT system is equivalent to two medium trucks, the vibration impact on structures within 10m or less from the tracks with train speeds of approximately 40km/hr will have no vibration impact as it is predicted to be less than 0.10mm/s. at 50km. This would be representative of the worst-case scenario.

"Noise and Vibration Impact Assessment Proposed Light Rail Transit System"
Prepared by J.E Coulter Associates Limited
Dated: August 2, 2011

Table 9, below, summarizes the estimated vibration levels that would be present at various setbacks from the centreline of the nearest track.

Table 9: Expected LRT Vibration Levels on Concrete Track Bed

Distance from Track Centerline (m)	Vibration Levels at Various Speeds (mm/s rms)		
	20 km/h	50 km/h	60 km/h
6	0.07	0.17	0.21
10	0.05	0.11	0.14
15	0.04	0.10	0.12
20	0.03	0.08	0.10

- **Page 19, Section 5.4.1 Perceptible Vibration Levels on Concrete Track**

"…Any residential receptors located 20m or more from the centreline of the nearest track will meet the guideline limit of 0.10mm/s without any additional vibration control measures when the LRT is operation at a speed of 60 km/hr."

It should be noted that human perception to vibration is considered at a level of 1.0mm/s. The vibration levels from the LRT are considered minimal and vibration mitigation measures are not required.

7.0 SUMMARY OF RECOMMENDATIONS

The following noise control measures are required to satisfy the indoor and outdoor noise level criterion:

- Central Air Conditioning as recommended for all residential units throughout the proposed development, noted in Table 7.
- Specific Window, Door, and Wall construction as recommended in Table 6.
- Registered Warning Clause Type "B" & "D" on title, noted in Table 7.
- Minimum STC-43 for all specific buildings as recommended in Table 6.
- A minimum 0.91m (3 ft) noise barrier is required for the rooftop OLA, as noted in Section 4.1.
- It is recommended that a qualified acoustical consultant certify that the required noise control measures have been incorporated into the builder's plans prior to issuance of a building permit.
- It is recommended that a qualified acoustical consultant certify that the required control measures have been properly installed prior to an occupancy permit.

8.0 CONCLUSIONS

dBA Acoustical Consulting Inc. has provided a noise impact study on behalf of API Development Consultants, for the proposed 18-storey mixed-use building, located at the southwest corner of King Street West and Caroline Street South, Hamilton, ON. The study determined the noise impact from King Street West, Caroline Street South, and Main Street West vehicular traffic, Hamilton LRT, and area stationary noise sources, that impacted the proposed residential building as required for site plan approval for the City of Hamilton.

This study detailed the noise impact relative to the site plan and recommend noise control measures necessary to meet Ministry of Environment, Conversation, and Parks, (MECP) Publication NPC-300 entitled "Stationary & Transportation Sources-Approval & Planning guidelines while satisfying the planning requirements of the City of Hamilton.

FIGURE 1
SITE LOCATION

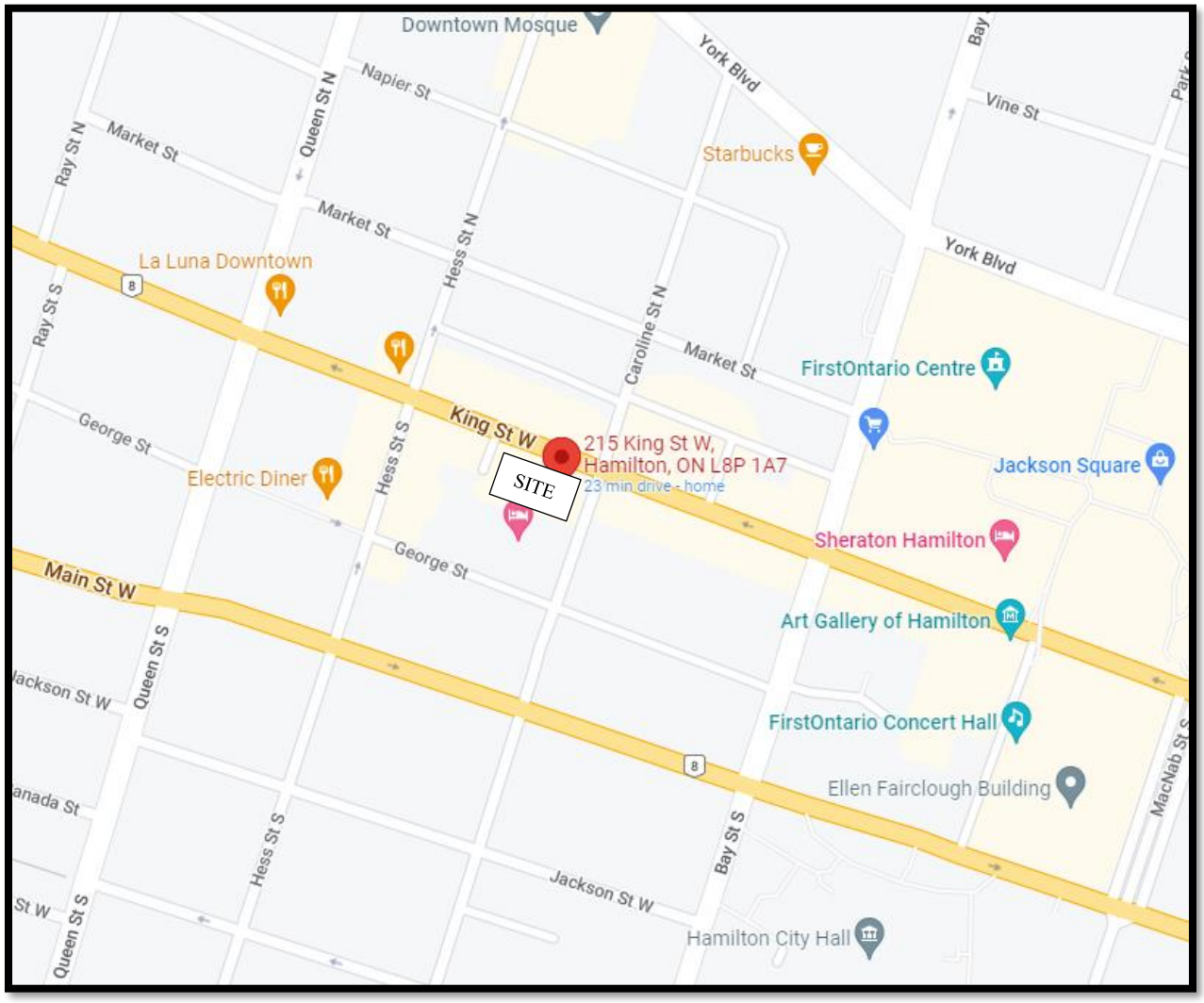


FIGURE 2
SITE PLAN

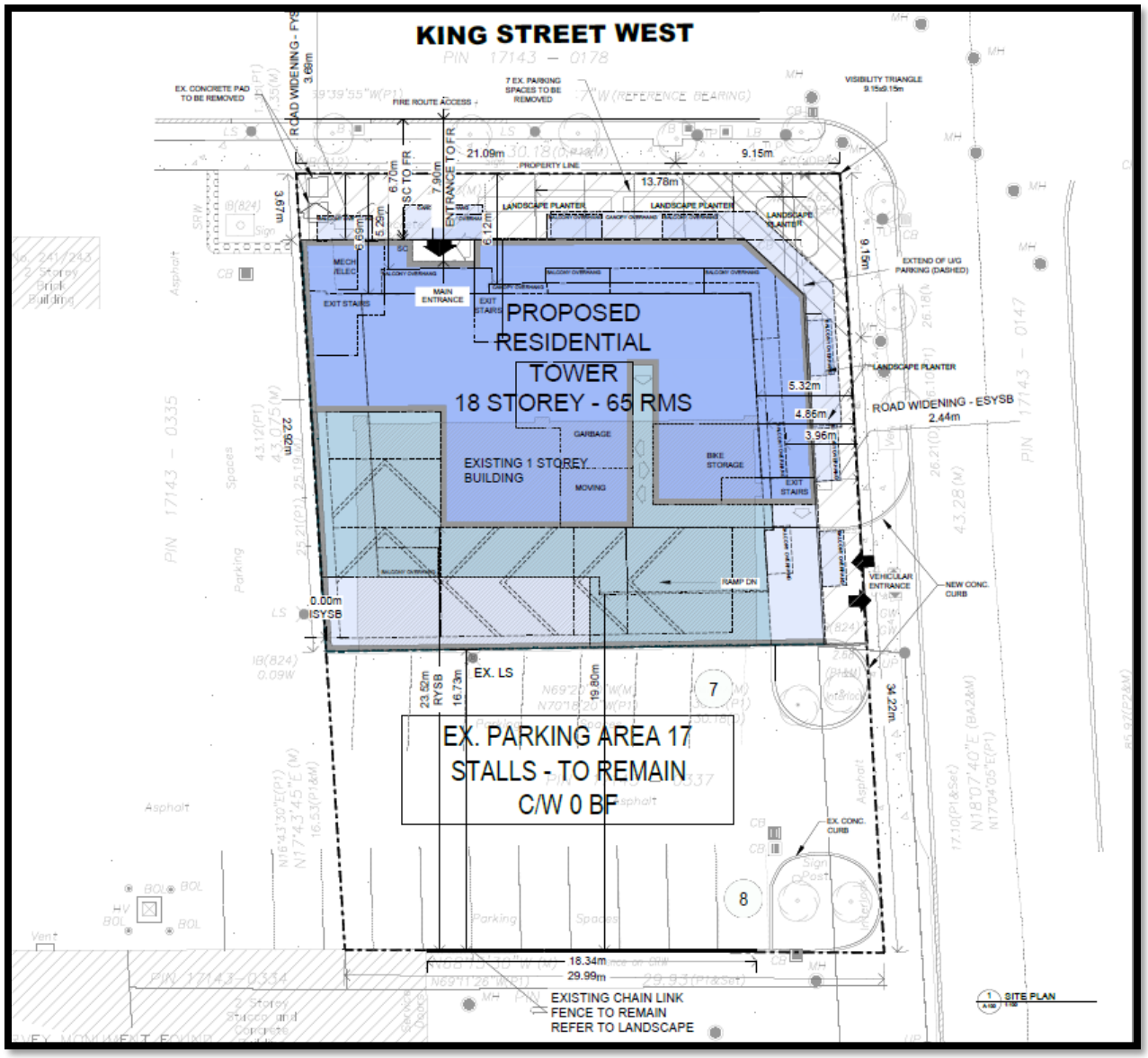
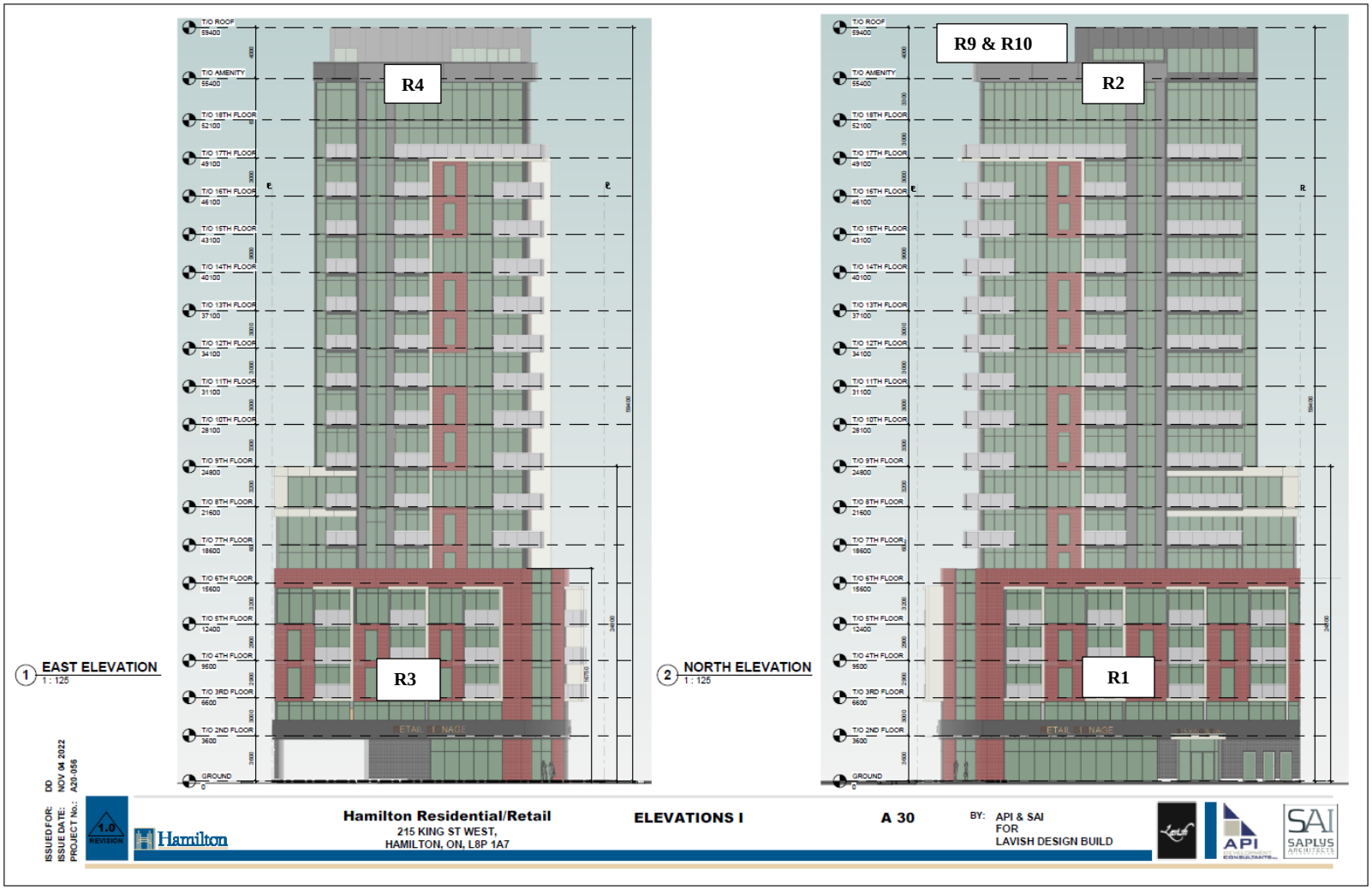
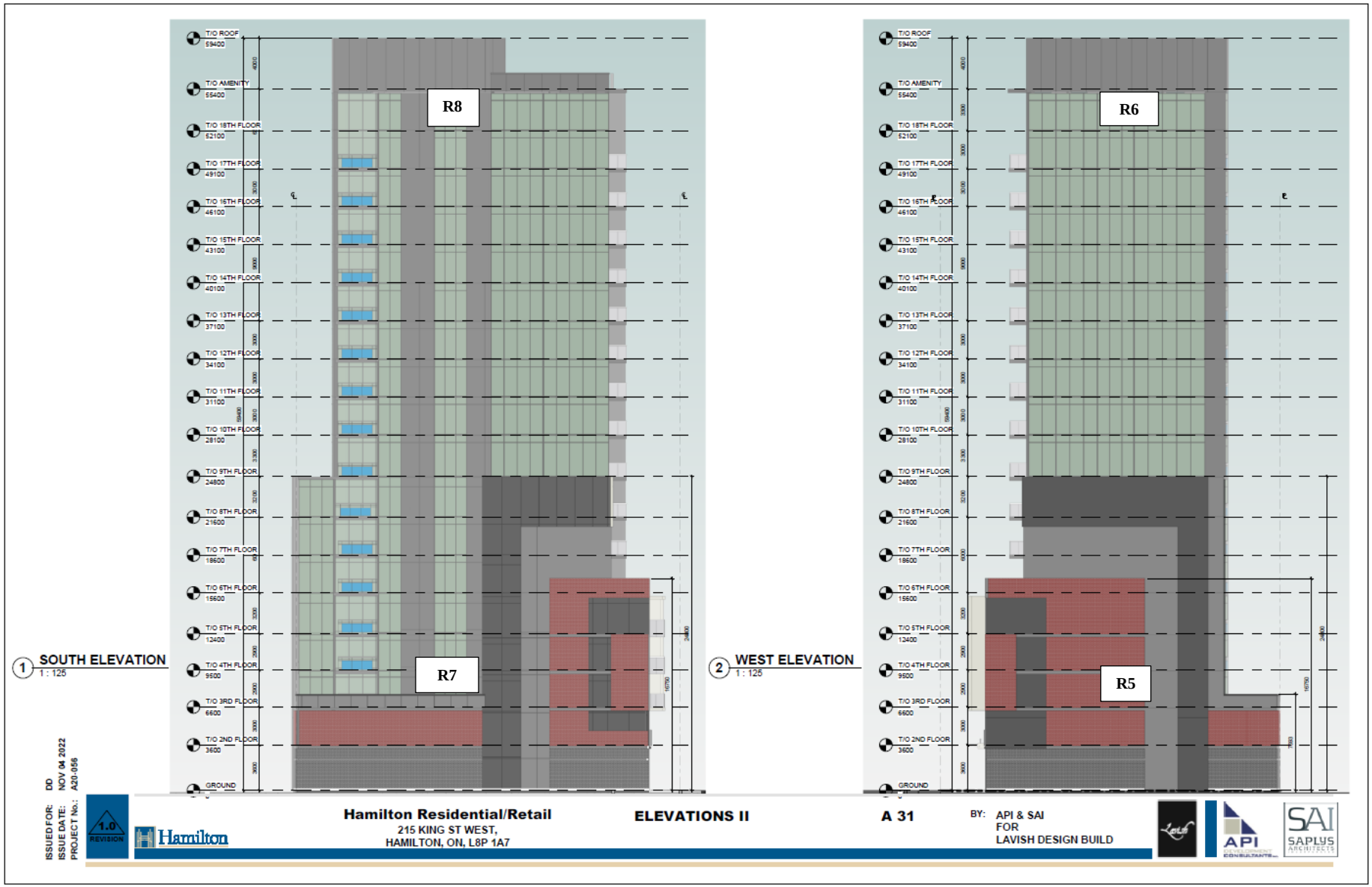


FIGURE 3
RECEPTOR LOCATIONS




R8
R7
R6
R5
T/O ROOF 59400
T/O AMENITY 55400
T/O 18TH FLOOR 52100
T/O 17TH FLOOR 49100
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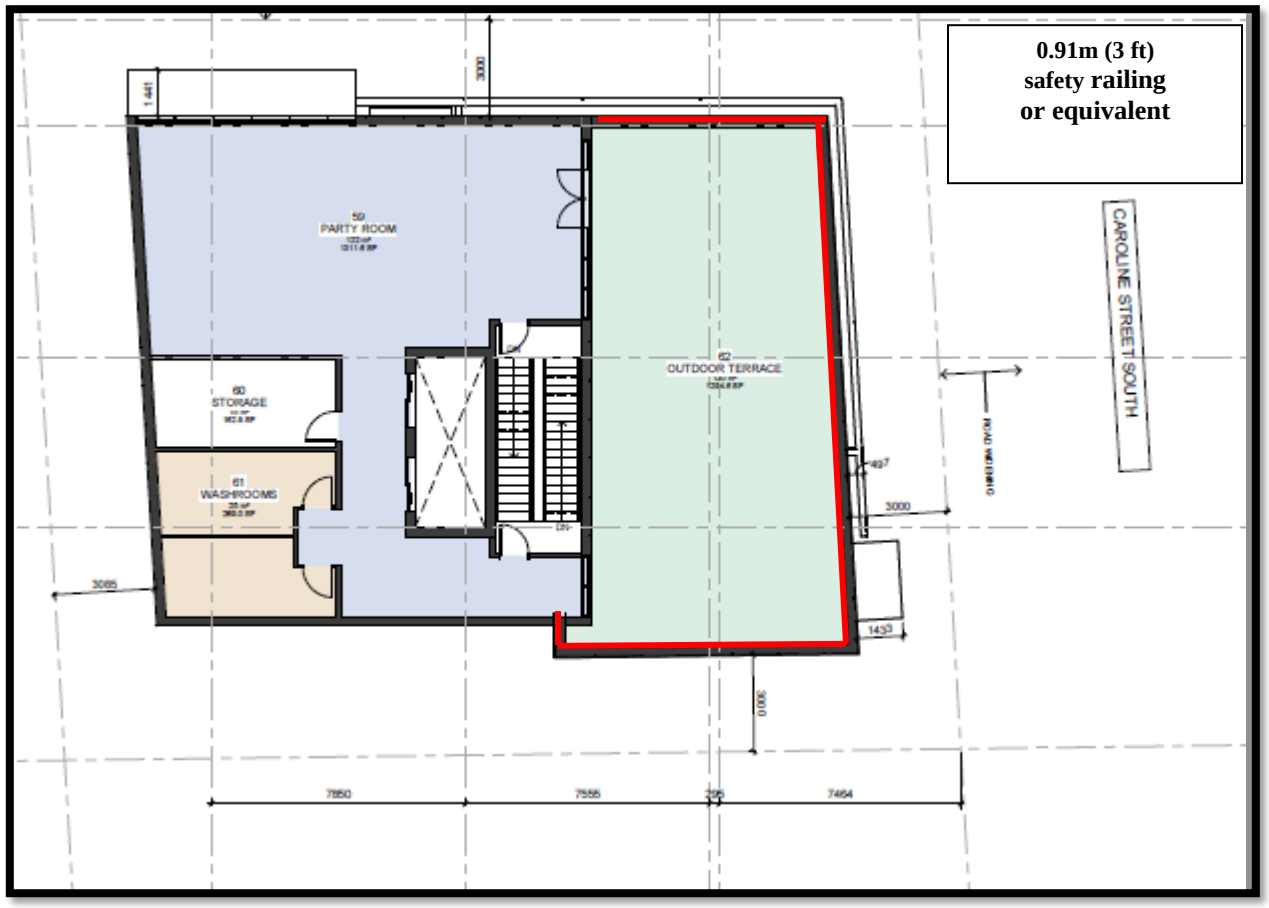
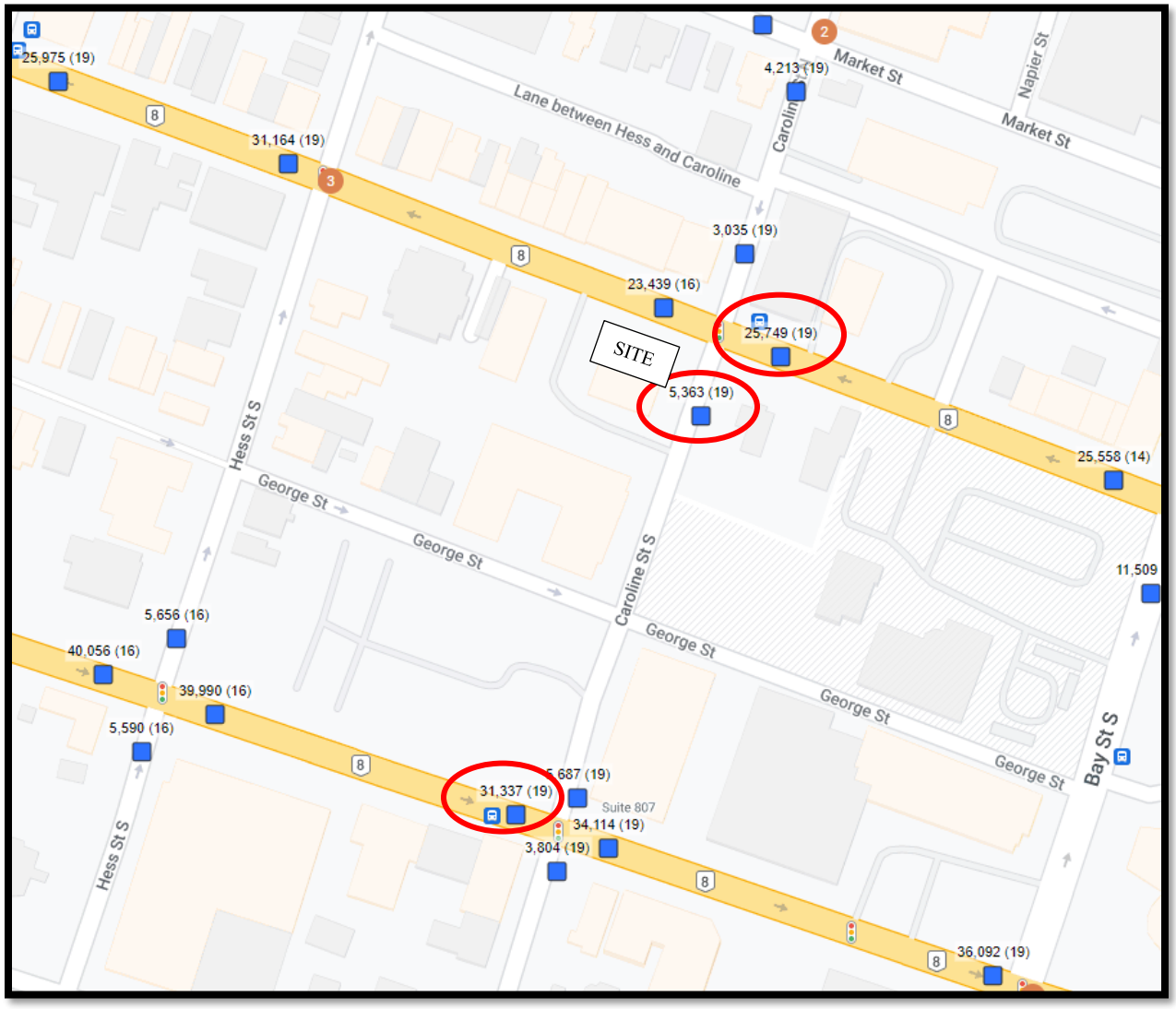
T/O 15TH FLOOR 43100
T/O 14TH FLOOR 40100
T/O 13TH FLOOR 37100
T/O 12TH FLOOR 34100
T/O 11TH FLOOR 31100
T/O 10TH FLOOR 28100
T/O 9TH FLOOR 24800
T/O 8TH FLOOR 21600
T/O 7TH FLOOR 18600
T/O 6TH FLOOR 15600
T/O 5TH FLOOR 12400
T/O 4TH FLOOR 9500
T/O 3RD FLOOR 6600
T/O 2ND FLOOR 3600
GROUND
1 SOUTH ELEVATION
1 : 125
2 WEST ELEVATION
1 : 125
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
ELEVATIONS II
A 31
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

FIGURE 4
NOISE BARRIER LOCATION



APPENDIX "A"

2019 City of Hamilton Traffic Data
King Street West, Caroline Street South & Main Street West



STAMSON CALCULATIONS

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:15:51
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: R1Car.te             Time Period: Day/Night 16/8 hours
Description: R1 3rd Floor North Facade Free Field
                      TOTAL Leq FROM ALL SOURCES                    (DAY): 68.03
                                                                    (NIGHT): 61.49

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    67.78 !    67.78
 2.Caroline St      !     1.00 !    54.22 !    54.22
 3.Main St W        !     1.19 !    49.26 !    49.26
--------------------+---------+---------+---------
                      Total                 68.03 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    61.25 !    61.25
 2.Caroline St      !     1.00 !    47.65 !    47.65
 3.Main St W        !     1.19 !    42.74 !    42.74
--------------------+---------+---------+---------
                      Total                 61.49 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:20:28
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r2car.te             Time Period: Day/Night 16/8 hours
Description: R2 18th Floor North Facade Free Field
                      TOTAL Leq FROM ALL SOURCES                    (DAY): 69.22
                                                                    (NIGHT): 62.69

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
---------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
---------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
------------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth         :   2.00
    Number of Years of Growth           :  14.00
    Medium Truck % of Total Volume      :   2.00
    Heavy Truck  % of Total Volume      :   2.00
    Day (16 hrs) % of Total Volume      :  90.00

Data for Segment # 3: Main St W (day/night)
------------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    68.90 !    68.90
 2.Caroline St      !     1.00 !    55.36 !    55.36
 3.Main St W        !     1.19 !    54.06 !    54.06
--------------------+---------+---------+---------
                      Total                 69.22 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    62.37 !    62.37
 2.Caroline St      !     1.00 !    48.79 !    48.79
 3.Main St W        !     1.19 !    47.54 !    47.54
--------------------+---------+---------+---------
                      Total                 62.69 dBA
```

```
STAMSON 5.0        SUMMARY REPORT        Date: 05-01-2023 16:24:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r3car.te             Time Period: Day/Night 16/8 hours
Description: R3 3rd Floor East Facade Free Field
                     TOTAL Leq FROM ALL SOURCES                    (DAY): 62.28
                                                                   (NIGHT): 55.74

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    60.33 !    60.33
 2.Caroline St      !     1.00 !    57.23 !    57.23
 3.Main St W        !     1.19 !    49.26 !    49.26
--------------------+---------+---------+---------
                      Total                 62.28 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    53.80 !    53.80
 2.Caroline St      !     1.00 !    50.66 !    50.66
 3.Main St W        !     1.19 !    42.74 !    42.74
--------------------+---------+---------+---------
                      Total                 55.74 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:28:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r4car.te             Time Period: Day/Night 16/8 hours
Description: R4 18th Floor East Facade Free Field
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 64.60
                                                                (NIGHT): 58.06
Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    62.88 !    62.88
 2.Caroline St      !     1.00 !    58.37 !    58.37
 3.Main St W        !     1.19 !    54.06 !    54.06
--------------------+---------+---------+---------
                      Total                 64.60 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    56.35 !    56.35
 2.Caroline St      !     1.00 !    51.80 !    51.80
 3.Main St W        !     1.19 !    47.54 !    47.54
--------------------+---------+---------+---------
                      Total                 58.06 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:33:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r5car.te             Time Period: Day/Night 16/8 hours
Description: R5 3rd Floor West Facade Free Field
                      TOTAL Leq FROM ALL SOURCES                    (DAY): 60.84
                                                                    (NIGHT): 54.31

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   20.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  75.00 / 75.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth         :   2.00
    Number of Years of Growth           :  14.00
    Medium Truck % of Total Volume      :   2.00
    Heavy Truck  % of Total Volume      :   2.00
    Day (16 hrs) % of Total Volume      :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 145.00 / 145.00 m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    60.33 !    60.33
 2.Caroline St      !     1.00 !    38.44 !    38.44
 3.Main St W        !     1.19 !    51.09 !    51.09
--------------------+---------+---------+---------
                      Total                 60.84 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    53.80 !    53.80
 2.Caroline St      !     1.00 !    31.87 !    31.87
 3.Main St W        !     1.19 !    44.57 !    44.57
--------------------+---------+---------+---------
                      Total                 54.31 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:36:22
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r6car.te             Time Period: Day/Night 16/8 hours
Description: R6 18th Floor West Facade Free Field
                      TOTAL Leq FROM ALL SOURCES                    (DAY): 63.88
                                                                    (NIGHT): 57.35

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  30.00 / 30.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   20.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  75.00 / 75.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 145.00 / 145.00 m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    62.88 !    62.88
 2.Caroline St      !     1.00 !    41.84 !    41.84
 3.Main St W        !     1.19 !    56.89 !    56.89
--------------------+---------+---------+---------
                      Total                 63.88 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    56.35 !    56.35
 2.Caroline St      !     1.00 !    35.27 !    35.27
 3.Main St W        !     1.19 !    50.37 !    50.37
--------------------+---------+---------+---------
                      Total                 57.35 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:42:36
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r7car.te             Time Period: Day/Night 16/8 hours
Description: R7 3rd Floor south Facade Free Field
                      TOTAL Leq FROM ALL SOURCES                    (DAY): 58.29
                                                                    (NIGHT): 51.76

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  45.00 / 45.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  25.00 / 25.00  m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth         :   2.00
    Number of Years of Growth           :  14.00
    Medium Truck % of Total Volume      :   2.00
    Heavy Truck  % of Total Volume      :   2.00
    Day (16 hrs) % of Total Volume      :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           : -25.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :   8.00 / 8.00   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    55.63 !    55.63
 2.Caroline St      !     1.00 !    50.94 !    50.94
 3.Main St W        !     1.19 !    52.68 !    52.68
--------------------+---------+---------+---------
                      Total                 58.29 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    49.10 !    49.10
 2.Caroline St      !     1.00 !    44.37 !    44.37
 3.Main St W        !     1.19 !    46.16 !    46.16
--------------------+---------+---------+---------
                      Total                 51.76 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:44:13
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r8car.te             Time Period: Day/Night 16/8 hours
Description: R8 18th Floor south Facade Free Field
                      TOTAL Leq FROM ALL SOURCES                    (DAY): 61.77
                                                                    (NIGHT): 55.24

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  45.00 / 45.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           :  -0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  25.00 / 25.00  m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth         :   2.00
    Number of Years of Growth           :  14.00
    Medium Truck % of Total Volume      :   2.00
    Heavy Truck  % of Total Volume      :   2.00
    Day (16 hrs) % of Total Volume      :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           : -25.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :  54.00 / 54.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    58.11 !    58.11
 2.Caroline St      !     1.00 !    53.14 !    53.14
 3.Main St W        !     1.19 !    58.14 !    58.14
--------------------+---------+---------+---------
                      Total                 61.77 dBA

Result summary (night)
----------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    51.58 !    51.58
 2.Caroline St      !     1.00 !    46.57 !    46.57
 3.Main St W        !     1.19 !    51.62 !    51.62
--------------------+---------+---------+---------
                      Total                 55.24 dBA
```

```
STAMSON 5.04        SUMMARY REPORT        Date: 05-01-2023 16:52:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r9car.te             Time Period: Day/Night 16/8 hours
Description: R9 Rooftop Amenity Area North Facade Free Field
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 69.40

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  57.00 / 57.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Caroline St (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  57.00 / 57.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

```
Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Main St W (day/night)
-------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :  57.00 / 57.00  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Result summary (day)
--------------------
                     !  source  !   Road   !  Total
                     !  height  !   Leq    !   Leq
                     !   (m)    !  (dBA)   !  (dBA)
---------------------+---------+---------+---------
 1.King St W         !     1.19 !    68.90 !    68.90
 2.Caroline St       !     1.00 !    58.37 !    58.37
 3.Main St W         !     1.19 !    54.06 !    54.06
---------------------+---------+---------+---------
                       Total                 69.40 dBA
```

```
STAMSON 5.04          SUMMARY REPORT          Date: 05-01-2023 16:55:42
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: r10Car.te             Time Period: Day/Night 16/8 hours
Description: R10 Rooftop Amenity Area North Facade 0.91m
                     TOTAL Leq FROM ALL SOURCES                  (DAY): 52.37

Road data, segment # 1: King St W (day/night)
----------------------------------------------
Car traffic volume  : 29355/3262  veh/TimePeriod  *
Medium truck volume :   612/68    veh/TimePeriod  *
Heavy truck volume  :   612/68    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  25749
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: King St W (day/night)
--------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  57.00 / 57.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.91 m
Barrier receiver distance :   3.00 / 10.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  57.00 m
Reference angle           :   0.00

Road data, segment # 2: Caroline St (day/night)
-----------------------------------------------
Car traffic volume  :  6241/693   veh/TimePeriod  *
Medium truck volume :    64/7     veh/TimePeriod  *
Heavy truck volume  :    64/7     veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   5363
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.00
    Heavy Truck  % of Total Volume     :   1.00
    Day (16 hrs) % of Total Volume     :  90.00
```

```
Data for Segment # 2: Caroline St (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  15.00 / 15.00  m
Receiver height           :  57.00 / 57.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   0.91 m
Barrier receiver distance :   3.00 / 10.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  57.00 m
Reference angle           :   0.00

Road data, segment # 3: Main St W (day/night)
-----------------------------------------------
Car traffic volume  : 35725/3969  veh/TimePeriod  *
Medium truck volume :   744/83    veh/TimePeriod  *
Heavy truck volume  :   744/83    veh/TimePeriod  *
Posted speed limit  :    50 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  31337
    Percentage of Annual Growth        :   2.00
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   2.00
    Heavy Truck  % of Total Volume     :   2.00
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 3: Main St W (day/night)
-----------------------------------------------
Angle1   Angle2           :  -0.00 deg   45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 139.00 / 139.00 m
Receiver height           :  57.00 / 57.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            :  -0.00 deg   Angle2 : 45.00 deg
Barrier height            :   0.91 m
Barrier receiver distance :   3.00 / 3.00   m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :  57.00 m
Reference angle           :   0.00

Result summary (day)
--------------------
                    !  source  !   Road   !  Total
                    !  height  !   Leq    !   Leq
                    !   (m)    !  (dBA)   !  (dBA)
--------------------+---------+---------+---------
 1.King St W        !     1.19 !    51.82 !    51.82
 2.Caroline St      !     1.00 !    41.29 !    41.29
 3.Main St W        !     1.19 !    38.45 !    38.45
--------------------+---------+---------+---------
                      Total                 52.37 dBA
```

HAMILTON LRT REPORT

Given the noise limits for the light rail vehicle and the traffic volumes (with and without the project) the noise impact of the LRV component of the project can be determined.

Sound levels are calculated using the Ministry of the Environment's *ORNAMENT* prediction procedure. The computer program used for this analysis is the MOE's *STAMSON 5.04* computer program, which incorporates both *ORNAMENT* (road) and STEAM (rail) prediction methods. Although on rail, the LRVs are treated as roadway sources and are evaluated based on the *ORNAMENT* procedure as medium trucks.

In order to confirm the modelled sound levels throughout the corridor, short term sound level measurements were taken during daytime hours at various locations. The details regarding the location and sound levels measured at these locations can be found in Appendix E.

Generally, because of the old sound data used in the models, areas with relatively higher truck traffic show higher modelled sound levels than measured sound levels. Because of the relatively low heavy and medium truck traffic along the proposed LRT route, the measured sound levels tended to be within 1dB of the modelled sound levels in most cases. In areas with densely packed buildings on either side of a road, the measured sound levels were actually about 2dB higher than the modelled sound levels. This is a result of the reflection of roadway noise off adjacent buildings, which is not incorporated into the model.

All absolute sound levels reported within this report should take into consideration the difference between modelled sound levels and measured sound levels. Measured sound levels are likely to be lower than modelled sound levels in areas with higher truck percentages, which likely occurs along streets parallel to the LRT route.

4.2.1 Light Rail Vehicle Noise Characteristics

Modern light rail vehicles come in a few different forms. They are often divided into modules, such as a passenger module or a motor module (also referred to as a passenger bogie or motor bogie). Commonly, a new LRV vehicle will have two motor bogies and maybe a passenger bogie in the middle, resulting in a vehicle length of 30-40m. These are also different from common streetcars in that they have wheel covers and are more modern in design, resulting in modestly lower sound levels. Newer, light rail wheels also have constrained damping, which, coupled with larger turning radii, greatly reduces wheel squeal noise on corners.

As the LRVs have not been selected as yet, specific noise data are unavailable. The noise impact assessments completed for some of the Toronto Transit Commission's Transit City LRT routes indicate sound levels of approximately 82dB at a distance of 7.5m for a comparable vehicle travelling at 40km/h on concrete. These are specifications only and not actual sound levels. Recently measured data from the Jerusalem LRT indicate maximum sound levels of *75dBA at 7.5m* for a 35m long two-motor bogie vehicle travelling at 40km/h. For the purposes of this assessment, the focus is on the sound level of an LRV in operation. According to the *ORNAMENT* procedure, a medium truck produces *71dB at 15m* while travelling at 40km/h. Thus, modelling each LRV consist (train) as two medium trucks slightly overestimates the LRT system noise, but can be representative of the actual sound levels that can be expected from this technology.

2.3 Vibration Impact Criteria

The vibration impact criteria attempt to address two potential impacts from vibration generated by the LRT.

- First, the criteria consider perceptible (ground-borne) vibration levels. This addresses vibration that can be felt by residents in a building.
- Secondly, the criteria document also mentions the sound from vibration (vibration-induced sound) but does not set a limit.

The limit for perceptible vibration levels has been set to 0.1mm/s rms (root-mean-square) velocity. If absolute vibration levels are expected to exceed this limit, mitigation methods need to be determined during the detailed design phase to meet it to the extent technologically, economically and administratively feasible.

There are no specific criteria in Ontario that set limits for the sound resulting from vibration (vibration-induced sound). The relatively lower limit of 0.1mm/s instead of 0.14mm/s (suitable for hospital vibration levels) attempts to reduce this issue. The possibility for a noise impact as a result of vibration still exists. It is dependent on the frequency spectrum of the vibration as well as the levels. Based on the United States' Federal Transit Administration guidelines (2006), a guideline level of 35dBA is used in this report for residential rooms and other rooms (e.g. hospitals) where people generally sleep, for cases where the ground-borne, vibration-generated noise dominates the impression of the passby.

The vibration-induced noise criterion level of 35dBA should be taken into context along with the air-borne noise. New LRT vehicles typically exhibit maximum sound levels ranging from 78-80dBA at 7.5m while traveling at 40km/h, similar to a medium-sized truck. For rooms with exposure to the LRT and other traffic, outdoor sound levels in this range would indicate indoor sound levels of 48-50dBA, assuming a general 30dB noise reduction from closed windows. In this case, the contribution from vibration-induced noise would be negligible and often indistinguishable compared to the air-borne noise coming through the closed window. Thus, the criterion level for vibration induced noise is mainly applicable to those rooms with little or no window exposure to the LRT. Examples of these would be flanking apartments/houses with little or no window exposure, inset bedrooms separated from the LRT exposure by another room, or in basement apartments with small windows.

Vibration levels are evaluated at the nearest point of a residential or sensitive-use building. The review of vibration-induced noise potential involves identifying the locations where the rail system passes close to buildings, or where there is special track work prone to creating vibration (switches). Next is the identification of the uses in the buildings and the proximity of sensitive rooms to the source of vibration. Then, the vibration levels must be estimated and, where impacts are anticipated, a level of vibration control specified.

J. E. COULTER ASSOCIATES LIMITED 13

The following assumptions were used in modelling the traffic data:

1. The B-Line LRT route is expected to displace traffic, resulting in an increase in traffic on other roads. The effect of the increase in traffic on parallel roads is reviewed in Section 4.2.3.
2. With the exception of the LRT volumes, daily traffic has been divided into daytime and nighttime volumes, using a typical 90% daytime/10% nighttime split.
3. Nighttime LRT operations are expected to stop between 0130 and 0500 hours for maintenance.
4. The speed limit for regular traffic is assumed to be 60km/h on Main Street, west of Highway 403, 60km/h on Queenston Road, between Reid Ave and Potruff Road, and 50km/h everywhere else
5. The operating speed of the LRT will be the same as regular traffic and 50km/h in the downtown section with no regular traffic.
6. Due to the nature of sound, changes in traffic volumes of +25%/-20% would change the overall sound levels by 1dB only.

4.2.3 Assessment Analysis and Results

Table 5 summarizes the "No Project" and "With Project" sound levels as well as the expected daytime and nighttime impacts.


HAMILTON
LRT LIGHT RAIL TRANSIT
N
403
QEW
LINC
RHVP
McMaster
Operations, Maintenance & Storage Facility (OMSF)
Longwood
Dundurn
Queen
James
Mary
Hamilton GO Centre
Wellington
Wentworth
Sherman
Scott Park
Gage Park
Ottawa
Kenilworth
Queenston
Parkdale
Nash
Eastgate
Hamilton LRT Project
B-LINE LRT - MCMASTER TO EASTGATE
OMSF SITE RUN-IN TRACK
FRID STREET EXTENSION
HIGH-ORDER PEDESTRIAN CONNECTION
METROLINX
Hamilton

CITY OF HAMILTON
LRT EMAIL

Hi Frank,

LRT train speed there would still be 40 km/hour. Thanks!

Greg

Greg Macdonald, MCIP, RPP
Senior Project Manager, Planning
Light Rail Transit Office | City of Hamilton
T: 905.546.2424 x. 6223

From: Macdonald, Greg
Sent: July-23-19 8:47 AM
To: 'frank@dbaservices.ca'
Subject: RE: LRT noise study

OK, will look it up. Thanks!

Greg

From: frank@dbaservices.ca [mailto:frank@dbaservices.ca]
Sent: July-22-19 4:45 PM
To: Macdonald, Greg
Subject: RE: LRT noise study

Greg…… I just need to know the LRT train speed for 354 King Street East near Queen Street station. Thanks. Its located in a school zone.

Frank Westaway, Owner

PLEASE NOTE NEW MAILING ADDRESS

dBA Acoustical Consultants Inc.
A Division of dBA Services

P.O. Box 32059
1447 Upper Ottawa St
Hamilton ON
L8W 3K0
Office: 905-383-9491

PROJECT STATISTICS

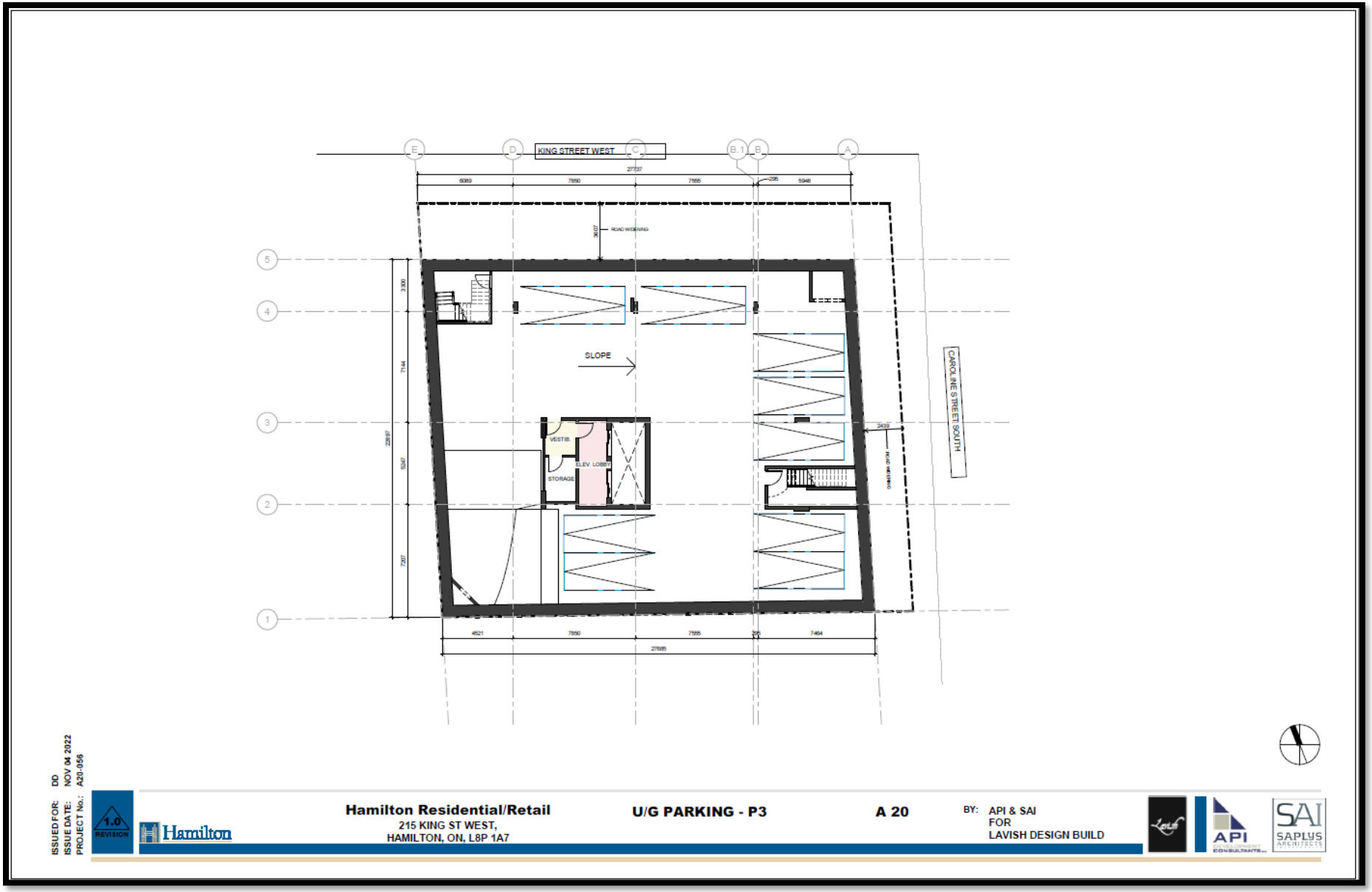
HAMILTON MIXED-USE / 215 KING ST W & CAROLINE ST S

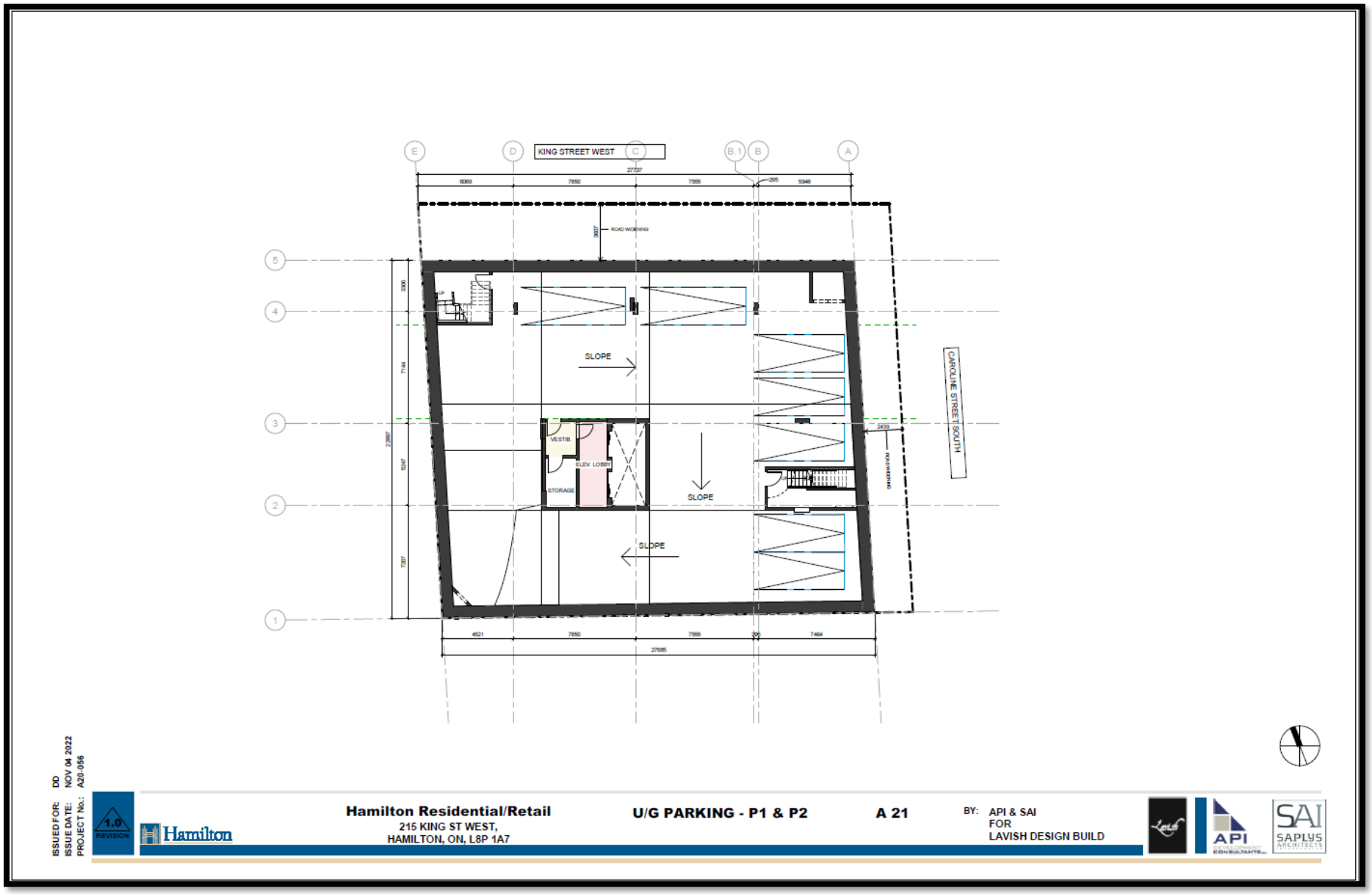
BUILDING HEIGHT			GROSS FLOOR AREA				RES. UNITS COUNT				
Storey	FLOOR HEIGHT (m)	T.O.SLAB (m)	SM	SF		PARKING SPACE	1bed	1bed+	2bed	3bed	TOTAL /FLOOR
P3	-2.70	-8.60	618.4	6,657	P3	9					
P2	-2.70	-5.90	618.4	6,657	P2	7					
P1	-3.20	-3.20	618.4	6,657	P1	7					
1	3.60	0.00	613.4	6,603	1		0	0	0	0	0
2	3.00	3.60	614.6	6,616	2		0	0	0	0	0
3	2.90	6.60	550.5	5,925	3		2	1	4	0	7
4	2.90	9.50	550.5	5,925	4		2	1	4	0	7
5	3.20	12.40	550.5	5,925	5		2	1	4	0	7
6	3.00	15.60	412.9	4,444	6		2	1	3	0	6
7	3.00	18.60	412.9	4,444	7		2	1	3	0	6
8	3.20	21.60	412.9	4,444	8		2	1	3	0	6
9	3.30	24.80	334.8	3,604	9		3	0	2	0	5
10	3.00	28.10	334.8	3,604	10		3	0	2	0	5
11	3.00	31.10	334.8	3,604	11		3	0	2	0	5
12	3.00	34.10	334.8	3,604	12		3	0	2	0	5
13	3.00	37.10	334.8	3,604	13		3	0	2	0	5
14	3.00	40.10	334.8	3,604	14		3	0	2	0	5
15	3.00	43.10	334.8	3,604	15		3	0	2	0	5
16	3.00	46.10	334.8	3,604	16		3	0	2	0	5
17	3.00	49.10	334.8	3,604	17		1	0	3	2	6
18	3.30	52.10	334.8	3,604	18						
PENTHOUSE	4.00	55.40	207.5	2,233	PENTHOUSE						
Building Height		59.40	TOTAL GFA	7466.2	80,366	TOTAL UNITS	37	6	40	2	85

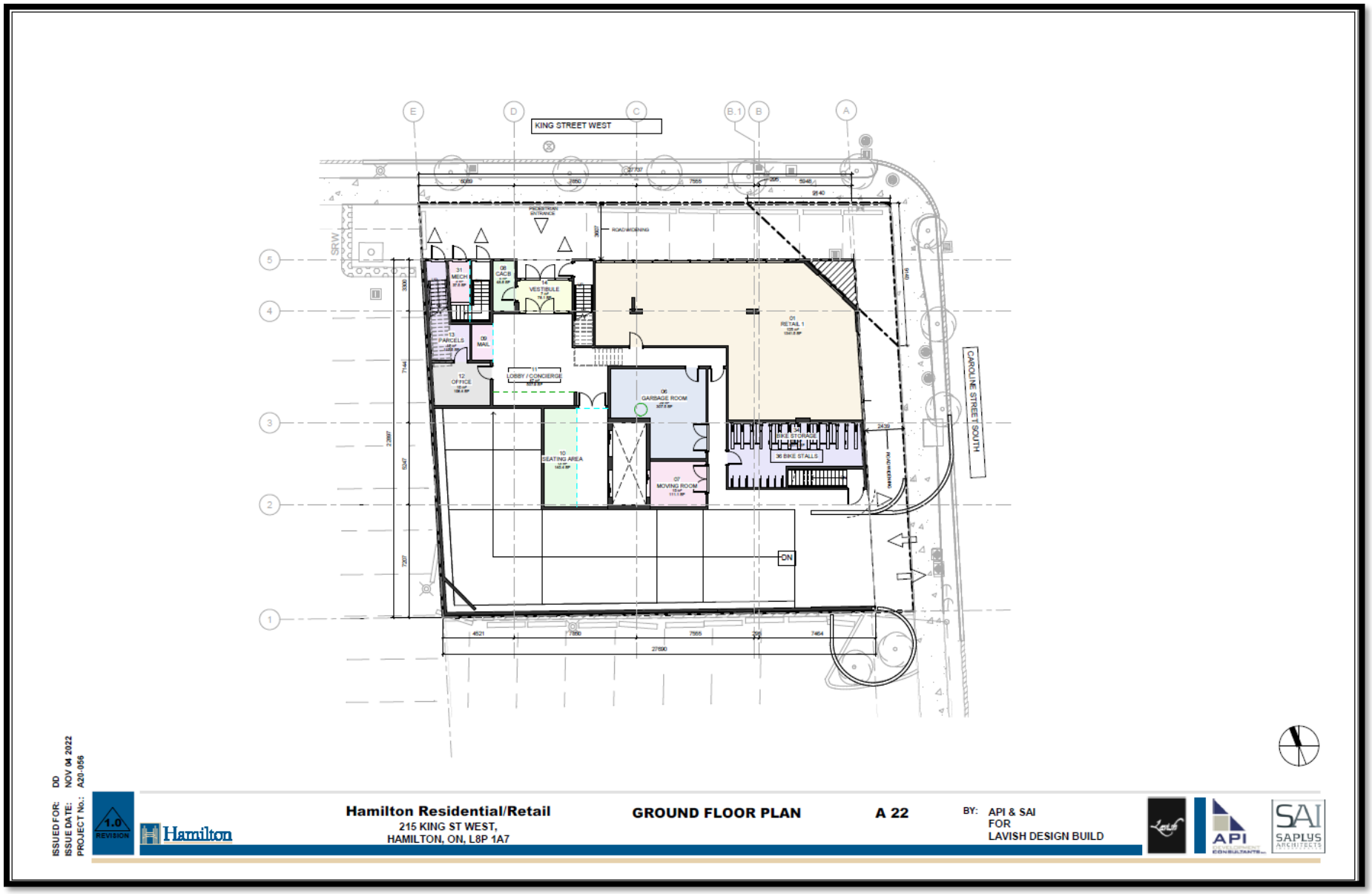
PARKING COUNT						
	0 TO 12	12	0		PER UNIT	TOTAL
	13 TO 50	38	0.5		PER UNIT	19
	51 TO 85	34	0.7		PER UNIT	24
PARKING REQUIRED						43
PARKING PROVIDED						23
PARKING SHORTAGE						-20

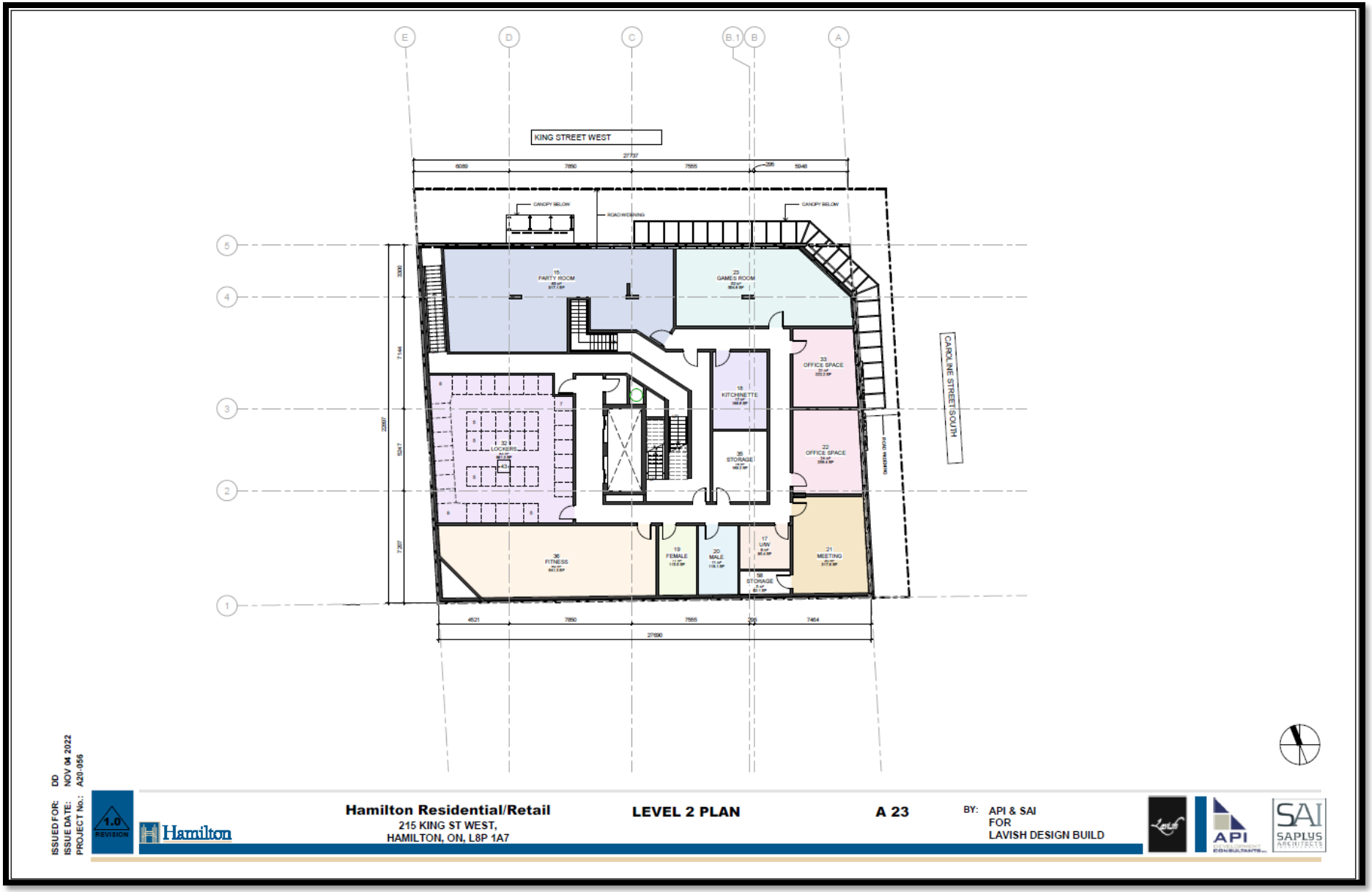
RETAIL	SF		SM
RU 1	1341.5		124.6
TOTAL RETAIL	1341.5		124.6

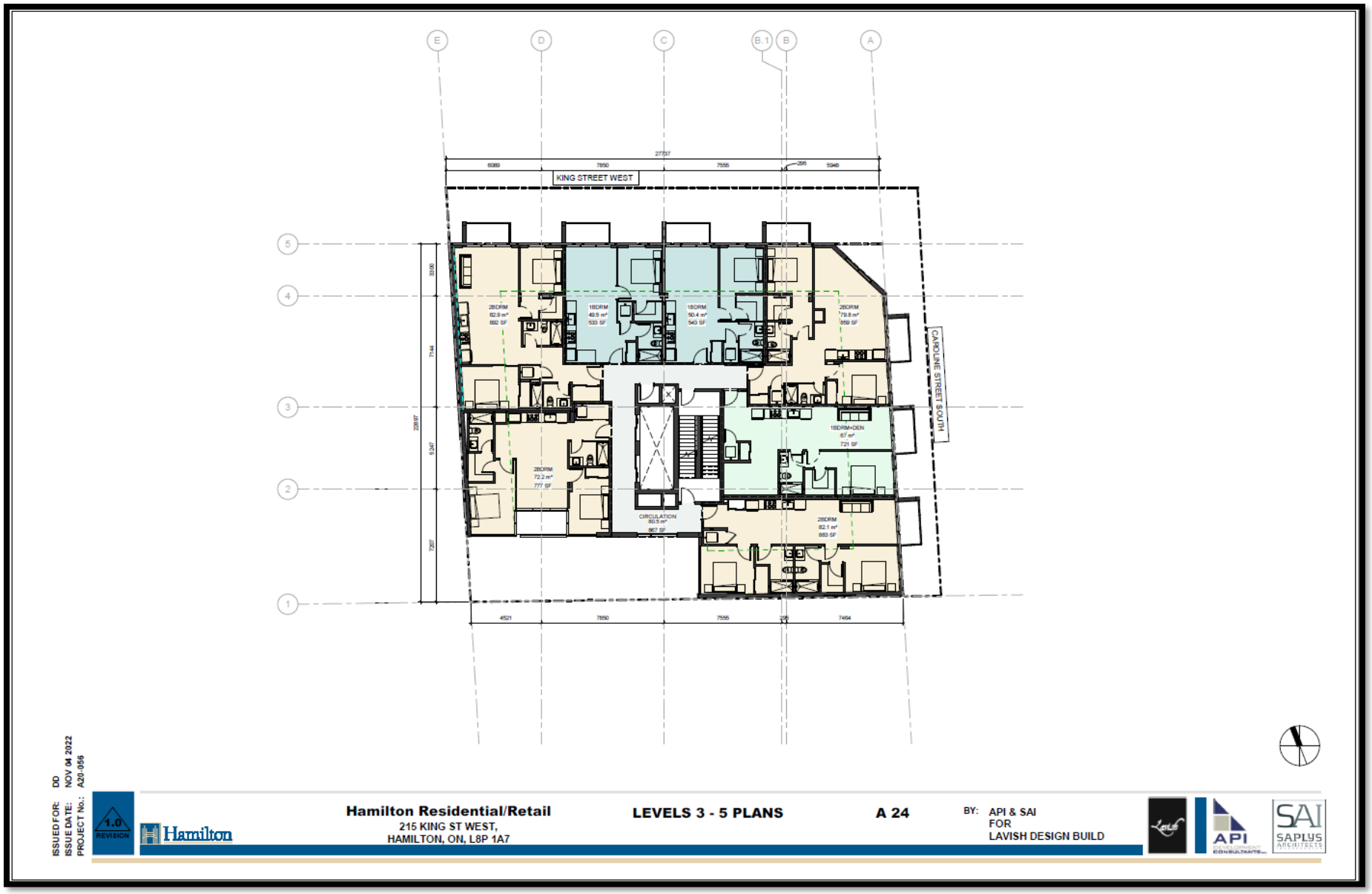
FLOOR PLANS

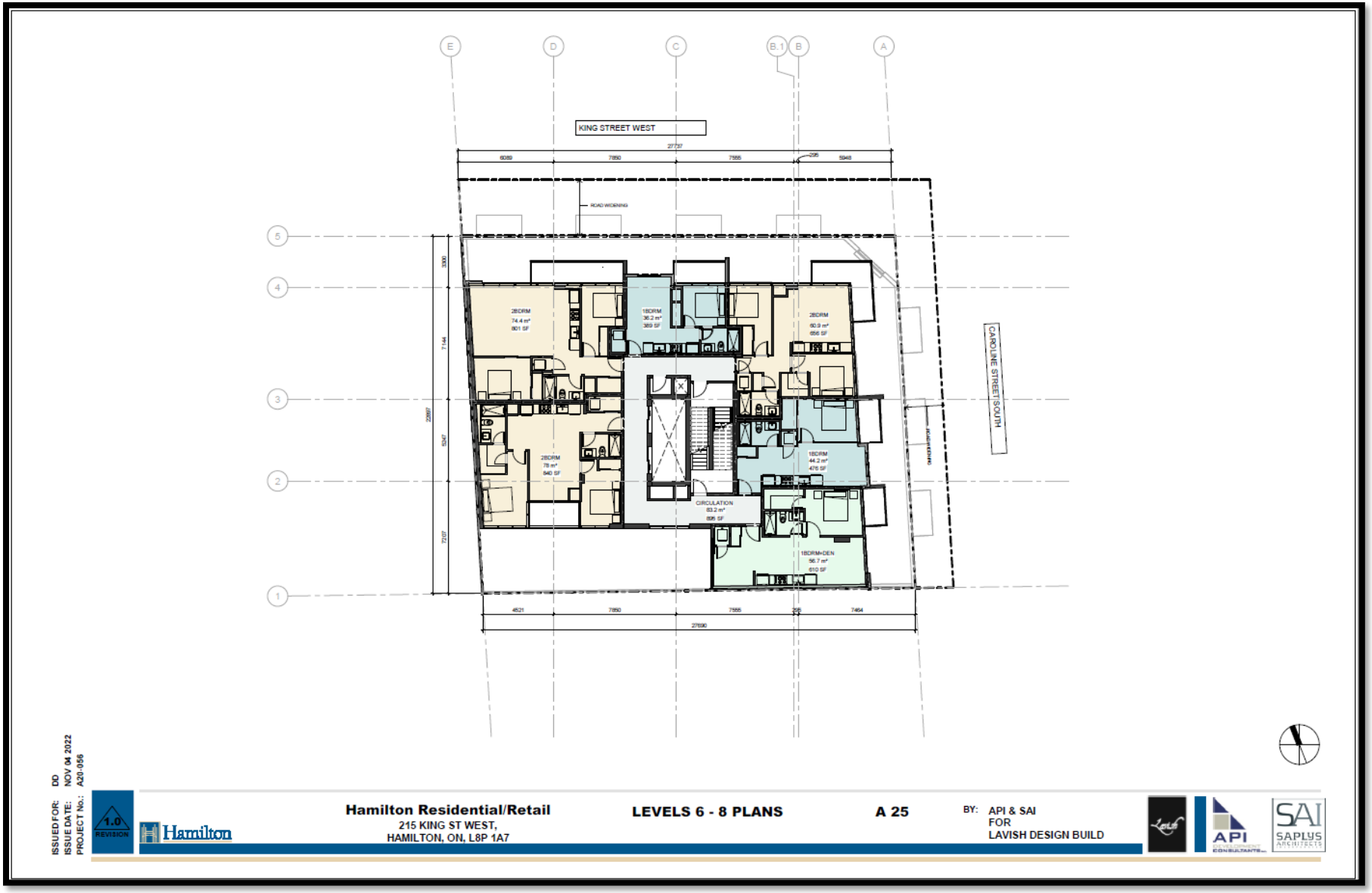

KING STREET WEST
CAROLINE STREET SOUTH
SLOPE
VESTIB.
ELEV. LOBBY
STORAGE
ROAD WIDENING
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
U/G PARKING - P3
A 20
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

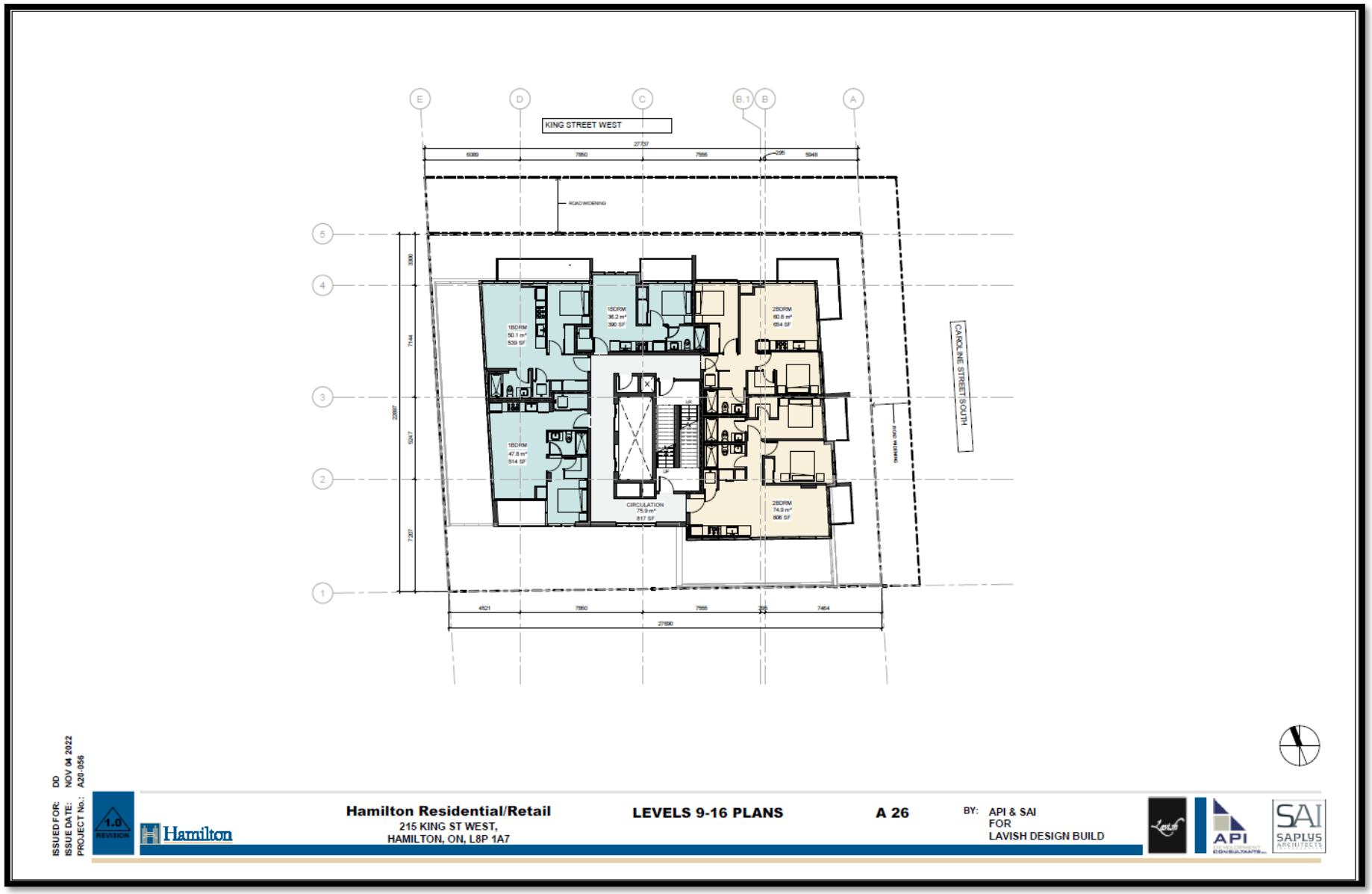

KING STREET WEST
CAROLINE STREET SOUTH
SLOPE
SLOPE
SLOPE
VESTIB.
ELEV. LOBBY
STORAGE
ROAD WIDENING
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
U/G PARKING - P1 & P2
A 21
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

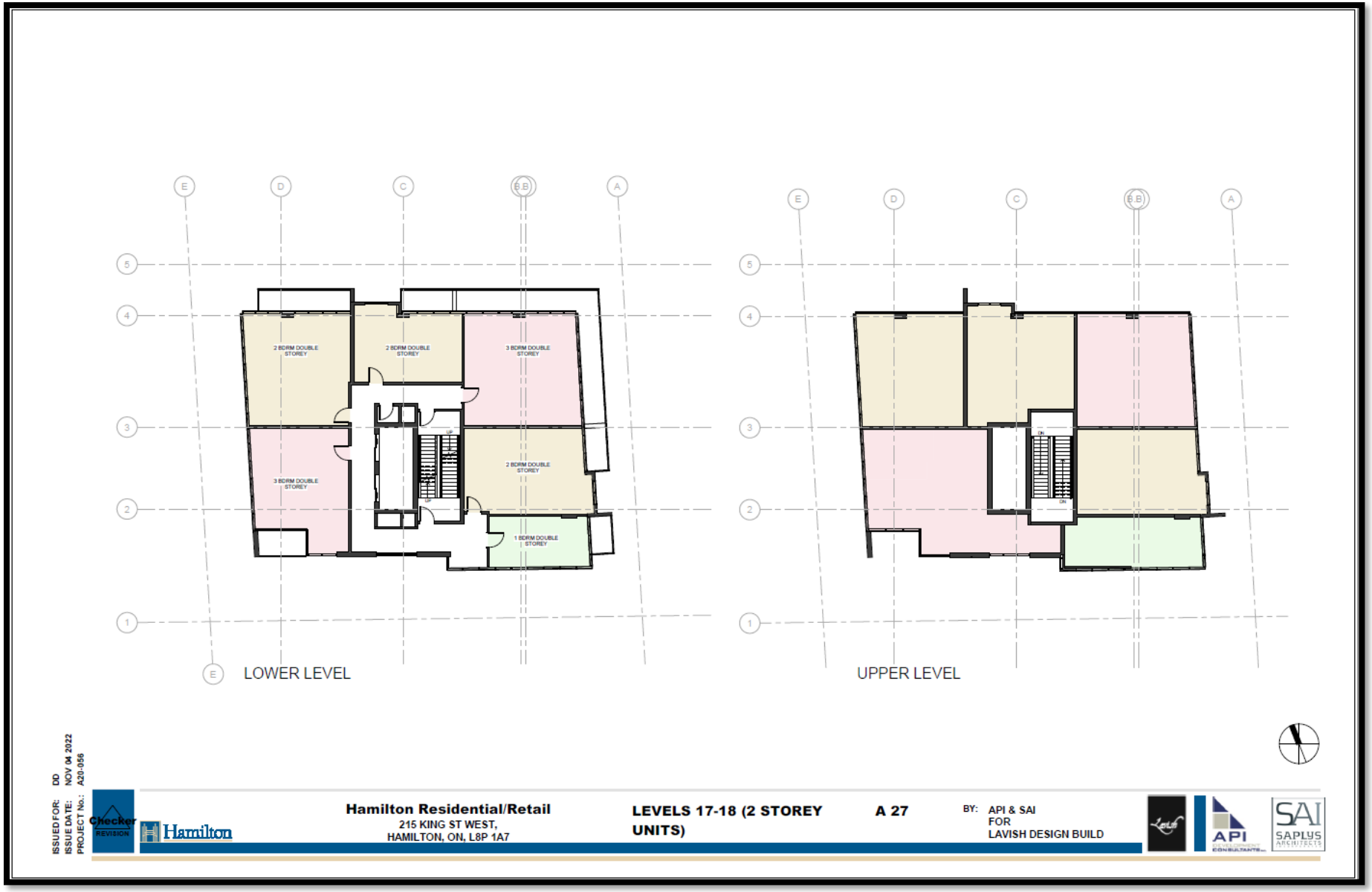

KING STREET WEST
CAROLINE STREET SOUTH
SRW
01 RETAIL 1
02 CACB
03 VESTIBULE
04 LOBBY / CONCIERGE
05 GARBAGE ROOM
06 BIKE STORAGE
30 BIKE STALLS
07 MOVING ROOM
08 MECH
09 MAIL
10 SEATING AREA
11 OFFICE
12 PARCELS
ON
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
GROUND FLOOR PLAN
A 22
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

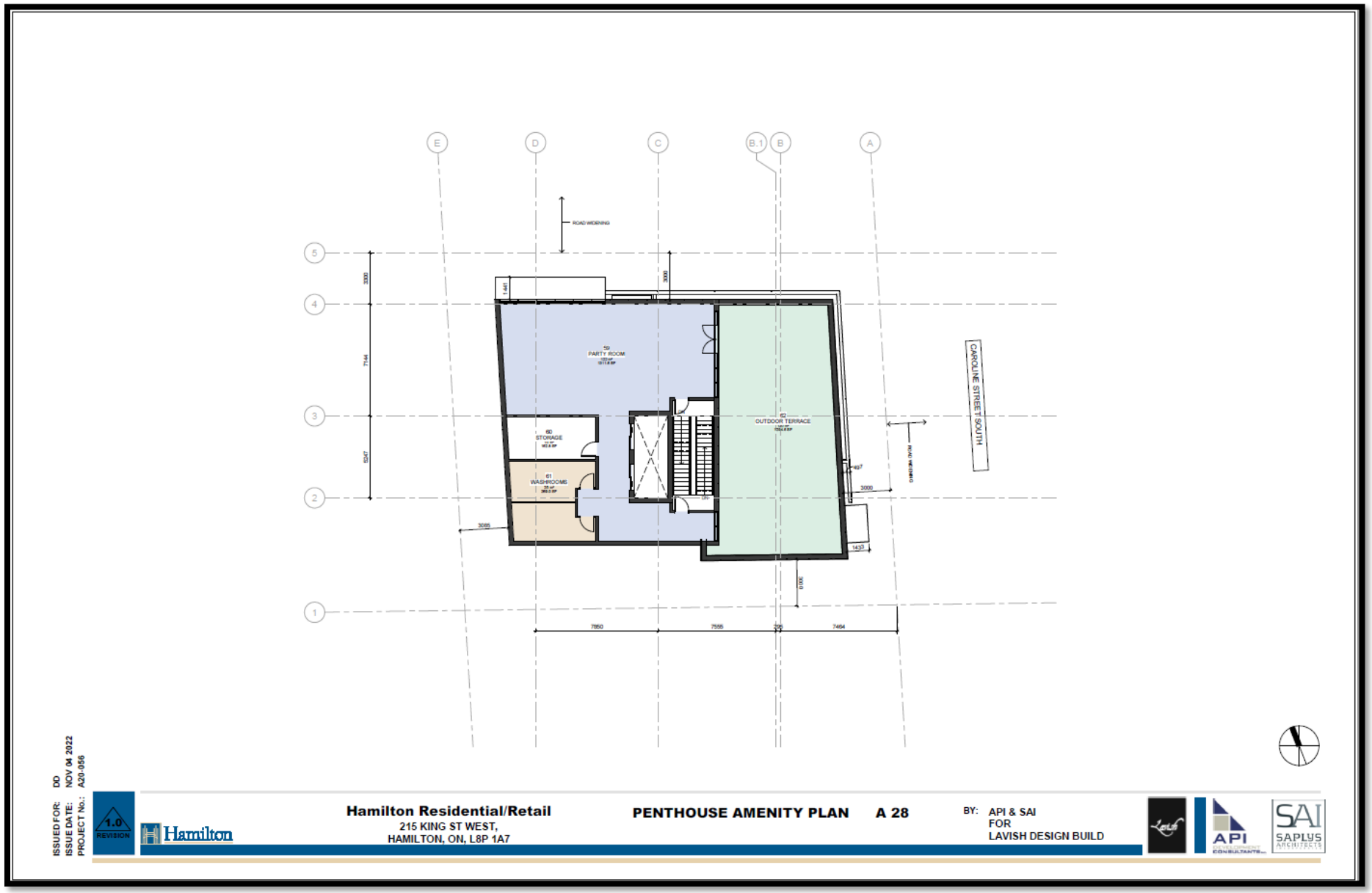

KING STREET WEST
CAROLINE STREET SOUTH
15 PARTY ROOM
23 GAMES ROOM
33 OFFICE SPACE
18 KITCHENETTE
35 STORAGE
22 OFFICE SPACE
32 LOCKERS
36 FITNESS
19 FEMALE
20 MALE
17 U/W
58 STORAGE
21 MEETING
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
LEVEL 2 PLAN
A 23
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLYS ARCHITECTS


KING STREET WEST
CAROLINE STREET SOUTH
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
LEVELS 3 - 5 PLANS
A 24
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLYS ARCHITECTS

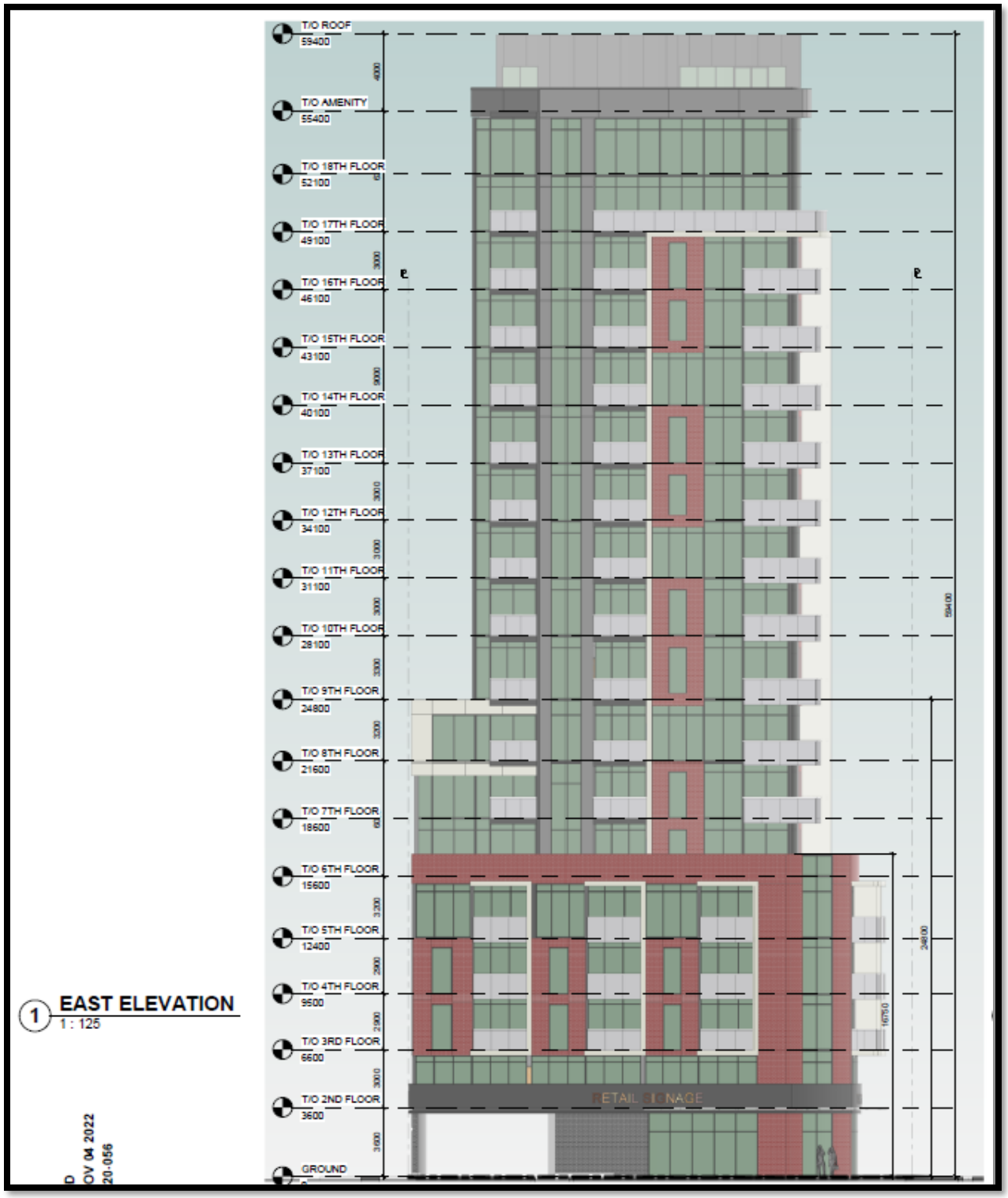

KING STREET WEST
CAROLINE STREET SOUTH
ROAD WIDENING
2BDRM
74.4 m²
801 SF
1BDRM
36.2 m²
389 SF
2BDRM
60.9 m²
656 SF
2BDRM
78 m²
840 SF
1BDRM
44.2 m²
476 SF
CIRCULATION
83.2 m²
895 SF
1BDRM+DEN
56.7 m²
610 SF
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
LEVELS 6 - 8 PLANS
A 25
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

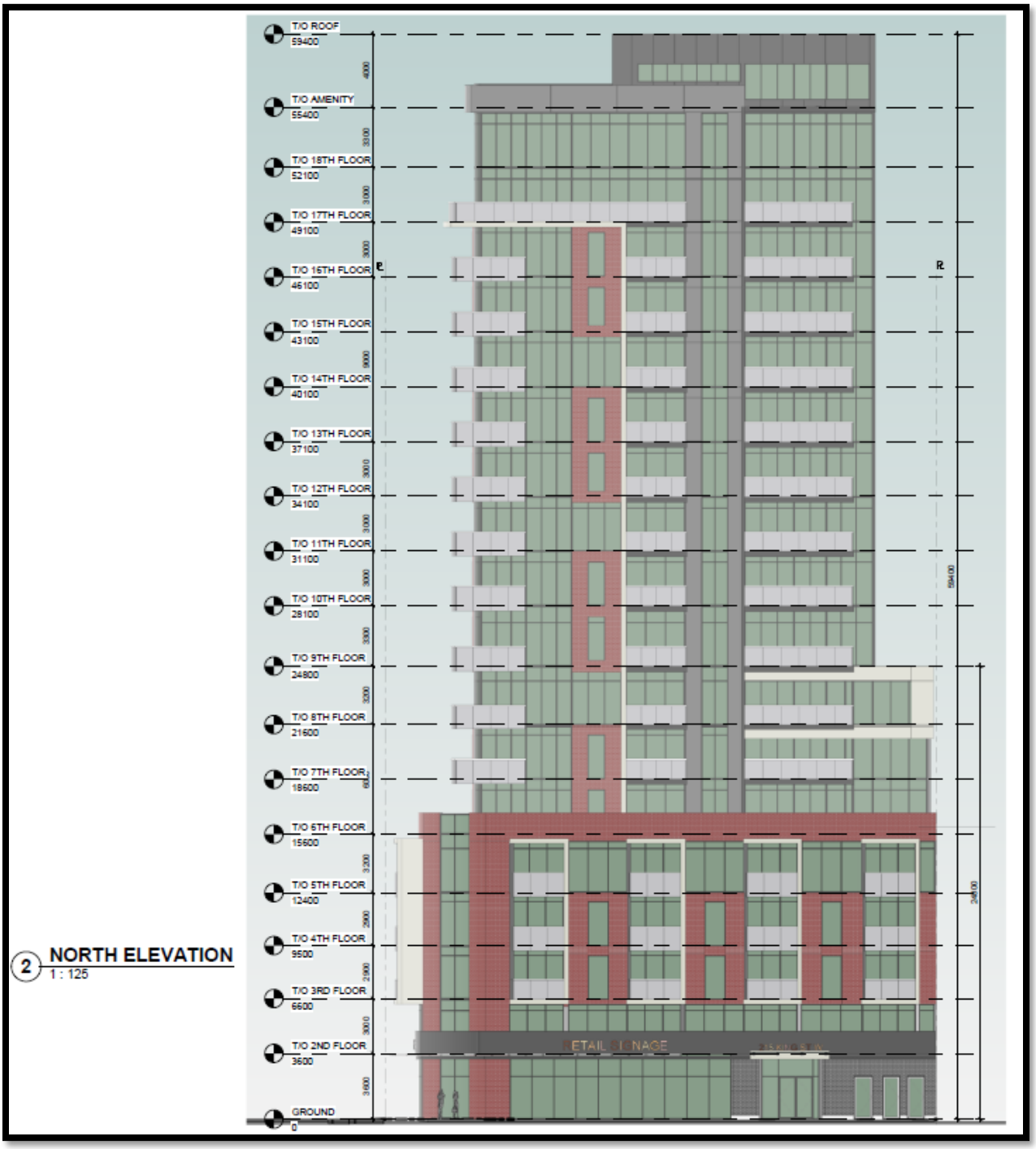

KING STREET WEST
CAROLINE STREET SOUTH
ROADWIDENING
1BDRM
2BDRM
CIRCULATION
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
LEVELS 9-16 PLANS
A 26
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS


E
D
C
B.B
A
5
4
3
2
1
2 BDRM DOUBLE STOREY
2 BDRM DOUBLE STOREY
3 BDRM DOUBLE STOREY
3 BDRM DOUBLE STOREY
2 BDRM DOUBLE STOREY
1 BDRM DOUBLE STOREY
LOWER LEVEL
UPPER LEVEL
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
Checker
REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
LEVELS 17-18 (2 STOREY UNITS)
A 27
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

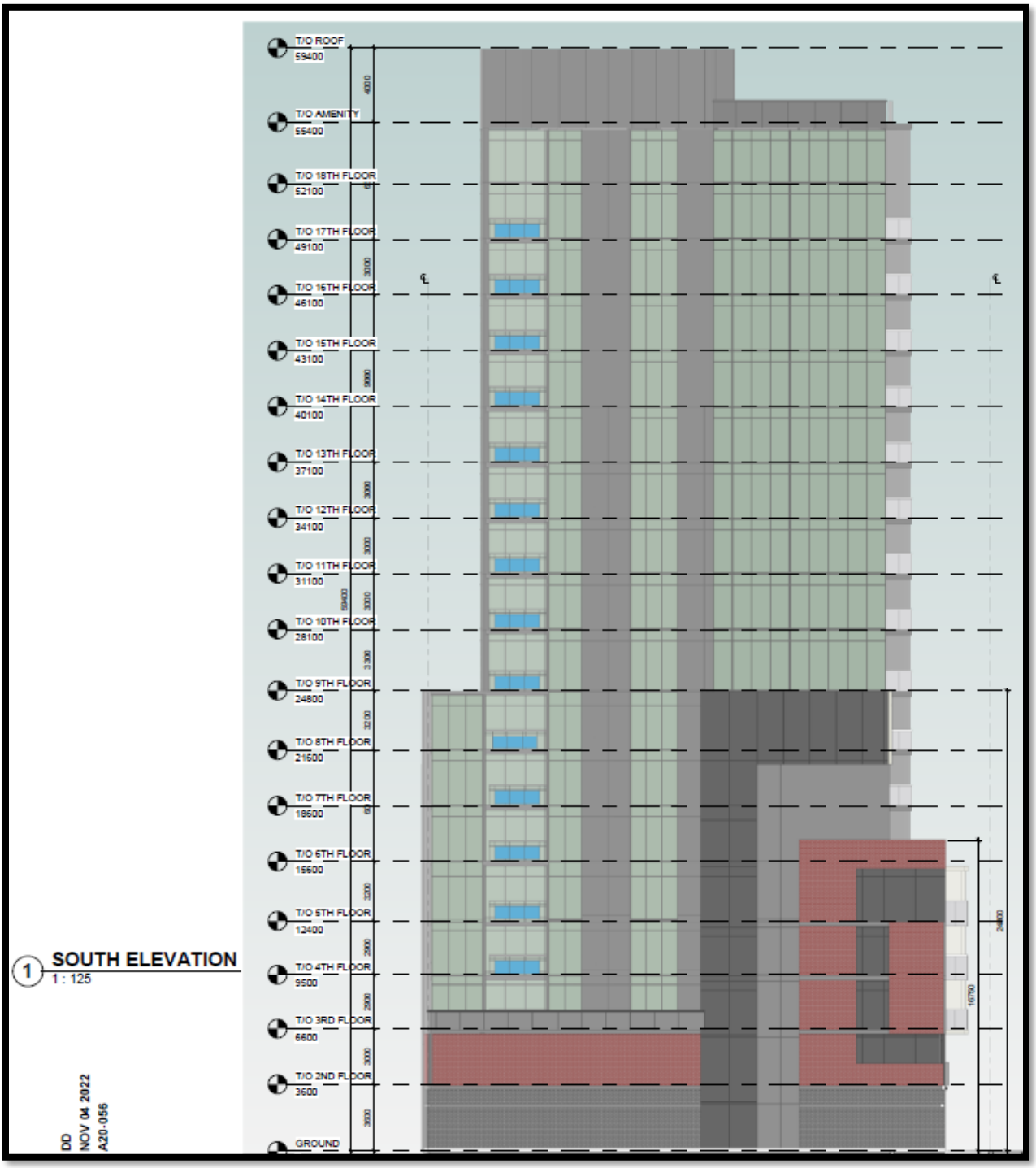

E
D
C
B.1
B
A
5
4
3
2
1
ROAD WIDENING
3300
7144
5247
1441
3000
50
PARTY ROOM
60
STORAGE
61
WASHROOMS
62
OUTDOOR TERRACE
CAROLINE STREET SOUTH
ROAD WIDENING
497
3000
3085
1433
7850
7555
7464
ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0
REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
PENTHOUSE AMENITY PLAN A 28
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLYS
ARCHITECTS

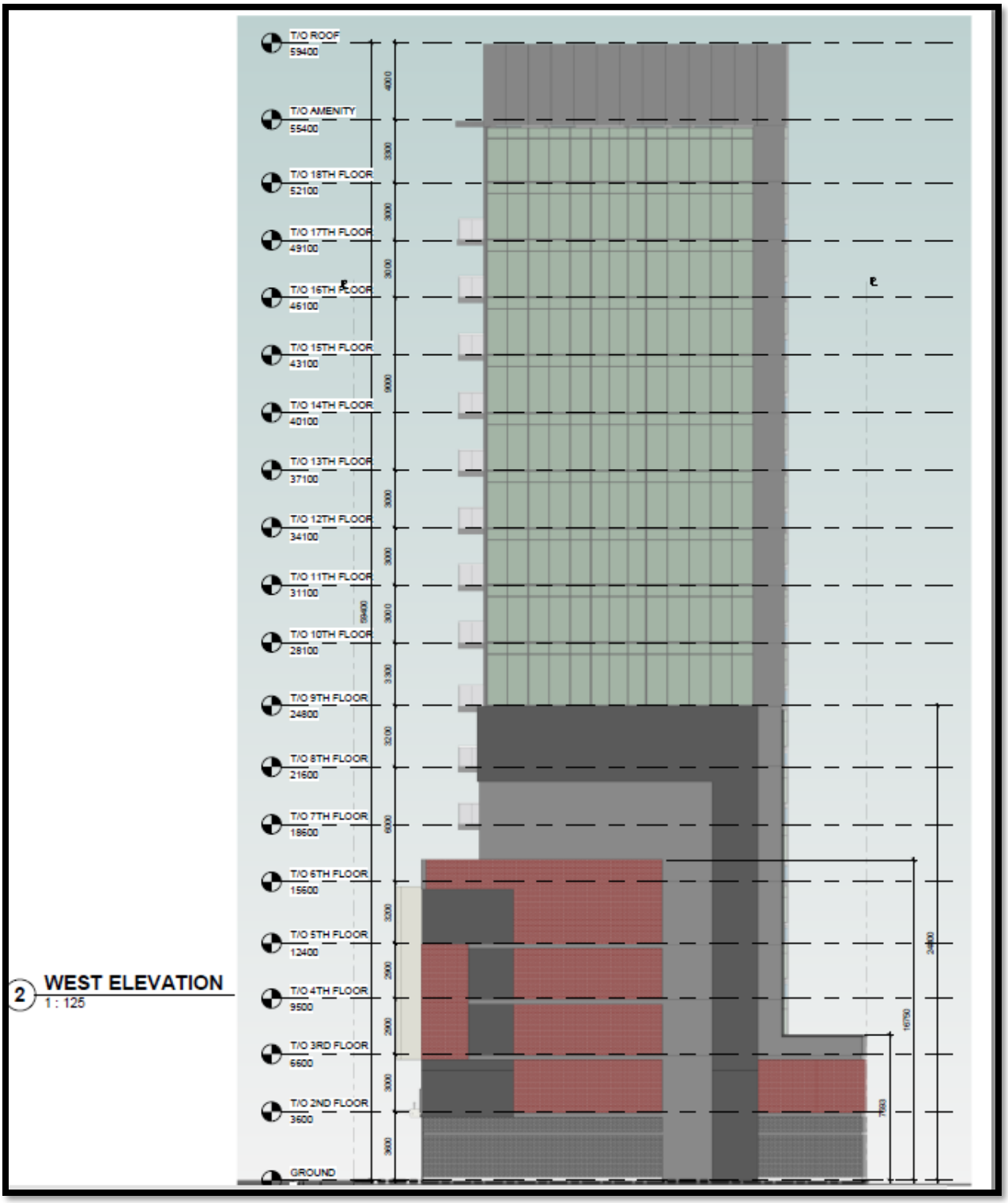
ELEVATIONS


T/O ROOF
59400
T/O AMENITY
55400
T/O 18TH FLOOR
52100
T/O 17TH FLOOR
49100
T/O 16TH FLOOR
46100
T/O 15TH FLOOR
43100
T/O 14TH FLOOR
40100
T/O 13TH FLOOR
37100
T/O 12TH FLOOR
34100
T/O 11TH FLOOR
31100
T/O 10TH FLOOR
28100
T/O 9TH FLOOR
24800
T/O 8TH FLOOR
21600
T/O 7TH FLOOR
18600
T/O 6TH FLOOR
15600
T/O 5TH FLOOR
12400
T/O 4TH FLOOR
9600
T/O 3RD FLOOR
6600
T/O 2ND FLOOR
3600
GROUND
RETAIL SIGNAGE
1 EAST ELEVATION
1 : 125
OV 04 2022
20-056



2 NORTH ELEVATION
1 : 125


T/O ROOF
59400
T/O AMENITY
55400
T/O 18TH FLOOR
52100
T/O 17TH FLOOR
49100
T/O 16TH FLOOR
46100
T/O 15TH FLOOR
43100
T/O 14TH FLOOR
40100
T/O 13TH FLOOR
37100
T/O 12TH FLOOR
34100
T/O 11TH FLOOR
31100
T/O 10TH FLOOR
28100
T/O 9TH FLOOR
24800
T/O 8TH FLOOR
21600
T/O 7TH FLOOR
18600
T/O 6TH FLOOR
15600
T/O 5TH FLOOR
12400
T/O 4TH FLOOR
9500
T/O 3RD FLOOR
6600
T/O 2ND FLOOR
3600
GROUND
1 SOUTH ELEVATION
1 : 125
DD NOV 04 2022 A20-056



2 **WEST ELEVATION**
1 : 125

RENDERINGS


ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0 REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
RENDERED VIEW I -
CAROLINE ST. S
A 01
BY: API & SAI
FOR
LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS


ISSUED FOR: DD
ISSUE DATE: NOV 04 2022
PROJECT No.: A20-056
1.0
REVISION
Hamilton
Hamilton Residential/Retail
215 KING ST WEST,
HAMILTON, ON, L8P 1A7
RENDERED VIEW II - KING AT CAROLINE
A 02
BY: API & SAI FOR LAVISH DESIGN BUILD
API
SAI
SAPLUS ARCHITECTS

EXTERIOR WALL STC RATINGS

EXTERIOR WALL STC RATINGS

Wall Configuration	EW1	EW2	EW3	EW4	EW1R	EW2R	EW3R	EW5	EW4R	EW6	EW7 EW5R	EW8
STC Rating	**38**	**40**	**43**	**46**	**47**	**48**	**49**	**54**	**55**	**57**	**58**	**62**

Source: National Research Council, Division of Building Research

NOTES:

1 The common structure of walls EW1 to EW5 is composed of 12.7mm gypsum board, vapour barrier and 38x89 mm studs with 50 mm (or thicker) mineral wool or glass fibre batts in inter-stud cavities.

- EW1 denotes the common structure, plus sheathing, plus wood siding or metal siding and fibre backer board
- EW2 denotes the common structure, plus rigid insulation (25 to 30 mm), and wood siding or metal siding and fibre backer board.
- EW3 denotes simulated mansard with the common structure, plus sheathing, 28 X89 mm framing, sheathing and asphalt roofing material
- EW4 denotes the common structure, plus sheathing and 20 mm stucco.
- EW5 denotes the common structure, plus sheathing, 25 mm air space, 100mm brick veneer.
- EW6 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 100 mm back-up block 100 mm face brick.
- EW7 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 140mm back-up block, 100 mm face brick.
- EW8 denotes exterior wall composed of 12.7 mm gypsum board, rigid insulation (25 to 50 mm), 200 mm concrete.

2 R signifies the mounting of the interior gypsum board on resilient clips.

3 An exterior wall conforming to rainscreen design principles and composed of 12.7 mm gypsum board, 100 mm concrete block, rigid insulation (25 to 50 mm), 25 mm air space, and 100 mm brick veneer has the same STC as EW6.

4 An exterior wall described in EW1 with the addition of rigid insulation (25 to 50 mm) between the sheathing and the external finish has the same STC as EW2.

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Buildin
g Division
71 Main
Street
West
Hamilton, Ontario, Canada,
L8P 4Y5 Phone: 905.546.2720
Fax: 905.546.2764
www.hamilton.ca

Hamilton

June 13, 2024

FILE:	ALR
FOLDER:	TBD
ATTENTION OF:	Wilrik Banda
TELEPHONE NO:	TBD
EXTENSION:	TBD

API DEVELOPMENT
CONSULTANTS
C/O DAVID BARNARD / NATALIA
GARAVITO
1464 CORNWALL ROAD
OAKVILLE ON L6J 7W5

Re: APPLICABLE LAW REVIEW – ZONING BY-LAW
Present Zoning: D2 – Downtown Mixed-Use with Pedestrian Focus and Holdings H17, H19 and H20 in Hamilton Zoning By-law 05-200
Address: 1215-217 King Street West, Hamilton

An Applicable Law Review respecting zoning bylaw compliance has been completed and the following comments are provided.

COMMENTS:

1. This application is in support of a site plan application to permit the construction of a 14-Storey mixed-use Building with a height of 43.80 metres with a total of 21 parking spaces being provided underground.

2. This is a corner lot. The applicant has not indicated the preferred front lot line as per Section 6.0 a) ii). For the purposes of zoning, the lot line along Caroline Street is deemed to be the front lot line based on the following definition:

   Front Lot Line *– shall mean any lot line abutting a street, and: a) b) c) With reference to a corner lot, shall mean the shorter of the lot lines abutting the streets, except where both lot lines are of equal length, at the option of the owner, either of the lot lines abutting a*

public street may be considered as the front lot line;

3. Holding Provision H17 states the following:

Notwithstanding Figure 1 – Special Figures of By-law 05-200, on those lands zoned Downtown (D1), (D2), and (D5) Zone, identified on Maps 868, 869, 909, 910, 911, 951, 952, 953, 954, 994, 995 of Schedule "A" – Zoning Maps development shall be restricted in accordance with the following:

a) *For such time as the Holding Provision is in place, these lands shall only be used for permitted uses, buildings and structures listed in the (D1), (D2), or (D5) Zone.*

b) *Regulations*

For such time as the Holding Provision is in place, these lands shall be subject to the regulations of the (D1), (D2), or (D5) Zones except where in conflict with the following:

i) No development exceeding the maximum height of 44.0 metres.

c) *Conditions for Holding Provision Removal*

The Holding Provision shall, upon application by the landowner, be removed by way of an amending Zoning By-law, from all or part of the lands subject to this provision when the following conditions have been satisfied:

i) That the landowner demonstrate to the satisfaction of the Director of Planning and Chief Planner, City of Hamilton, that sufficient land assembly has occurred to achieve the minimum lot area requirement and lot frontage requirement in accordance with Section 6.0 of this By-law.

ii) That the landowner demonstrate that the proposal conforms to the policies of the Downtown Hamilton Secondary Plan by submitting the following studies to the satisfaction of the Director of Planning, and Chief Planner, City of Hamilton:

1. Shadow Impact Study;
2. Pedestrian Level Wind Study;
3. Visual Impact Assessment;
4. Traffic Impact Study; and,
5. Functional Servicing Report.

iii) That the landowner demonstrate that the proposed development does not exceed the height of the Niagara Escarpment to the satisfaction of the Director of Planning and Chief Planner, City of Hamilton.

iv) That conditional site plan approval be received, which shall address matters including but not limited to Design Review Panel advice, to the satisfaction of the Director of Planning and Chief Planner, City of Hamilton.

Holding Provision H19 states the following:

Notwithstanding Figure 1 – Special Figures of By-law 05-200, on those lands zoned Downtown (D1), (D2), and (D5) Zone, identified on Maps 868, 869, 909, 910, 911, 951, 952, 953, 954, 994, 995 of Schedule "A" – Zoning Maps development shall be restricted in accordance with the following:

a) *For such time as the Holding Provision is in place, these lands shall only be used for permitted uses, buildings and structures listed in the (D1), (D2), or (D5) Zone.*

b) *Regulations*

   For such time as the Holding Provision is in place, these lands shall be subject to the regulations of the (D1), (D2), or (D5) Zones except where in conflict with the following:

   i) No development exceeding 44.0 metres in height.

c) *Conditions for Holding Provision Removal*

   The Holding Provision shall, upon application by the landowner, be removed by way of an amending Zoning By-law, from all or part of the lands subject to this provision when the following conditions have been satisfied:

   i) That the landowner shall be required to enter into a Section 37 Agreement to secure provision of Community Benefits to the satisfaction of the Director of Planning and Chief Planner, City of Hamilton.

Holding Provision H20 states the following:

Notwithstanding Figure 1 – Special Figures of By-law 05-200 on those lands zoned Downtown (D1), (D2), and (D5) Zone, identified on Maps 868, 869, 909, 910, 911, 951, 952, 953, 954, 994, 995 of Schedule "A" – Zoning Maps development shall be restricted by the following:

a) *For such time as the Holding Provision is in place, these lands shall only be used for permitted uses, buildings and structures listed in the (D1), (D2), or (D5) Zone.*

b) *Regulations*

   For such time as the Holding Provision is in place, these lands shall be subject to the regulations of the (D1), (D2), or (D5) Zones except where in conflict with the following:

   i) No development exceeding 22.0 metres in height.

c) *Conditions for Holding Provision Removal*

The Holding Provision shall, upon application by the landowner, be removed by way of an amending Zoning By-law, from all or part of the lands subject to this provision when the following conditions have been satisfied:

i) That the landowner demonstrate that how any development having the effect of removing all or part of rental housing comprised of three or more units will be replaced to the satisfaction of the Director of Planning and Chief Planner, City of Hamilton.

ii) That the landowner enter into an Agreement with the City of Hamilton.

4. The applicant has indicated that this property will be subject of a future consent application. The proposal is being review based on the proposed new lot lines.

5. The proposed development has been reviewed and compared to the standards of the D2 – Downtown Mixed-Use with Pedestrian Focus zone in Hamilton Zoning By-law 05-200 as well as the Council approved parking amendment to Hamilton Zoning By-law 05-200 that is not Final and Binding as indicated in the following charts:

	Required by By-Law	**Provided**	**Conforming/ Non-Conforming**
Section 6.2– D2 – Downtown Mixed-Use – Pedestrian Focus Zone			
Permitted Uses [as per section 6.2.1 of Hamilton Zoning By-law 05-200]	Artist Studio Beverage Making Establishment Catering Service Commercial Entertainment Commercial Recreation Commercial School Community Garden Conference or Convention Centre Craftsperson Shop Day Nursery Dwelling Unit(s) Educational Establishment Financial Establishment Hotel Laboratory Lodging House Medical Clinic Microbrewery Multiple Dwelling Office Personal Services Place of Assembly Place of Worship Repair Service Restaurant Retail Tradesperson's Shop Urban Farm Urban Farmers Market Veterinary Service	Retail and multiple dwelling	**Conforms**

	Required by By-Law	Provided	Conforming/ Non-Conforming
Restricted Uses [as per section 6.2.1.1 of Hamilton Zoning By-law 05-200]	i) In addition to Section 6.2.1, the following uses shall only be permitted in accordance with Section 6.2.3 and the following additional restrictions: 1. Day Nursery Dwelling Unit(s) Multiple Dwelling Place of Worship A. Shall not be permitted within the ground floor, except for access, accessory office and utility areas. 2. Microbrewery A Microbrewery shall have a maximum Gross Floor Area of 700.0 square metres. 3. Parking Facility In the case of a Parking Facility developed after the effective date of this By-law, such facility: A. Shall only be contained within a building; and, B. With the exception of an access driveway to the parking facility, the ground floor of the facility which faces any street shall only be used for permitted uses, other than parking. C. In addition to 6.2.1.1 i) 3. B) above, any parking structure located above the ground floor shall be screened from view from the public sidewalk.	Retail located on the ground floor with a 77-unit multiple dwelling on the 2nd to the 14th floor.	**Conforms**
Building Setback from a Street Line [as per section 6.2.3(a) of Hamilton Zoning By-law 05-200]	i) Maximum 2.0 metres for any portion of building below 11.0 metres in height, except where a visibility triangle shall be provided for a driveway access;	0 metres at street level for that portion below 11.0 metres in height	**Conforms**
	ii) Notwithstanding Section 6.2.3 a) i) above, a maximum setback of 6.0 metres for that portion of a building providing an access driveway to a garage.	2.95 metres	**Conforms**
	iii) Section 6.2.3 a) i) above, shall not apply for any portion of a building that exceeds the requirement established in Section 6.2.3 c) ii) or iii) below.	**See Section 6.2.3 c) iii) below**	
	iv) Where a building(s) has been constructed and complies with Section 6.2.3 c) ii) or iii) below, additional buildings constructed on the subject property shall not be subject to Section 6.2.3 a) i) above, as it relates to the setback from a front lot line.	Not applicable	**N/A**
	v) Rooftop mechanical penthouse, stair tower and elevator bulkhead shall not be subject to Section 6.2.3 a) i) above.		

	Required by By-Law	Provided	Conforming/ Non-Conforming
	vi) Accessory buildings and structures shall not be subject to Section 6.2.3 a) i).	Not proposed	**N/A**
Building Height [as per section 6.2.3(b) of Hamilton Zoning By-law 05-200]	i) Minimum 11.0 metres;	43.8 metres	**Conforms**
	ii) Maximum Building Height shall be in accordance Figure 1 of Schedule "F" – Special Figures.	Permitted = 83 storeys Proposed = 14 storeys	**Conforms**
Built Form for New Development [as per section 6.2.3(c) of Hamilton Zoning By-law 05-200]	In the case of buildings constructed after the effective date of this By-law or additions to buildings existing as of the effective date of this By-law the following regulations shall apply: i) Rooftop mechanical equipment shall be located and/or screened from view of any abutting street;	Mechanical penthouse screened from view of any abutting street	**Conforms**
	ii) For an interior lot or a through lot the minimum width of the ground floor façade facing the front lot line shall: 1. Be greater than or equal to 75% of the measurement of the front lot line; and, 2. Comply with Section 6.2.3 a) i) above.	This is a corner lot. Not applicable	**N/A**
	iii) For a corner lot the minimum combined width of the ground floor façade facing the front lot line and flankage lot line shall: 1. Be greater than or equal to 50% of the measurement of the front lot line and flankage lot line; and, 2. Comply with Section 6.2.3 a) i) above.	76.1% as per site plan statistics	**Conforms**
	iv) Notwithstanding Section 6.2.3 c) ii) and iii) above, a driveway with a maximum width of 7.5 metres shall be permitted for ingress and egress.	6.6 metres	**Conforms**
	v) No parking or aisles shall be located between the required building façade and the front lot line or flankage lot line.	Parking located on 3 levels of underground parking.	**N/A**
	vi) A minimum of one principal entrance shall be provided: 1. within the ground floor building façade setback the least distance from a street; and, 2. shall be accessible from the building façade with direct access from the public sidewalk.	Principal entrance located on King Street West with direct access to the public sidewalk	**Conforms**
Outdoor Storage [as per section 6.2.3(d) of Hamilton Zoning By-law 05-200]	i) No outdoor storage of goods, materials, or equipment shall be permitted.	Not applicable	**N/A**
	ii) Notwithstanding Section 6.2.3 d) i) above, the outdoor display of goods or materials for retail purposes accessory to	Not applicable	**N/A**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	a retail use shall only be permitted in a front yard or flankage yard.		
Section 6.0 – Downtown Zones General Provisions			
General Provisions [as per section 6.0 a) of Hamilton Zoning By-law 05-200]	In addition to the regulations of Sections 6.1, 6.2, and 6.5 of this By-law, the following Downtown Zones General Provisions shall also apply: a) Notwithstanding Section 3: Definitions as it relates to the definition of Development and Front Lot Line – Corner Lot the following shall apply: i) Development – A change in the use of any land, building, or structure for any purpose, and shall include the carrying out of any building, engineering construction, demolition, or other operation in, on, over or under land, or the construction, addition or alteration of any building or structure.		
	ii) Front Lot Line – Corner Lot shall mean at the option of the owner, either of the lot lines abutting a public street.		
General Provisions [as per section 6.0 b) of Hamilton Zoning By-law 05-200]	In the case of buildings constructed after the effective date of this Bylaw, for any building equal to or less than 44.0 metres in height the following special regulations shall also apply: i) A minimum 3.0 metre stepback shall be required from the building base façade height shown in Schedule "F" – Special Figure 15. 3.0 metres at 16.0 metres in height	3.0 metres at 16.4 metres	**Non-conforming**
	ii) A minimum 3.0 metre stepback shall be required for any portion of a building exceeding 22.0 metres in height from a side or rear lot line.	3.0 metres at 22.2 metres	**Non-conforming**
General Provisions [as per section 6.0 c) of Hamilton Zoning By-law 05-200]	In the case of buildings constructed after the effective date of this Bylaw, for any building exceeding 44.0 metres in height the following special regulations shall also apply: i) A minimum 3.0 metre stepback shall be required from the building base façade height shown in Schedule "F" – Special Figure 15.	43.8 metres	**N/A**
	ii) A minimum 3.0 metre stepback shall be required for any portion of a building exceeding 22.0 metres in height from a side or rear lot line except any flankage lot line.	3.0 metres at 22.2 metres	**Conforms**
	iii) The following additional stepbacks shall be required for any portion of building exceeding 44.0 metres in height: 1. Minimum of 9.5 metres from a lot line abutting a laneway; and, 2. Minimum 12.5 metres from all side and rear lot lines except any flankage lot line.	43.8 metres in height. Not applicable	**N/A**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	iv) Notwithstanding Section 6.1.3 a) i) of this By-law, for lands zoned Downtown Central Business District (D1) Zone, a maximum 10.0 metre setback from a street line shall be permitted for a yard where an Urban Square with a minimum size of 135.0 square metres has been provided.		
	v) Notwithstanding Section 4.7 of this By-law a minimum lot frontage of 35.0 metres is required.	14.01 metres of frontage along Caroline Street	**Non-conforming**
	vi) Notwithstanding Section 4.7 of this By-law a minimum lot area of 1,575.0 square metres is required	792 square metres	**Non-conforming**
General Provisions [as per section 6.0 d) of Hamilton Zoning By-law 05-200]	In addition to 6.0 a) above, for that portion of a building exceeding 44.0 metres in height a distance of 25.0 metres shall be provided between exterior walls on the same property.	43.8 metres in height. Not applicable	**N/A**
General Provisions [as per section 6.0 e) of Hamilton Zoning By-law 05-200]	For the lots delineated as a Heritage Character Zone on Figure 2 of Schedule "F" – Special Figures, where construction and/or alteration to the façade of a building are proposed, the following regulations shall also apply: i) A minimum of 60% of the area of the ground floor façade shall be comprised of clear glazed windows and doors. Window and doorframes, clear glazed transoms and sidelights, doors with at least 50% clear glazing, and a sill up to 0.6m in height are permitted to be included in the calculation of the clear glazed area. Signage and opaque/spandrel glazing shall not be included in the calculation of the clear glazed area;	50% as per site plan statistics	**Non-conforming**
	ii) A minimum of 25% and a maximum of 40% of the façade of the second and third storeys shall be composed of windows. Window and doorframes, clear glazed transoms and sidelights, doors with at least 50% clear glazing, and a sill up to 0.6m in height are permitted to be included in the calculation of the clear glazed area. Signage and opaque/spandrel glazing shall not be included in the calculation of the clear glazed area;	Maximum of 45.2% as per site plan statistics	**Non-conforming**
	iii) The ground floor storey shall be no less than 3.6 metres in height and no greater than 4.5 metres in height. The second and third storeys shall each be no less than 3.0 metres in height and no greater than 4.0 metres in height; and,	4.2 metres	**Conforms**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	iv) Exterior building cladding for the first three storeys, except decorative architectural features (such as window and door frames, sills, lintels, surrounds, and cornices), shall be of either one or a combination of no more than two of the following materials: 1. Brick; 2. Concrete panels; 3. Stone block, stone veneer or artificial stone; 4. Stucco; or, 5. Metal and metal panels, excluding aluminium siding or any metal variant thereof.	Brick and stucco as per site plan statistics	**Conforms**
General Provisions [as per section 6.0 f) of Hamilton Zoning By-law 05-200]	Notwithstanding the above, for properties designated under the Ontario Heritage Act, any alternative building design or building materials approved through the issuance of a Heritage Permit shall be deemed to comply with this Section.	**Applicant to confirm with Heritage Planning. Zoning is unable to verify at this time.**	
General Provisions - Parking [as per section 6.0 g) of Hamilton Zoning By-law 05-200]	Unless otherwise regulated by the Downtown Zones, parking shall be provided in accordance with Section 5 of this By-law.		
General Provisions – Accessory Buildings [as per section 6.0 a) of Hamilton Zoning By-law 05-200]	Unless otherwise regulated by the Downtown Zones, Accessory Buildings shall be in accordance with the requirements of Section 4.8 of this By-law.		
Section 4 – General Provisions			
Frontage on a Street [as per Section 4.3) of Hamilton Zoning By-law 05-200]	a) No lot shall have built upon it a building for any purpose in any zone unless the lot abuts a street for a minimum of 4.5 metres. Provided, however, that where a lot is separated from a street by land owned by the City or the Province of Ontario which land is held by such public agency for future road widening purposes or as a 0.3 metre reserve, a building may be erected upon such lot if registered rights-of-way giving access to a street have been granted and such access scheme is part of a Development Agreement pursuant to the Planning Act.	Not applicable as per Section 6.0 c) v) above.	**See Section 6.0 c) v) above**
	b) Where a building or lot is legally tied to a common element condominium which has frontage on a common element road that provides direct access to a street and is registered under the Condominium Act, such driveway shall be deemed to also be a street for purposes of applying	Not applicable	**N/A**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	the provisions of this By-law.		
	c) Nothing in this By-law shall prevent the erection, repair, restoration, or addition of a dwelling on an existing lot having access to a public road via a private road subject to the provisions of the Zone in which the lot is located. For the purposes this Section, the front lot line shall be the lot line which divides the lot from the private road and all other lot lines shall correspond thereto. (By-law No. 24-051, April 10, 2024, not final & binding)	Not applicable	**N/A**
Permitted Yard Encroachments [as per Section 4.6) of Hamilton Zoning By-law 05-200]	a) The usual projections of window sills, chimney breasts, belt courses, cornices, eaves, troughs and other similar architectural features, ductwork, venting and other similar appurtenances may be permitted in any required yard, provided that no such feature shall project more than 0.6 metres into the required yard, or to a maximum of half the distance of the required yard, whichever is the lesser;	Signage on the first level appears to encroach into the public right of way. This may be subject to an encroachment agreement with the City.	**Applicant to Confirm**
	b) A fire escape or exterior staircase may encroach into a required side or rear yard to a maximum of 1.5 metres, or to a maximum of half the distance of the required yard, whichever is the lesser;	Not applicable	**N/A**
	c) An unenclosed ramp for wheelchair access may encroach into any required yard to no maximum distance;	Not applicable	**N/A**
	d) A porch, deck or canopy may encroach into any required yard to a maximum of 1.5 metres, or to a maximum of half the distance of the required yard, whichever is the lesser;	Not applicable	**N/A**
	e) A balcony may encroach into any required yard to a maximum of 1.0 metre, except into a required side yard of not more than one- third of its width or 1.0 metre, whichever is the lesser; and,	Balconies are integrated into the building façade. The upper level balconies do not encroach into minimum yard requirements.	**Conforms**
	f) A bay window or alcove, without foundation, may encroach into any required yard to a maximum of 0.6 metres, or half the distance of the required yard, whichever is the lesser. No such feature shall have a width greater than 3.0 metres.	Not applicable	**N/A**
	g) An existing building may encroach, or further encroach, into a required yard to a maximum of 0.15 metre for the purpose of recladding the building.	Not applicable	**N/A**
	h) Notwithstanding Section 4.6 d), e), and f) as it applies to the required front yard, for lots identified on Figure 36 of	Balconies are integrated into the building façade which is located at	**Conforms**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	Schedule "F" – Special Figures of this By-law, the encroachment of a feature shall in no cases result in a front yard of less than 0.5 metres. (By-law No. 24-051, April 10, 2024, not final & binding)	0 metres from the street line.	
	i) Wall-mounted electric vehicle charging equipment may encroach into any required yard to a maximum of 0.3 metres. (By-law No. 24-052, April 10, 2024, not final & binding)	Parking is provided underground. Not applicable	**N/A**
Accessory Buildings [as per section 4.8 of Hamilton Zoning By-law 05-200]	a) Unless otherwise provided for in this By-law, Accessory Buildings shall not be used as a dwelling unit.		
	b) Accessory Buildings shall not be permitted within a front or flankage yard.	No accessory building proposed.	**N/A**
	c) Notwithstanding Subsection 4.8 b), a building used as a station for parking attendants or security personnel shall be permitted within a front or flankage yard.	Not applicable	**N/A**
	d) Notwithstanding any other provisions in this By-law, where a zone contains a maximum setback requirement from a street line, the maximum setback requirement shall not apply to Accessory Buildings.	Not applicable	**N/A**
	e) Where a vehicular entrance to an Accessory Building faces a street line, the vehicular entrance shall be setback a minimum of 6.0 metres from the street line.	Not applicable	**N/A**
	f) Except as permitted in Subsection 4.18 a), an Accessory Building shall not be erected prior to the erection of the principal building or structure on the lot.	Not applicable	**N/A**
	g) All Accessory Buildings shall have a maximum height of 4.5 metres.	Not applicable	**N/A**
	h) Notwithstanding Subsection 4.6a), an eave or gutter of any Accessory Building may encroach into any required yard to a maximum of 0.45 metre.	Not applicable	**N/A**
	i) Rooftop amenity area shall be prohibited on all Accessory Buildings.	Not applicable	**N/A**
	j) Gazebos, pergolas, and carports shall be considered as Accessory Buildings, but shall not be subject to the Lot Coverage or Gross Floor Area requirements of the applicable zones in which they are located.	Not applicable	**N/A**
	k) Children's play structures and sports bleachers shall not be considered Accessory Buildings and shall not be subject to the regulations of Subsections	Not applicable	**N/A**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	4.8.1, 4.8.2, 4.8.3, 4.8.4 and 4.8.5 or the regulations of the zones in which they are located.		
Mechanical and Unitary Equipment [as per Section 4.9 of Hamilton Zoning By-law 05-200]	Hot boxes, air conditioners and pumps (including heat pumps and swimming pool pumps) and other similar mechanical equipment shall be located only in accordance with the following regulations: a) Within a required front yard, provided such equipment shall have a minimum setback of 3.0 metres from the street line, a minimum setback of 0.6 metres from a side lot line and is screened from the street by an enclosure or landscaping; and,	Mechanical penthouse. No mechanical equipment located at grade level.	**N/A**
	b) Within a required front yard, provided such equipment shall have a minimum setback of 3.0 metres from the street line, a minimum setback of 0.6 metres from a side lot line and is screened from the street by an enclosure or landscaping; and, Within a required side yard or required rear yard provided such equipment has a minimum setback of 0.6 metres from the side lot line or rear lot line.	Not applicable	**N/A**
Visual Barrier [as per Section 4.19 of Hamilton Zoning By-law 05-200]	Where this By-law requires a visual barrier to be provided and maintained, such barrier shall act as a screen between uses and be constructed to a minimum height of 1.8 metres, and to a maximum height of 2.5 metres where a visual barrier consists of a fence or wall and shall not be located within 3.0 metres of a street line. A visual barrier shall consist of the following: a) A wall, fence; b) A continuous planting of suitable trees or shrubs, together with a reserved width of planting area appropriate for healthy plant growth; c) Earth berms; or, d) Any combination of the above.		
Adequate Services [as per Section 4.22 of Hamilton Zoning By-law 05-200]	Except for Section 4.15 – Model Homes in Draft Plans of Subdivision, no buildings or structures may be erected, used or occupied unless: i) adequate watermains, storm and sanitary sewer systems are existing or have been provided for in a binding and secured development agreement and all regulatory approvals have been received to the satisfaction of the General Manager of Planning and Economic Development Department and/or his or her designate; or, ii) where such services are not required or contemplated, an approved waste disposal system and potable water supply to sustain the use of land for buildings or structures are existing or have been provided for to the satisfaction of the Chief Building Official and all regulatory approvals have been received to the satisfaction of the General Manager of the Planning and Economic Development Department and/or his or her designate;		
Section 5 - Parking			
Location [as per Section 5.1 of Hamilton Zoning By-law	a) All Uses i) Required parking facilities shall be located on the same lot as the use	Located on the lot.	**Conforms**

	Required by By-Law	Provided	Conforming/ Non-Conforming
05-200]	requiring the parking.		
	ii) Notwithstanding Subsection 5.1 a) i), where the provision of parking on the same lot as the use requiring the parking is not possible, such off-site parking may be located on another lot within 300.0 metres of the lot containing the use requiring the parking, provided: a) Such off-site parking shall only be permitted within a zone in which the use requiring such parking is permitted; b) Such off-site parking shall be subject to Subsection 5.1 a) iii); and, c) Subsection 5.1 a) ii) shall not apply to any Residential Zone.	Not applicable	**N/A**
	iii) Where the required parking is provided in accordance with Subsection ii) above, the owners of both lots shall enter into an agreement with the City to be registered against the title of both the lot upon which parking is to be provided and the lot containing the use requiring the parking. The lot upon which the parking is located, pursuant to the agreement, shall continue to be so used only for such purposes until alternate parking spaces in conformity with the regulations of this By-law are provided.	Not applicable	**N/A**
	iv) Parking as provided for in Subsection iii) may be transferred to another lot in accordance with Subsection ii), provided that an agreement as required by Subsection iii) is registered on title of said other lot.	Not applicable	**N/A**
	v) Unless otherwise regulated in this By-law, parking spaces and aisles, giving direct access to abutting parking spaces, excluding driveways extending directly from the street, shall be subject to the following: a) Shall not be located within 3.0 metres of a street line, b) Shall provide a 3.0 metre wide planting strip being required and permanently maintained between the street line and the said parking spaces or aisle, except for that portion of a lot line abutting the Red Hill Valley Parkway and the Lincoln Alexander Parkway; and, c) Where a Planting Strip is provided, as per b) above, any architectural wall or feature within the Planting Strip shall be limited to a maximum height of 0.6 metres.	Underground parking. Not applicable	**N/A**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	vi) Within any Downtown Zone, no new surface parking lots shall be permitted except where the parking is accessory to the main use on the same lot.		
	d) Multiple Dwellings On a lot containing a multiple dwelling: i) With the exception of any visitor parking required by Section 5.6, required parking for multiple dwellings shall not be located between the façade and the front lot line or between the façade and flankage lot line. In no case shall any parking be located within the required front yard or required flankage yard or within 3.0 metres of a street line.	All parking is provided underground.	**N/A**
	ii) Visitor parking may be permitted between the façade and a street provided that no more than 50% of the front yard shall be used for visitor parking and access to such parking.	All parking is provided underground.	**N/A**
Design Standards [as per Section 5.2 a) of Hamilton Zoning By-law 05-200]	Where a parking lot is situated on a lot which abuts a Residential Zone, Settlement Residential (S1) Zone, Downtown (D5), or Downtown (D6) Zone, the following shall be provided and maintained along that portion of the lot line that abuts a Residential Zone, Settlement Residential (S1) Zone, Downtown (D5) Zone, or Downtown (D6) Zone: i) A minimum 1.5 metres wide landscape strip which shall contain a visual barrier in accordance with Section 4.19 of this By-law.	All parking is provided underground.	**N/A**
Parking Space Size [as per Section 5.2 b) of Hamilton Zoning By-law 05-200]	Unless permitted by another regulation in this By-law, parking space sizes shall be: i) Minimum 2.8 metres in width and 5.8 metres in length;	2.4 metres x 5.8 metres on the floor plans Note: Site plan statistics state that parking spaces are 2.8 metres x 5.8 metres	**Unable to determine compliance**
	ii) Where a wall, column, or any other obstruction is located abutting or within any parking space within an above ground or underground parking structure, the minimum width of a parking space shall be increased by 0.3 metres for each wall, column, or obstruction;	.3 metres not provided. Column not dimensioned. Unable to determine if this is a requirement.	**Unable to determine compliance**
	iii) Notwithstanding Subsection ii), an additional 0.3 metres shall not be required provided: 1. the maximum length of the wall, column or any other obstruction shall not exceed 1.15 metres;	Column located at the front of the parking space but is not dimensioned.	**Unable to determine compliance**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	2. the wall, column or any other obstruction is located at the front, rear, or both ends of the parking space; and, 3. the wall, column or any other obstruction does not project more than 0.15 metres into the width of the parking space.		
	iv) The length of each parking space in an attached garage of a dwelling unit shall be increased by an equivalent length of the step, steps or stairwell that extends into the parking space;	No steps. Not applicable	**N/A**
	v) Notwithstanding Subsection iv), an open stairway may project into the length of the required parking space not more than 0.75 metres provided the height of the stairway does not exceed 0.5 metres;	Not applicable	**N/A**
	vi) Notwithstanding Subsection i) herein, where 10 or more parking spaces are required on a lot, the minimum parking space size of not more than 10% of such required parking spaces shall be a width of 2.6 metres and a length of 5.5 metres, provided that any such parking space is clearly identified as being reserved for the parking of small cars only; and,	Not provided	**N/A**
	vii) Notwithstanding Subsection b) ii) and iii), light standards, including the base, located at the intersection of 4 parking spaces shall not be considered as an obstruction.	Not applicable	**N/A**
Parking Access [as per Section 5.2 c) of Hamilton Zoning By-law 05-200]	All required parking shall be provided as follows: i) With adequate means of ingress and egress to and from the street or laneway without the necessity of moving any other motor vehicle, except that the accessibility to a maximum of one of the required parking spaces for a single detached dwelling may be obstructed by another motor vehicle.	Adequate ingress and egress to and from the street.	**Conforms**
	ii) Shall be arranged so as to not interfere with normal public use of the street or laneway;	Underground parking arrangement does not interfere with normal public use of the street.	**Conforms**
	iii) Shall be accessed by means of an access driveway: 1. Located on the lot; or, 2. Located party on the lot in the case of a mutual driveway; or, 3. By means of a Right-of Way.	Access driveway located on the lot	**Conforms**
	iv) Any parking lot shall provide for ingress and egress of vehicles to and from a street in a forward motion only.	Ingress and egress provided in a forward motion.	**Conforms**

	Required by By-Law	Provided	Conforming/ Non-Conforming
Parallel Parking Size [as per Section 5.2 d) of Hamilton Zoning By-law 05-200]	Notwithstanding Subsection b) herein, in the case of parallel parking: i) Each parallel parking space shall have a minimum width of 2.4 metres and a minimum length of 6.7 metres. End spaces which have a clear, unobstructed approach, shall have a minimum length of 5.5 metres.	2.4 metres x 6.7 metres	**Conforms**
Surface Treatment [as per Section 5.2 e) of Hamilton Zoning By-law 05-200]	i) Parking Spaces, Driveways and Widening(s) in All Zones a) Shall be provided and maintained with stable surfaces such as asphalt, concrete or other hard-surfaced material, crushed stone, permeable pavers or gravel, and shall be maintained in a dust free condition.	Presumed concrete / asphalt	**Conforms**
	ii) Parking Lots in All Zones, except the Rural Classification Zones a) Shall be designed and maintained with stable surfaces such as asphalt, concrete or other hard-surfaced material.	Presumed concrete / asphalt	**Conforms**
Barrier Free Parking Space Size [as per Section 5.2 f) of Hamilton Zoning By-law 05-200]	Notwithstanding Subsection b) herein, in the case of a barrier free parking, each parking space shall have a minimum width of 4.4 metres and a minimum length of 5.8 metres.	2.4 metres x 2.5 metres **Note**: Amended parking requirements are AODA compliant and the proposed parking spaces would conform to the AODA regulations.	**Non-conforming**
Commercial Parking Facilities [as per Section 5.2 g) of Hamilton Zoning By-law 05-200]	Commercial Parking Facilities and Hotels Parking spaces may be designed to include the use of tandem or stacked parking where a parking attendant is on site or a valet service is provided.	Not applicable	**N/A**
Landscape Requirements [as per Section 5.2 h) of Hamilton Zoning By-law 05-200]	In addition to Section 5.1 a) v) and Subsection 5.2 e), the following Planting Strip requirements shall apply to surface parking lots in all zones where 50 or more parking spaces are provided on a lot: i) Landscaped Area(s) and Landscaped Parking Island(s) with a minimum combined area of 10% of the area of the parking lot and associated access driveway and manouvering areas shall be provided and maintained;	Underground parking. Not applicable	**N/A**
	ii) Each Landscaped Area and Landscaped Parking Island shall have a minimum area of 10.0 square metres; and,	Not applicable	**N/A**
	iii) In addition to Section 5.6, the number of required parking spaces required to	Not applicable	**N/A**

<table>
<tr><th></th><th colspan="2">Required by By-Law</th><th>Provided</th><th>Conforming/ Non-Conforming</th></tr>
<tr><td></td><td colspan="2">accommodate the Landscaped Area or Landscaped Parking Island within the parking lot shall be reduced by the amount needed to accommodate the minimum Landscaped Parking Island requirement as required by Subsection 5.2 h) i), up to a maximum of 10% of the required parking spaces.</td><td></td><td></td></tr>
<tr><td rowspan="9">Minimum Aisle Width
[as per Section 5.2 i) of Hamilton Zoning By-law 05-200]</td><td colspan="2">In addition to Subsection c) herein, the minimum aisle width shall be designed and provided in accordance with the following requirements:</td><td colspan="2"></td></tr>
<tr><td>Parking Angle Degree</td><td>One-Way and Two-Way Aisle Width</td><td rowspan="8">6.5 metres</td><td rowspan="8">Conforms</td></tr>
<tr><td>0º</td><td>3.7 m</td></tr>
<tr><td>15º</td><td>3.7 m</td></tr>
<tr><td>30º</td><td>3.7 m</td></tr>
<tr><td>45º</td><td>4.5 m</td></tr>
<tr><td>60º</td><td>5.5 m</td></tr>
<tr><td>75º</td><td>6.0 m</td></tr>
<tr><td>90º</td><td>6.0 m</td></tr>
<tr><td>Loading Facilities
[as per Section 5.2.1 of Hamilton Zoning By-law 05-200]</td><td colspan="2">The location of loading doors and associated loading facilities shall be subject to the following:
a) Shall not be permitted within a Front Yard;
b) Shall not be permitted in any yard abutting a street, except where screened from view by a Visual Barrier in accordance with Section 4.19 of this By-law; and,
c) Shall not be permitted in a required yard abutting a Residential Zone or an Institutional Zone and shall be screened from view by a Visual Barrier in accordance with Section 4.19 of this By-law.</td><td>Loading is located within the building.</td><td>Conforms</td></tr>
<tr><td rowspan="4">Barrier Free Parking
[as per Section 5.5 of Hamilton Zoning By-law 05-200]</td><td colspan="2">a) Barrier free parking shall be designated and provided as part of the required parking spaces in accordance with the following requirements:</td><td rowspan="4">Required = 21 spaces
Required barrier free spaces = 1
Provided = 2</td><td rowspan="4">Conforms</td></tr>
<tr><td>Required Parking Spaces</td><td>Designated Barrier Free Parking Spaces</td></tr>
<tr><td>1-49 spaces</td><td>Minimum 1 space</td></tr>
<tr><td>50-100 spaces</td><td>Minimum 4% of the total number of required parking</td></tr>
</table>

	Required by By-Law		Provided	Conforming/ Non-Conforming
		spaces		
	101-200 spaces	Minimum 1 space + 3% of the total number of required parking spaces; and,		
	201-1000 spaces	Minimum 2 spaces + 2% of the total number of required parking spaces; and,		
	1000 or more spaces	Minimum 11 + 1% of the total number of required parking spaces.		
	b) Subsection 5.5 a) shall not apply to Single Detached Dwellings, Semi-Detached Dwellings, Duplex Dwellings and Street Townhouses abutting a public street.			
	c) Where the application of the parking standards in Section a) above results in a numeric fraction, fractions shall be rounded down to the nearest whole number.			
Required Parking Spaces [as per Section 5.6 a) of Hamilton Zoning By-law 05-200]	Parking spaces shall be provided in the minimum quantity specified in Column 2 hereunder for each use listed in Column 1, subject to the provisions of Subsection b) herein: a) Parking Schedule for All Downtown Zones i. Residential Uses: a) Multiple Dwelling i) Dwelling units less than 50.0 square metres in gross floor area: Units 1-12 = Min. 0 – Max. 1.25 per unit Units 13+ = Min 0.3 – Max 1.25 per unit		1-12 = 12 units = 0 13+ = 27 units x 0.3 = 8.1 Total required residential parking = 8.1 + 13 = 21.1 = 21 Provided = 21 parking spaces	**Conforms**
	ii) Units greater than 50.0 square metres in gross floor area: Units 1-12 = Min. 0 – Max. 1.25 per unit Units 13-50 = Min. 0.5 – Max. 1.25 per unit Units 51+ = Min. 0.7 – Max. 1.25 per unit		1-12 = 12 units = 0 13-50 = 26 units x 0.5 = 13 51+ = 0 units = 0 Total required residential parking = 8.1 + 13 = 21.1 = 21 Provided = 21 parking spaces	**Conforms**
	iii) Units with 3 or more bedrooms: Units 1-12 = Min. 0 – Max. 1.25 per unit Units 13+ = Min. 0.3 – Max. 1.25 per unit		Not applicable	**N/A**
	iv. Commercial No parking shall be required unless specifically listed in the subsection below. Commercial School Financial Establishment		Retail use. 0 parking required and 0 parking provided.	**Conforms**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	Hotel Conference or Convention Centre Medical Clinic Office Veterinary Service		
Additional Downtown Parking Provisions [as per Section 5.6 b) of Hamilton Zoning By-law 05-200]	For lands within a Downtown (D1), (D2), and (D5) Zone the following provisions shall apply: i) The number of parking spaces provided shall not exceed the maximum parking standard established in Section a) above.	Maximum = 21 x 1.25 = 26.25 Provided = 21	**Conforms**
	ii) Where the number of existing parking spaces exceed the maximum parking standard in Section 5.6 a) above, the parking spaces provided in excess of the maximum parking standard may be eliminated. However, in no case may the number of parking spaces provided be less than the minimum parking requirements for all uses listed in Section 5.6 a) above.	New building. Not applicable	**N/A**
	iii) Notwithstanding Section 5.6 a) above, for any permitted use, except a Medical Clinic, within any Downtown Zone located in all or part of a building existing on the effective date of this By-law, no parking spaces are required provided that the number of parking spaces which existed on the effective date of this By-law shall continue to be provided and maintained. Where an addition or expansion of an existing building is proposed, the parking requirements of Section 5.6 a) above, shall only apply to the increased gross floor area.	Not applicable	**N/A**
	iv) Where the application of the parking standards in Section 5.6 a) above, results in a numeric fraction, fractions shall be rounded down to the nearest whole number.		
Bicycle Parking [as per Section 5.7 of Hamilton Zoning By-law 05-200]	a) Locational Requirements i) Long-term Bicycle Parking Space shall be located in a secure enclosed bicycle parking area. ii) Short-term Bicycle Parking Space shall be located within a bicycle parking area at grade.		
	c) In the Downtown (D1), (D2) and (D5) Zones, Transit Oriented Corridor Zones and Commercial and Mixed Use Zones short-term bicycle parking shall be provided in each and every building in the minimum quantity specified in accordance with the following requirements: i) Residential Uses: All Downtown (D1), (D2), and (D5), TOC and Commercial and Mixed Use Zones: Multiple Dwelling – 5 short-term spaces	10 short-term spaces provided in the public right of way, not on the subject lands. Applicant may have to pursue an encroachment agreement with the City.	**Non-conforming**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	Other commercial uses not listed above – 5 short-term spaces.		
	d) Notwithstanding Section c) above, for any Office, Personal Services, Restaurant, or Retail use less than 450.0 square metres no short-term bicycle parking space(s) shall be required.	38.17 square metres of retail. Short-term bicycle parking is not required.	**Conforms**
	e) Notwithstanding Section b) and in addition to c) above, in the Downtown (D1), (D2), and (D5) Zones, Transit Oriented Corridor Zones long-term bicycle parking shall be provided in the minimum quantity specified in accordance with the following requirements: i) Residential Uses: Multiple Dwelling – 0.5 long term spaces per dwelling unit ii) Commercial Uses: All commercial uses: i) 0 where less than 450.0 square metres of gross floor area; ii) 2 per unit for those uses between 450.0 square metres and 10,00.0 square metres of gross floor area; and, iii) 5 per unit for those uses between 1001.0 square metres and 10000.0 square metres of gross floor area; and, iv) 7 per unit for those uses in excess of 10,001.0 square metres of gross floor area.	77 units x 0.5 = 38.5 = 38 required long-term bicycle spaces Retail use does not require long-term bicycle parking. Provided = 18 (ground floor) + 24 (2nd floor) = 42 long-term bicycle spaces	**Conforms**
	f) Notwithstanding Sections c) and e) above, for any use within a the Downtown (D1), (D2) and (D5) Zones, Transit Oriented Corridor Zones or the Commercial and Mixed Use Zones located in all or part of a building existing on the effective date of this By-law, no bicycle parking spaces are required, provided that the number of bicycle parking spaces which existed on the effective date of this By-law shall continue to be provided and maintained except a use shall not be required to provide additional bicycle parking beyond that which is required by Section c) and e) of thisBy-law. Where an addition, alteration or expansion of an existing building is proposed, the bicycle parking requirements of Section c) and e) above shall only apply to the increased gross floor area of the building.	New building. Not applicable	**N/A**
	g) Notwithstanding Subsection 5.6 a) and	D2 zone. Not applicable	**N/A**

	Required by By-Law	Provided	Conforming/ Non-Conforming
	c), for any use within the Commercial and Mixed Use (C4), (C5) and (C5a) Zones, the required motor vehicle parking may be reduced in accordance with the following regulations: i) 1 motor vehicle space for every 5 long term bicycle spaces is provided and maintained up to a maximum of 10% of the original motor vehicle parking requirement; and, ii) In addition to Subsection 5.7g)i), 1 motor vehicle space for every 15 square metres of gross floor area of locker, change room or shower facilities specifically accessible to all users of the secure long term bicycle spaces.		
	h) Where the application of the bicycle parking standards in Section 5.7 above, results in a numeric fraction, fractions shall be rounded down to the nearest whole number.		

Section 5: Parking (By-Law 24-052, Not Final and Binding)			
Section 5.1 – Parking Supply Requirements and Restrictions			
Minimum Number of Required Parking Spaces [as per section 5.1.1 (a) of Hamilton Zoning By-law 05-200]	The minimum number of required parking spaces which must be provided shall be the result of applying: i) The minimum amount in accordance with the Minimum Required Parking Rate Schedule in Section 5.7.1; ii) Any eligible exception in this Section; and, iii) Any eligible deductions in this Section	Subject to PRA1	
Exception for Existing Buildings in All Zones [as per section 5.1.1 (b) of Hamilton Zoning By-law 05-200]	Notwithstanding Section 5.7.1, for any use located in all or part of a building existing on the effective date of this By-law, no parking spaces are required, provided that the number of parking spaces which existed on the effective date of this By-law shall continue to be provided, except that: i) a use shall not be required to provide additional parking beyond that which is required by Section 5.7.1; and, ii) where an addition, alteration or expansion of an existing building is proposed, the parking requirements of Section 5.7.1 shall only apply to the increased gross floor area of the building.	New building. Not applicable	**N/A**
Rounding Calculations [as per section 5.1.1 (c) of Hamilton Zoning By-law	i) Where the application of the parking standards in Section 5.7.1, 5.7.2, 5.7.4, and 5.7.5 results in a numeric fraction, fractions shall be rounded down to the nearest whole number. ii) Where the application of the minimum accessible parking standards in Section 5.7.3 results in a		

05-200]	numeric fraction, fractions shall be rounded up to the nearest whole number. iii) Where the calculations in Sections 5.7.1, 5.7.2, 5.7.3, 5.7.4 or 5.7.5 apply to multiple uses, rounding shall only be applied to the sum of the requirements for all uses on the lot.		
Required Parking to be Provided on Same Lot [as per section 5.1.1 (d) of Hamilton Zoning By-law 05-200]	All required parking spaces shall be located on the same lot as the use for which they are required, unless the parking spaces are provided on another lot in compliance with Section 5.6.1.	On the same lot.	**Conforms**
Provision of Parking on a Lot Subject to Multiple Zones [as per section 5.1.1 (e) of Hamilton Zoning By-law 05-200]	Where more than one zone applies to a lot, parking spaces provided for any use on the lot may be located within any zone within the boundaries of the lot, except: i) where a portion of a lot is within one of the Open Space and Park Zones, no parking spaces may be located within such portion of the lot except parking spaces required for a permitted use located within such portion.	D2 zone only. Not applicable	**N/A**
Maximum Permitted Number of Parking [as per section 5.1.2 of Hamilton Zoning By-law 05-200]	a) Maximum Permitted Number of Parking Spaces Where Section 5.7.2 specifies a maximum permitted number of parking spaces, the number of parking spaces located on a lot shall not exceed that number.	**See Section 5.7.2 below**	
	b) Reduction of Excess Parking Spaces Where the number of existing parking spaces exceeds the maximum permitted in accordance with Section 5.7.2, the parking spaces provided in excess of the maximum parking standard may be eliminated. However, in no case may the number of parking spaces provided be less than the minimum parking requirements in Section 5.7.1.	Provided parking does not exceed the maximum	**N/A**
Minimum Required Number of Accessible Parking Spaces [as per section 5.1.3 of Hamilton Zoning By-law 05-200]	a) Minimum Number of Accessible Parking Spaces Accessible parking shall be designated and provided in accordance with the requirements of the Minimum Accessible Parking Rate Schedule in Section 5.7.3.	**See Section 5.7.3 below**	
	b) Exception for Certain Residential Uses Section 5.7.3 shall not apply to Single Detached Dwellings, Semi-Detached Dwellings, Duplex Dwellings, Triplex Dwellings, Fourplex Dwellings and Street Townhouse Dwellings.		
Minimum Required Number of Electric Vehicle Parking Spaces [as per section 5.1.4 of Hamilton Zoning By-law 05-200]	a) Minimum Required Number of Electric Vehicle Parking Spaces Where parking spaces are provided, Electric Vehicle Parking Spaces shall be provided in accordance with: i) The minimum rates in accordance with the Parking Schedule in Section 5.7.4; and, ii) Any eligible exception in this Section.	**See Section 5.7.4 below**	
	b) Exception for the Agriculture (A1) Zone, Rural (A2) Zone, and any Open	D2 zone. Not applicable	**N/A**

	Space and Park Zone The minimum requirement for Electric Vehicle Parking Spaces shall not apply to any parking space located within one of the following Zones: i) Agriculture (A1) Zone; ii) Rural (A2) Zone; and, iii) Any Open Space and Park Zone.		
	c) Exception for Existing Buildings in All Zones Notwithstanding Section 5.7.4, for any use within any Zone, located in all or part of a building existing on the effective date of this By-law, no Electric Vehicle Parking Spaces are required, except that: i) where an addition or expansion of an existing building is proposed, the Electric Vehicle Parking requirements of Section 5.7.4 shall only apply to such addition or expansion.	New building. Not applicable	**N/A**
	d) Exception for Existing Parking Lots in All Zones Notwithstanding Section 5.7.4, for any Parking Lot or portion thereof within any Zone, existing on the effective date of this By-law, no Electric Vehicle Parking Spaces are required, except that: i) where an expansion or enlargement of such parking is proposed, the electric vehicle parking requirements of Section 5.7.4 shall only apply to such expansion or enlargement.	Not applicable	**N/A**
	e) Regulations for Electric Vehicle Parking Spaces Electric Vehicle Parking Spaces shall be subject to the regulations in Section 5.6.7.	**See Section 5.6.7 below**	
Section 5.2 – Functional Design Requirements			
Minimum Parking Space Dimensions [as per section 5.2.1 of Hamilton Zoning By-law 05-200]	a) Minimum Parking Space Dimensions Unless permitted by another regulation in this By-law, parking space sizes shall be a minimum of 2.8 metres in width and 5.8 metres in length.	2.4 metres x 5.8 metres on the floor plans Note: Site plan statistics state that parking spaces are 2.8 metres x 5.8 metres	**Unable to determine compliance**
	b) Required Increase in Width due to Obstruction Where a wall, column, or any other obstruction is located abutting or within any parking space, the minimum width of a parking space shall be increased by 0.3 metres for each side which is obstructed by a wall, column, or other obstruction;	.3 metres not provided. Column not dimensioned and unable to determine if this is a requirement.	**Unable to determine compliance**
	c) Exceptions to Increase in Width due to Obstruction Notwithstanding Subsection 5.2.1 b), an additional 0.3 metres shall not be required provided all of the following	Column located at the front of the parking space but is not dimensioned.	**Unable to determine compliance**

	conditions are met: i) the maximum length of the wall, column or other obstruction shall not exceed 1.15 metres, measured along the side of the parking space, from the front or rear of the space towards the side's midpoint; ii) the wall, column or other obstruction is located at the front, rear, or both ends of the parking space; and, iii) the wall, column or other obstruction does not project more than 0.15 metres into the width of the parking space.		
	d) Increase in Length Due to Stairs within an Attached Garage The length of each parking space in an attached garage of a dwelling unit shall be increased by an equivalent length of the step, steps or stairwell that extends into the parking space, except: i) an open stairway may project into the length of the required parking space not more than 0.75 metres provided the height of the stairway does not exceed 0.5 metres	Not applicable	**N/A**
	e) Light Standards Not Considered Obstructions Notwithstanding Section 5.2.1 b), light standards, including the base, located at the intersection of four parking spaces shall not be considered as an obstruction.	Underground parking. Not applicable	**N/A**
	f) Optional Reduction in Minimum Dimensions for Small Car Parking Notwithstanding Subsection 5.2.1 a), where 10 or more parking spaces are provided on a lot, the minimum parking space size of not more than 10% of such required parking spaces may be a width of 2.6 metres and a length of 5.5 metres, provided that any such parking space is clearly identified as being reserved for the parking of small cars only.	Small car parking not provided.	**N/A**
	g) Minimum Parallel Parking Space Dimensions Notwithstanding Subsection 5.2.1 a), each parallel parking space shall have a minimum width of 2.4 metres and a minimum length of 6.7 metres, except that end spaces which have a clear, unobstructed approach, may have a minimum length of 5.5 metres.	2.4 metres x 6.7 metres	**Conforms**
Minimum Accessible Parking Space Dimensions and Minimum Accessibility Aisle Requirements [as per section 5.2.2 of Hamilton Zoning By-law	a) Minimum Accessible Parking Space Width and Accessibility Aisle Requirement Each accessible parking space shall have: i) a minimum width of 3.4 metres, notwithstanding Section 5.2.1 a) above	3.4 metres x 5.8 metres with a 1.5 metres wide shared accessible aisle. Adjacent accessible space is 2.4 metres x 5.8 metres	**Conforms**

<table>
<tr><td>05-200]</td><td>and subject to Section 5.2.2 b) below;
ii) a minimum length of 5.8 metres; and,
iii) a minimum of one side must continuously abut an accessibility aisle, provided in accordance with Section 5.2.2 c) and d) below</td><td></td><td></td></tr>
<tr><td></td><td><u>b) Permitted Reduction in Width for Accessible Parking Spaces</u>
Where two or more accessible parking spaces are provided, a maximum of 50% of such spaces, rounded up to the nearest whole number in the case of a numeric fraction, may have a reduced minimum width of 2.4 metres.</td><td>3.4 metres x 5.8 metres with a 1.5 metres wide shared accessible aisle. Adjacent accessible space is 2.4 metres x 5.8 metres</td><td>Conforms</td></tr>
<tr><td></td><td><u>c) Accessibility Aisle Requirements</u>
A minimum of one side of each accessible parking space shall continuously abut an unobstructed accessibility aisle which shall:
i) have a minimum width of 1.5 metres;
ii) have a minimum length which extends the full length of each abutting accessible parking space; and,
iii) be clearly identified and marked.</td><td>1.5 metres wide shared accessible aisle</td><td>Conforms</td></tr>
<tr><td></td><td><u>d) Sharing of Accessibility Aisle</u>
A maximum of two accessible parking spaces may abut one accessibility aisle, provided such spaces continuously abut opposite sides of the shared accessibility aisle.</td><td>2 accessible spaces abutting the accessibility aisle</td><td>Conforms</td></tr>
<tr><td>Drive Aisle Requirements
[as per section 5.2.3 of Hamilton Zoning By-law 05-200]</td><td><u>a) Minimum Drive Aisle Width</u>
The drive aisle abutting any parking space shall be designed and provided in accordance with the following minimum width requirements
<table><tr><th>Parking Angle Degree</th><th>One-Way and Two-Way Aisle Width</th></tr><tr><td>0º</td><td>3.7m</td></tr><tr><td>15º</td><td>3.7m</td></tr><tr><td>30º</td><td>3.7m</td></tr><tr><td>45º</td><td>4.5m</td></tr><tr><td>60º</td><td>5.5m</td></tr><tr><td>75º</td><td>6.0m</td></tr><tr><td>90º</td><td>6.0m</td></tr></table></td><td>6.5 metres</td><td>Conforms</td></tr>
<tr><td>Access Requirements
[as per section 5.2.4 of Hamilton Zoning By-law 05-200]</td><td><u>a) Access Design Requirements</u>
Access to all parking shall:
i) be arranged so as to not interfere with normal public use of the street or laneway;
ii) be provided by means of an access driveway:
1. located on the lot; or,</td><td>Arrangement does not interfere with normal public use of the street and an access driveway is located on the lot</td><td>Conforms</td></tr>
</table>

	2. located partly on the lot in the case of a mutual driveway; or, 3. by means of a Right-of-Way; and, iii) in the case of a Parking Lot, provide ingress and egress of vehicles to and from a street in a forward motion only.		
	b) Minimum Access Driveway Width The width of any driveway providing access to a parking space shall be a minimum of 2.7 metres	6.6 metres	**Conforms**
	c) Tandem and Stacked Parking Restriction and Exceptions All parking spaces shall have adequate means of ingress and egress to and from the street or laneway without the necessity of moving any other motor vehicle, except: i) the accessibility to a maximum of one of the parking spaces for a Single Detached Dwelling may be obstructed by another motor vehicle; and, ii) where a parking attendant is on site or a valet service is provided in association with a Commercial Parking Facility or Hotel, parking spaces may	Not applicable	**N/A**
	d) Minimum Floor Level for an Attached Garage Where an attached garage is provided for a Single Detached Dwelling, Semi-Detached Dwelling, Duplex Dwelling, Street Townhouse Dwelling, Triplex Dwelling or Fourplex Dwelling in any Zone except the Agriculture (A1) and Rural (A2) Zone, the finished floor level of the garage shall be a minimum of 0.3 metres above grade.	Not applicable	**N/A**
Section 5.3 – Locational, Landscaping and Surface Material Requirements			
Locational and Landscaping Requirements for All Uses [as per section 5.3.1 of Hamilton Zoning By-law 05-200]	a) Streetline Setback and Planting Strip Requirement Unless identified as exempt in Section 5.3.1 b), parking spaces and associated drive aisles, excluding driveways extending directly from the street, shall be subject to all of the following: i) Shall not be located within 3.0 metres of a street line; ii) Shall provide a 3.0 metre wide Planting Strip being required and permanently maintained between the street line and the parking spaces or aisle, except for that portion of a lot line; 1. Notwithstanding 5.3.1 a) iii), no Planting Strip shall be required for any portion of a lot line abutting the Red Hill Valley Parkway or the Lincoln Alexander Parkway; and, iii) Where a Planting Strip is provided, as per 5.3.1 a) ii) above, any	Underground parking only. Not applicable	**N/A**

	architectural wall or feature within the Planting Strip shall be limited to a maximum height of 0.6 metres.		
	b) Exemption for Certain Uses The setback and Planting Strip requirements of Section 5.3.1 a) shall not apply to parking provided in association with the following uses: i) Single Detached Dwelling; ii) Semi-Detached Dwelling; iii) Street Townhouse Dwelling; iv) Duplex Dwelling; v) Triplex Dwelling; and vi) Fourplex Dwelling.		
	c) Multiple Dwelling Front and Flankage Yard Parking Restriction In addition to Section 5.3.1 a), on a lot containing a Multiple Dwelling: i) With the exception of any visitor parking required by Section 5.7.1, required parking for Multiple Dwellings shall not be located between the façade and the front lot line or between the façade and flankage lot line. In no case shall any parking be located within the required front yard or required flankage yard or within 3.0 metres of a street line. ii) Visitor parking may be permitted between the façade and a street provided that no more than 50% of the front or flankage yard shall be used for visitor parking and access to such parking	Underground parking only. Not applicable	**N/A**
	d) Landscape Strip and Visual Barrier Requirement for Parking Lots Where a Parking Lot is situated on a lot which abuts a Residential Zone, Settlement Residential (S1) Zone, Downtown (D5), or Downtown (D6) Zone, the following shall be provided and maintained along that portion of the lot line that abuts a Residential Zone, Settlement Residential (S1) Zone, Downtown (D5) Zone, or Downtown (D6) Zone: i) A minimum 1.5 metre wide landscape strip which shall contain a Visual Barrier in accordance with Section 4.19 of this By-law.	Underground parking only. Not applicable	**N/A**
	e) Landscaped Area and Landscaped Parking Island Requirements for Surface Parking Lots Containing 50 or More Parking Spaces in All Zones In addition to Section 5.3.1 b), the following requirements shall apply to surface Parking Lots in all zones which contain 50 or more parking spaces: i) Landscaped Area(s) and Landscaped Parking Island(s) with a minimum combined area of 10% of the area of the Parking Lot and associated access driveway and manoeuvring areas shall be provided and maintained;	Underground parking only. Not applicable	**N/A**

	ii) Each Landscaped Area and Landscaped Parking Island shall have a minimum area of 10.0 square metres; iii) The calculation for Landscaped Area(s) and Landscaped Parking Island(s) shall not include the area of landscaping provided to satisfy the minimum requirement of any other Section of this By-law; iv) A Landscaped Area or Landscaped Parking Island may be traversed by a pedestrian walkway; and, v) When calculating the minimum number of parking spaces in accordance with Section 5.7.1, such number may be reduced by the number needed to accommodate the minimum Landscaped Parking Island requirement of this section, up to a maximum of 10% of the required parking spaces.		
Locational and Landscaping and Driveway Requirements for Single Detached Dwellings, Semi-Detached Dwellings, Duplex Dwellings, Triplex Dwellings and Fourplex Dwellings in All Zones Except the Agriculture (A1) and Rural (A2) Zones [as per section 5.3.2 of Hamilton Zoning By-law 05-200]	a) On a lot containing a Single Detached Dwelling, Semi-Detached Dwelling, Duplex Dwelling, Triplex Dwelling or Fourplex Dwelling, in all Zones except the Agriculture (A1) and Rural (A2) Zone: i) The width of a driveway shall not exceed the width of an attached garage; ii) Notwithstanding Subsection 5.3.2 a) i), on a lot having an attached garage less than 5.0 metres in width, the driveway may extend beyond the width of the garage toward the side lot line to a maximum width of 5.0 metres and no closer than 0.6 metres to the side lot line, nearest to the garage; iii) In the case of a dwelling unit without an attached garage, the driveway width shall not exceed 50% of the lot width or 8.0 metres, whichever is less; iv) A maximum of one driveway shall be permitted for each dwelling unit, except in the case of: 1. A corner lot where a maximum of one driveway may be permitted from each street. 2. On a lot having a minimum width of 30.0 metres, a maximum of two driveways may be permitted. v) On a corner lot, no access driveway shall be permitted through a daylight triangle.	Not applicable	**N/A**
Locational and Landscaping and Driveway Requirements for Street Townhouse Dwellings [as per section 5.3.3 of Hamilton Zoning By-law 05-200]	a) On a lot containing a Street Townhouse Dwelling: i) The required parking spaces for such dwelling shall be located a minimum distance of 5.8 metres from the street line to which the driveway is accessed; and, ii) No parking shall be permitted in a required front yard or required flankage	Not applicable	**N/A**

	yard.		
Parking Facility Surface Material Requirements [as per section 5.3.4 of Hamilton Zoning By-law 05-200]	a) Parking Spaces, Driveways and Widening(s) in All Zones Parking spaces, driveways and widening(s) in all zones shall be provided and maintained with stable surfaces such as asphalt, concrete or other hardsurfaced material, crushed stone, permeable pavers or gravel, and shall be maintained in a dust free condition. i) Notwithstanding Section 5.3.4 a), on a lot containing a residential use in a Residential Zone, any parking provided beyond that which is required by Section 5.7.1 of this By-law shall be maintained with permeable material and shall not be deemed landscaped area in the calculation of total landscaped area on a lot. ii) Notwithstanding Section 5.3.4 a), in the Industrial Zones, where crushed stone or gravel is provided, the access driveway shall be designed such that a minimum of 10.0 metres extending from the streetline shall be constructed and maintained with asphalt, concrete or other hard surfaced material, and shall be maintained in a dust free condition.	Presumed concrete and/or asphalt	**Conforms**
	b) Parking Lots in All Zones, except the Rural Zones Parking Lots in all zones, except the Rural Zones, shall be designed and maintained with stable surfaces such as asphalt, concrete, or other hardsurfaced material, or permeable pavers.	Not applicable	**N/A**
	c) Parking Lots in the Rural Zones Parking lots in the Rural Zones shall be designed and maintained with stable surfaces such as asphalt, concrete or other hard-surfaced material, crushed stone, permeable pavers, or gravel, except that: i) Where crushed stone or gravel is provided, the access driveway shall be designed such that a minimum of 10.0 metres extending from the streetline shall be constructed and maintained with asphalt, concrete or other hard surfaced material, and shall be maintained in a dust free condition.	Not applicable	**N/A**
Section 5.4 – Bicycle Parking Requirements			
Minimum Bicycle Parking Requirements [as per section 5.4.1 of Hamilton Zoning By-law 05-200]	a) Minimum Number of Required Bicycle Parking Spaces The minimum required number of short-term and long-term bicycle parking spaces which must be provided for each building on a lot in accordance with Section 5.4.2 shall be the result of applying: i) The minimum amount in accordance	**See Section 5.7.5 below**	

	with the Minimum Bicycle Parking Schedule in Section 5.7.5; and, ii) Any eligible exception in this Section.		
	b) Exception for Existing Buildings Notwithstanding Section 5.7.5, for any use located in all or part of a building existing on the effective date of this By-law, no additional bicycle parking spaces are required, provided that the number of bicycle parking spaces which existed on the effective date of this By-law shall continue to be provided and maintained, except that: i) a use shall not be required to provide additional bicycle parking beyond that which is required by Section 5.7.5; and, ii) where an addition, alteration or expansion of an existing building is proposed, the bicycle parking requirements of Section 5.7.5 shall only apply to the increased gross floor area of the building.	New building. Not applicable	**N/A**
Bicycle Parking Regulations [as per section 5.4.2 of Hamilton Zoning By-law 05-200]	a) Bicycle Parking Locational Requirements i) Short-term Bicycle Parking Spaces shall be publicly accessible and located within a bicycle parking area at grade, which includes the first floor of a building or an exterior surface area. ii) Long-term Bicycle Parking Spaces shall be located in a secure enclosed bicycle parking area.		
Section 5.5 – Loading Facilities			
Loading Facility Regulations [as per section 5.5.1 of Hamilton Zoning By-law 05-200]	a) The location of loading doors and associated loading facilities shall be subject to the following: i) Shall not be permitted within a Front Yard; ii) Shall not be permitted in any yard abutting a street, except where screened from view by a Visual Barrier in accordance with Section 4.19 of this By-law; and, iii) Shall not be permitted in a required yard abutting a Residential Zone or an Institutional Zone and shall be screened from view by a Visual Barrier in accordance with Section 4.19 of this By-law.	Loading located internally.	**Conforms**
Section 5.6 – General Parking Regulations			
Requirements for Locating Required Parking on Another Lot [as per section 5.6.1 of Hamilton Zoning By-law 05-200]	a) Notwithstanding Subsection 5.1.1 d), where the provision of parking on the same lot as the use requiring the parking is not possible, such off-site parking may be located on another lot within 300.0 metres of the lot containing the use requiring the parking, provided: i) Such off-site parking shall only be permitted within a zone in which the use requiring such parking is permitted or a U3 Zone; ii) Such off-site parking shall be subject to Subsection 5.6.1 b); and, iii) Notwithstanding Subsection 5.6.1 a),	Provided on the same lot. Not applicable	**N/A**

	off-site parking shall only be permitted on a lot in a Residential Zone where the off-site parking is for a use in a Residential Zone.		
	b) Where the required parking is provided in accordance with 5.6.1 a) above, the owners of both lots shall enter into an agreement with the City to be registered against the title of both the lot upon which parking is to be provided and the lot containing the use requiring the parking. The lot upon which the parking is located, pursuant to the agreement, shall continue to be so used only for such purposes until alternate parking spaces in conformity with the regulations of this By-law are provided.	Not applicable	**N/A**
	c) Parking as provided for in 5.6.1 b) may be transferred to another lot in accordance with Subsection 5.6.1 a), provided that an agreement as per 5.6.1 b) is registered on title of said other lot.	Not applicable	**N/A**
Commercial Motor Vehicles [as per section 5.6.2 of Hamilton Zoning By-law 05-200]	a) In any Residential Zone, Downtown (D5) Zone, Downtown (D6) Zone, Settlement Residential (S1) Zone, or any Residential uses in any Institutional Zone: i) A maximum of one Commercial Motor Vehicle may be parked on a lot. ii) Commercial Motor Vehicles shall be stored or parked within a garage or fully enclosed building. iii) Notwithstanding Subsection 5.6.2 a) ii), a Commercial Motor Vehicle may be parked on a driveway, provided the vehicle: 1. shall not exceed a gross weight of 3,000 kilograms registered with the Province; 2. shall not exceed a maximum vehicle length of 6.0 metres; 3. shall not exceed a maximum vehicle height of 2.4 metres; and, 4. shall not occupy the required parking spaces for existing dwellings on the lot. iv) Subsections 5.6.2 a) i), ii), and iii) shall not apply to any Commercial Motor Vehicle attending a residential lot for the purpose of short-term delivery or service.	Not applicable	**N/A**

	b) In any Agricultural (A1) Zone or Rural (A2) Zone: i) A maximum of one Commercial Motor Vehicle may be parked unenclosed, provided it is setback a minimum of 20 metres from any lot line and 50 metres from a dwelling on an adjacent lot. ii) Notwithstanding the definition of Commercial Motor Vehicle, Section 5.6.2 b) i) above does not apply to the storage or parking of agricultural vehicles and equipment associated with an agricultural operation.		
Major Recreational Equipment [as per section 5.6.4 of Hamilton Zoning By-law 05-200]	a) In any Residential Zone, Downtown (D5) or Downtown (D6) Zone or Settlement Residential (S1) Zone, Major Recreational Equipment: i) May be stored in a garage; ii) Shall not be stored in the front yard or flankage yard; iii) May be stored in a rear yard provided that it is screened from the view of a street and abutting properties zoned Residential or Downtown (D5) or Downtown (D6) with a Visual Barrier in accordance with Section 4.19 of this By-law; iv) May be stored in a carport or side yard provided that the Major Recreational Equipment is screened with a Visual Barrier in accordance with Section 4.19 of this By-law, and has a minimum setback of 1.2 metres from the side lot line; and, v) Notwithstanding 5.6.4 a) ii), iii), and iv), Major Recreational Equipment may be parked on a driveway wholly inside the lot line between May 1st and October 31st in each year.	Not applicable	**N/A**
	b) In any Rural Zone, Major Recreational Equipment: i) May be stored enclosed; ii) Shall not be stored in the minimum required front yard or flankage yard; iii) May be stored in a rear yard or side yard provided that the Major Recreational Equipment is screened with a visual barrier in accordance with Section 4.19 of this By-law, and has a minimum setback of 1.2 metres from the side or rear lot line; iv) Notwithstanding Subsections i), ii) and iii) herein, Major Recreational Equipment may be parked on a driveway wholly inside the lot line between May 1st and October 31st in each year; and, v) Storage of Major Recreational Equipment shall only be permitted for Major Recreational Equipment owned by a resident of the lot	Not applicable	**N/A**

Prohibition of New Principal Surface Parking Lots in Downtown Zones [as per section 5.6.5 of Hamilton Zoning By-law 05-200]	a) Within any Downtown Zone, no new surface parking lots shall be permitted except where the parking is accessory to the main use on the same lot.	Not applicable	**N/A**
Visitor Parking Space Requirements [as per section 5.6.6 of Hamilton Zoning By-law 05-200]	a) A required visitor parking space provided on a lot shall be clearly identified and marked as being reserved for such purpose.	Visitor parking not indicated.	**N/A**
Electric Vehicle Parking Space Regulations [as per section 5.6.7 of Hamilton Zoning By-law 05-200]	a) Permission for Chargers to Encroach Within Required Landscaping Features and Planting Strips Notwithstanding any other Section of this By-law, except Section 5.6.7 b) below, a charging device associated with an Electric Vehicle Parking Space, including any such space required by Section 5.1.4, may be located within any of the following required features and will not constitute a reduction of that feature's provision: i) Planting Strip; ii) Landscape Strip; iii) Landscaped Area; and, iv) Landscaped Parking Island.		
	b) Restrictions for Chargers Encroaching Within Required Landscaping Features and Planting Strips Despite Section 5.6.7 a) above, the permission to encroach within the noted features shall not apply to any of the following: i) A transformer or mechanical enclosure other than a charging device; or, ii) A charging device with a hard-surfaced base exceeding an area of 1.0 square metres.		
	c) Permission for Chargers to Encroach Within any Required Yard Notwithstanding any other Section of this By-law, a charging device associated with an Electric Vehicle Parking Space may be located within any required yard, except that any such charging device may not be located: i) less than 0.6 metres from any lot line; or, ii) within a visibility triangle.		
Section 5.7 – Parking Schedules			
Parking Schedules [as per section 5.7 of Hamilton Zoning By-law 05-200]	a) Parking Rate Areas Where this By-law indicates that a Parking Rate Area (PRA) applies for the purpose of calculating a parking requirement or permission, such Parking Rate Area shall apply to lands and shall be indicated as Parking Rate Area (PRA1), (PRA2) and (PRA3) on Schedule "A" – Zoning Maps.	Subject to PRA1	
	b) Application of Parking Rate Areas Where a parking rate or requirement contained in this By-law does not contain reference to a Parking Rate Area (PRA), such parking rate shall apply to all lands throughout the City. Only where a parking rate refers to a specific Parking Rate Area, and where such use is located within that specified Parking Rate Area, shall there be any modification to the parking rate, and only in the manner prescribed.		
Minimum Required Parking Rate Schedule [as per section 5.7.1 of Hamilton Zoning By-law 05-200]	a) Minimum Required Parking Rate Schedule Parking spaces shall be provided in the minimum quantity specified in Column 2 hereunder for each use listed in Column 1: As per table in By-law 5.7.1	77 dwelling units, mixed use 0 for residential parking 2 Visitor + 0.05 x 77 = 3.85 = 5.85 = 5	**Conforms**

<table>
<tr><td></td><td>Multiple Dwelling: Dwelling Unit, Mixed Use, where the total number of such units is 5 or greater
a) In PRA 1, no parking spaces are required for residents, and 2 visitor parking spaces, plus 0.05 visitor parking spaces are required per unit.

Retail
a) In PRA 1, and,
i) within a Downtown Zone, no parking is required; or,</td><td>Retail use does not require parking.

Provided = 21 parking spaces</td><td></td></tr>
<tr><td>Maximum Permitted Parking Rate Schedule
[as per section 5.7.2 of Hamilton Zoning By-law 05-200]</td><td>a) Maximum Permitted Parking Rate Schedule
For any use listed in Column 1, the number of parking spaces provided shall not exceed the number in Column 2:
As per table in By-law 5.7.2

i. Residential Uses:
Multiple Dwelling, and Dwelling Unit, Mixed Use, where the total number of such units is 5 or greater:
a) In PRA 1, 1 space per unit, inclusive of resident and visitor parking spaces.</td><td>77 units, 21 spaces in total. Does not exceed the maximum of 77.</td><td>Conforms</td></tr>
<tr><td>Minimum Accessible Parking Rate Schedule
[as per section 5.7.3 a) of Hamilton Zoning By-law 05-200]</td><td colspan="3">a) Minimum Accessible Parking Rate Schedules
The minimum number of accessible parking spaces which must be provided shall be the greater minimum number resulting from the calculations in Sections 5.7.3 b) and 5.7.3 c) below, with numeric fractions rounded up in accordance with Section 5.1.1 c) ii) and iii).</td></tr>
<tr><td>Minimum Accessible Parking Calculation 1 - Proportionate to Parking Provision
[as per section 5.7.3 b) of Hamilton Zoning By-law 05-200]</td><td colspan="2">b) Minimum Accessible Parking Calculation 1 - Proportionate to Parking Provision
On a lot containing 5 or more parking spaces, a minimum number of the parking spaces provided shall meet the requirements of the Minimum Accessible Parking Rate Schedule below:

Column 1
Total Number of Parking Spaces Provided

5 – 100 spaces

101 – 200 spaces</td><td>Column 2
Minimum Number of Accessible Parking Spaces

Minimum 4% of the total number of parking spaces provided;

Minimum 1 space + 3% of the total number of parking spaces provided;</td><td>4% of 21 = 0.84 = 1 accessible space

Provided = 2</td><td>Conforms</td></tr>
</table>

	201 - 1000 spaces	Minimum 2 spaces + 2% of the total number of parking spaces provided; and,		
	1000 or more spaces	Minimum 11 + 1% of the total number of required parking spaces.		
Minimum Accessible Parking Calculation 2 - Where Total Parking Provision is Reduced Pursuant to a Parking Rate Area or Downtown Zone [as per section 5.7.3 c) of Hamilton Zoning By-law 05-200]	c) Minimum Accessible Parking Calculation 2 - Where Total Parking Provision is Reduced Pursuant to a Parking Rate Area or Downtown Zone The minimum number of accessible parking spaces which must be provided shall be: i) In any Zone, except a Downtown Zone, the result of: a) applying the requirements of Section 5.7.1 to all uses, excluding the existing gross floor area within any existing building, and excluding the application of any Parking Rate Area or Downtown Zone, to produce a total number of parking spaces; and, b) applying the corresponding requirement listed in Column 2 of Schedule 5.7.3 b) to the total number of parking spaces resulting from the calculation in Section 5.7.3 c) i) a) immediately above to produce the minimum required number of accessible parking spaces. ii) In any Downtown Zone, the result of applying Column 2 hereunder for each use listed in Column 1, excluding any existing gross floor area within any existing building: Refer to table in By-law 5.7.3 c) 5-100 spaces Minimum 4% of the total number of parking spaces provided.		4% of 21 = 0.84 = 1 accessible space Provided = 2	**Conforms**
Minimum Electric Vehicle Parking Rate Schedule [as per section 5.7.4 a) of Hamilton Zoning By-law 05-200]	a) Minimum Electric Vehicle Parking Rate Schedule Of the parking spaces provided on a lot, a minimum percentage shall be provided as Electric Vehicle Parking Spaces, as specified in Column 2 hereunder for each associated use listed in Column 1, and any such Electric Vehicle Parking Spaces shall be subject to Section 5.6.7: As per table in By-law 5.7.4 i. Residential Uses Dwelling Unit Mixed Use, 100% of all parking spaces, excluding any visitor spaces.		0 spaces required for residential parking. 5 spaces for visitor parking required. 21 spaces provided. 2 spaces indicated in the site plan statistics as being EV ready. None shown on the plan. A stat, note, typical standard or other indication in a site plan that a certain percentage will meet the EV requirements will be sufficient for zoning purposes. For questions around how to or who will ensure that the rough in is installed, this will typically be	**Unable to determine compliance**

		Building Inspections' responsibility since it is a zoning requirement and must be verified at build out.	
Minimum Bicycle Parking Rate Schedule [as per section 5.7.5 a) of Hamilton Zoning By-law 05-200]	a) Minimum Required Bicycle Parking Rate Schedule For each building containing one or more of the uses listed in Column 1 in the following schedule: i) Short-term Bicycle Parking Spaces shall be provided in the minimum quantity specified in Column 2 and subject to the regulations in Section 5.4.2; and ii) Long-term Bicycle Parking Spaces shall be provided in the minimum quantity specified in Column 3 and subject to the regulations in Section 5.4.2. As per table in By-law 5.7.5 i. Residential Uses: Multiple Dwelling, and Dwelling Unit, Mixed Use, where the total number of such units exceeds 4 Short term = a) In Parking Rate Area (PRA) 1 and PRA 2, 0.1 per unit. Long term = a) In Parking Rate Area (PRA) 1 and PRA 2, 0.7 per unit. ii. Non-Residential Uses Retail Short term = a) In PRA 1 and PRA 2, 0.2 for each 100 square metres of gross floor area. Long-term = a) In PRA 1 and PRA 2, 0.15 for each 100 square metres of gross floor area.	i. Residential Uses Short-term = 77 x 0.1 = 7.7 = 7 Provided = 10 short-term spaces provided in the public right of way, not on the subject lands. Applicant shall pursue an encroachment agreement with the City. Long-term = 77 x 0.7 = 53.9 = 53 Provided = 42 long term spaces ii. Non-Residential Uses Short-term = 38.17 square metres of retail = 0.2 = 0 bicycle requirement Long-term = 38.17 square metres of retail = 0.15 = 0 bicycle requirement Provided = 0	**Non-conforming**

6. A Corridor Development Permit is required from Metrolinx to construct any buildings, structure, road, utility infrastructure, or to conduct any excavation, dewatering or other Prescribed Work pursuant to the Building Transit Faster Act and its Regulation. Please contact development.coordinator@metrolinx.com for further information.

7. Fencing details have not been provided; all fencing shall conform to Hamilton Fence By-law 10-142.

8. All new signs proposed for this development must comply with the regulations contained within the Sign By-law 10-197.

9. A building permit is required for construction of the proposed accessory building in the normal manner.

10. The designer shall ensure that the fire access route conforms to the Ontario Building Code.

11. This review is based on the plans submitted with the application.

Yours truly

For the Manager of Zoning and Committee of Adjustment

ACKNOWLEDGEMENT CLAUSE (FOR ZONING COMPLIANCE REVIEW APPLICATIONS IN SUPPORT OF A ZONING BY-LAW AMENDMENT, SITE PLAN, OR MINOR VARIANCE APPLICATION)

I/We hereby acknowledge and understand the above noted comments and further acknowledge that the supporting documentation submitted with this Zoning Compliance Review application has not been changed or modified between the date of this letter and the date of application for the subsequent Zoning By-law Amendment, Site Plan, or Minor Variance application.

If the supporting documentation has been changed or modified, a new application for Zoning Compliance Review may be required prior to acceptance of a formal application for Zoning By-law Amendment, Site Plan, or Minor Variance application.

Owner	Owner Signature	Date
Applicant (I have the authority to bind the Owner)	Applicant Signature	Date
Agent (I have the authority to bind the Owner)	Agent Signature	Date

Outlook

RE: 20-056 Hamilton 15-217 KING ST WEST - Site Plan Application and Minor Variance Fees

From Amir, Amna <Amna.Amir@hamilton.ca>
Date Tue 2024-10-08 2:40 PM
To Natalia Garavito <ngaravito@apiconsultants.net>
Cc David Barnard <dbarnard@apiconsultants.net>

Hi Natalia,

I tried giving you a call back, but reached your vm.

The Site Plan Application and Minor Variance application can be submitted concurrently, however there may be other variances identified in the first review, so we advise to wait on submitting the Minor Variance application until you get Zoning comments back confirming **all** non-conformities. However, it is ultimately up to you.

The 2024 Site Plan Application fee is $9,145.

We commit to issuing conditional approval of the site plan application in 60 days.

Once conditional approval is issued, we will need the 2024 clearing of conditions fee ($17,675) to start the technical review stage for clearances.

If you have any questions, feel free to call me.

Thanks,
Amna

Amna Amir BES (she/her)
Planner II – Site Planning
Heritage and Urban Design
Planning & Economic Development Department
City of Hamilton, 71 Main St. W, L8P 4Y5
(905) 546-2424 ext. 4454
Hamilton

From: Natalia Garavito <ngaravito@apiconsultants.net>
Sent: Tuesday, October 8, 2024 10:08 AM
To: Amir, Amna <Amna.Amir@hamilton.ca>
Cc: David Barnard <dbarnard@apiconsultants.net>
Subject: Re: 20-056 Hamilton 15-217 KING ST WEST - Site Plan Application and Minor Variance Fees

External Email: Use caution with links and attachments

Hello Amna,

I just tried to reach out to you via phone and was not able to connect, could you please get back to us as soon as possible. We need to submit by the end of this week.

Look forward to hearing from you.

Kindest Regards!

Natalia Garavito

API DEVELOPMENT CONSULTANTS INC.
ARCHITECTURE & PLANNING INITIATIVES

Site Plan & Development Coordinator.
Email: ngaravito@apiconsultants.net
Office: 905-337 7249 Ext:206
1464 Cornwall Road, Unit 7
Oakville, On., L6J 7W5
www.apidevelopmentconsultants.com
Check out our YouTube Channel!

From: Natalia Garavito <ngaravito@apiconsultants.net>
Sent: Tuesday, October 8, 2024 8:29 AM
To: amna.amir@hamilton.ca <amna.amir@hamilton.ca>
Subject: Re: 20-056 Hamilton 15-217 KING ST WEST - Site Plan Application and Minor Variance Fees

Good morning Amna,

I thought I would follow up regarding my below email, could you please also confirm if we shall apply for the Minor Variance Concurrently with our Site Plan Application.

Look forward to hearing from you.

Kindest Regards!

Natalia Garavito

API DEVELOPMENT CONSULTANTS INC.
ARCHITECTURE & PLANNING INITIATIVES

Site Plan & Development Coordinator.
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Office: 905-337 7249 Ext:206
1464 Cornwall Road, Unit 7
Oakville, On., L6J 7W5
www.apidevelopmentconsultants.com
Check out our YouTube Channel!

From: Natalia Garavito <ngaravito@apiconsultants.net>
Sent: Friday, October 4, 2024 10:02 AM
To: amna.amir@hamilton.ca <amna.amir@hamilton.ca>
Subject: 20-056 Hamilton 15-217 KING ST WEST - Site Plan Application and Minor Variance Fees

Good morning Amna,

I hope this email finds you well,

Could you please confirm the Applicable Fees for the Site Plan Application and Minor Variance Application.

Furthermore, are any hard copies required?

Look forward to hearing from you.

Kindest Regards!

Natalia Garavito

Site Plan & Development Coordinator.
Email: ngaravito@apiconsultants.net
Office: 905-337 7249 Ext:206
1464 Cornwall Road, Unit 7
Oakville, On., L6J 7W5
www.apidevelopmentconsultants.com
Check out our YouTube Channel!

Committee of Adjustment
City Hall, 5th Floor,
71 Main St. W.,
Hamilton, ON L8P4Y5

Phone: (905) 546-2424 ext. 4221
Email: cofa@hamilton.ca

APPLICATION FOR A MINOR VARIANCE/PERMISSION

UNDER SECTION 45 OF THE *PLANNING ACT*

1. APPLICANT INFORMATION

	NAME
Registered Owners(s)	
Applicant(s)	
Agent or Solicitor	

[redacted]

1.2 Primary contact ☐ Applicant ☐ Owner ☑ Agent/Solicitor

1.3 Sign should be sent to ☐ Applicant ☑ Owner ☑ AgentSolicitor

1.4 Request for digital copy of sign ☑ Yes*

If YES, provide email address where sign is to be sent [redacted]

1.5 All correspondence may be sent by email ☑ Yes* ☐ No

If Yes, a valid email must be included for the registered owner(s) AND the Applicant/Agent (if applicable). Only one email address submitted will result in the voiding of this service. This request does not guarantee all correspondence will sent by email.

1.6 Payment type ☐ In person ☐ Cheque [redacted]

*Must provide number above

2. LOCATION OF SUBJECT LAND

2.1 Complete the applicable sections:

Municipal Address	215-217 KING ST WEST, HAMILTON, ON		
Assessment Roll Number			
Former Municipality	City of Hamilton		
Lot	10,11	Concession	
Registered Plan Number	121	Lot(s)	
Reference Plan Number (s)	750-A	Part(s)	

2.2 Are there any easements or restrictive covenants affecting the subject land?

☐ Yes ☑ No

If YES, describe the easement or covenant and its effect:

3. PURPOSE OF THE APPLICATION

Additional sheets can be submitted if there is not sufficient room to answer the following questions. Additional sheets must be clearly labelled

All dimensions in the application form are to be provided in metric units (millimetres, metres, hectares, etc.)

3.1 Nature and extent of relief applied for:

1. 3m step-back from building base facade at 16m - Provided 3m at 16.4m
2. 3m step-back at 22m rear and side - Provided 3m at 22.2m
3. Minimum 60% Area of Ground Floor of clear glazed windows and doors - Provided 50%
4. Minimum 25%-Maximum 40% area of 2nd floor and 3rd floor facade of clear glazed windows - Provided 45.2%
5. Holding Provision H20 Building Height Maximum 22m - Provided 43.8m

☐ Second Dwelling Unit ☑ Reconstruction of Existing Dwelling

3.2 Why it is not possible to comply with the provisions of the By-law?

1,2 The Floor to Floor established height are the same at all floors. We we factor in the clear height required for the garbage truck clearance height we unfortunately have to a non compliance issue. The only way to comply would be to have shorter floor to floor which is not marketable.
3,4. We have to leave some areas for Structure and what the zoning does not account for is the heritage report that was submitted with the Application
5*. The increase setbacks that allow for the Maximum Height of 44m (Note that we believe a MV is needed to remove the Holding Provision H20)

3.3 Is this an application 45(2) of the Planning Act.

☑ Yes ☐ No

If yes, please provide an explanation:

4. DESCRIPTION OF SUBJECT LAND AND SERVICING INFORMATION

4.1 Dimensions of Subject Lands:

Lot Frontage	Lot Depth	Lot Area	Width of Street
30.18	43.15	6.25 ha	9.10m

4.2 Location of all buildings and structures on or proposed for the subject lands: (Specify distance from side, rear and front lot lines)

Existing:

Type of Structure	Front Yard Setback	Rear Yard Setback	Side Yard Setbacks	Date of Construction
Commercial Bldg	5.30	2.0	0E/13.46W	

Proposed:

Type of Structure	Front Yard Setback	Rear Yard Setback	Side Yard Setbacks	Date of Construction
Mixed Use Bldg	2.44	.20	0E/3.05W	

4.3. Particulars of all buildings and structures on or proposed for the subject lands (attach additional sheets if necessary):

Existing:

Type of Structure	Ground Floor Area	Gross Floor Area	Number of Storeys	Height
Commercial Bldg	5.30	2.0	0E/13.46W	

Proposed:

Type of Structure	Ground Floor Area	Gross Floor Area	Number of Storeys	Height
Mixed Use Bldg	2.44	.20	0E/3.05W	

4.4 Type of water supply: (check appropriate box)

- ☑ publicly owned and operated piped water system
- ☐ privately owned and operated individual well
- ☐ lake or other water body
- ☐ other means (specify)

_____

4.5 Type of storm drainage: (check appropriate boxes)

- ☑ publicly owned and operated storm sewers
- ☐ swales
- ☐ ditches
- ☐ other means (specify)

_____

4.6 Type of sewage disposal proposed: (check appropriate box)

☑ publicly owned and operated sanitary sewage
☐ system privately owned and operated individual
☐ septic system other means (specify) _____

4.7 Type of access: (check appropriate box)

☐ provincial highway
☐ municipal road, seasonally maintained
☑ municipal road, maintained all year
☐ right of way
☐ other public road

_____

4.8 Proposed use(s) of the subject property (single detached dwelling duplex, retail, factory etc.):

Mixed Use Building - Single Detached

4.9 Existing uses of abutting properties (single detached dwelling duplex, retail, factory etc.):

West: Commercial Building, East:Municipal Road, North: Municipal Road, South:Commercial Hotel Building

7 HISTORY OF THE SUBJECT LAND

7.1 Date of acquisition of subject lands:

7.2 Previous use(s) of the subject property: (single detached dwelling duplex, retail, factory etc)

Single Detached -commercial Building

7.3 Existing use(s) of the subject property: (single detached dwelling duplex, retail, factory etc)

Single Detached -commercial Building

7.4 Length of time the existing uses of the subject property have continued:

Unknown

7.5 What is the existing official plan designation of the subject land?

Rural Hamilton Official Plan designation (if applicable): Urban Area

Rural Settlement Area: Urban Area

Urban Hamilton Official Plan designation (if applicable) Downtown Mixed Use Area

Please provide an explanation of how the application conforms with the Official Plan.

Please refer to the Justification Report in support.

7.6 What is the existing zoning of the subject land? Downtown Mixed Use - Pedestrian Focus

7.8 Has the owner previously applied for relief in respect of the subject property? (Zoning By-lawAmendment or Minor Variance)

☐ Yes ☑ No

If yes, please provide the file number: Downtown Mixed Use - Pedestrian Focus D2

7.9 Is the subject property the subject of a current application for consent under Section 53 of the *Planning Act*?

☑ Yes ☐ No

If yes, please provide the file number: _____

8 ADDITIONAL INFORMATION

8.1 Number of Dwelling Units Existing: 2

8.2 Number of Dwelling Units Proposed: 77

8.3 Additional Information (please include separate sheet if needed):

Proposed Development has gone Through Peer Review Panel, Zoning Review and Site Plan Approval. The proposed Development is a Residential Tower with 14 Storeys and 77 units. 3 Levels of underground parking with 18 parking spaces, the requested relief has been

11 COMPLETE APPLICATION REQUIREMENTS

11.1 All Applications

- [x] Application Fee
- [x] Site Sketch
- [x] Complete Application form
- [x] Signatures Sheet

11.4 Other Information Deemed Necessary

- [x] Cover Letter/Planning Justification Report
- [x] Authorization from Council or Director of Planning and Chief Planner to submit application for Minor Variance
- [ ] Minimum Distance Separation Formulae (data sheet available upon request)
- [ ] Hydrogeological Assessment
- [x] Septic Assessment
- [x] Archeological Assessment
- [x] Noise Study
- [x] Parking Study

_____

_____