

**ONTARIO**  
**SUPERIOR COURT OF JUSTICE**  
**(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,**  
**R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.**  
**FOR THE APPOINTMENT OF A TRUSTEE UNDER SECTION 68(1) OF THE**  
***CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**MOTION RECORD**  
(returnable August 5, 2015)

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**TO: THE SERVICE LIST**

**SERVICE LIST**  
(as of April 23, 2015)

**CHAITONS LLP**

5000 Yonge Street, 10<sup>th</sup> Floor  
Toronto, ON M2N 7E9

**Harvey Chaiton**

Tel: (416) 218-1129  
Fax: (416) 218-1849  
E-mail: harvey@chaitons.com

**Sam Rappos**

Tel: (416) 218-1137  
Fax: (416) 218-1837  
Email: samr@chaitons.com

**Lawyers for the Trustee**

**COLLINS BARROW TORONTO LIMITED**

11 King St. West  
Suite 700, Box 27  
Toronto, ON M5H 4C7

**Bryan Tannenbaum and Arif Dhanani**

Tel: (416) 238-5055 / (647) 725-0183  
Fax: (416) 480-2646  
Email: btannenbaum@collinsbarrow.com / andhanani@collinsbarrow.com

**Trustee**

**THORNTON GROUT FINNIGAN LLP**

Ste. 3200, 100 Wellington St. W.  
PO Box 329, Toronto-Dominion Centre  
Toronto, ON M5K 1K7

**Grant Moffat / Asim Iqbal**

Tel: (416) 304-0599 / (416) 304-0595  
Fax: (416) 304-1313  
Email: gmoffat@tgf.ca / aiqbal@tgf.ca

**Lawyers for Laurentian Bank of Canada**

**PAPE BARRISTERS PROFESSIONAL CORPORATION**

One Queen Street East  
Suite 1910, Box 69  
Toronto, ON M5C 2W5

**Jonathan Rosenstein**

Tel: (416) 364-8716  
Fax: (416) 364-8855  
Email: jrosenstein@papebarristers.com / jenn@papebarristers.com

**Lawyers for Aviva Insurance Company of Canada**

**AFFLECK GREENE MCMURTRY LLP**

365 Bay Street, Suite 200  
Toronto, ON M5H 2V1

**Kyle Peterson**

Tel: (416) 360-0327  
Fax: (416) 360-5960  
Email: kpeterson@agmlawyers.com

**Lawyers for MarshallZehr Group Inc.**

**BROWN BEATTIE O'DONOVAN LLP**

1600 – 380 Wellington Street  
London, ON N6A 5B5

**James Fisher**

Tel: (519) 964-3163  
Fax: (519) 679-6350  
Email: jfisher@bbo.on.ca

**Lawyers for Allen Street Holdings Inc.**

**SIMPSONWIGLE LAW LLP**

1 Hunter Street East, Suite 200  
Hamilton, ON L8N 3W1

**Derek Schmuck**

Tel: (905) 528-8411 x 363  
Fax: (905) 528-9008  
Email: schmuckd@simpsonwigle.com

**Lawyers for Screen Painting Ltd.**

**A. CONTE PROFESSIONAL CORPORATION**

242 Applewood Crescent  
Unit 12, 2<sup>nd</sup> Floor  
Concord, ON L4K 4E5

**Antonio Conte**

Tel: (416) 947-0208  
Fax: (866) 543-3165  
Email: a.conte@contelaw.ca

**Lawyers for Global Fire Protection Ltd.**

**KOSKIE MINSKY LLP**

20 Queen Street West  
Suite 900, Box 52  
Toronto, ON M5H 3R3

**Jeffrey Long**

Tel: (416) 595-2125  
Fax: (416) 204-2892  
Email: jlong@kmlaw.ca

**Lawyers for J & I Gaweda Construction Limited**

**PETKER & ASSOCIATES**

295 Weber St. N.  
Waterloo, ON N2J 3H8

**Jarvis Postnikoff**

Tel: (519) 886-1204  
Fax: (519) 886-5674  
Email: jarvis@petkerlaw.com

**Lawyer for Bast Home Comfort Inc.**

**PARENTE, BOREAN LLP**

3883 Highway 7, Suite 207  
Woodbridge, ON L4L 6C1

**Gerard Borean**

Tel: (905) 850-6066  
Fax: (905) 850-6069  
Email: gborean@parenteborean.com

**Lawyers for Frendell Kitchens Limited**



**CHODOLA REYNOLDS BINDER**

720 Walker Road  
Windsor, ON N8Y 2N3

**Robert Reynolds**

Tel: (519) 254-6433  
Fax: (519) 254-7990  
Email: reynolds@crblaw.ca

**Lawyers for T.I.C. Contracting Ltd.**

**MILLER THOMSON LLP**

60 Columbia Way, Suite 600  
Markham, ON L3R 0C9

**Enzo Di Iorio / Riccardo Del Vecchio**

Tel: (905) 415-6711 / (905) 415-6764  
Fax: (905) 415-6777  
Email: ediiorio@millerthomson.com / rdelvecchio@millerthomson.com

**Lawyers for Global Precast Inc. and 2050491 Ontario Inc. o/a The  
Downsview Group**

**CLARKS LLP**

1200 Canada Building  
374 Ouellette Avenue  
Windsor, ON N9A 1A8

**John Clark**

Tel: (519) 254-4990  
Fax: (519) 254-2294  
Email: jtclark@clarkslaw.com

**Lawyers for Sam Tortoloa Enterprises Inc.**

**DOOLEY LUCENTI**

10 Checkley Street  
Barrie, ON L4N 1W1

**Eric Gionet**

Tel: (705) 792-7963  
Fax: (705) 792-7964  
Email: egionet@dllaw.ca

**Lawyers for CRS Contractors Rental Supply General Partner Inc.**

**PALLET VALO LLP**

77 City Centre Drive  
West Tower, Suite 300  
Mississauga, ON L5B 1M5

**Anna Esposito**

Tel: (905) 273-3022 x 260  
Fax: (905) 273-6920  
Email: aesposito@pallettvalo.com

**Lawyers for Adlers Main Tile & Carpet Co. Ltd. and 694643 Ontario Limited**

**GLAHOLT LLP**

141 Adelaide St West, Suite 800  
Toronto, ON M5H 3L5

**Andrea Lee**

Tel: (416) 368-8280 x 216  
Fax: (416) 368-3467  
Email: al@glaholt.com

**Lawyers for Turner Fleischer Architects Inc.**

**BISCEGLIA & ASSOCIATES PROFESSIONAL CORPORATION**

200-7941 Jane St.  
Concord, ON L4K 4L6

**Emillio Bisceglia**

Tel: (905) 695-3100  
Fax: (905) 695-5201  
Email: ebisceglia@lawtoronto.com

**Lawyers for Hammerschlag & Joffe Inc.**

**BARRY S. GREENBERG**

Barrister and Solicitor  
7626A Yonge Street  
Thornhill, ON L4J 1V9

Tel: (905) 886-9535 Ext. 27  
Fax: (905) 886-9540  
Email: bsgreenberg@rogers.com

**Lawyers for Weston Flooring Limited**

**LEVINE, SHERKIN, BOUSSIDAN PROFESSIONAL CORPORATION**  
300-23 Lesmill Rd.  
North York, ON M3B 3P6

**Jeremy Sacks**

Tel: (416) 224-2400  
Fax: (416) 224-2408  
Email: [Jeremy@lsblaw.com](mailto:Jeremy@lsblaw.com)

**Lawyers for Great Pyramid Aluminum Ltd.**

**NORTON ROSE FULBRIGHT CANADA LLP**

Suite 3800, Royal Bank Plaza  
South Tower, 200 Bay Street, P.O. Box 84  
Toronto, ON M5J 2Z4

**Michael Tamblyn**

Tel: (416) 202-6705  
Fax: (416) 216-3930  
Email: [michael.tamblyn@nortonrosefulbright.com](mailto:michael.tamblyn@nortonrosefulbright.com)

**Lawyers for Lipton's Audio Video Unlimited**

**HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF  
ONTARIO AS REPRESENTED BY THE MINISTER OF FINANCE**

PO Box 620  
33 King Street West, 6th Floor  
Oshawa, ON L1H 8E9

**Kevin J. O'Hara**

Tel: (905) 433-6934  
Fax: (905) 436-451  
Email: [kevin.ohara@ontario.ca](mailto:kevin.ohara@ontario.ca)

**REGIONAL MUNICIPALITY OF WATERLOO**

150 Frederick St., 8th Floor  
Kitchener, ON N2G 4J3

**Fiona M. McCrea - Solicitor, Property**

Tel: (519) 575-4518  
Fax: (519) 575-4466  
Email: [fmccrea@regionofwaterloo.ca](mailto:fmccrea@regionofwaterloo.ca)

**CITY OF WATERLOO**

Waterloo City Centre  
100 Regina Street South

PO Box 337 STN Waterloo  
Waterloo, ON N2J 4A8

**Steve Ross, Director, Legal Services**

Tel: (519) 747-8758

Fax: (519) 747-8523

Email: Steve.Ross@waterloo.ca

**HAMMOND FLESIAS**

3800 Steeles Ave. West, Suite 300  
Woodbridge, ON L4L 4G9

**Richard Hammond**

Tel: (905) 850-8550

Fax: (905) 850-9998

Email: rhammond@hammondflesias.com

**Lawyers for Brody Wall System Ltd.**

**MADORIN, SNYDER LLP**

55 King Street West, P.O. Box 1234  
Kitchener, ON N2G 4G9

**Tim J. McGowan**

Tel: (519) 744-4491

Fax: (519) 741-8060

Email: tmcgowan@kw-law.com

**Lawyers for Certain Unit Purchasers**

**GOWLING LAFLEUR HENDERSON**

50 Queen Street North, Suite 1020  
PO Box 2248  
Kitchener, ON N2H 6W2

**Ross Earnshaw**

Tel: (519) 575-7525

Fax: (519) 571-5025

Email: ross.earnshaw@gowlings.com

**Lawyers for Certain Unit Purchasers**

**SORBARA, SCHUMACHER, MCCANN LLP**

31 Union St. East  
Waterloo, ON N2J 1B8

**Justin Heimpel**

Tel: (519) 741-8010 ext. 224  
Fax: (519) 576-1184  
Email: [jheimpel@sorbaralaw.com](mailto:jheimpel@sorbaralaw.com)

**Lawyers for Bulldog Rebar Inc. and the City of Waterloo**

**FARHOOD BOEHLER WINNY LLP**

Marsland Center  
510-20 Erb Street West  
Waterloo, ON N2L 1T2

**Wayne Boehler**

Tel: (519) 744-9949  
Fax: (519) 744-7974  
Email: [wboehler@fblaw.ca](mailto:wboehler@fblaw.ca)

**Lawyers for Nelco Mechanical Limited**

**TORYS LLP**

79 Wellington St. W., 30th Floor  
Box 270, TD South Tower  
Toronto, ON M5K 1N2

**Adam Slavens**

Tel: (416) 865-7333  
Fax: (416) 865-7380  
Email: [aslavens@torys.com](mailto:aslavens@torys.com)

**Lawyers for Tarion Warranty Corporation**

**DUNCAN, LINTON LLP**

45 Erb St. E.  
PO Box 457, Stn. Waterloo  
Waterloo, ON N2J 4B5

**Irwin Duncan**

Tel: (519) 886-3340  
Fax: (519) 886-8651  
Email: [iad@kwlaw.net](mailto:iad@kwlaw.net)

**Lawyers for Certain Unit Purchasers**

**M.G.M. Paralegal Services**

19 Weber Street East  
Kitchener, ON N2H 1C2

**Nancy Gazzola**

Tel: (226) 647-9206

Fax: (866) 300-8682

Email: mgmlegalservice@gmail.com

**Paralegals for Gregory Moore**

**RUBIN & CHRISTIE LLP**

219 Finch Avenue West - 2nd Floor

Toronto, ON M2R 1M2

**David Rubin**

Tel: (416) 361-0900

Fax: (416) 361-3459

Email: drubin@rubinchristie.ca

**Lawyers for DKS Stone Fabrication & Design Inc.**

**ECCLESTON LLP**

Toronto Dominion Bank Tower, Ste. 4020,

66 Wellington St. W.

PO Box 230, Stn. Toronto Dom.

Toronto, ON M5K 1J3

**Maurizio Artale**

Tel: (416) 913-2043

Fax: (416) 504-2686

Email: Maurizio@ecclestonllp.com

**Lawyers for Skyway Canada Limited**

**CAPO, SGRO LLP**

400-7050 Weston Rd.

Woodbridge, ON L4L 8G7

**Gregory Hemsworth**

Tel: (905) 850-7000

Fax: (905) 850-7050

Email: ghemsworth@cslp.ca

**Lawyers for Aluminum Window Design Installations Inc.**

**SAVARIA**

85 Bessemer Road

London ON N6E 1P9

**Danielle Ryder**

Tel: (519) 681-3311 ext 4231

Fax: (519) 681-3494

Email: [danieller@savaria.com](mailto:danieller@savaria.com)

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# TAB 1

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**NOTICE OF MOTION**  
(returnable August 5, 2015)

**Oliver Romaniuk** (“**Mr. Romaniuk**”), currently not a party to this proceeding, will make a motion to a Judge of the Commercial List on August 5, 2015 at 10:00 a.m., or as soon after that time as the motion can be heard, at 330 University Avenue, Toronto, Ontario.

**PROPOSED METHOD OF HEARING:** The motion is to be heard orally.

**THE MOTION IS FOR:**

- (a) an Order or Orders:
  - (i) granting Mr. Romaniuk leave to intervene as an added party based on his Agreement of Purchase and Sale (“**Agreement**”) and his outstanding obligations and liabilities to the Applicant;

- (ii) granting Mr. Romaniuk latitude with respect to, or opportunity to rectify, matters relating to the *Rules of Civil Procedure*, R.R.O. 1990, Regulation 194 and the various Practice Directions, Notices, Guides and Forms of the Ontario Superior Court of Justice, all to the extent that the Court finds to be reasonable and appropriate in each circumstance;
- (iii) granting Mr. Romaniuk an initial opportunity to plead his case orally, in whole or in part and as the Court sees fit to restrict, with respect to matter or duration, at the scheduled hearing and that this opportunity be subject to a blanket indemnity for cost awards, either for or against. If the Court so decides that an Order as described to be excessive, inappropriate, or as a matter of precedent, disallowed, Mr. Romaniuk begs forgiveness of the Honourable Court and retracts all requests, other than to remain as an interested party with respect to the proceeding.
- (iv) denying the Trustee approval of the Trustee's conduct as set out in the many reports of the Trustee, for the reasons described herein;
- (v) directing the Trustee to disclose any information relevant to its proposed parking plan, as well as the expected effects of the plan, directly or indirectly, on the values of the affected Units or with regards to the conduct of the Trustee in its dealings with Purchasers;
- (vi) an interim Order directing the Trustee to reverse the reallocation of Parking Unit 64, Level A, originally allocated to Unit 1, Level 12 if said Parking Unit has not yet completed final closing;

- (vii) an interlocutory injunction on the Trustee with regards to the closing of any further Units for 15 business days or for an amount of time the Court finds appropriate to determine the appropriateness of the Trustee's actions, based on the arguments contained herein;
- (viii) direct the trustee to hold an open, public and transparent process which earnestly considers proposals from all Purchasers with respect to solving the issues of both parking and the Unsold Units;
- (ix) direct the Trustee to perform a thorough and holistic comparative analysis of the solution proposals to the issues of both parking and the Unsold Units;
- (x) direct the Trustee to provide information with respect to the magnitude of the Applicant's insolvency, such that all parties are aware of the general extent to which the termination of any Agreements may be required;
- (xi) direct the Trustee to consider the termination of each Agreement of Purchase and Sale only as a last resort, on a case by case basis and to only terminate to the extent required;
- (xii) direct the Trustee to develop a transparent and objective methodology, including metrics and thresholds, that the Trustee would implement to determine the order in which Agreements would be considered for termination and the decision factors for deciding where additional

terminations are required, or whether sufficient terminations have been performed to fulfill its duties;

(xiii) direct the Trustee that when considering the interests of the various stakeholders, the Applicant is to be considered subordinate to each and every Purchaser for the reasons contained herein;

(xiv) for the Court to extend those orders resulting from these motions and to the benefit of Mr. Romaniuk, to other Purchasers in the 144 Project that find themselves in similar circumstances; such that all may obtain fair and equitable treatment under the law; and

(b) such further and other relief as Mr. Romaniuk may request and this Honourable Court may permit.

**THE GROUNDS FOR THE MOTION ARE:**

**Background**

1. On February 14, 2015, Mr. Romaniuk entered into an Agreement of Purchase and Sale with 144 Park Ltd. for Unit 1, Level 12, together with two Parking Units and one Locker Unit.
2. On June 3, 2014, Mr. Romaniuk took occupancy of Unit 1, Level 12, together with Parking Unit 63, Level A, Parking Unit 64, Level A, and Storage Unit 69, Level A (collectively the “**Unit**”).

3. On November 3, 2014, Mr. Romaniuk entered into an Assignment of Agreement of Purchase and Sale with Achim (AJ) Mueller and Kerry Mueller (“**the Muellers**”).
4. On November 4, 2014, Mr. Romaniuk entered into an Agreement of Assignment with the Muellers and 144 Park Ltd.
5. On January 22, 2015, Collins Barrow Toronto Limited was appointed as Trustee under the *Construction Lien Act* (Ontario) with respect to lands and premises known municipally as 142, 144 and 148 Park Street and 21 Allen Street West, Waterloo, Ontario, and legally described in Schedule "A" to the Appointment Order (the "**Property**") pursuant to the Order of Mr. Justice Penny dated January 22, 2015 (the "**Appointment Order**").
6. Pursuant to the Appointment Order, the Trustee was authorized to, among other things:
  - (a) act as receiver and manager of the Property;
  - (b) take possession and control of the Property and any and all proceeds, receipts and disbursements arising out of or from the Property; and
  - (c) complete the existing agreements of purchase and sale for the 128 pre-sold condominium units and related parking units and storage units that form part of the Property.
7. This proceeding was commenced by way of application by 144 Park Ltd. ("**144**"), the registered owner of the Property. The Property was developed by 144 and a 19 story

residential condominium project was constructed, containing 148 residential units (the "**144 Park Project**").

8. A detailed description of the conduct and activities taken by the Trustee from June 23, 2015 to date are set out in the Third Report of the Trustee (Note that paragraphs numbered here 5 through 8 inclusive were obtained verbatim, save undefined acronyms, from the Trustee's report).
9. Between the time of the appointment of the Trustee and the end of July, 2015, the Muellers have been in periodic communication with Mr. Romaniuk to generally apprise him of the status of and activities surrounding the Unit.
10. At 11:35 a.m. on the morning of Tuesday, July 28, 2015, Mr. Romaniuk and AJ Mueller had a detailed 36 minute phone conversation discussing the Application, the activities of the Trustee and its counsel, and the various potential outcomes with respect to the Unit.
11. That evening at 11:03 p.m. Mr. Romaniuk sent an email, addressed to the Trustee and counsel for the Applicant, stating to the recipients for their record his standing and interest in the proceeding, as well as an opinion on a number of matters and the supporting arguments for those various opinions.
12. This Motion Record is the resulting formal filing, with Mr. Romaniuk subsequent to the email having had additional time to refine his arguments and perform the research providing the support upon which they are based.



**Leave to Intervene**

13. Mr. Romaniuk claims an interest in the subject matter as the original Purchaser of Unit 1, Level 12.
14. Mr. Romaniuk claims he may be adversely affected by a judgement in the proceeding, in that:
  - (a) Mr. Romaniuk, under paragraph 13 of the Assignment to Agreement, has potential liabilities to 144 as guarantor to the Agreement of Purchase and Sale if the Muellers default on their obligations, including forfeiture of deposit, loss of the investment with regards to Unit upgrades; and
  - (b) upon final closing of the Unit, Mr. Romaniuk stands to realize a reasonable profit from his assignment agreement, commensurate with the magnitude of financial investment, time, personal effort and opportunity cost involved over these many years.

**Flexibility in Matters of Court Procedure and Bilateral Indemnity in Award of Costs**

15. Mr. Romaniuk has only recently initiated his activities with respect to this proceeding and for financial reasons is unable to retain external counsel. He is therefore self-represented and requests an initial audience before the Court.
16. Mr. Romaniuk fully understands the complexity of the law and has no intention to unduly increase the duration or cost of the proceeding, only to provide the Court with an additional perspective.

17. Mr. Romaniuk requests one opportunity to plead before the Court at the hearing already scheduled by the Trustee. Simultaneously, Mr. Romaniuk is well aware of the potential award of costs against him, costs that he cannot bear at this time.
18. Therefore, if the Court will allow Mr. Romaniuk his singular pleading, he requests that the Court only do so if Mr. Romaniuk is granted indemnity with respect to any cost awards, either for or against him.
19. As stated in the motion, if such an Order is unable to be granted or the Court finds that the request, or the Motions themselves to be excessive, inappropriate or disallowed for any reason the Court determines, Mr. Romaniuk begs forgiveness of the Court, graciously retracts all but request for leave to intervene as an interested party.
20. Through his employment, Mr. Romaniuk has considerable exposure and interaction with the Ontario Energy Board, a quasi-judicial regulatory body. This exposure provides for a base level of understanding with respect to the proper practice and procedure of formal proceedings.
21. Mr. Romaniuk has devoted considerable personal time and effort developing the substance of his arguments, the form in which they are presented to the Court and various parties to the proceeding, as well as educating himself in proper Court procedures, protocols and processes, to the extent possible in such a short period. Details regarding these activities are outlined in Mr. Romaniuk's Affidavit.
22. Mr. Romaniuk is continuing to educate himself as the proceeding progresses. In the interim, leniency by the Court is requested with respect to the various particulars as well

as being provided opportunities to correct minor infractions without prejudice to the substance. Mr. Romaniuk is committed to immediately addressing such infractions with the utmost expediency, to minimize any delays to this important proceeding.

**Conduct of the Trustee, Disclosure of Information and Reversal of Reallocations**

23. In the Trustee's reports, it has identified two related issues that it considers central to concluding the process. They are the issues of Parking Units and the Unsold Units.
24. The Trustee states in its Third Report to the Court that it is communicating with residents with two parking units to *request* that the sale transaction be completed with only one unit.
25. Letters distributed to Purchasers with two Parking Units state that if Purchaser is not agreeable to the Amendment, the Trustee may seek a Court Order terminating the Agreement of Purchase and Sale.
26. The Trustee's statement is more akin to a threat than a request, particularly given the fact that many of the Units are Purchaser or tenant occupied, with eviction being a significant personal burden in terms of time, finances and general disruption.
27. In the same report and paragraph the Trustee states it is reallocating parking units to various residents in order to provide permanent parking units to those with temporary parking units.

28. Specifically, at the time of interim occupancy, which closed on June 3, 2014, Unit 1, Level 12 was allocated Parking Unit 63, Level A and Unit 64, Level A, as per the Interim Statement of Adjustments.
29. Unit 64, Level A, as of noon on July 24<sup>th</sup>, has been reallocated and Parking Unit 32, Level 1 has been allocated.
30. The authority under which the Trustee has performed the reallocation is questionable. The first paragraph of the Agreement of Purchase and Sale states that Vendor has the sole discretion to allocate Parking Units. This was completed at the time of occupancy.
31. The Agreement of Purchase and Sale does not contain any clause or language regarding reallocation of Parking Units after initial allocation. For this reason alone, the Court should find that any reallocations that can be reversed should be reversed, as the Trustee was not within its right to do so under the Agreements of Purchase and Sale.
32. Additionally, there appears to be no rational for the Trustee to replace one Parking Unit with another, apparently equivalent, Parking Unit, or how this action could benefit those with temporary parking units.
33. The letters distributed to Purchasers regarding Parking Unit reallocation mention nothing regarding the effects of the reallocations to the Unit. The letters do reference a potential solution that balances the many stakeholder interest.
34. The Trustee should disclose its plan so that all parties may determine in a transparent manner if it is indeed balanced. As well the Trustee should provide a rational for the

reallocation of apparently equivalent Parking Units, or explain how the reallocation is a component of the plan.

35. At all times, the Trustee has been operating with significantly greater information than other parties to the proceeding, particularly Purchasers. It appears that the Trustee, at each step, has been acting with knowledge, forethought and intent. In fact, if it did not, the Trustee could be considered negligent in the duties it was directed to perform by Order of the Court.
36. Upon the Trustee's disclosure with regards to its parking plan, it should become evident whether the reallocation or any of the Trustee's actions has or will result in a material reduction in the value of the Unit.
37. If it is the case that the Trustee materially affected the value of the Unit, did so by knowingly withholding the parking plan or other material information, and did so with forethought and intent, then the Trustee's actions are tantamount to fraud and willful misconduct.

#### **Temporary Injunction on the Further Closing of Units**

38. The lawful transfer of title to property is critical, and while robust, the system is not without potential complications. Currently under appeal is *CIBC Mortgages Inc. v. Computershare Trust Co. of Canada*, 2015 ONSC 543 (CanLII). In that case it was found that: (in full disclosure the quoted text is taken directly from an article written by counsel to the Trustee)

“...the Lawrence v. Maple Trust case had affirmed the doctrine of deferred indefeasibility in the province of Ontario. According to this doctrine, a fraudster can never give a good title to an innocent party. Rather, the innocent party is always subject to an overriding claim from the true owner. The innocent party’s title is defeasible by the true owner. Thus, the innocent party’s claim to a defeasible interest is deferred.”

39. Therefore, if it is found that the actions of the Trustee were questionable, so too would be the validity of many of the completed transfers of title at the 144 Park Project.
40. Therefore, the closing of any further units should be halted until the question of conduct has been determined and whether any remedy is appropriate for those that already have.

#### **Transparency with Respect to Parking Solutions and Unsold Units**

41. While it is often necessary and right to do so, the Trustee has been taking significant and unilateral steps towards what it feels is the only correct course of action, namely to sell the Unsold Units with Parking Units. It has started that its heretofore unreleased parking plan is balanced among the stakeholders.
42. Only after the plan is publically released and all parties are able to review, analyze and comment, can the plan be considered vetted and therefore considered to be balanced.
43. In addition to the existing parking plan, stakeholders have not had an open forum within which to propose alternate, creative and innovative suggestions and proposals. The Trustee, by definition, has a limited view on the matter and received limited input from stakeholders. In addition, stakeholders should receive the benefit of understanding why

a given proposal cannot or should not be considered, or why an interest of one stakeholder outweighs that of another.

### **Proposals for the Unsold Units and Analysis Thereof**

44. Once a set of reasonable, vetted proposals is determined, the quantitative and qualitative factors of each must be compared in order to determine the appropriate plan to execute.
45. The comparison should be a holistic comparative analysis, including not only financial considerations but the assorted hard and soft benefits and costs to each of the stakeholders, taking into account factors such as outside risks and effects on possible range of outcomes in each proposal, economic forecasts, each stakeholder's understood and accepted risks when deciding to participate in the Project.
46. Finally, the solution should take into account each party's ability to participate and level of control over the circumstances that brought the project to this point, relative to their ability to affect or tolerate the results of the proposed solution moving forward.

### **Termination of Agreements of Purchase and Sale as Last Resort**

47. In the Agreements of Purchase and Sale the Purchaser covenants, *inter alia*, the Agreement is subordinate to and postponed to any mortgages arranged by the Vendor.
48. At this time, it is unknown if the Applicant is cash-flow insolvent, balance-sheet insolvent or bankrupt, and therefore whether the Applicant is truly unable to pay its debts at all, or if the situation is merely a deadlock between parties, that is, a matter of

liquidity. The latter can be relatively easily solved through the Trustee merely breaking the deadlock, as the Trustee has been doing.

49. The Trustee should therefore provide the parties with a balance sheet sufficiently detailed for the parties to understand the true nature and extent of the insolvency. It should include estimates of the expected proceeds of the two 'bookend' scenarios. The first being status quo where Unsold Units are sold as would have been otherwise, with parking provided for at 155 at a future time. The second is the scenario in which agreements are terminated, second parking units are reclaimed and sold with the Unsold Units.
50. The Applicant, in the Application and in the Affidavit of Greg Puklicz, stated that the unsold units have significant appraised value and the closing of the 129 units will provide a fund for the benefit of all stakeholders.
51. In *Firm Capital Mortgage Fund Inc. v. 2012241 Ontario Ltd.*, 2012 ONSC 4816 (CanLII), the Receiver was appointed to manage a commercial property and requested that the Court grant it the right to terminate agreements under the authority of the subordination clauses in the Agreements of Purchase and Sale, in the event that the offer to purchase the property required vacant possession.
52. The Receiver makes the argument that this is the only practical approach to maximize recovery for the stakeholders and that it does not have the financial resources to complete the property to the point of registration. Neither of these are the case in this Proceeding.
53. The Court agreed, noting:



[31] With respect to the second issue, namely, whether the Receiver should be authorized to terminate purchase agreements and leases and be entitled to a vesting order that terminates the interest of parties to purchase agreements and leases, it is necessary for the Receiver to take into account equitable considerations of all stakeholders.

54. For Unitholders who paid deposits that are still held in trust, the Court found that their equitable considerations were limited and if deposits returned, they would not incur any significant financial losses.
55. This reasoning may not be valid in the case of a residential building where the termination of Agreements is not a component of the only option available to the Trustee.
56. In *Firm Capital Mortgage Fund Inc. v. 2012241 Ontario Limited*, 2013 ONSC 147 (CanLII), the highest of the offers to purchase the property was substantially below the amount outstanding on the mortgage.
57. The Receiver was of the view that all options had been exhausted and that this was the best price that could be expected on the open market in the present circumstances.
58. In *Peel Condominium Corporation No. 505 v. Cam-Valley Homes Limited*, 2001 CanLII 24035 (ON CA), the developers of a multi-phased condominium project not dissimilar from 144 Park and 155 Caroline.
59. The Court found that while the developer was not responsible to carry out the future project under any good faith obligation, such an obligation did exist in the original

agreement, stating that the developer's good faith obligation is to carry out the agreement and deliver whatever title the contract between the parties calls for. This duty is circumscribed by the documentation required by the Condominium Act.

60. The Court also stated the requirement to exercise a contractual right in a reasonable manner is recognized in special categories of relationships, such as employers as contracts of employment are the result of bargaining of unequal parties, or the insured, where it is only the insured that is aware of certain information that is of critical importance.
61. The Court stated that Purchasers of condominiums share many of the same characteristics of both these special relationships. The purchaser of a condominium enters into a contract with a developer that is basically dictated by the developer and is not the result of the exercise of bargaining power between two equals. This power imbalance continues so long as the developer is developing the project.
62. In addition to the lack of bargaining power, the condominium purchaser lacks the information necessary to achieve more favourable contractual terms with the developer. It is only the developer that is aware of the information with respect to the risks concerning the project and the extent to which those risks may require further modification of the projected development.
63. While the developer has the right to change the development, just as an employer has a right to terminate an employee, that right must be exercised with candour and reasonableness, taking into consideration the interests of the condominium owners.

64. In this Proceeding, the Applicant made numerous unilateral decisions during the course of development that resulted in the current circumstances. The Trustee should consider this when selecting a course of action.
65. If there are sufficient proceeds made available without termination of significant Agreements, the Trustee should be directed to do so at an absolute minimum and provide justification as to why each is necessary to the fulfillment of its duties.

**Trustee to Develop a Transparent and Objective Methodology for Termination**

66. If there is to be a set of Purchasers that retain their second Parking Units, there must be a transparent and objective method for determining the priority. There are many methods, including both self-selection through a form of reverse auction similar to airlines and oversold seats, as well as imposed but impartial methods, such as first-come-first-serve in order of date of Parking Unit purchase, or a binary metric, such as those Purchasers informed their Parking Units were to be in 155 would remain so.
67. In any instance, the Trustee should be responsible to demonstrate transparently and in an objective manner that each terminated agreement is necessary for the completion of its duties and not a single termination is requested and approved without being required.

**Trustee to Consider the Applicant as Subordinate to All Parties**

68. The development of a property such as 144 Park is a risky but potentially very lucrative endeavor. If the project would have been a success, one can assume that the developers would have stood to make a significant return. This is the nature of such projects.

69. The delays, as explained in the project updates provided to Purchasers as the project progressed, appeared to be as a result of questionable preparation and contingency planning. Groundwater, and the associated pumping, filtration and building redesign are issues that could be foreseen through sufficient testing, as well as planned for and managed appropriately from both a schedule and budget standpoint.
70. With regards to delays by the trades, proper contracting strategy and active contract management techniques should have provide the developer with advanced warning of issues and subsequently the needed remedies.
71. With respect to termination of Purchasers Agreements, the Court should direct the Trustee that the Applicant should not profit from such terminations. The subordination of Purchasers to lenders is meant as remedy in such circumstances as we find ourselves.
72. The Applicant should not be allowed to place the financial burden of its mistakes and poor planning onto the Purchasers by having the Trustee terminate in excess, only to resell for greater gains. In opposite circumstances one can be sure that the Applicant would not have shared in a windfall profit.
73. In this circumstance, the lack of distance between the Applicant and the Trustee should be noted. The Trustee was selected in advance and 'came with the deal'.

**Equity Under the Law and the Extension of Benefits to all Purchasers**

74. Mr. Romaniuk has stated openly that he stands to profit from the closing of his unit. Since the purchase of the Unit in 2010 he has had a significant personal investment in the Project and during that time circumstances have changed. For personal reasons and

the circumstance at that time, Mr. Romaniuk's decision to assign the Unit was both a prudent and necessary decision. This could result in a reasonable but yet unrealized profit, commensurate with the amount, time, personal effort and opportunity cost involved over these many years.

75. To that effect, Mr. Romaniuk has provided arguments that, in general, act to further his own interests, as is the nature of the legal system. This should in no way prejudice the outcome of the results of the motions. Above all, Mr. Romaniuk is interested in a fair and just outcome.
76. Therefore, it is humbly requested of the Court that any Order be made in such a manner as to result first in a fair and equitable process amongst the Purchasers as a whole, such that the standing and benefit accrued to us as a group is maximized in relation to the Applicant.
77. The Trustee has been active and effective in a number of techniques that divide the tenants and result in overall benefit in the interests of the Trustee.
78. The Purchasers bought into a Project and have little to no control of the situation. Simply put, the Purchasers should not be the ones to bear the costs of the Applicant's mistakes.

### **General**

79. The Affidavit of Oliver Romaniuk sworn August 4, 2015.

80. Rules 1.04, 1.05, 1.06, 2.01, 2.03, 3.02, 13.01, 37, 39.01, 40, and 44 of the *Rules of Civil Procedure* (Ontario).
81. The inherent jurisdiction of the Court.
82. Such other grounds as Mr. Romaniuk may advise and this Honourable Court may permit.

**THE FOLLOWING DOCUMENTARY EVIDENCE** will be used at the hearing of the motion:

1. The Affidavit of Mr. Romaniuk sworn August 4, 2015 and the exhibits attached thereto;  
and
2. such further and other material as Mr. Romaniuk may advise and this Honourable Court may permit.

August 4, 2015

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**TO: THE SERVICE LIST**

**IN THE MATTER OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**NOTICE OF MOTION**

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

## **TAB 2**



**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,  
R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.  
FOR THE APPOINTMENT OF A TRUSTEE UNDER SECTION 68(1) OF THE  
*CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**AFFIDAVIT OF OLIVER ROMANIUK**  
(sworn August 4, 2015)

**I, OLIVER ROMANIUK**, of the city of Toronto, in the Province of Ontario, **MAKE  
OATH AND SAY AS FOLLOWS:**

1. I am Oliver Romaniuk, the original Purchaser of Residential Unit 01, Level 12, together two Parking Units and one Locker Unit (collectively the “**Unit**”). The facts set forth herein are within my personal knowledge or determined from the face of the documents attached hereto as exhibits.

2. My opinions and beliefs are explicitly stated as such.

**Personal Qualifications**

3. I have a Bachelors and Masters of Electrical Engineering from the University of Waterloo. I am a Registered Professional Engineer in the Province of Ontario. I have been

employed for over a decade managing various types and sizes of projects in the electricity industry.

4. My current employment is as a Project Manager of Development for high voltage electrical transmission lines. My current project is in the development phase and has a budget of \$22.4 million. Upon completion it is estimated to be in excess of 400 kilometers with an initial capital cost estimate of approximately \$400 million. The project will consist of over 1100 individual towers on a 50-60 metre wide right-of-way, each tower standing approximately 40-45 meters in height.

5. My team consists of professionals in the areas of project management (including budgeting, scheduling, supply chain and contract management), engineering (including electrical, geotechnical and structural), construction, real estate and land acquisition, environmental assessments and permitting, regulatory (specifically the Ontario Energy Board), corporate legal and stakeholder relations.

6. I believe that the preceding provides me with sufficient knowledge and experience to make reasonable estimations regarding the development and execution of projects.

7. My many interactions with the Ontario Energy Board (a quasi-judicial regulatory body in Ontario) have provided me with a basic level of understanding of proper process and procedure in formal proceedings.

**Request for Leniency and Purpose for Motion**

8. I do not suggest that I am sufficiently familiar with the body of precedent with respect to civil, commercial or other law, but to the best of my ability I have attempted to adhere to rules in general and show respect for the Honourable Court.

9. Between the afternoon of July 28, 2015 and the filing of this document, I have used every moment available to me to become familiar with:

- (a) *Rules of Civil Procedure* (Ontario);
- (b) forms relating to the *Rules of Civil Procedure* (Ontario);
- (c) the Policies and Practice Direction of the Ontario Superior Court of Justice, including those specifics both the Toronto Region and the Commercial List;
- (d) The entire contents of the proceeding to date, including the Application, Motions, Reports of the Trustee, among others;
- (e) the entire contents of the proceeding of *Firm Capital Mortgage Fund Inc. v. 2012241 Ontario Ltd.*, as it is my understanding that this case sets the precedent for termination of Purchasers Agreements in similar circumstances; and
- (f) generally searching the Canadian Legal Information Institute for reasonable precedent to provide to the Court in the defense of the Purchasers as a whole, it is here that I found *Peel Condominium Corporation No. 505 v. Cam-Valley Homes Limited*.

10. This research has resulted in this Record of Motion. I defer to the Honourable Court and opposing counsel to review and opine if it is of sufficient quality, depth, or importance to be considered in this proceeding. I request that upon review, if the Court so finds that in my ignorance I have offended the Honourable Court or the process, that I be dismissed from the

proceeding without an award of cost against me. The dismissal itself will be a sufficient and humbling punishment.

### **Overview**

11. I entered into an Agreement of Purchase and Sale (“Agreement”) for the Unit with 144 Park Ltd. on February 14<sup>th</sup>, 2010, as per Exhibit A. All required payments and obligations on my part with respect to the Agreement to date have been met.

12. I move to Jupiter, Florida in August of 2012, I was married on October 20, 2012 and returned back to Toronto, Ontario in April of 2014. During this time I was receiving updates from the Applicant regarding the status of the project.

13. On September 18, 2013 I purchased upgrades to the Unit in the amount of \$3,688.32, as per Exhibit B.

14. Nearing the end of 2013, my wife Leah Weller and I discussed the possibility of selling or assigning the Unit, as we had made a large personal decision that would incur significant medical expenses periodically during the course of 2014 and 2015 (We decided to proceed with that decision in early 2014 as described below).

15. I requested information regarding assignment of the contract and received an email response from Joshua Lee on December 6, 2013, as per Exhibit F. In that email, occupancy was tentatively scheduled for February 6, 2014. In addition, Joshua indicated that for a building such as 144 Park, a “worst case 5 months to achieve registration and schedule the final closings.”

16. As shown in Exhibit G, at the time of that email, the construction of 144 Park had progressed significantly. The structure was largely complete and occupancy was only a few months away. I had no reason to believe that the project was in any jeopardy.
17. On June 3, 2014 I took occupancy of the Unit and was allocated Parking Unit 63, Level A, Parking Unit 64, Level A and Storage Unit 69, Level A, as per Exhibit C.
18. I listed the Unit for assignment with Mint Realty in August of 2014.
19. On November 3, 2014, I completed an Assignment of Agreement of Purchase and Sale with Achim (AJ) Mueller and Kerry Mueller (“**Muellers**”) as per Exhibit D.
20. On November 4, 2015, I completed an Agreement to Assign with the Muellers and the Applicant, as per Exhibit E.
21. In that Agreement to Assign, I remain as guarantor for the timely performance and fulfillment of all covenants and obligations of the Assignee.

**Statement of Personal Status**

22. My wife and I stand to make a reasonable profit from the assignment, commensurate with the magnitude of the financial investment, the risk involved, the time that has elapsed, amount of personal effort that has been expended and the opportunity cost of the invested finances. In simple terms, it has resulted in an annualized, after tax, rate of return of less than 7%, hardly a windfall under the circumstances.
23. Leah and I have been anticipating the closing of the unit to pay for recent and significant medical expenses. I am therefore in no position to obtain legal counsel on this matter.

24. If the agreement is terminated, I stand to lose my deposit of \$35,800 in addition to realizing no profit.

25. These funds and the expectations set by the Applicant with respect to the progress of the Project are a component of the information used by my wife and I when deciding to proceed with incurring these significant medical expenses. These expenses, while elective, are core to our family.

26. To date, Leah and I have spent approximately \$30,000 attempting to conceive our first child. We have suffered many setbacks and it has taken a personal, physical and financial toll, and our journey is far from over.

27. My intent is not to sway the Court or Trustee with pity. It is just an example to demonstrate that how the termination of an Agreement is not simply a matter of reimbursing deposits. Expectations of success and good faith in project execution play a part.

28. For this reason, I am seeking only that the Trustee provide transparency, fairness and a measured approach to seeking order for termination.

### **Reasoning for Bringing the Motion**

29. Between the time of the appointment of the Trustee and the end of July 2015, I was in periodic communication with the Muellers in general respect of progress with the Unit and building.

30. At 11:35 a.m. on the morning of Tuesday, July 28, 2015, I had a detailed 36 minute phone conversation with AJ Mueller where we discussed the Application, the activities of the Trustee and its counsel, and the potential various outcomes with respect to the Unit.

31. At that time, the facts led me to believe that the Trustee would proceed with the threat to request Order of the Court to terminate Agreements. Nothing in the Trustee's reports has given me any indication or confidence that the Trustee plans to do so in a just or measured manner.

32. For the balance of July 28, I researched to the best of my ability any legal avenue to argue that the termination of Agreements was not the optimal path forward for the Trustee.

33. That evening at 11:03 p.m. I completed and sent an email to the Trustee and counsel for the Applicant, stating for their record my standing and interest in the proceeding, as well as an opinion on a number of matters and supporting arguments for those various personal opinions.

34. To summarize my concern, I believe I understand correctly that the Trustee has a duty to make whole the debtors to the best of its ability and given the circumstances. Once that is achieved, the Trustee may or should conclude its activities and request the Court to order that the Applicant take back control. If the proceeds are larger than the debt without the termination of any agreements, then the Trustee should act in that manner.

35. I have attempted to find arguments to support motions that would force transparency surrounding that matter, such that the above will occur.

36. The information that I have reviewed has left me with the singular impression that the Trustee will be acting to maximize proceeds, without regard to the interests of the Purchasers.

**SWORN BEFORE ME** at the City of  
Toronto, in the Province of Ontario on  
August 4, 2015

---

Commissioner for Taking Affidavits  
(or as may be)

---

**OLIVER ROMANIUK**

THIS IS EXHIBIT "A" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.



A.K. 0841-10

Residential Unit No. 01 Level No. 12  
Suite No. 1201  
Model Type EX1000

**AGREEMENT OF PURCHASE AND SALE**

The undersigned, Oliver A. Romaniuk (collectively, the "Purchaser"), hereby agrees with 144 PARK LTD. (the "Vendor") to purchase the above-noted unit, as outlined for identification purposes only on the sketch attached hereto as Schedule "A", together with ~~one~~ (2) Parking Unit(s) and one (1) Locker Unit(s), all of which shall be allocated by the Vendor in its sole discretion being (a) proposed unit(s) in the Condominium, to be registered against those lands and premises situate on the north east corner of Allen Street and Park Street in the City of Waterloo, and which is proposed to be municipally known as 144 Park Street, Waterloo, Ontario (hereinafter called the "Property"), together with an undivided interest in the common elements appurtenant to such unit(s) and the exclusive use of those parts of the common elements attaching to such unit(s), as set out in the proposed Declaration (collectively, the "Unit") on the following terms and conditions:

The purchase price of the Unit (the "Purchase Price") is Three hundred fifty seven thousand nine hundred ninety. (\$357,990.00) DOLLARS in lawful money of Canada, payable as follows:

- (a) to Harris, Sheaffer LLP, in Trust, (the "Vendor's Solicitors" or "Escrow Agent" or "Trustee") in the following amounts at the following times, by cheque or bank draft, as deposits pending completion or other termination of this Agreement and to be credited on account of the Purchase Price on the Occupancy Date:
  - (i) the sum of FIVE THOUSAND (\$5,000.00) Dollars submitted with this Agreement;
  - (ii) the sum of Twelve thousand nine hundred. (\$12,900.00) Dollars submitted with this Agreement and post-dated twenty one (21) days following the date of execution of this Agreement by the Purchaser, and together with 1(a)(i) above represents 5% of the Purchase Price;
  - (iii) the sum of Seventeen thousand nine hundred. (\$17,900.00) Dollars submitted with this Agreement and post-dated one hundred eighty (180) days following the date of execution of this Agreement by the Purchaser, being 5% of the Purchase Price;
- (b) the sum of ZERO (\$0.00) Dollars by certified cheque or bank draft to the Vendor's Solicitors on the Occupancy Date, being 5% of the Purchase Price;
- (c) the balance of the Purchase Price by certified cheque on the Title Transfer Date to the Vendor or as the Vendor may direct, subject to the adjustments hereinafter set forth.
- (d) the Purchaser agrees to pay the sum as hereinbefore set out in paragraph 1 (a) as a deposit by cheque payable to the Escrow Agent with such last-mentioned party to hold such funds in trust as the escrow agent acting for and on behalf of TWC under the provisions of a Deposit Trust Agreement ("DTA") with respect to this proposed condominium on the express understanding and agreement that as soon as prescribed security for the said deposit money has been provided in accordance with Section 81 of the Act, the Escrow Agent shall be entitled to release and disburse said funds to the Vendor (or to whomsoever and in whatsoever manner the Vendor may direct).

- 1. (a) The Purchaser shall occupy the Unit on the First Tentative Occupancy Date [as defined in the Statement of Critical Dates being part of the Tarion Addendum as hereinafter defined], or such extended or accelerated date that the Unit is substantially completed by the Vendor for occupancy by the Purchaser in accordance with the terms of this Agreement including, without limitation, the Tarion Addendum (the "Occupancy Date");
- (b) The transfer of title to the Unit shall be completed on the later of the Occupancy Date or a date established by the Vendor in accordance with Paragraph 14 hereof (the "Title Transfer Date");
- (c) The Purchaser's address for delivery of any notices pursuant to this Agreement or the Act is the address set out in the Tarion Addendum;
- (d) Notwithstanding anything contained in this Agreement (or in any schedules annexed hereto) to the contrary, it is expressly understood and agreed that if the Purchaser has not executed and delivered to the Vendor or its sales representative an acknowledgement of receipt of both the Vendor's disclosure statement and a copy of this Agreement duly executed by both parties hereto, within fifteen (15) days from the date of the Purchaser's execution of this Agreement as set out below, then the Purchaser shall be deemed to be in default hereunder and the Vendor shall have the unilateral right to terminate the Agreement at any time thereafter upon delivering written notice confirming such termination to the Purchaser, whereupon the Purchaser's initial deposit cheque shall be forthwith returned to the Purchaser by or on behalf of the Vendor.

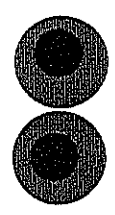
The following Schedules of this Agreement, if attached hereto, shall form a part of this Agreement. If there is a form of Acknowledgement attached hereto same shall form part of this Agreement and shall be executed by the Purchaser and delivered to the Vendor on the Closing Date. The Purchaser acknowledges that he has read all Sections and Schedules of this Agreement and the form of Acknowledgement, if any:

- Schedule "A" - Unit Plan/sketch
- Schedule "B" - Features & Finishes
- Schedule "C" - Occupancy Licence
- Schedule "D" - Warning Provisions
- Schedule "E" - Receipt Confirmation
- Schedule being the Tarion Warranty Corporation Statement of Critical Dates and Addendum to Agreement of Purchase and Sale (collectively the "Tarion Addendum") and such other Schedules annexed hereto and specified as Schedule "\_\_\_".

DATED, signed, sealed and delivered this 14 day of February, 2010.

SIGNED, SEALED AND DELIVERED in the presence of  
WITNESS:  
as to all Purchaser's signatures, if more than one purchaser)

Oliver A. Romaniuk  
PURCHASER: \_\_\_\_\_ D.O.B. \_\_\_\_\_  
\_\_\_\_\_  
PURCHASER: \_\_\_\_\_ D.O.B. \_\_\_\_\_  
\_\_\_\_\_  
PURCHASER'S SOLICITOR: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Facsimile: \_\_\_\_\_



The undersigned accepts the above offer and agrees to complete this transaction in accordance with the terms thereof.

DATED, signed, sealed and delivered, this 14 day of February, 2010.

Vendor's Solicitors:  
HARRIS, SHEAFFER LLP  
Suite 610 - 4100 Yonge Street  
Toronto, Ontario, M2P 3B5  
Attn: Mark L. KAROLY  
Telephone: (416) 250-5800 Fax: (416) 250-5300

144 PARK LTD.  
Per: [Signature]  
Authorized Signing Officer  
I have the authority to bind the Corporation.



*Handwritten notes:*  
3:50 PM  
Feb 25/10  
VMH

3. The meaning of words and phrases used in this Agreement and its Schedules shall have the meaning ascribed to them in the *Condominium Act, 1998*, S.O. 1998, C.19, the regulations thereunder and any amendments thereto (the "Act") and other terms used herein shall have ascribed to them the definitions in the Condominium Documents unless otherwise provided for as follows:
- (a) "Agreement" means this Agreement of Purchase and Sale including all Schedules attached hereto and made a part hereof;
  - (b) "Condominium" means the condominium which will be registered against the Property pursuant to the provisions of the Act;
  - (c) "Condominium Documents" means the Creating Documents, the by-laws and rules of the Condominium, the disclosure statement and budget statement together with all other documents and agreements which are entered into by the Vendor on behalf of the Condominium or by the Condominium directly prior to the turnover of the condominium, as may be amended from time to time;
  - (d) "CRA" means the Canada Revenue Agency or its successors;
  - (e) "Creating Documents" means the declaration and description which are intended to be registered against title to the Property and which will serve to create the Condominium, as may be amended from time to time;
  - (f) "Interim Occupancy" shall mean the period of time from the Occupancy Date to the Title Transfer Date;
  - (g) "Occupancy Licence" shall mean the terms and conditions by which the Purchaser shall occupy the Unit during Interim Occupancy as set forth in Schedule "C" hereof;
  - (h) "Occupancy Fee" shall mean the sum of money payable monthly in advance by the Purchaser to the Vendor and calculated in accordance with Schedule "C" hereof;
  - (i) "Property" shall mean the lands and premises upon which the Condominium is constructed or shall be constructed and legally described in the Condominium Documents; and
  - (j) "TWC" means Tarion Warranty Corporation or its successors.

#### Finishes

4. The Purchase Price shall include those items listed on Schedule "B" attached hereto. The Purchaser acknowledges that only the items set out in Schedule "B" are included in the Purchase Price and that model suite/vingnette furnishings and appliances, decor, upgrades, artist's renderings, scale model(s), improvements, mirrors, drapes, tracks and wall coverings are for display purposes only and are not included in the Purchase Price unless specified in Schedule "B". The Purchaser agrees to attend and notify the Vendor of his/her choice of finishes within fifteen (15) days of being requested to do so by the Vendor. In the event colours and/or finishes subsequently become unavailable, the Purchaser agrees to re-attend at such time or times as requested by the Vendor or its agents, to choose from substitute colours and/or finishes. If the Purchaser fails to choose colours or finishes within the time periods requested, the Vendor may irrevocably choose the colours and finishes for the Purchaser and the Purchaser agrees to accept the Vendor's selections.

#### Deposits

5. (a) The Vendor shall credit the Purchaser with interest at the prescribed rate on either the Occupancy Date or Title Transfer Date at the Vendor's sole discretion on all money received by the Vendor on account of the Purchase Price from the date of deposit of the money received from time to time by the Declarant's solicitor or the trustee until the Occupancy Date. The Purchaser acknowledges and agrees that, for the purposes of subsection 81(6) of the Act, compliance with the requirement to provide written evidence, in the form prescribed by the Act, of payment of monies by or on behalf of the Purchaser on account of the Purchase Price of the Unit shall be deemed to have been sufficiently made by delivery of such written evidence to the address of the Purchaser noted in the Tarion Addendum. The Purchaser further acknowledges and agrees that any cheques provided to the Vendor on account of the Purchase Price will not be deposited and accordingly interest as prescribed by the Act will not accrue thereon, until after the expiry of the ten (10) day rescission period as provided for in section 73 of the Act (or any extension thereof as may be agreed to in writing by the Vendor). The Purchaser represents and warrants that the Purchaser is not a non-resident of Canada within the meaning of the Income Tax Act of Canada (the "ITA"). If the Purchaser is not a resident of Canada for the purposes of the ITA the Vendor shall be entitled to withhold and remit to CRA the appropriate amount of interest payable to the Purchaser on account of the deposits paid hereunder, under the ITA.
- (b) All deposits paid by the Purchaser shall be held by the Escrow Agent in a designated trust account, and shall be released only in accordance with the provisions of subsection 81(7) of the Act and the regulations thereto, as amended. Without limiting the generality of the foregoing, and for greater clarity, it is understood and agreed that with respect to any deposit monies received from the Purchaser the Escrow Agent shall be entitled to withdraw such deposit monies from said designated trust account prior to the Title Transfer Date if and only when the Vendor obtains a Certificate of Deposit from TWC for deposit monies up to Twenty Thousand (\$20,000.00) Dollars and with respect to deposit monies in excess of Twenty Thousand (\$20,000.00) Dollars, one or more excess condominium deposit insurance policies (issued by any insurer as may be selected by the Vendor, authorized to provide excess condominium deposit insurance in Ontario) insuring the deposit monies so withdrawn (or intended to be withdrawn), and delivers the said excess condominium deposit insurance policies (duly executed by or on behalf of the insurer and the Vendor) to the Escrow Agent holding the deposit monies for which said policies have been provided as security, in accordance with the provisions of section 21 of O. Reg. 48/01.

#### Adjustments

6. (a) Commencing as of the Occupancy Date, the Purchaser shall be responsible and be obligated to pay the following costs and/or charges in respect to the Unit:

- (i) all utility costs including electricity, gas and water (unless included as part of the common expenses); and
  - (ii) the Occupancy Fee owing by the Purchaser for Interim Occupancy prior to the Title Transfer Date (if applicable).
- (b) The Purchase Price shall be adjusted to reflect the following items, which shall be apportioned and allowed from the Title Transfer Date, with that day itself apportioned to the Purchaser:
- (i) realty taxes (including local improvement charges pursuant to the *Local Improvement Charges Act*, if any) which may be estimated as if the Unit has been assessed as fully completed by the taxing authority for the calendar year in which the transaction is completed as well as for the following calendar year, notwithstanding the same may not have been levied or paid on the Title Transfer Date. The Vendor shall be entitled in its sole discretion to collect from the Purchaser a reasonable estimate of the taxes as part of the Occupancy Fee and/or such further amounts on the Title Transfer Date, provided all amounts so collected shall either be remitted to the relevant taxing authority on account of the Unit or held by the Vendor pending receipt of final tax bills for the Unit, following which said realty taxes shall be readjusted in accordance with subsections 80(8) and (9) of the Act; and
  - (ii) common expense contributions attributable to the Unit, with the Purchaser being obliged to provide the Vendor on or before the Title Transfer Date with a series of post-dated cheques payable to the condominium corporation for the common expense contributions attributable to the Unit, for such period of time after the Title Transfer Date as determined by the Vendor (but in no event for more than one year).
- (c) Interest on all money paid by the Purchaser on account of the Purchase Price, shall be adjusted and credited to the Purchaser in accordance with paragraph 5 of this Agreement.
- (d) The Purchaser shall, in addition to the Purchase Price, pay the following amounts to the Vendor on the Title Transfer Date:
- (i) If there are chattels involved in this transaction, the allocation of value of such chattels shall be estimated where necessary by the Vendor, and retail sales tax may be collected and remitted by the Vendor or alternatively, the Purchaser shall pay as a credit to the Vendor on the Statement of Adjustments, the provincial sales tax paid by the Vendor on account of chattels in Schedule "B";
  - (ii) Any new taxes imposed on or payable in respect to the purchase of the Unit by the federal, provincial, or municipal government or any increases to existing taxes currently imposed on the Unit by such government;
  - (iii) The amount of any parks levy levied, charged or otherwise imposed with respect to the Condominium, the Property or the Unit by any governmental authority, not to exceed One Thousand Five Hundred (\$1,500.00) Dollars plus G.S.T., per unit;
  - (iv) The cost of the TWC enrolment fee for the Unit (together with any provincial or federal taxes exigible with respect thereto); \$ 1050.90
  - (v) The cost of utility meters, water meter installations, hydro and gas meter or check meter installations, water and sewer service connection charges and hydro and gas installation and connection or energization charges for the Condominium and/or the Unit, the Purchaser's portion of such installation and/or connection or energization charges and costs to be calculated by dividing the total amount of such charges and costs by the number of residential dwelling units in the Condominium and by charging the Purchaser in the statement of adjustments with that portion of the charges and costs;
  - (vi) The cost of any carbon monoxide detector installed in the Unit (if applicable);
  - (vii) The charge imposed upon the Vendor or its solicitors by the Law Society of Upper Canada upon registration of a Transfer/Deed of Land or Charge/Mortgage of Land or any other instrument;
  - (viii) A sum of Fifty (\$50.00) Dollars for each cheque tendered pursuant to paragraph 1(a) and 1(b) of this Agreement and for any cheque tendered for upgrades or any other monies paid on account of the Purchase Price up to, but not including the Title Transfer Date representing a reasonable reimbursement to the Vendor of the costs incurred or to be incurred by the Vendor in fulfillment of the requirements of subsection 81(6) of the Act;
  - (ix) The Purchaser agrees to pay Three Hundred (\$300.00) Dollars towards the cost of obtaining (partial) discharges of mortgages not intended to be assumed by the Purchaser;
- (e) In the event that the Purchaser desires to increase the amount to be paid to the Vendor's solicitors on the Occupancy Date at any time after the expiry of the initial ten (10) day statutory rescission period, or wishes to vary the manner in which the Purchaser has previously requested to take title to the Property, or wishes to add or change any unit(s) being acquired from the Vendor, then the Purchaser hereby covenants and agrees to pay to the Vendor's Solicitor's the legal fees and ancillary disbursements which may be incurred by the Vendor or charged by the Vendor's Solicitors in order to implement any of the foregoing changes so requested by the Purchaser (with the Vendor's Solicitors' legal fees for implementing any such changes to any of the interim closing and/or final closing documents so requested by the Purchaser and agreed to by the Vendor being \$350.00 plus G.S.T.), but without there being any obligation whatsoever on the part of the Vendor to approve of, or to implement, any of the foregoing changes so requested.

- (f) It is further understood and agreed that the Unit may include a rental or leased furnace or hot water tank or HVAC equipment and associated components which would remain the property of the appropriate company or other supplier of such item, and in such event and where the cost of same does not comprise a common expense of the Condominium, the Purchaser shall pay the monthly rental/lease charges assessed with respect thereto from and after the Occupancy Date, and in any event shall execute all requisite rental or security documents in connection therewith.
- (g) The Purchaser acknowledges that it may be required to enter into an agreement with the supplier of hydro services to the Condominium (the "Hydro Supplier") on or before the Closing Date. Furthermore, the Purchaser acknowledges that such agreement may require the Purchaser to deliver a security deposit to the Hydro Supplier prior to the Occupancy Date and the Purchaser agrees to deliver such security deposit to the Vendor on the Occupancy Date.
- (h) It is acknowledged and agreed by the parties hereto that the Purchase Price already includes a component equivalent to both the federal portion and, if applicable, the provincial portion of the harmonized goods and services tax or single sales tax exigible with respect to this purchase and sale transaction less the Rebate as defined below (hereinafter referred to as the "HST"), and that the Vendor shall remit the HST to CRA on behalf of the Purchaser forthwith following the completion of this transaction. The Purchaser hereby warrants and represents to the Vendor that with respect to this transaction, the Purchaser qualifies for the new housing rebate applicable pursuant to Section 254 of the *Excise Tax Act* (Canada), as may be amended, and the new housing rebate announced by the Ontario Ministry of Revenue (collectively, the "Rebate"), in its Information Notice dated June 2009 - No. 2 (the "Ontario Circular") and further warrants and represents that the Purchaser is a natural person who is acquiring the Property with the intention of being the sole beneficial owner thereof on the Title Transfer Date (and not as the agent or trustee for or on behalf of any other party or parties), and covenants that upon the Occupancy Date the Purchaser or one or more of the Purchaser's relations (as such term is defined in the *Excise Tax Act*) shall personally occupy the Unit as his primary place of residence, for such period of time as shall be required by the *Excise Tax Act*, and any other applicable legislation, in order to entitle the Purchaser to the Rebate (and the ultimate assignment thereof to and in favour of the Vendor) in respect of the Purchaser's acquisition of the Unit. The Purchaser further warrants and represents that he has not claimed (and hereby covenants that the Purchaser shall not hereafter claim), for the Purchaser's own account, any part of the Rebate or the RST transitional housing rebate referred to in the Ontario Circular (the "Transitional Rebate") in connection with the Purchaser's acquisition of the Unit, save as otherwise hereinafter expressly provided or contemplated. The Purchaser hereby irrevocably assigns to the Vendor all of the Purchaser's rights, interests and entitlements to the Rebate and the Transitional Rebate (and concomitantly releases all of the Purchaser's claims or interests in and to the Rebate and the Transitional Rebate, to and in favour of the Vendor), and hereby irrevocably authorizes and directs CRA to pay or credit the Rebate and the Transitional Rebate directly to the Vendor. In addition, the Purchaser shall execute and deliver to the Vendor, forthwith upon the Vendor's or Vendor's solicitors request for same (and in any event on or before the Title Transfer Date), all requisite documents and assurances that the Vendor or the Vendor's solicitors may reasonably require in order to confirm the Purchaser's entitlement to the Rebate and/or to enable the Vendor to obtain the benefit of the Rebate and the Transitional Rebate (by way of assignment or otherwise), including without limitation: the New Housing Application for Rebate of Goods and Services Tax Form as prescribed from time to time (the "Rebate Forms"). The Purchaser covenants and agrees to indemnify and save the Vendor harmless from and against any loss, cost, damage and/or liability (including an amount equivalent to the Rebate and the Transitional Rebate, plus penalties and interest thereon) which the Vendor may suffer, incur or be charged with, as a result of the Purchaser's failure to qualify for the Rebate, or as a result of the Purchaser having qualified initially but being subsequently disentitled to the Rebate, or as a result of the inability to assign the benefit of the Rebate or the Transitional Rebate to the Vendor (or the ineffectiveness of the documents purporting to assign the benefit of the Rebate or the Transitional Rebate to the Vendor). As security for the payment of such amount, the Purchaser does hereby charge and pledge his interest in the Unit with the intention of creating a lien or charge against same. It is further understood and agreed by the parties hereto that:

- (i) if the Purchaser does not qualify for the Rebate, or fails to deliver to the Vendor or the Vendor's solicitors forthwith upon the Vendor's or the Vendor's solicitors request for same (and in any event on or before the Title Transfer Date) the Rebate Forms duly executed by the Purchaser, together with all other requisite documents and assurances that the Vendor or the Vendor's solicitors may reasonably require from the Purchaser or the Purchaser's solicitor in order to confirm the Purchaser's eligibility for the Rebate and/or to ensure that the Vendor ultimately acquires (or is otherwise assigned) the benefit of the Rebate and the Transitional Rebate; or
- (ii) if the Vendor believes, for whatever reason, that the Purchaser does not qualify for the Rebate, regardless of any documentation provided by or on behalf of the Purchaser (including any statutory declaration sworn by the Purchaser) to the contrary, and the Vendor's belief or position on this matter is communicated to the Purchaser or the Purchaser's solicitor on or before the Title Transfer Date;

then notwithstanding anything hereinbefore or hereinafter provided to the contrary, the Purchaser shall be obliged to pay to the Vendor (or to whomsoever the Vendor may in writing direct), by certified cheque delivered on the Title Transfer Date, an amount equivalent to the Rebate and/or the Transitional Rebate, in addition to the Purchase Price and in those circumstances where the Purchaser maintains that he is eligible for the Rebate despite the Vendor's belief to the contrary, the Purchaser shall (after payment of the amount equivalent to the Rebate as aforesaid) be fully entitled to pursue the procurement of the Rebate directly from CRA. It is further understood and agreed that in the event that the Purchaser intends to rent out the Unit before or after the Title Transfer Date, the Purchaser shall not be entitled to the Rebate, but may nevertheless be entitled to pursue, on his own after the Title Transfer Date, the federal and provincial new rental housing rebates directly with CRA, pursuant to Section 256.2 of the *Excise Tax Act*, as may be amended, and other applicable legislation to be enacted relating to the provincial new rental housing rebate.

- (i) Notwithstanding any other provision herein contained in this Agreement, the Purchaser acknowledges and agrees that the Purchase Price does not include any HST exigible with respect to any of the adjustments payable by the Purchaser pursuant to this Agreement, or any extras or upgrades or changes purchased, ordered or chosen by the Purchaser from the Vendor which are not specifically set forth in this Agreement,

and the Purchaser covenants and agrees to pay such HST to the Vendor in accordance with the *Excise Tax Act*. In addition, and without limiting the generality of the foregoing, in the event that the Purchase Price is increased by the addition of extras, changes, upgrades or adjustments and as a result of such increase, the quantum of the Rebate that would otherwise be available is reduced or extinguished (the quantum of such reduction being hereinafter referred to as the "**Reduction**"), then the Purchaser shall pay to the Vendor on the Title Transfer Date the amount of (as determined by the Vendor in its sole and absolute discretion) the Reduction.

- (j) An administration fee of TWO HUNDRED AND FIFTY (\$250.00) DOLLARS shall be charged to the Purchaser for any cheque payable hereunder delivered to the Vendor or to the Vendor's Solicitors and not accepted by the Vendor's or the Vendor's Solicitor's bank for any reason. At the Vendor's option, this administration fee can be collected as an adjustment on the Title Transfer Date or together with the replacement cheque delivered by the Purchaser.

**Title**

7. The Vendor or its Solicitor shall notify the Purchaser or his/her Solicitor following registration of the Creating Documents so as to permit the Purchaser or his/her Solicitor to examine title to the Unit (the "**Notification Date**"). The Purchaser shall be allowed twenty (20) days from the Notification Date (the "**Examination Period**") to examine title to the Unit at the Purchaser's own expense and shall not call for the production of any surveys, title deeds, abstracts of title, grading certificates, occupancy permits or certificates, nor any other proof or evidence of the title or occupiability of the Unit, except such copies thereof as are in the Vendor's possession. If within the Examination Period, any valid objection to title or to any outstanding work order is made in writing to the Vendor which the Vendor shall be unable or unwilling to remove and which the Purchaser will not waive, this Agreement shall, notwithstanding any intervening acts or negotiations in respect of such objections, be null and void and the deposit monies together with the interest required by the Act to be paid after deducting any payments due to the Vendor by the Purchaser as provided for in this Agreement shall be returned to the Purchaser and the Vendor shall have no further liability or obligation hereunder and shall not be liable for any costs or damages. Save as to any valid objections so made within the Examination Period, the Purchaser shall be conclusively deemed to have accepted the title of the Vendor to the Unit. The Purchaser acknowledges and agrees that the Vendor shall be entitled to respond to some or all of the requisitions submitted by or on behalf of the Purchaser through the use of a standard title memorandum or title advice statement prepared by the Vendor's Solicitors, and that same shall constitute a satisfactory manner of responding to the Purchaser's requisitions, thereby relieving the Vendor and the Vendor's Solicitors of the requirement to respond directly or specifically to the Purchaser's requisitions.

**Direction Re: Title**

8. The Purchaser hereby agrees to submit to the Vendor or the Vendor's Solicitors on the earlier of the Occupancy Date and twenty (20) days prior to the Title Transfer Date, a written direction as to how the Purchaser intends to take title to the Unit, including, the date(s) of birth and marital status and the Purchaser shall be required to close the transaction in the manner so advised unless the Vendor otherwise consents in writing, which consent may be arbitrarily withheld. If the Purchaser does not submit such confirmation within the required time as aforesaid the Vendor shall be entitled to tender a Transfer/Deed on the Title Transfer Date engrossed in the name of the Purchaser as shown on the face of this Agreement.

**Permitted Encumbrances**

9. (a) The Purchaser agrees to accept title subject to the following:
- (i) the Condominium Documents, notwithstanding that they may be amended and varied from the proposed Condominium Documents in the general form attached to the Disclosure Statement delivered to the Purchaser as set out in Schedule "E";
  - (ii) registered restrictions or covenants that run with the Property, including any encroachment agreement(s) with any governmental authorities or adjacent land owner(s), provided that same are complied with as at the Title Transfer Date;
  - (iii) easements, rights-of-way and/or licences now registered (or to be registered hereafter) for the supply and installation of utility services, drainage, telephone services, electricity, gas, storm and/or sanitary sewers, water, cable television/internet, recreational and shared facilities, and/or any other service(s) to or for the benefit of the Condominium (or to any adjacent or neighbouring properties), including any easement(s) which may be required by the Vendor (or by the owner of the Property, if not one and the same as the Vendor), or by any owner(s) of adjacent or neighbouring properties, for servicing and/or access to (or entry from) such properties, together with any easement and cost-sharing agreement(s) or reciprocal agreement(s) confirming (or pertaining to) any easement or right-of-way for access, egress, support and/or servicing purposes, and/or pertaining to the sharing of any services, facilities and/or amenities with adjacent or neighbouring property owners, provided that any such easement and cost-sharing agreements or reciprocal agreements are (insofar as the obligations thereunder pertaining to the Property, or any portion thereof, are concerned) complied with as at the Title Transfer Date;
  - (iv) registered municipal agreements and registered agreements with publicly regulated utilities and/or with local ratepayer associations, including without limitation, any development, site plan, condominium, subdivision, Section 37, collateral, limiting distance, engineering and/or other municipal agreement (or similar agreements entered into with any governmental authorities including any amendments or addenda related thereto), (with all of such agreements being hereinafter collectively referred to as the "**Development Agreements**"), provided that same are complied with as at the Title Transfer Date, or security has been posted in such amounts and on such terms as may be required by the governmental authorities to ensure compliance therewith and/or the completion of any outstanding obligations thereunder; and
  - (v) unregistered or inchoate liens for unpaid utilities in respect of which no formal bill, account or invoice has been issued by the relevant utility authority (or if issued, the time for payment of same

has not yet expired), without any claim or request by the Purchaser for any utility holdback(s) or reduction/abatement in the Purchase Price, provided that the Vendor delivers to the Purchaser the Vendor's written undertaking to pay all outstanding utility accounts owing with respect to the Property (including any amounts owing in connection with any final meter reading(s) taken on or immediately prior to the Title Transfer Date, if applicable), as soon as reasonably possible after the completion of this transaction;

- (b) It is understood and agreed that the Vendor shall not be obliged to obtain or register on title to the property a release of (or an amendment to) any of the aforementioned easements, Development Agreements, reciprocal agreements or restrictive covenants or any of the other aforementioned agreements or notices, nor shall the Vendor be obliged to have any of same deleted from the title to the Property, and the Purchaser hereby expressly acknowledges and agrees that the Purchaser shall satisfy himself or herself as to compliance therewith. The Purchaser agrees to observe and comply with the terms and provisions of the Development Agreements, and all restrictive covenants registered on title. The Purchaser further acknowledges and agrees that the retention by the local municipality within which the Property is situate (the "Municipality"), or by any of the other governmental authorities, of security (e.g. in the form of cash, letters of credit, a performance bond, etc., satisfactory to the Municipality and/or any of the other governmental authorities) intended to guarantee the fulfilment of any outstanding obligations under the Development Agreements shall, for the purposes of the purchase and sale transaction contemplated hereunder, be deemed to be satisfactory compliance with the terms and provisions of the Development Agreements. The Purchaser also acknowledges that the wires, cables and fittings comprising the cable television system serving the Condominium are (or may be) owned by the local cable television supplier, or by a company associated, affiliated with or related to the Vendor.
- (c) The Purchaser covenants and agrees to consent to the matters referred to in subparagraph 9(a) hereof and to execute all documents and do all things requisite for this purpose, either before or after the Title Transfer Date;
- (d) In the event that the Vendor is not the registered owner of the Property, the Purchaser agrees to accept a conveyance of title from the registered owner together with the owner's title covenants in lieu of the Vendor's.
- (e) The Vendor shall be entitled to insert in the Transfer/Deed of Land, specific covenants by the Purchaser pertaining to any or all of the restrictions, easements, covenants and agreements referred to herein and in the Condominium Documents, and in such case, the Purchaser may be required to deliver separate written covenants on closing. If so requested by the Vendor, the Purchaser covenants to execute all documents and instruments required to convey or confirm any of the easements, licences, covenants, agreements, and/or rights, required pursuant to this Agreement and shall observe and comply with all of the terms and provisions therewith. The Purchaser may be required to obtain a similar covenant (enforceable by and in favour of the Vendor), in any agreement entered into between the Purchaser and any subsequent transferee of the Unit.

#### Vendor's Lien

- 10. The Purchaser agrees that the Vendor shall have a Vendor's Lien for unpaid purchase monies on the Title Transfer Date and shall be entitled to register a Notice of Vendor's Lien against the Unit any time after the Title Transfer Date.

#### Partial Discharges

- 11. The Purchaser acknowledges that the Unit may be encumbered by mortgages (and collateral security thereto) which are not intended to be assumed by the Purchaser and that the Vendor shall not be obliged to obtain and register (partial) discharges of such mortgages insofar as they affect the Unit on the Title Transfer Date. The Purchaser agrees to accept the Vendor's Solicitors' undertaking to obtain and register (partial) discharges of such mortgages in respect of the Unit, as soon as reasonably possible after the Title Transfer Date subject to the Vendor or its solicitors providing to the Purchaser or the Purchaser's Solicitor the following:
  - (a) a mortgage statement or letter from the mortgagee(s) (or from their respective solicitors) confirming the amount, if any, required to be paid to the mortgagee(s) to obtain (partial) discharges of the mortgages with respect to the Unit;
  - (b) a direction from the Vendor to the Purchaser to pay such amounts to the mortgagee(s) (or to whomever the mortgagees may direct) on the Title Transfer Date to obtain a (partial) discharge of the mortgage(s) with respect to the Unit; and
  - (c) an undertaking from the Vendor's Solicitors to deliver such amounts to the mortgagees and to obtain and register the (partial) discharge of the mortgages with respect to the Unit upon receipt thereof and within a reasonable time following the Title Transfer Date and to advise the Purchaser or the Purchaser's Solicitor concerning registration particulars by posting same on the internet.

#### Construction Lien Act

- 12. The Purchaser covenants and agrees that he/she is a "home buyer" within the meaning of the *Construction Lien Act*, R.S.O. 1990, c.C.30 and will not claim any lien holdback on the Occupancy Date or Title Transfer Date. The Vendor shall complete the remainder of the Condominium according to its schedule of completion and neither the Occupancy Date nor the Title Transfer Date shall be delayed on that account.

#### The Planning Act

- 13. This Agreement and the transaction arising therefrom are conditional upon compliance with the provisions of section 50 of the *Planning Act*, R.S.O. 1990, c.P.13 and any amendments thereto on or before the Title Transfer Date.

Title Transfer Date

14. (a) The provisions of the Tarion Addendum reflect the TWC's policies, regulations and/or guidelines on extensions of the First Tentative Occupancy Date, but it is expressly understood and agreed by the parties hereto that any failure to provide notice(s) of the extension(s) of the First Tentative Occupancy Date, Subsequent Tentative Occupancy Dates or Firm Occupancy Date, in accordance with the provisions of the Tarion Addendum shall only give rise to a damage claim by the Purchaser against the Vendor up to a maximum of \$7,500.00, as more particularly set forth in the Regulations to the *Ontario New Home Warranties Plan Act*, R.S.O. 1990, as amended (the "ONHWPA"), and under no circumstances shall the Purchaser be entitled to terminate this transaction or otherwise rescind this Agreement as a result thereof, other than in accordance with the Tarion Addendum.
- (b) The Vendor's Solicitors shall designate a date not less than twenty (20) days after written notice is given to the Purchaser or his or her solicitor of the registration of the Creating Documents as the Title Transfer Date. The Title Transfer Date once designated may be extended from time to time by the Vendor's Solicitors provided that it shall not be more than twenty-four (24) months following the Occupancy Date.

Purchaser's Covenants, Representations and Warranties

15. The Purchaser covenants and agrees that this Agreement is subordinate to and postponed to any mortgages arranged by the Vendor and any advances thereunder from time to time, and to any easement, license or other agreement concerning the Condominium and the Condominium Documents. The Purchaser further agrees to consent to and execute all documentation as may be required by the Vendor in this regard and the Purchaser hereby irrevocably appoints the Vendor as the Purchaser's attorney to execute any consents or other documents required by the Vendor to give effect to this paragraph. The Purchaser hereby consents to the Vendor obtaining a consumer's report containing credit and/or personal information for the purposes of this transaction. The Purchaser further agrees to deliver to the Vendor, from time to time, within ten (10) days of written demand from the Vendor, all necessary financial and personal information required by the Vendor in order to evidence the Purchaser's ability to pay the balance of the Purchase Price on the Title Transfer Date, including without limitation, written confirmation of the Purchaser's income and evidence of the source of the payments required to be made by the Purchaser in accordance with this Agreement. Without limiting the generality of the foregoing and notwithstanding any other provision in this Agreement to the contrary, within ten (10) days of written demand from the Vendor, the Purchaser agrees to produce evidence of a satisfactory mortgage approval signed by a lending institution or other mortgagee acceptable to the Vendor confirming that the said lending institution or acceptable mortgagee will be advancing funds to the Purchaser sufficient to pay the balance due on the Title Transfer Date. If the Purchaser fails to provide the mortgage approval as aforesaid, then the Purchaser shall be deemed to be in default under this Agreement. The Vendor may, in its sole discretion, elect to accept in the place of such mortgage commitment, other evidence satisfactory to the Vendor that the Purchaser will have sufficient funds to pay the balance due on the Title Transfer Date.
16. The Purchaser acknowledges that notwithstanding any rule of law to the contrary, that by executing this Agreement, it has not acquired any equitable or legal interest in the Unit or the Property. The Purchaser covenants and agrees not to register this Agreement or notice of this Agreement or a caution, certificate of pending litigation, Purchaser's Lien, or any other document providing evidence of this Agreement against title to the Property, Unit or the Condominium and further agrees not to give, register, or permit to be registered any encumbrance against the Property, Unit or the Condominium. Should the Purchaser be in default of his or her obligations hereunder, the Vendor may, as agent and attorney of the Purchaser, cause the removal of notice of this Agreement, caution or other document providing evidence of this Agreement or any assignment thereof, from the title to the Property, Unit or the Condominium. In addition, the Vendor, at its option, shall have the right to declare this Agreement null and void in accordance with the provisions of paragraph 26 hereof. The Purchaser hereby irrevocably consents to a court order removing such notice of this Agreement, any caution, or any other document or instrument whatsoever from title to the Property, Unit or the Condominium and the Purchaser agrees to pay all of the Vendor's costs and expenses in obtaining such order (including the Vendor's Solicitor's fees on a full indemnity basis).
17. The Purchaser covenants not to list for sale or lease, advertise for sale or lease, sell or lease, nor in any way assign his or her interest under this Agreement, or the Purchaser's rights and interests hereunder or in the Unit, nor directly or indirectly permit any third party to list or advertise the Unit for sale or lease, at any time until after the Title Transfer Date, without the prior written consent of the Vendor, which consent may be arbitrarily withheld. The Purchaser acknowledges and agrees that once a breach of the preceding covenant occurs, such breach is or shall be incapable of rectification, and accordingly the Purchaser acknowledges, and agrees that in the event of such breach, the Vendor shall have the unilateral right and option of terminating this Agreement and the Occupancy License, effective upon delivery of notice of termination to the Purchaser or the Purchaser's solicitor, whereupon the provisions of this Agreement dealing with the consequence of termination by reason of the Purchaser's default, shall apply. The Purchaser shall be entitled to direct that title to the Unit be taken in the name of his or her spouse, or a member of his or her immediate family only, and shall not be permitted to direct title to any other third parties.
18. The Purchaser acknowledges that the Vendor is (or may in the future be) processing and/or completing one or more rezoning or minor variance applications with respect to the Lands (and/or the lands adjacent thereto or in the neighbouring vicinity thereof), as a well as a site plan approval/development application/draft plan of condominium approval with respect to the Lands, in order to permit the development and construction of the Condominium thereon. The Purchaser acknowledges that during the rezoning, minor variance, site plan and/or draft plan of condominium approval process, the footprint or siting of the condominium building may shift from that originally proposed or intended, the overall height of the condominium building (and the number of levels/floors, and/or the number of dwelling units comprising the Condominium) may vary, and the location of the Condominium's proposed amenities may likewise be altered, without adversely affecting the floor plan layout, design and size of the interior of the Unit, and the Purchaser hereby expressly agrees to complete this transaction notwithstanding the foregoing, without any abatement in the Purchase Price, and without any entitlement to a claim for damages or other compensation whatsoever. The Purchaser further covenants and agrees that it shall not oppose the *aforementioned zoning, minor variance and site plan/development applications*, nor any other applications ancillary thereto, including without limitation, any application submitted or pursued by or on behalf of the Vendor to lawfully permit the development and registration of the Condominium, or to obtain an increase in the density coverage or the dwelling unit count (or yield) thereof, or for any other lawful purpose whatsoever, and the Purchaser expressly acknowledges and agrees that this covenant may be pleaded as an estoppel or bar to any opposition or objection raised by the Purchaser thereto.



19. The Purchaser covenants and agrees that he/she shall not interfere with the completion of other units and the common elements by the Vendor. Until the Condominium is completed and all units sold and transferred the Vendor may make such use of the Condominium as may facilitate the completion of the Condominium and sale of all the units, including, but not limited to the maintenance of a sales/rental/administration/construction office(s) and model units, and the display of signs located on the Property.

#### Termination without Default

20. In the event this Agreement is terminated through no fault of the Purchaser, all deposit monies paid by the Purchaser towards the Purchase Price, together with any interest required by law to be paid, shall be returned to the Purchaser; provided however, that the Vendor shall not be obligated to return any monies paid by the Purchaser as an Occupancy Fee. The Vendor shall be entitled to require the Purchaser to execute a release of any surety, lender or any other third party requested by the Vendor in its discretion prior to the return of such monies. In no event shall the Vendor or its agents be liable for any damages or costs whatsoever and without limiting the generality of the foregoing, for any loss of bargain, for any relocating costs, or for any professional or other fees paid in relation to this transaction. This provision may be pleaded by the Vendor as a complete defence to any such claim.

#### Tarion Warranty Corporation

21. The Vendor represents and warrants to the Purchaser that the Vendor is a registered vendor/builder with the TWC. The Purchaser acknowledges and agrees that any warranties of workmanship or materials, in respect of any aspect of the construction of the Condominium including the Unit, whether implied by this Agreement or at law or in equity or by any statute or otherwise, shall be limited to only those warranties deemed to be given by the Vendor under the ONHWPA and shall extend only for the time period and in respect of those items as stated in the ONHWPA, it being understood and agreed that there is no representation, warranty, guarantee, collateral agreement, or condition precedent to, concurrent with or in any way affecting this Agreement, the Condominium or the Unit, other than as expressed herein. The Purchaser hereby irrevocably appoints the Vendor his/her agent to complete and execute the TWC Certificate of Deposit and any excess condominium deposit insurance documentation in this regard, as required, both on its own behalf and on behalf of the Purchaser.

#### Right of Entry

22. Notwithstanding the Purchaser occupying the Unit on the Occupancy Date or the closing of this transaction and the delivery of title to the Unit to the Purchaser, as applicable, the Vendor or any person authorized by it shall be entitled at all reasonable times and upon reasonable prior notice to the Purchaser to enter the Unit and the common elements in order to make inspections or to do any work or replace therein or thereon which may be deemed necessary by the Vendor in connection with the Unit or the common elements and such right shall be in addition to any rights and easements created under the Act. A right of entry in favour of the Vendor for a period not exceeding five (5) years similar to the foregoing may be included in the Transfer/Deed provided on the Title Transfer Date and acknowledged by the Purchaser at the Vendor's sole discretion.

#### Occupancy

23. (a) The Unit shall be deemed to be substantially completed when the interior work has been finished to the minimum standards allowed by the Municipality so that the Unit may be lawfully occupied notwithstanding that there remains other work within the Unit and/or the common elements to be completed. The Purchaser shall not occupy the Unit until the Municipality has permitted same or consented thereto, if such consent is required and the Occupancy Date shall be postponed until such required consent is given. The Purchaser shall not require the Vendor to provide or produce an occupancy permit, certificate or authorization from the Municipality other than the documentation required by paragraph 8 of the Tarion Addendum. Provided that the Vendor complies with paragraph 8 of the Tarion Addendum, the Purchaser acknowledges that the failure to complete the common elements before the Occupancy Date shall not be deemed to be failure to complete the Unit, and the Purchaser agrees to complete this transaction notwithstanding any claim submitted to the Vendor and/or to the TWC in respect of apparent deficiencies or incomplete work provided, always, that such incomplete work does not prevent occupancy of the Unit as, otherwise, permitted by the Municipality.
- (b) If the Unit is substantially complete and fit for occupancy on the Occupancy Date, as provided for in subparagraph (a) above, but the Creating Documents have not been registered, (or in the event the Condominium is registered prior to the Occupancy Date and closing documentation has yet to be prepared), the Purchaser shall pay to the Vendor, a further amount on account of the Purchase Price specified in paragraph 1(b) hereof without adjustment save for any pro-rated portion of the Occupancy Fee described and calculated in Schedule "C", and the Purchaser shall occupy the Unit on the Occupancy Date pursuant to the Occupancy Licence attached hereto as Schedule "C".

#### Inspection

24. (a) The Purchaser or the Purchaser's designate as hereinafter provided agrees to meet the Vendor's representative at the date and time designated by the Vendor, prior to the Occupancy Date, to conduct a pre-delivery inspection of the Unit (the "PDI") and to list all items remaining incomplete at the time of such inspection together with all mutually agreed deficiencies with respect to the Unit, on the TWC Certificate of Completion and Possession (the "CCP") and the PDI Form, in the forms prescribed from time to time by, and required to be completed pursuant to the provisions of the ONHWPA. The said CCP and PDI Forms shall be executed by both the Purchaser or the Purchaser's designate and the Vendor's representative at the PDI and shall constitute the Vendor's only undertaking with respect to incomplete or deficient work and the Purchaser shall not require any further undertaking of the Vendor to complete any outstanding items. In the event that the Vendor performs any additional work to the Unit in its discretion, the Vendor shall not be deemed to have waived the provision of this paragraph or otherwise enlarged its obligations hereunder.
- (b) The Purchaser acknowledges that the Homeowner Information Package as defined in TWC Bulletin 42 (the "HIP") is available from TWC and that the Vendor further agrees to provide the HIP to the Purchaser or the Purchaser's designate, at or before the PDI. The Purchaser or the Purchaser's designate agrees to execute and provide to the Vendor the Confirmation of Receipt of the HIP forthwith upon receipt of the HIP.



- (c) The Purchaser shall be entitled to send a designate to conduct the PDI in the Purchaser's place or attend with their designate, provided the Purchaser first provides to the Vendor a written authority appointing such designate for PDI prior to the PDI. If the Purchaser appoints a designate, the Purchaser acknowledges and agrees that the Purchaser shall be bound by all of the documentation executed by the designate to the same degree and with the force and effect as if executed by the Purchaser directly.
- (d) In the event the Purchaser and/or the Purchaser's designate fails to attend the PDI or fails to execute the CCP and PDI Forms at the conclusion of the PDI, the Vendor may declare the Purchaser to be in default under this Agreement and may exercise any or all of its remedies set forth in this Agreement of Purchase and Sale and/or at law. Alternatively, the Vendor may, at its option, complete the within transaction but not provide the keys to the Unit to the Purchaser until the CCP and PDI Forms have been executed by the Purchaser and/or its designate or complete the within transaction and complete the CCP and PDI Forms on behalf of the Purchaser and/or the Purchaser's designate and the Purchaser hereby irrevocably appoints the Vendor the Purchaser's attorney and/or agent and/or designate to complete the CCP and PDI Forms on the Purchaser's behalf and the Purchaser shall be bound as if the Purchaser or the Purchaser's designate had executed the CCP and PDI Forms.
- (e) In the event the Purchaser and/or the Purchaser's designate fails to execute the Confirmation of Receipt of the HIP forthwith upon receipt thereof, the Vendor may declare the Purchaser to be in default under this Agreement and may exercise any or all of its remedies set forth in this Agreement of Purchase and Sale and/or at law.

#### Purchaser's Default

25. (a) In the event that the Purchaser is in default with respect to any of his or her obligations contained in this Agreement (other than paragraph 2(d) hereof) or in the Occupancy License on or before the Title Transfer Date and fails to remedy such default forthwith, if such default is a monetary default and/or pertains to the execution and delivery of documentation required to be given to the Vendor on the Occupancy Date or the Title Transfer Date, or within five (5) days of the Purchaser being so notified in writing with respect to any other non-monetary default, then the Vendor, in addition to (and without prejudice to) any other rights or remedies available to the Vendor (at law or in equity) may, at its sole option, unilaterally suspend all of the Purchaser's rights, benefits and privileges contained herein (including without limitation, the right to make colour and finish selections with respect to the Unit as hereinbefore provided or contemplated), and/or unilaterally declare this Agreement and the Occupancy License to be terminated and of no further force or effect. All monies paid hereunder (including the deposit monies paid or agreed to be paid by the Purchaser pursuant to this Agreement which sums shall be accelerated on demand of the Vendor), together with any interest earned thereon and monies paid or payable for extras or upgrades or changes ordered by the Purchaser, whether or not installed in the Dwelling, shall be forfeited to the Vendor. The Purchaser agrees that the forfeiture of the aforesaid monies shall not be a penalty and it shall not be necessary for the Vendor to prove it suffered any damages in order for the Vendor to be able to retain the aforesaid monies. The Vendor shall in such event still be entitled to claim damages from the Purchaser in addition to any monies forfeited to the Vendor. The aforesaid retention of monies is in addition to (and without prejudice to) any other rights or remedies available to the Vendor, at law or in equity. In the event of the termination of this Agreement and/or the Occupancy License by reason of the Purchaser's default as aforesaid, then the Purchaser shall be obliged to forthwith vacate the Unit (or cause same to be forthwith vacated) if same has been occupied (and shall leave the Unit in a clean condition, without any physical or cosmetic damages thereto, and clear of all garbage, debris and any furnishings and/or belongings of the Purchaser), and shall execute such releases and any other documents or assurances as the Vendor may require, in order to confirm that the Purchaser does not have (and the Purchaser hereby covenants and agrees that he/she does not have) any legal, equitable or proprietary interest whatsoever in the Unit and/or the Property (or any portion thereof) prior to the completion of this transaction and the payment of the entire Purchase Price to the Vendor or the Vendor's solicitors as hereinbefore provided, and in the event the Purchaser fails or refuses to execute same, the Purchaser hereby appoints the Vendor to be his or her lawful attorney in order to execute such releases, documents and assurances in the Purchaser's name, place and stead, and in accordance with the provisions of the *Powers of Attorney Act*, R.S.O. 1990, as amended, the Purchaser hereby declares that this power of attorney may be exercised by the Vendor during any subsequent legal incapacity on the part of the Purchaser. In the event the Vendor's Solicitors or an Escrow Agent is/are holding any of the deposits in trust pursuant to this Agreement, then in the event of default as aforesaid, the Purchaser hereby releases the said solicitors or Escrow Agent from any obligation to hold the deposit monies, in trust, and shall not make any claim whatsoever against the said solicitors or Escrow Agent and the Purchaser hereby irrevocably directs and authorizes the said solicitors or Escrow Agent to deliver the said deposit monies and accrued interest, if any, to the Vendor.
- (b) Notwithstanding subparagraph (a) above, the Purchaser acknowledges and agrees that if any amount, payment and/or adjustment which are due and payable by the Purchaser to the Vendor pursuant to this Agreement are not made and/or paid on the date due, but are subsequently accepted by the Vendor, notwithstanding the Purchaser's default, then such amount, payment and/or adjustment shall, until paid, bear interest at the rate equal to eight (8%) percent per annum above the bank rate as defined in subsection 19(2) of O. Reg. 48/01 to the Act at the date of default.

#### Common Elements

26. The Purchaser acknowledges that the Condominium will be constructed to Ontario Building Code requirements at the time of issuance of the building permit. The Purchaser covenants and agrees the Purchaser shall have no claims against the Vendor for any equal, higher or better standards of workmanship or materials. The Purchaser agrees that the foregoing may be pleaded by the Vendor as an estoppel in any action brought by the Purchaser or his/her successors in title against the Vendor. The Vendor may, from time to time, change, vary or modify in its sole discretion or at the instance of any governmental authority or mortgagee, any elevations, building specifications or site plans of any part of the Condominium, to conform with any municipal or architectural requirements related to building codes, official plan or official plan amendments, zoning by-laws, committee of adjustment and/or land division committee decisions, municipal site plan approval or architectural control. Such changes may be to the plans and specifications existing at inception of the Condominium or as they existed at the time the Purchaser entered into this Agreement, or as illustrated on any sales material, including without limitation, brochures, models or otherwise. With respect to any aspect of

construction, finishing or equipment, the Vendor shall have the right, without the Purchaser's consent, to substitute materials, for those described in this Agreement or in the plans or specifications, provided the substituted materials are in the judgment of the Vendor's architect, whose determination shall be final and binding, of equal or better quality. The Purchaser shall have no claim against the Vendor for any such changes, variances or modifications nor shall the Vendor be required to give notice thereof. The Purchaser hereby consents to any such alterations and agrees to complete the sale notwithstanding any such modifications.

Executions

27. The Purchaser agrees to provide to the Vendor's Solicitors on the Occupancy Date a clear and up-to-date Execution Certificate confirming that no executions are filed at the local Land Titles Office against the individual(s) in whose name title to the Unit is being taken.

Risk

28. The Unit shall be and remain at the risk of the Vendor until the Title Transfer Date, subject to the terms of the Occupancy Licence attached hereto as Schedule "C". If any part of the Condominium is damaged before the Creating Documents are registered, the Vendor may in its sole discretion either:
- (a) make such repairs as are necessary to complete this transaction and, if necessary, delay the Occupancy Date in the manner permitted in paragraph 7 of the Tarrion Addendum;
  - (b) terminate this Agreement and return to the Purchaser all deposit monies paid by the Purchaser to the Vendor, with interest payable under law if the damage to the Condominium has frustrated this Agreement at law; or
  - (c) apply to a court of competent jurisdiction for an order terminating the Agreement in accordance with the provisions of subsection 79(3) of the Act.

it being understood and agreed that all insurance policies and the proceeds thereof are to be for the benefit of the Vendor alone.

Tender/Termet

29. (a) The parties waive personal tender and agree that tender, in the absence of any other mutually acceptable arrangement and subject to the provisions of paragraph 30 of this Agreement shall be validly made by the Vendor upon the Purchaser, by a representative of the Vendor attending at the offices of Harris, Sheaffer, LLP at 12:00 noon on the Title Transfer Date or the Occupancy Date as the case may be and remaining there until 5:00 p.m. and is ready, willing and able to complete the transaction. The Purchaser agrees that keys may be released to the Purchaser as the construction site or sales office on the Occupancy Date or the Title Transfer Date, as applicable. The Vendor's advice that the keys are available shall be valid tender of possession of the Property to the Purchaser. In the event the Purchaser or his or her solicitor fails to appear or appears and fails to close, such attendance by the Vendor's representative (which includes the Vendor's Solicitors) shall be deemed satisfactory evidence that the Vendor is ready, willing and able to complete the sale at such time. Payment shall be tendered by certified cheque drawn on any Canadian chartered bank; and
- (b) It is further provided that, notwithstanding subparagraph 29 (a) hereof, in the event the Purchaser or his or her solicitor advise the Vendor or its Solicitors, on or before the Occupancy Date or Title Transfer Date, as applicable, that the Purchaser is unable or unwilling to complete the purchase or take occupancy, the Vendor is relieved of any obligation to make any formal tender upon the Purchaser or his or her solicitor and may exercise forthwith any and all of its right and remedies provided for in this Agreement and at law.
30. As the electronic registration system (hereinafter referred to as the "Teraview Electronic Registration System" or "TERS") is operative in the applicable Land Titles Office in which the Property is registered, then at the option of the Vendor's solicitor, the following provisions shall prevail:
- (a) The Purchaser shall be obliged to retain a solicitor, who is both an authorized TERS user and in good standing with the Law Society of Upper Canada to represent the Purchaser in connection with the completion of the transaction. The Purchaser shall authorize such solicitor to, at the option of the Vendor's Solicitors, either execute an escrow closing agreement with the Vendor's Solicitor on the standard form recommended by the Law Society of Upper Canada (hereinafter referred to as the "Escrow Document Registration Agreement") establishing the procedures and timing for completing this transaction or to otherwise agree to be bound by the procedures set forth in the Escrow Document Registration Agreement.
  - (b) The delivery and exchange of documents, monies and keys to the Unit and the release thereof to the Vendor and the Purchaser, as the case may be:
    - (i) shall not occur contemporaneously with the registration of the Transfer/Deed (and other registerable documentation); and
    - (ii) shall be governed by the Escrow Document Registration Agreement, pursuant to which the solicitor receiving the documents, keys and/or certified funds will be required to hold same in escrow, and will not be entitled to release same except in strict accordance with the provisions of the Escrow Document Registration Agreement.
  - (c) If the Purchaser's solicitor is unwilling or unable to complete this transaction via TERS, in accordance with the provisions contemplated under the Escrow Document Registration Agreement, then said solicitor (or the authorized agent thereof) shall be obliged to personally attend at the office of the Vendor's solicitor, at such time on the Title Transfer Date as may be directed by the Vendor's solicitor or as mutually agreed upon, in order to complete this transaction via TERS utilizing the computer facilities in the Vendor's solicitor's office, and shall pay a fee as determined by the Vendor's solicitor, acting reasonably for the use of the Vendor's computer facilities.

- (d) The Purchaser expressly acknowledges and agrees that he or she will not be entitled to receive the Transfer/Deed to the Unit for registration until the balance of funds due on closing, in accordance with the statement of adjustments, are either remitted by certified cheque via personal delivery or by electronic funds transfer to the vendor's solicitor (or in such other manner as the latter may direct) prior to the release of the Transfer/Deed for registration.
- (e) Each of the parties hereto agrees that the delivery of any documents not intended for registration on title to the Unit may be delivered to the other party hereto by telefax transmission (or by a similar system reproducing the original or by electronic transmission of electronically signed documents through the Internet), provided that all documents so transmitted have been duly and properly executed by the appropriate parties/signatories thereto which may be by electronic signature. The party transmitting any such document shall also deliver the original of same (unless the document is an electronically signed document pursuant to the *Electronic Commerce Act*) to the recipient party by overnight courier sent the day of closing or within 7 business days of closing, if same has been so requested by the recipient party.
- (f) Notwithstanding anything contained in this agreement to the contrary, it is expressly understood and agreed by the parties hereto that an effective tender shall be deemed to have been validly made by the Vendor upon the Purchaser when the Vendor's solicitor has:
  - (i) delivered all closing documents and/or funds to the Purchaser's solicitor in accordance with the provisions of the Escrow Document Registration Agreement and keys are made available for the Purchaser to pick up at the Vendor's sales of customer service office;
  - (ii) advised the Purchaser's solicitor, in writing, that the Vendor is ready, willing and able to complete the transaction in accordance with the terms and provisions of this Agreement; and
  - (iii) has completed all steps required by TERS in order to complete this transaction that can be performed or undertaken by the Vendor's solicitor without the cooperation or participation of the Purchaser's solicitor, and specifically when the "completeness signatory" for the transfer/deed has been electronically "signed" by the Vendor's solicitor;

without the necessity of personally attending upon the Purchaser or the Purchaser's solicitor with the aforementioned documents, keys and/or funds, and without any requirement to have an independent witness evidencing the foregoing.

#### General

- 31. The Vendor shall provide a statutory declaration on the Title Transfer Date that it is not a non-resident of Canada within the meaning of the ITA.
- 32. The Vendor and Purchaser agree to pay the costs of registration of their own documents and any tax in connection therewith.
- 33. The Vendor and the Purchaser agree that there is no representation, warranty, collateral agreement or condition affecting this Agreement or the Property or supported hereby other than as expressed herein in writing.
- 34. This Offer and its acceptance is to be read with all changes of gender or number required by the context and the terms, provisions and conditions hereof shall be for the benefit of and be binding upon the Vendor and the Purchaser, and as the context of this Agreement permits, their respective heirs, estate trustees, successors and permitted assigns.
- 35. The Purchaser acknowledges that the suite area of the Unit, as may be represented or referred to by the Vendor or any sales agent, or which appear in any sales material is approximate only, and is generally measured to the outside of all exterior, corridor and stairwell walls, and to the centre line of all party walls separating one unit from another. NOTE: For more information on the method of calculating the floor area of any unit, reference should be made to Builder Bulletin No. 22 published by the TWC. Actual useable floor space may (therefore) vary from any stated or represented floor area or gross floor area, and the extent of the actual or useable living space within the confines of the Unit may vary from any represented square footage or floor area measurement(s) made by or on behalf of the Vendor. In addition, the Purchaser is advised that the floor area measurements are generally calculated based on the middle floor of the Condominium building for each suite type, such that units on lower floors may have less floor space due to thicker structural members, mechanical rooms, etc., while units on higher floors may have more floor space. Accordingly, the Purchaser hereby confirms and agrees that all details and dimensions of the Unit purchased hereunder are approximate only, and that the Purchase Price shall not be subject to any adjustment or claim for compensation whatsoever, whether based upon the ultimate square footage of the Unit, or the actual or useable living space within the confines of the Unit or otherwise. The Purchaser further acknowledges that the ceiling height of the Unit is measured from the upper surface of the concrete floor slab (or subfloor) to the underside surface of the concrete ceiling slab (or joists). However, where ceiling bulkheads are installed within the Unit, and/or where dropped ceilings are required, then the ceiling height of the Unit will be less than that represented, and the Purchaser shall correspondingly be obliged to accept the same without any abatement or claim for compensation whatsoever.
- 36. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.
- 37. The headings of this Agreement form no part hereof and are inserted for convenience of reference only.
- 38. Each of the provisions of this Agreement shall be deemed independent and severable and the invalidity or unenforceability in whole or in part of any one or more of such provisions shall not be deemed to impair or affect in any manner the validity, enforceability or effect of the remainder of this Agreement, and in such event all the other provisions of this Agreement shall continue in full force and effect as if such invalid provision had never been included herein. The Purchaser and the Vendor acknowledge and agree that this Agreement and all amendments and addenda thereto shall constitute an agreement made under seal.
- 39. (a) If any documents required to be executed and delivered by the Purchaser to the Vendor are, in fact, executed by a third party appointed as the attorney for the Purchaser, then the power of attorney appointing such person must be registered in the Land Titles office where the Lands are registered, and a duplicate registered

copy thereof (together with a statutory declaration sworn by the Purchaser's solicitor unequivocally confirming, without any qualification whatsoever, that said power of attorney has not been revoked) shall be delivered to the Vendor along with such documents.

- (b) Where the Purchaser is a corporation, or where the Purchaser is buying in trust for another person or corporation for a disclosed or undisclosed beneficiary or principal (including, without limitation, a corporation to be incorporated), the execution of this Agreement by the principal or principals of such corporation, or by the person named as the Purchaser in trust as the case may be, shall be deemed and construed to constitute the personal indemnity of such person or persons so signing with respect to the obligations of the Purchaser herein and shall be fully liable to the Vendor for the Purchaser's obligations under this Agreement and may not plead such agency, trust relationship or any other relationships as a defence to such liability.

#### Notice

40. (a) Any notice required to be delivered under the provisions of the Taron Addendum shall be delivered in the manner required by paragraph 14 of the Taron Addendum.
- (b) Any other notice given pursuant to the terms of this Agreement shall be deemed to have been properly given if it is in writing and is delivered by hand, ordinary prepaid post, facsimile transmission or electronic mail to the attention of the Purchaser or to the Purchaser's solicitor to their respective addresses indicated herein or to the address of the Unit after the Occupancy Date and to the Vendor at 8791 Woodbine Avenue, Suite 100, Markham, Ontario, L3R 0P4, or to the Vendor's Solicitors at the address indicated in this Agreement or such other address as may from time to time be given by notice in accordance with the foregoing. Such notice shall be deemed to have been received on the day it was delivered by hand, by electronic mail or by facsimile transmission and upon the third day following posting, excluding Saturdays, Sundays and statutory holidays. This agreement or any amendment or addendum thereto may, at the Vendor's option, be properly delivered if it delivered by facsimile transmission or if a copy of same is computer scanned and forwarded by electronic mail to the other party.

#### Material Change

41. The Purchaser acknowledges and agrees that the Vendor may, from time to time in its sole discretion, due to site conditions or constraints, or for marketing considerations, or for any other legitimate reason, including without limitation any request or requirement of any of the governmental authorities or any request or requirement of the Vendor's architect or other design consultants:
- (a) change the Property's municipal address or numbering of the Unit (in terms of the unit number and/or level number ascribed to any one or more of the units comprising the Unit);
- (b) change, vary or modify the plans and specifications pertaining to the Unit or the Condominium, or any portion thereof (including architectural, structural, engineering, landscaping, grading, mechanical, site servicing and/or other plans and specifications) from the plans and specifications existing at the inception of the project, or existing at the time that the Purchaser has entered into this Agreement, or as same may be illustrated in any sales brochure(s), model(s) in the sales office or otherwise, including without limitation, making any change to the total number of dwelling, parking, locker and/or other ancillary units intended to be created within the Condominium, and/or any change to the total number of levels or floors within the Condominium, as well as any changes or alterations to the design, style, size and/or configuration of any dwelling or other ancillary units within the Condominium;
- (c) change, vary, or modify the number, size and location of any windows, column(s) and/or bulkhead(s) within or adjacent to (or comprising part of) the Unit, from the number, size and/or location of same as displayed or illustrated in any sales brochure(s), model(s) or floor plan(s) previously delivered or shown to the Purchaser, including the insertion or placement of any window(s), column(s) and/or bulkhead(s) in one or more locations within the Unit which have not been shown or illustrated in any sales brochure(s), model(s) or floor plan(s) previously delivered or shown to the Purchaser (regardless of the extent or impact thereof), as well as the removal of any window(s), column(s) and/or bulkhead(s) from any location(s) previously shown or illustrated in any sales brochure(s), model(s) in the sales office or otherwise; and/or
- (d) change the layout of the Unit such that same is a mirror image of the layout shown to the Purchaser (or a mirror image of the layout illustrated in any sales brochure or other marketing material(s) delivered to the Purchaser);

and that the Purchaser shall have absolutely no claim or cause of action whatsoever against the Vendor or its sales representatives (whether based or founded in contract, tort or in equity) for any such changes, deletions, alterations or modifications, nor shall the Purchaser be entitled to any abatement or reduction in the Purchase Price whatsoever as a consequence thereof, nor any notice thereof (unless any such change, deletion, alteration or modification to the said plans and specifications is material in nature (as defined by the Act) and significantly affects the fundamental character, use or value of the Unit and/or the Condominium, in which case the Vendor shall be obliged to notify the Purchaser in writing of such change, deletion, alteration or modification as soon as reasonably possible after the Vendor proposes to implement same, or otherwise becomes aware of same), and where any such change, deletion, alteration or modification to the said plans and specifications is material in nature, then the Purchaser's only recourse and remedy shall be the termination of this Agreement prior to the Title Transfer Date (and specifically within 10 days after the Purchaser is notified or otherwise becomes aware of such material change), and the return of the Purchaser's deposit monies, together with interest accrued thereon at the rate prescribed by the Act.

#### Cause of Action/Assignment

42. (a) The Purchaser acknowledges and agrees that notwithstanding any rights which he or she might otherwise have at law or in equity arising out of this Agreement, the Purchaser shall not assert any of such rights, nor have any claim or cause of action whatsoever as a result of any matter or thing arising under or in connection with this Agreement (whether based or founded in contract law, tort law or in equity, and whether for

innocent misrepresentation, negligent misrepresentation, breach of contract, breach of fiduciary duty, breach of constructive trust or otherwise), against any person, firm, corporation or other legal entity, other than the person, firm, corporation or legal entity specifically named or defined as the Vendor herein, even though the Vendor may be (or may ultimately be found or adjudged to be) a nominee or agent of another person, firm, corporation or other legal entity, or a trustee for and on behalf of another person, firm, corporation or other legal entity, and this acknowledgment and agreement may be pleaded as an estoppel and bar against the Purchaser in any action, suit, application or proceeding brought by or on behalf of the Purchaser to assert any of such rights, claims or causes of action against any such third parties. Furthermore, the Purchaser and the Vendor acknowledge that this Agreement shall be deemed to be a contract under seal.

- (b) At any time prior to the Title Transfer Date, the Vendor shall be permitted to assign this Agreement (and its rights, benefits and interests hereunder) to any person, firm, partnership or corporation registered as a vendor pursuant to the ONHWP and upon any such assignee assuming all obligations under this Agreement and notifying the Purchaser or the Purchaser's solicitor of such assignment, the Vendor named herein shall be automatically released from all obligations and liabilities to the Purchaser arising from this Agreement, and said assignee shall be deemed for all purposes to be the vendor herein as if it had been an original party to this Agreement, in the place and stead of the Vendor.

#### Non-Merger

43. The covenants and agreements of each of the parties hereto shall not merge on the Title Transfer Date, but shall remain in full force and effect according to their respective terms, until all outstanding obligations of each of the parties hereto have been duly performed or fulfilled in accordance with the provisions of this Agreement. No further written assurances evidencing or confirming the non-merger of the covenants of either of the parties hereto shall be required or requested by or on behalf of either party hereto.

#### Notice/Warning Provisions

44. The Purchaser acknowledges that it is anticipated by the Vendor that in connection with the Vendor's application to the appropriate governmental authorities for draft plan of condominium approval certain requirements may be imposed upon the Vendor by various governmental authorities. These requirements (the "Requirements") usually relate to warning provisions to be given to Purchasers in connection with environmental or other concerns (such as warnings relating to noise levels, the proximity of the Condominium to major street, garbage storage and pickup, school transportation, and similar matters). Accordingly, the Purchaser covenants and agrees that (1) on either the Occupancy Date or Title Transfer Date, as determined by the Vendor, the Purchaser shall execute any and all documents required by the Vendor acknowledging, inter alia, that the Purchaser is aware of the Requirements, and (2) if the Vendor is required to incorporate the Requirements into the final Condominium Documents the Purchaser shall accept the same, without in any way affecting this transaction. Notwithstanding the generality of the foregoing, the Purchaser agrees to be bound by the warnings set forth in Schedule "D" hereto.

#### Purchaser's Consent to the Collection and Limited Use of Personal Information

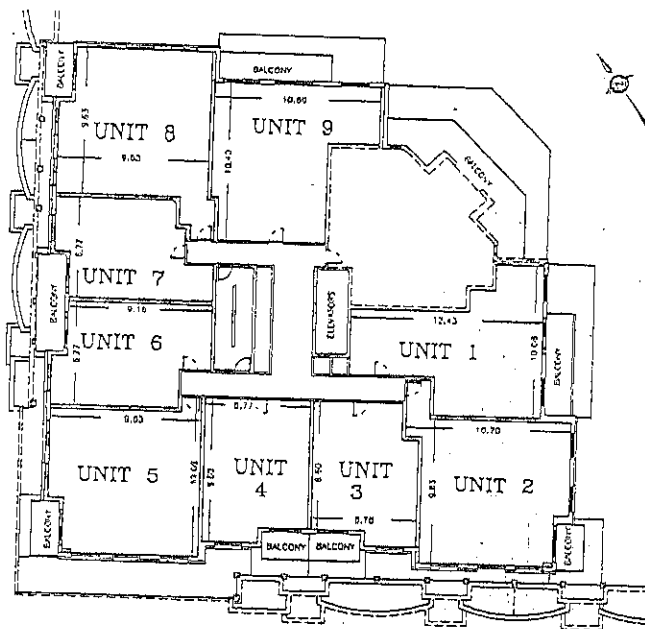
45. The Purchaser hereby consents to the Vendor's collection, use and disclosure of the Purchaser's personal information for the purpose of enabling the Vendor to proceed with the Purchaser's purchase of the Unit, completion of this transaction, and for post-closing and after-sales customer care purposes. Such personal information includes the Purchaser's name, home address, e-mail address, telefax/telephone number, age, date of birth, marital and residency status, social insurance number (only with respect to subparagraph (b) below), financial information, desired suite design(s), and colour/finish selections. In particular, but without limiting the foregoing, the Vendor may disclose such personal information to:
- (a) Any relevant governmental authorities or agencies, including without limitation, the Land Titles Office (in which the Condominium is registered), the Ministry of Finance for the Province of Ontario (i.e. with respect to Land Transfer Tax), and the Canada Revenue Agency (i.e. with respect to GST);
  - (b) Canada Revenue Agency, to whose attention the T-5 interest income tax information return and/or the NR4 non-resident withholding tax information return is submitted (where applicable), which will contain or refer to the Purchaser's social insurance number or business registration number (as the case may be), as required by Regulation 201(1)(b)(ii) of the ITA, as amended;
  - (c) The Condominium for the purposes of facilitating the completion of the Condominium's voting, leasing and/or other relevant records and to the Condominium's property manager for the purposes of facilitating the issuance of notices, the collection of common expenses and/or implementing other condominium management/administration functions;
  - (d) any companies or legal entities that are associated with, related to or affiliated with the Vendor, other future condominium declarants that are likewise associated with, related to or affiliated with the Vendor (or with the Vendor's parent/holding company) and are developing one or more other condominium projects or communities that may be of interest to the Purchaser or members of the Purchaser's family, for the limited purposes of marketing, advertising and/or selling various products and/or services to the Purchaser and/or members of the Purchaser's family;
  - (e) any financial institution(s) providing (or wishing to provide) mortgage financing, banking and/or other financial or related services to the Purchaser and/or members of the Purchaser's family, with respect to the Unit, including without limitation, the Vendor's construction lender(s), the quantity surveyor monitoring the Project and its costs, the Vendor's designated construction lender(s), the Tarion Warranty Corporation and/or any warranty bond provider and/or excess condominium deposit insurer, required in connection with the development and/or construction financing of the Condominium and/or the financing of the Purchaser's acquisition of the Property from the Vendor;
  - (f) any insurance companies of the Vendor providing (or wishing to provide) insurance coverage with respect to the Property (or any portion thereof) and/or the common elements of the Condominium, and any title insurance companies providing (or wishing to provide) title insurance to the Purchaser or the Purchaser's mortgage lender(s) in connection with the completion of this transaction;

- (g) any trades/suppliers or sub-trades/suppliers, who have been retained by or on behalf of the Vendor (or who are otherwise dealing with the Vendor) to facilitate the completion and finishing of the Unit and the installation of any extras or upgrades ordered or requested by the Purchaser;
- (h) one or more providers of cable television, telephone, telecommunication, security alarm systems, hydro-electricity, chilled water/hot water, gas and/or other similar or related services to the Property (or any portion thereof ) and/or the Condominium (collectively, the "Utilities"), unless the Purchaser gives the Vendor prior notice in writing not to disclose the Purchaser's personal information to one or more of the Utilities;
- (i) one or more third party data processing companies which handle or process marketing campaigns on behalf of the Vendor or other companies that are associated with, related to or affiliated with the Vendor, and who may send (by e-mail or other means) promotional literature/brochures about new condominiums and/or related services to the Purchaser and/or members of the Purchaser's family, unless the Purchaser gives the Vendor prior notice in writing not to disclose the Purchaser's personal information to said third party data processing companies;
- (j) the Vendor's solicitors, to facilitate the interim occupancy and/or final closing of this transaction, including the closing by electronic means via the Teraview Electronic Registration System, and which may (in turn) involve the disclosure of such personal information to an internet application service provider for distribution of documentation;
- (k) any person, where the Purchaser further consents to such disclosure or disclosures required by law.

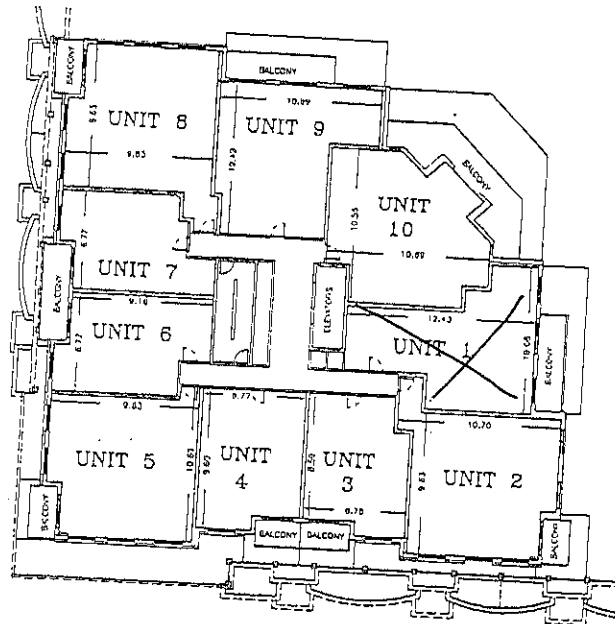
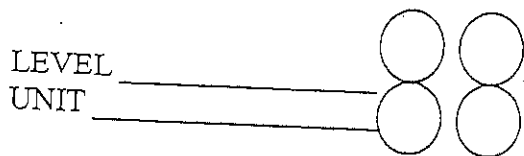
Any questions or concerns of the Purchaser with respect to the collection, use or disclosure of his or her personal information may be delivered to the Vendor at the address set out in the Tarion Addendum, Attention: Privacy Officer.

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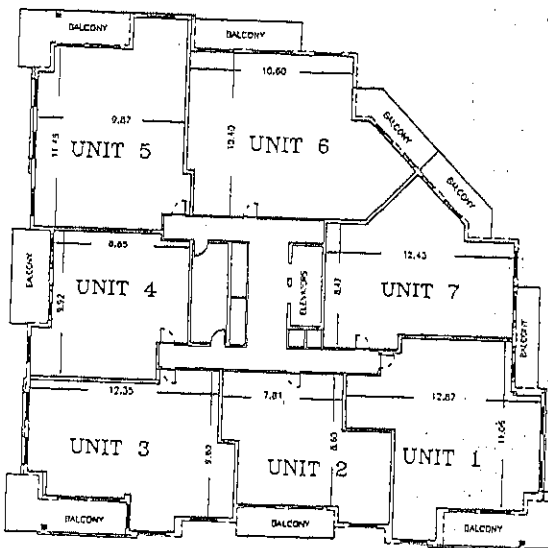
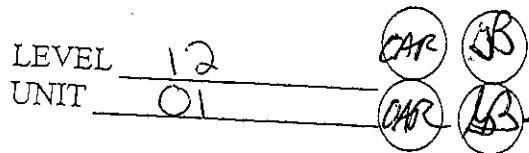
SCHEDULE "A" TO THE AGREEMENT OF PURCHASE AND SALE



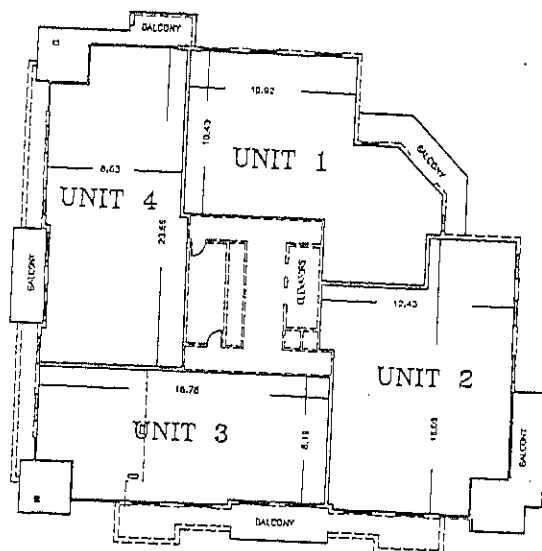
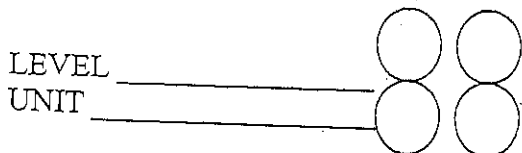
UNITS 1 to 9 (inclusive),  
LEVEL 4  
(NOT TO SCALE)



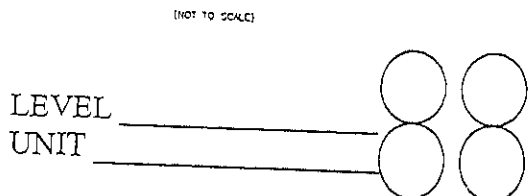
UNITS 1 to 10 (inclusive),  
LEVELS 5 to 13 (inclusive)  
(NOT TO SCALE)



UNITS 1 to 7 (inclusive),  
LEVELS 14 to 17 (inclusive)  
(NOT TO SCALE)



UNITS 1 to 4 (inclusive),  
LEVELS 18 and 19  
(NOT TO SCALE)



## SCHEDULE "B" TO THE AGREEMENT OF PURCHASE AND SALE

### FEATURES AND FINISHES – TOWER UNITS

#### The following are included in the Purchase Price:

- Engineered hardwood flooring in living, dining and den areas
- 40oz carpet with foam under pad in bedroom(s)
- Ceramic tile in kitchen, laundry, bathroom(s), and entrance areas
- Bi-fold doors for all closet/storage areas, painted white
- Digital Thermostat(s) for individual climate control of suite
- Smooth finished ceilings
- Contemporary trim package including nominal 4" painted base, lever passage and privacy sets
- Interior walls are primed and then painted with two coats of off-white, latex paint (bathroom(s), and all woodwork and trim painted with durable white semi-gloss paint). Paints have low levels of volatile organic compounds (VOCs).
- 6'8" foot interior doors with lever hardware, complete with contemporary casings
- 7 foot solid wood entry door with security peeper, lever set hardware and suite number on the escutcheon plate for floors 4-13. 8 foot solid wood entry door with security peeper, lever set hardware and suite number on the escutcheon plate for floors 14-19.
- Balcony and Terrace access via sliding patio door(s)
- Balcony to have one exterior electrical receptacle.
- Thermally broken aluminum window frames with, double pane, sealed glazed units, with designated operable windows.
- Where ceiling bulkheads are installed, the ceiling height will be less than the nominal 9 feet. Where dropped ceilings are required, (in areas such as foyers, closets, kitchens, dining rooms, bathrooms, laundry rooms and hallways), the ceiling height will also be less than the nominal 9 feet.

#### **KITCHENS**

- Stainless steel brand name Energy Star ® refrigerator and dishwasher
- Stainless steel brand name electric range, combination microwave/hood vent,
- Kitchen cabinetry with one bank of drawers, pantry per suite design. Cabinets complete with contemporary handles.

- Granite kitchen countertop with polished square edge and stainless steel under mounted double sink.
- Single lever kitchen faucet, complete with pull out spray.
- 4" granite backsplash

#### **BATHROOMS**

- White bathroom fixtures throughout.
- Cultured marble vanity with integrated basin and single lever faucet for the bathroom(s)
- Vanity mirror in clear finish
- 5' acrylic soaker tub with single lever faucet.
- Ceramic tiles in tub area to ceiling height
- Temperature controlled shower faucet.
- Low-flow shower head(s).
- Ceramic tile flooring
- Low consumption toilet(s).

#### **LAUNDRY**

- Brand name stackable washer & dryer combination unit
- Heavy-duty wiring and receptacle for dryer.
- Dryer vented to exterior.

#### **SAFETY and SECURITY**

- Heat detector(s) connected to fire annunciation panel.
- Hard wired smoke alarm(s).

#### **ELECTRICAL SERVICE and FIXTURES**

- Individual electrical power service, separately metered
- Decora series receptacles and switches throughout.
- Light fixtures in foyer, hallway(s), kitchen, breakfast area, and den.
- Capped ceiling light outlet in dining room.

#### **COMMUNICATIONS**

- Pre-wired cable outlet in living room, bedroom(s), den and kitchen
- Pre-wired telephone outlet in living room, bedroom(s), den and kitchen.

- N.B. Subject to paragraph 4 of the Agreement of Purchase and Sale attached hereto, the Vendor shall have the right to substitute other products and materials for those listed in this Schedule or provided for in the plans and specifications provided that the substituted products and materials are of a quality equal to, or better than, the products and materials so listed or so provided.
1. Marble and wood are subject to natural variations in colour and grain. Ceramic tile and broadloom are subject to pattern, shade and colour variations.
  2. If the Unit is at a stage of construction which will enable the Vendor to permit the Purchaser to make colour and material choices from the Vendor's standard selections, then the Purchaser shall have until the Vendor's date designated by the Vendor (of which the Purchaser shall be given at least seven (7) days prior to notice) to properly complete the Vendor's colour and material selection form. If the Purchaser fails to do so within such time period, the Vendor may irrevocably exercise all of the Purchaser's rights to colour and material selections hereunder and such selections shall be binding upon the Purchaser. No changes whatsoever shall be permitted in colours or materials so selected by the Vendor, except that the Vendor shall have the right to substitute other materials and items for those provided in this Schedule provided that such materials and items are of equal quality to or better than the materials and items set out herein.
  3. The Purchaser acknowledges that there shall be no reduction in the price or credit for any standard feature listed herein which is omitted at the Purchaser's request.
  4. References to model types or model numbers refer to current manufacturer's models. If these types or models shall change, the Vendor shall provide an equivalent model.
  5. All dimensions, if any, are approximate.
  6. All specifications and materials are subject to change without notice.
  7. Pursuant to this Agreement or this Schedule or pursuant to a supplementary agreement or purchase order the Purchase may have requested the Vendor to construct an additional feature within the Unit which is in the nature of an optional extra (such as, by way of example only, a fireplace); if, as a result of building, construction or site conditions within the Unit or the Building, the Vendor is not able to construct such extra, then the Vendor may, by written notice to the Purchaser, terminate the Vendor's obligation to construct the extra. In such event, the Vendor shall refund to the Purchaser the monies, if any, paid by the Purchaser to the Vendor in respect of such extra, without interest and in all other respects this Agreement shall continue in full force and effect.
  8. Floor and specific features will depend on the Vendor's package as selected.



## SCHEDULE "C" TO AGREEMENT OF PURCHASE AND SALE

### TERMS OF OCCUPANCY LICENCE

- C.1 The transfer of title to the Unit shall take place on the Title Transfer Date upon which date, unless otherwise expressly provided for hereunder, the term of this Occupancy Licence shall be terminated.
- C.2 The Purchaser shall pay or have paid to the Vendor, on or before the Occupancy Date, by certified cheque drawn on a Canadian chartered bank the amount set forth in paragraph 1(b) of this Agreement without adjustment. Upon payment of such amount on the Occupancy Date, the Vendor grants to the Purchaser a licence to occupy the Unit from the Occupancy Date.

The Purchaser shall pay to the Vendor the Occupancy Fee calculated as follows:

- (a) the amount of interest payable in respect of the unpaid balance of the Purchase Price at the prescribed rate;
- (b) an amount reasonably estimated by the Vendor on a monthly basis for municipal realty taxes attributable by the Vendor to the Unit; and
- (c) the projected monthly common expense contribution for the Unit;

as an occupancy charge on the first day of each month in advance during Interim Occupancy, no part of which shall be credited as payments on account of the Purchase Price, but which payments shall be a charge for occupancy only. If the Occupancy Date is not the first day of the month, the Purchaser shall pay on the Occupancy Date a pro rata amount for the balance of the month by certified funds. The Purchaser shall deliver to the Vendor on or before the Occupancy Date a series of post-dated cheques as required by the Vendor for payment of the estimated monthly Occupancy Fee. The Occupancy Fee may be recalculated by the Vendor, from time to time based on revised estimates of the items which may be lawfully taken into account in the calculation thereof and the Purchaser shall pay to the Vendor such revised Occupancy Fee following notice from the Vendor. With respect to taxes, the Purchaser agrees that the amount estimated by the Vendor on account of municipal realty taxes attributed to the Unit shall be subject to recalculation based upon the real property tax assessment or reassessment of the Units and/or Condominium, issued by the municipality after the Title Transfer Date and the municipal tax mill rate in effect as at the date such assessment or reassessment is issued. The Occupancy Fee shall thereupon be recalculated by the Vendor and any amount owing by one party to the other shall be paid upon demand.

- C.3 The Purchaser shall be allowed to remain in occupancy of the Unit during Interim Occupancy provided the terms of this Occupancy Licence and the Agreement have been observed and performed by the Purchaser. In the event the Purchaser breaches the terms of occupancy the Vendor in its sole discretion and without limitation of any other rights or remedies provided for in this Agreement or at law may terminate this Agreement and revoke the Occupancy Licence whereupon the Purchaser shall be deemed a trespasser and shall give up vacant possession forthwith. The Vendor may take whatever steps it deems necessary to obtain vacant possession and the Purchaser shall reimburse the Vendor for all costs it may incur.
- C.4 At or prior to the time that the Purchaser takes possession of the Unit, the Purchaser shall execute and deliver to the Vendor any documents, directions, acknowledgments, assumption agreements or any and all other documents required by the Vendor pursuant to this Agreement, in the same manner as if the closing of the transaction was taking place at that time.
- C.5 The Purchaser shall pay the monthly Occupancy Fee during Interim Occupancy and the Vendor shall destroy all unused post-dated Occupancy Fee cheques on or shortly after the Title Transfer Date.
- C.6 The Purchaser agrees to maintain the Unit in a clean and sanitary condition and not to make any alterations, improvements or additions thereto without the prior written approval of the Vendor which may be unreasonably withheld. The Purchaser shall be responsible for all utility, telephone expenses, cable television service, or other charges and expenses billed directly to the occupant of the Unit by the supplier of such services and not the responsibility of the Corporation under the Condominium Documents.
- C.7 The Purchaser's occupancy of the Unit shall be governed by the provisions of the Condominium Documents and the provisions of this Agreement. The Unit may only be occupied and used in accordance with the Condominium Documents and for no other purpose.
- C.8 The Vendor covenants to proceed with all due diligence and dispatch to register the Creating Documents. If the Vendor for any reason whatsoever is unable to register the Creating Documents and therefore is unable to deliver a registrable Transfer/Deed to the Purchaser within twenty-four (24) months after the Occupancy Date, the Purchaser or Vendor shall have the right after such twenty-four (24) month period to give sixty (60) days written notice to the other, of an intention to terminate the Occupancy Licence and this Agreement. If the Vendor and Purchaser consent to termination, the Purchaser shall give up vacant possession and pay the Occupancy Fee to such date, after which this Agreement and Occupancy Licence shall be terminated and all moneys paid to the Vendor on account of the Purchase Price shall be returned to the Purchaser together with interest required by the Act, subject however, to any repair and redecorating expenses of the Vendor necessary to restore the Unit to its original state of occupancy, reasonable wear and tear excepted. The Purchaser and Vendor each agree to provide a release of this Agreement in the Vendor's standard form. If the Vendor and Purchaser do not consent to termination, the provisions of subsection 79(3) of the Act may be invoked by the Vendor.
- C.9 The Vendor and the Purchaser covenant and agree, notwithstanding the taking of possession, that all terms hereunder continue to be binding upon them and that the Vendor may enforce the provisions of the Occupancy Licence separate and apart from the purchase and sale provisions of this Agreement.
- C.10 The Purchaser acknowledges that the Vendor holds a fire insurance policy on the Condominium including all aspects of a standard unit only and not on any improvements or betterments made by or on behalf of the Purchaser. It is the responsibility of the Purchaser, after the Occupancy Date to insure the improvements or betterments to the Unit and to

replace and/or repair same if they are removed, injured or destroyed. The Vendor is not liable for the Purchaser's loss occasioned by fire, theft or other casualty, unless caused by the Vendor's willful conduct.

- C.11 The Purchaser agrees to indemnify the Vendor for all losses, costs and expenses incurred as a result of the Purchaser's neglect, damage or use of the Unit or the Condominium, or by reason of injury to any person or property in or upon the Unit or the Condominium resulting from the negligence of the Purchaser, members of his immediate family, servants, agents, invitees, tenants, contractors and licensees. The Purchaser agrees that should the Vendor elect to repair or redecorate all or any part of the Unit or the Condominium as a result of the Purchaser's neglect, damage or use of the Unit or Condominium, he will immediately reimburse the Vendor for the cost of doing same, the determination of need for such repairs or redecoration shall be at the discretion of the Vendor, and such costs may be added to the Purchase Price.
- C.12 In accordance with subsections 80(6)(d) and (e) of the Act, subject to strict compliance by the Purchaser with the requirements of occupancy set forth in this Agreement, the Purchaser shall not have the right to assign, sublet or in any other manner dispose of the Occupancy Licence during Interim Occupancy without the prior written consent of the Vendor which consent may be arbitrarily withheld. The Purchaser acknowledges that an administrative fee will be payable to the Vendor each time the Purchaser wishes to assign, sublet or dispose of the Occupancy License during Interim Occupancy.
- C.13 The provisions set forth in this Agreement, unless otherwise expressly modified by the terms of the Occupancy Licence, shall be deemed to form an integral part of the Occupancy Licence. In the event the Vendor elects to terminate the Occupancy Licence pursuant to this Agreement following substantial damage to the Unit and/or the Condominium, the Occupancy Licence shall terminate forthwith upon notice from the Vendor to the Purchaser. If the Unit and/or the Condominium can be repaired within a reasonable time following damages as determined by the Vendor (but not, in any event, to exceed one hundred and eighty (180) days) and the Unit is, during such period of repairs uninhabitable, the Vendor shall proceed to carry out the necessary repairs to the Unit and/or the Condominium with all due dispatch and the Occupancy Fee shall abate during the period when the Unit remains uninhabitable; otherwise, the Purchaser shall vacate the Unit and deliver up vacant possession to the Vendor and all moneys, to the extent provided for in paragraph 20 hereof (excluding the Occupancy Fee paid to the Vendor) shall be returned to the Purchaser. It is understood and agreed that the proceeds of all insurance policies held by the Vendor are for the benefit of the Vendor alone.

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## SCHEDULE "D" TO AGREEMENT OF PURCHASE AND SALE

### WARNING CLAUSES

1. The Purchaser acknowledges that it is anticipated by the Declarant that in connection with the Declarant's application to the appropriate governmental authorities for draft plan of condominium approval certain requirements may be imposed upon the Declarant by various governmental authorities. These requirements (the "Requirements") usually relate to warning provisions to be given to Purchasers in connection with environmental or other concerns (such as warnings relating to noise levels, the proximity of the Condominium to major street, hydro transmission lines, garbage storage and pickup, school transportation, and similar matters). Accordingly, the Purchaser covenants and agrees that (1) on either the Closing Date or Unit Transfer Date, (as set out in the Agreement of Purchase and Sale executed by the Purchaser) as determined by the Declarant, the Purchaser shall execute any and all documents required by the Declarant acknowledging, inter alia, that the Purchaser is aware of the Requirements, and (2) if the Declarant is required to incorporate the Requirements into the final Condominium Documents the Purchaser shall accept the same, without in any way affecting this transaction.
2. The Purchaser is hereby advised that the Declarant's builder's risk and/or comprehensive liability insurance (effective prior to the registration of the Condominium), and the Condominium's master insurance policy (effective from and after the registration of the Condominium) will only cover the common elements and the standard unit and will not cover any betterments or improvements made to the standard unit, nor any furnishings or personal belongings of the Purchaser or other residents of the Unit, and accordingly the Purchaser should arrange for his or her own insurance coverage with respect to same, effective from and after the Closing Date, all at the Purchaser's sole cost and expense.
3. The Purchaser acknowledges and agrees that the Declarant (and any of its authorized agents, representatives and/or contractors), as well as one or more authorized representatives of the Condominium, shall be permitted to enter the Unit after Closing, from time to time, in order to enable the Declarant to correct outstanding deficiencies or incomplete work for which the Declarant is responsible, and to enable the Condominium to inspect the condition or state of repair of the Unit and undertake or complete any requisite repairs thereto (which the owner of the Unit has failed to do) in accordance with the Act.
4. The Purchaser acknowledges being advised of the following notices:
  - (i) Prospective purchasers are advised that pupils may be accommodated in temporary facilities and/or be directed to schools outside of the area;
  - (ii) Purchasers are advised that sufficient accommodation may not be available for students residing in this area and that you are notified that students may be accommodated in temporary facilities and/or bussed to existing facilities outside the area. The local District School Board may designate pick up points for the children to meet the bus on roads presently in existence or other pick up areas convenient to the Board.
  - (iii) This dwelling unit has been fitted with a forced air heating system and air conditioning. Air conditioning will allow window and exterior doors to remain closed, thereby ensuring that indoor sound levels are within the Municipality's and the Ministry of the Environment's noise criteria.
5. Without limiting the generality of the preceding subparagraph, the Purchaser is hereby advised that:
  - (i) noise levels caused by the Condominium's emergency generator, bank of elevators, garbage chutes, mechanical equipment, chiller/cooling tower, move-in bays and ancillary moving facilities and areas, and by the Condominium's indoor recreation facilities, may occasionally cause noise and inconvenience to the residential occupants; and
  - (ii) as and when other residential units in the Condominium are being completed and/or moved into, excessive levels of noise, vibration, dust and/or debris are possible, and same may accordingly temporarily cause noise and inconvenience to the residential occupants.
6. The Purchaser specifically acknowledges and agrees that the Condominium will be developed in accordance with any requirements that may be imposed from time to time by any Governmental Authorities and the proximity of the Lands to Park Street, Allen Street and King Street, and proposed Grand River Transit light rail operations may result in noise, vibration, electromagnetic interference, and stray current transmissions ("Interferences") to the Property and despite the inclusion of control features within the Condominium. Interferences from transit operations may continue to be of concern, occasionally interfering with some activities of the dwelling occupants in the Condominium. Purchasers are advised that Regional Municipality of Waterloo proposes to construct light rail operations along King Street and/or Caroline Street in the future.
7. It is further acknowledged that one or more of the Development Agreements may require the Declarant to provide the Purchaser with certain notices, including without limitation, notices regarding such matters as land use, the maintenance of retaining walls, landscaping features and/or fencing, noise abatement features, garbage storage and pick-up, school transportation, and noise/vibration levels from adjacent roadways and/or nearby railway lines or airports. The Purchaser agrees to be bound by the contents of any such notice(s), whether given to the Purchaser at the time that this Agreement has been entered into, or at any time thereafter up to the Title Transfer Date, and the Purchaser further covenants and agrees to execute, forthwith upon the Declarant's request, an express acknowledgment confirming the Purchaser's receipt of such notice(s) in accordance with (and in full compliance of) such provisions of the Development Agreement(s), if and when required to do so by the Declarant.
8. The Purchaser acknowledges that the Declarant reserves the right to increase or decrease the final number of residential, parking, locker, and/or other ancillary units intended to be created within the Condominium, as well as the right to alter the design, style, size and/or configuration of the residential units ultimately comprised within the Condominium which have not yet been sold by the Declarant to any unit purchaser(s), all in the Declarant's sole discretion, and the Purchaser expressly acknowledges and agrees to the foregoing, provided that the final budget for the first year following registration of the Condominium is prepared in such a manner so that any such variance in the residential/parking/locker and/or other ancillary unit count will not affect, in any material or substantial way, the percentages of common expenses and common interests allocated and attributable to the residential, parking and/or

locker units sold by the Declarant to the Purchaser. Without limiting the generality of the foregoing, the Purchaser further acknowledges and agrees that one or more residential units situate adjacent to one another may be combined or amalgamated prior to the registration of the Condominium, in which case the common expenses and common interests attributable to such proposed former units will be incorporated into one figure or percentage in respect of the final combined unit, and the overall residential unit count of the Condominium will be varied and adjusted accordingly. None of the foregoing changes or revisions (if implemented) shall in any way be considered or construed as a material change to the disclosure statement prepared and delivered by the Declarant to the Purchaser in connection with this transaction.

9. The Purchaser hereby acknowledges and agrees that the Declarant cannot guarantee (and will not be responsible for) the arrangement of a suitable move-in time for purposes of accommodating the Purchaser's occupancy of the residential unit on the Closing Date, (or any acceleration or extension thereof as hereinbefore provided), and that the Purchaser shall be solely responsible for directly contacting the Declarant's customer service office in order to make suitable booking arrangements with respect to the Condominium's service elevator, if applicable (with such booking being allotted on a "first come, first served" basis), and under no circumstances shall the Purchaser be entitled to any claim, refund, credit, reduction/abatement or set-off whatsoever against any portion of the Purchase Price, or against any portion of the common expenses or other adjustments with respect thereto (nor with respect to any portion of the monthly occupancy fees so paid or payable, if applicable) as a result of the service elevator not being available to accommodate the Purchaser moving into the Condominium on (or within any period of time after) or the Closing Date, (or any acceleration or extension thereof, as aforesaid).
10. The Declarant/Vendor shall have the right to substitute any level in the Condominium with an alternative floor plate containing a modified design of units and/or number of units on the level. In the event that such modification becomes necessary, there shall be a reallocation of each owner's proportionate percentage and the Budget shall be modified accordingly. The Purchaser acknowledges that none of the foregoing changes or revisions (if implemented) shall in any way be considered or construed as a material change to the disclosure statement prepared and delivered by the Declarant to the Purchaser in connection with this transaction.
11. Purchasers of Residential Units located on Levels 1, 4 and 5 of the Condominium acknowledge being advised that it is the Declarant's current intention to incorporate the Condominium's amenity space and Parking Facility within or adjacent to this level, and accordingly, Purchasers are advised that typical noise associated with the use of the amenity space and Parking Facility may occasionally interfere with some activities within the Unit. Purchasers acknowledge that they have reviewed the draft condominium plan provided to them within the Disclosure Book and, in consideration of both their location on a particular level and their location in relation to the amenities and parking facility are satisfied with respect to their proximity to same.
12. Purchasers of Residential Units located on Level 1 of the Condominium acknowledge being advised that it is the Declarant's current intention to incorporate the Condominium's parking facility and amenity space, and to locate certain mechanical facilities, loading area and refuse holding room within areas adjacent to said Units, and accordingly, Purchasers are advised that typical noise associated with the use of foregoing may occasionally interfere with some activities within the Unit. Purchasers acknowledge that they have reviewed the draft condominium plan provided to them within the Disclosure Book and, in consideration of both their location on a particular level and their location adjacent to the parking facility, amenities, mechanical facilities, loading area and refuse holding room, are satisfied with respect to their proximity to same.
13. Purchasers of Residential Units 1 to 9 on Level 1 are advised that they may be required to bring their refuse from their respective units to the refuse holding room in Level 1 of the Condominium.
14. Purchasers are advised that the Condominium is located in proximity to the Trans-Canada Trail.
15. Purchasers are notified that the Property is located in proximity to businesses and restaurants, including the Brick Brewery, which may produce odours that may be noticed by occupants of the Property from time to time.
16. Purchasers are advised that the Declarant's marketing material and site drawings and renderings ("**Marketing Material**") which they may have reviewed prior to the execution of this Agreement remains conceptual and that final building plans are subject to the final review and approval of any applicable governmental authority and the Declarant's design consultants and engineers, and accordingly such Marketing Material does not form part of this Agreement or the Vendor's obligations hereunder.

SCHEDULE "E" TO AGREEMENT OF PURCHASE AND SALE

THE UNDERSIGNED being the Purchaser of the Unit hereby acknowledges having received from the Vendor with respect to the purchase of the Unit the following document on the date noted below:

1. A Disclosure Statement dated April 27th, 2009, and accompanying documents in accordance with Section 72 of the Act.
2. A copy of the Agreement of Purchase and Sale (to which this acknowledgment is attached as a Schedule) executed by the Vendor and the Purchaser.

The Purchaser hereby acknowledges that the Condominium Documents required by the Act have not been registered by the Vendor, and agrees that the Vendor may, from time to time, make any modification to the Condominium Documents in accordance with its own requirements and the requirements of any mortgagee, governmental authority, examiner of Legal Surveys, the Land Registry Office or any other competent authority having jurisdiction to permit registration thereof.


The Purchaser further acknowledges and agrees that in the event there is a material change to the Disclosure Statement as defined in subsection 74(2) of the Act, the Purchaser's only remedy shall be as set forth in subsection 74(6) of the Act, notwithstanding any rule of law or equity to the contrary.

The Purchaser further acknowledges having been advised that the Purchaser shall be entitled to rescind or terminate the Agreement to which this Schedule is attached and obtain a refund of all deposit monies paid thereunder (together with all interest accrued thereon at the rate prescribed by the Act, if applicable), provided written notice of the Purchaser's desire to so rescind or terminate the Agreement is delivered to the Vendor or the Vendor's Solicitors within 10 days after the date set out below.

DATED at Waterloo this 14 day of February, 2010.

WITNESS:



  
Purchaser

\_\_\_\_\_  
Purchaser

Property 144 Park - Uptown Waterloo

Waterloo, Ontario

### Statement Of Critical Dates Delayed Occupancy Warranty

This Statement of Critical Dates forms part of the Addendum to which it is attached, which in turn forms part of the agreement of purchase and sale between the Vendor and the Purchaser relating to the Property. The Vendor must complete all blanks set out below.

**NOTE TO HOME BUYERS:** Please visit Tarion's website: [www.tarion.com](http://www.tarion.com) for important information about all Tarion's warranties including the Delayed Occupancy Warranty, the Pre-Delivery Inspection and other matters of interest to new home buyers. You can also obtain a copy of the Homeowner Information Package which is strongly recommended as essential reading for all home buyers. The website features a calculator which will assist you in confirming the various Critical Dates related to the occupancy of your condominium unit.

VENDOR 144 Park Ltd.

Full Name(s)

PURCHASER Oliver A. Romaniuk

Full Name(s)

#### 1. Critical Dates

The First Tentative Occupancy Date, which is the date that the Vendor anticipates the condominium home will be completed and ready to move in, is:

the 30 day of April, 2012.

The Vendor can delay Occupancy on one or more occasions by setting a subsequent Tentative Occupancy Date, in accordance with section 3 of the Addendum by giving proper written notice as set out in section 3.

By no later than 30 days after completion of the roof slab or of the roof trusses and sheathing, as the case may be, with 90 days prior written notice, the Vendor shall set either (i) a Final Tentative Occupancy Date; or (ii) a Firm Occupancy Date.

If the Vendor sets a Final Tentative Occupancy Date but cannot provide Occupancy by the Final Tentative Occupancy Date, then the Vendor shall set a Firm Occupancy Date that is no later than 120 days after the Final Tentative Occupancy Date, with proper written notice as set out in section 3 below.

If the Vendor cannot provide Occupancy by the Firm Occupancy Date, then the Purchaser is entitled to delayed occupancy compensation (see section 9 of the Addendum) and the Vendor must set a Delayed Occupancy Date which cannot be later than the Outside Occupancy Date.

The Outside Occupancy Date, which is the latest date by which the Vendor agrees to provide Occupancy, is:

the 31 day of October, 2013.

#### 2. Notice Period for an Occupancy Delay

Changing an Occupancy date requires proper written notice. The Vendor, without the Purchaser's consent, may delay occupancy one or more times in accordance with section 3 of the Addendum and no later than the Outside Occupancy Date.

Notice of a delay beyond the First Tentative Occupancy Date must be given no later than: (i.e., 90 days before the First Tentative Occupancy Date), or else the First Tentative Occupancy Date automatically becomes the Firm Occupancy Date.

the 31 day of January, 2012.

#### 3. Purchaser's Termination Period

If the condominium home is not complete by the Outside Occupancy Date, and the Vendor and the Purchaser have not otherwise agreed, then the Purchaser can terminate the transaction during a period of 30 days thereafter (the "Purchaser's Termination Period"), which period could end as late as:

the 30 day of November, 2013.

If the Purchaser terminates the transaction during the Purchaser's Termination Period, then the Purchaser is entitled to delayed occupancy compensation and to a full refund of all monies paid plus interest (see sections 9, 11 and 12 of the Addendum).

Note: Anytime a Critical Date is set or changed as permitted in the Addendum, other Critical Dates may change as well. At any given time the parties must refer to the most recent agreement or written notice that sets a Critical Date, and calculate revised Critical Dates using the formulas contained in the Addendum. Critical Dates can also change if there are unavoidable delays (see section 7 of the Addendum).

Acknowledged this 14 day of February, 2010.

VENDOR:

PURCHASER:

### Addendum to Agreement of Purchase and Sale Delayed Occupancy Warranty

This addendum, including the accompanying Statement of Critical Dates (the "Addendum"), forms part of the agreement of purchase and sale (the "Purchase Agreement") between the Vendor and the Purchaser relating to the Property. It contains important provisions that are part of the delayed occupancy warranty provided by the Vendor in accordance with the *Ontario New Home Warranties Plan Act* (the "Act"). If there are any differences between the provisions in the Addendum and the Purchase Agreement, then the Addendum provisions shall prevail. **PRIOR TO SIGNING THE PURCHASE AGREEMENT OR ANY AMENDMENT TO IT, THE PURCHASER SHOULD SEEK ADVICE FROM A LAWYER WITH RESPECT TO THE PURCHASE AGREEMENT OR AMENDING AGREEMENT, THE ADDENDUM AND THE DELAYED OCCUPANCY WARRANTY.**

The Vendor shall complete all blanks set out below.

<b>VENDOR</b>	144 Park Ltd.		
	Full Name(s)		
	39278	8791 Woodbine Avenue, Suite 100	
	Tarion Registration Number	Address	
	905-944-0907	Markham	Ontario
	Phone	City	Province
			L3R 0P4
			Postal Code
	905-944-0916	jbolton@madycorp.com	
	Fax	Email	

<b>PURCHASER</b>	OLIVER A. ROMANIUK		
	Full Name(s)		
	215 VICTORIA ST. S UNIT 406		
	Address		
	519-589-2478	KITCHENER	ON
	Phone	City	Province
			N2G 4Z7
			Postal Code
		oliver.romaniuk@gmail.com	
	Fax	Email	

<b>PROPERTY DESCRIPTION</b>		
21 Allen Street West (current) - 144 Park Street (proposed)		
Municipal Address		
Waterloo	Ontario	N2L 1C7
City	Province	Postal Code
Lots 1-6, inclusive, on Plan 186, save and except Parts 1 and 2 on 58R-10656: Waterloo being all of PIN No. 22417-0127 (LT)		
Short Legal Description		

<b>INFORMATION REGARDING THE PROPERTY</b>
The Vendor confirms that:
(a) The Vendor has obtained Formal Zoning Approval for the Building. <span style="float: right;"><input type="radio"/> Yes <input checked="" type="radio"/> No</span>
If no, the Vendor shall give written notice to the Purchaser within 10 days after the date that Formal Zoning Approval for the Building is obtained.
(b) Commencement of Construction: <input type="radio"/> has occurred; or <input checked="" type="radio"/> is expected to occur by the <u>30th</u> day of <u>April</u> , 20 <u>10</u> .
The Vendor shall give written notice to the Purchaser within 10 days after the actual date of Commencement of Construction.

**1. Definitions**

- “Building” means the condominium building or buildings contemplated by the Purchase Agreement, in which the Property is located or is proposed to be located.
- “Business Day” means any day other than: Saturday; Sunday; New Year’s Day; Family Day; Good Friday; Easter Monday; Victoria Day; Canada Day; Civic Holiday; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day; Boxing Day; and any special holiday proclaimed by the Governor General or the Lieutenant Governor; and where New Year’s Day, Canada Day or Remembrance Day falls on a Saturday or Sunday, the following Monday is not a Business Day, and where Christmas Day falls on a Saturday or Sunday, the following Monday and Tuesday are not Business Days; and where Christmas Day falls on a Friday, the following Monday is not a Business Day.
- “Commencement of Construction” means the commencement of construction of foundation components or elements (such as footings, rafts or piles) for the Building.
- “Critical Dates” means the First Tentative Occupancy Date, any subsequent Tentative Occupancy Date, the Final Tentative Occupancy Date, the Firm Occupancy Date, the Delayed Occupancy Date, the Outside Occupancy Date and the last day of the Purchaser’s Termination Period.
- “Delayed Occupancy Date” means the date, set in accordance with section 6, on which the Vendor agrees to provide Occupancy, in the event the Vendor cannot provide Occupancy on the Firm Occupancy Date.
- “Early Termination Conditions” means the types of conditions listed in Schedule A.
- “Firm Occupancy Date” means the firm date on which the Vendor agrees to provide Occupancy as set in accordance with this Addendum.
- “First Tentative Occupancy Date” means the date on which the Vendor, at the time of signing the Purchase Agreement, anticipates that the condominium home will be complete and ready for Occupancy, as set out in the Statement of Critical Dates.
- “Final Tentative Occupancy Date” means the last Tentative Occupancy Date that may be set, in accordance with paragraph 3(d).
- “Formal Zoning Approval” occurs when the zoning by-law required in order to construct the Building has been approved by all relevant governmental authorities having jurisdiction, and the period for appealing the approvals has elapsed and/or any appeals have been dismissed or the approval affirmed.
- “Occupancy” means the right to use or occupy a proposed or registered condominium home in accordance with the Purchase Agreement.
- “Outside Occupancy Date” means the latest date that the Vendor agrees, at the time of signing the Purchase Agreement, to provide Occupancy to the Purchaser, as set out in the Statement of Critical Dates.
- “Property” or “condominium home” means the condominium dwelling unit being acquired by the Purchaser from the Vendor, and its appurtenant interest in the common elements.
- “Purchaser’s Termination Period” means the 30-day period during which the Purchaser may terminate the Purchase Agreement for delay, in accordance with paragraph 11(b).
- “Statement of Critical Dates” means the Statement of Critical Dates attached to or accompanying this Addendum (in form to be determined by the Tarion Registrar from time to time). The Statement of Critical Dates must be signed by both the Vendor and Purchaser.
- “Tentative Occupancy Date” has the meaning given to it in paragraph 3(c).
- “The Act” means the *Ontario New Home Warranties Plan Act* including regulations, as amended from time to time.
- “Unavoidable Delay” means an event which delays Occupancy which is a strike, fire, explosion, flood, act of God, civil insurrection, act of war, act of terrorism or pandemic, plus any period of delay directly caused by the event, which are beyond the reasonable control of the Vendor and are not caused or contributed to by the fault of the Vendor.
- “Unavoidable Delay Period” means the number of days between the Purchaser’s receipt of written notice of the commencement of the Unavoidable Delay, as required by paragraph 7(b), and the date on which the Unavoidable Delay concludes.

**2. Early Termination Conditions**

- (a) The Vendor and Purchaser may include conditions in the Purchase Agreement that, if not satisfied, give rise to early termination of the Purchase Agreement, but only in the limited way described in this section.
- (b) The Vendor is not permitted to include any conditions in the Purchase Agreement other than: the types of Early Termination Conditions listed in Schedule A; and/or the conditions referred to in paragraphs 2(h), (i) and (j) below. Any other condition included in a Purchase Agreement for the benefit of the Vendor that is not expressly permitted under Schedule A or paragraphs 2(h) or (i) is deemed null and void and is not enforceable by the Vendor, but does not affect the validity of the balance of the Purchase Agreement.
- (c) The Vendor confirms that:
- (i) This Purchase Agreement is subject to Early Termination Conditions that, if not satisfied (or waived, if applicable), will result in the automatic termination of the Purchase Agreement.  Yes  No
  - (ii) If yes, the Early Termination Conditions are as follows. The obligation of each of the Purchaser and Vendor to complete this purchase and sale transaction is subject to satisfaction (or waiver, if applicable) of the following conditions:

Condition #1 (if applicable)  
Description of the Early Termination Condition: see appendix

The Approving Authority (as that term is defined in Schedule A) is: see appendix

The date by which Condition #1 is to be satisfied is the see appendix day of \_\_\_\_\_, 20\_\_\_\_.

Condition #2 (if applicable)  
Description of the Early Termination Condition: see appendix

The Approving Authority (as that term is defined in Schedule A) is: see appendix

The date by which Condition #2 is to be satisfied is the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The date for satisfaction of any Early Termination Condition cannot be later than 90 days before the First Tentative Occupancy Date, and will be deemed to be 90 days before the First Tentative Occupancy Date if no date is specified or if the date specified is later than 90 days before the First Tentative Occupancy Date. This time limitation does not apply to the condition in subparagraph 1(b)(iv) of Schedule A which must be satisfied or waived by the Vendor within 60 days following signing of the Purchase Agreement.

*Note: The parties must add additional pages as an appendix to this Addendum if there are additional Early Termination Conditions.*

- (d) There are no Early Termination Conditions applicable to this Purchase Agreement other than those identified in subparagraph 2(c)(ii) and any appendix listing additional Early Termination Conditions.
- (e) The Vendor agrees to take all commercially reasonable steps within its power to satisfy the Early Termination Conditions listed in subparagraph 2(c)(ii).
- (f) For conditions under paragraph 1(a) of Schedule A the following applies:
- (i) conditions in paragraph 1(a) of Schedule A may not be waived by either party;



**2. Early Termination Conditions (continued)**

- (ii) the Vendor shall provide written notice not later than five (5) Business Days after the date specified for satisfaction of a condition that: (A) the condition has been satisfied; or (B) the condition has not been satisfied (together with reasonable details and backup materials) and that as a result the Purchase Agreement is terminated; and
- (iii) if notice is not provided as required by subparagraph (ii) above then the condition is deemed not satisfied and the Purchase Agreement is terminated.
- (g) For conditions under paragraph 1(b) of Schedule A the following applies:
  - (i) conditions in paragraph 1(b) of Schedule A may be waived by the Vendor;
  - (ii) the Vendor shall provide written notice on or before the date specified for satisfaction of the condition that: (A) the condition has been satisfied or waived; or (B) the condition has not been satisfied nor waived, and that as a result the Purchase Agreement is terminated; and
  - (iii) if notice is not provided as required by subparagraph (ii) above then the condition is deemed satisfied or waived and the Purchase Agreement will continue to be binding on both parties.
- (h) The Purchase Agreement may be conditional until closing (transfer to the Purchaser of the title to the condominium home) upon compliance with the subdivision control provisions (section 50) of the *Planning Act* (Ontario) by virtue of registration of the Building under the *Condominium Act* (Ontario), which compliance shall be obtained by the Vendor at its sole expense, on or before closing.
- (i) The Purchaser is cautioned that there may be other conditions in the Purchase Agreement that allow the Vendor to terminate the Purchase Agreement due to the fault of the Purchaser.
- (j) The Purchase Agreement may include any condition that is for the sole benefit of the Purchaser and that is agreed to by the Vendor (i.e., the sale of an existing dwelling, Purchaser financing or a basement walkout). The Purchase Agreement may specify that the Purchaser has a right to terminate the Purchase Agreement if any such condition is not met, and may set out the terms on which termination by the Purchaser may be effected.

**3. Setting Tentative Occupancy Dates and the Firm Occupancy Date**

- (a) **Completing Construction Without Delay:** The Vendor shall take all reasonable steps to complete construction of the Building subject to all prescribed requirements, to provide Occupancy of the condominium home without delay, and to register without delay the declaration and description in respect of the Building.
- (b) **First Tentative Occupancy Date:** The Vendor shall identify the First Tentative Occupancy Date in the Statement of Critical Dates attached to this Addendum at the time the Purchase Agreement is signed.
- (c) **Subsequent Tentative Occupancy Dates:** The Vendor may, in accordance with this section, extend the First Tentative Occupancy Date on one or more occasions, by setting a subsequent Tentative Occupancy Date. The Vendor shall give written notice of any subsequent Tentative Occupancy Date to the Purchaser no later than 90 days before the existing Tentative Occupancy Date (which in this Addendum may include the First Tentative Occupancy Date), or else the existing Tentative Occupancy Date shall for all purposes be the Firm Occupancy Date. A subsequent Tentative Occupancy Date can be any Business Day on or before the Outside Occupancy Date.
- (d) **Final Tentative Occupancy Date:** By no later than 30 days after completion of the roof slab or of the roof trusses and sheathing of the Building, as the case may be, the Vendor shall by written notice to the Purchaser set either (i) a Final Tentative Occupancy Date; or (ii) a Firm Occupancy Date. If the Vendor does not do so, the existing Tentative Occupancy Date shall for all purposes be the Firm Occupancy Date. The Vendor shall give written notice of the Final Tentative Occupancy Date or Firm Occupancy Date, as the case may be, to the Purchaser no later than 90 days before the existing Tentative Occupancy Date, or else the existing Tentative Occupancy Date shall for all purposes be the Firm Occupancy Date. The Final Tentative Occupancy Date or Firm Occupancy Date, as the case may be, can be any Business Day on or before the Outside Occupancy Date.
- (e) **Firm Occupancy Date:** If the Vendor has set a Final Tentative Occupancy Date but cannot provide Occupancy by the Final Tentative Occupancy Date then the Vendor shall set a Firm Occupancy Date that is no later than 120 days after the Final Tentative Occupancy Date. The Vendor shall give written notice of the Firm Occupancy Date to the Purchaser no later than 90 days before the Final Tentative Occupancy Date, or else the Final Tentative Occupancy Date shall for all purposes be the Firm Occupancy Date. The Firm Occupancy Date can be any Business Day on or before the Outside Occupancy Date.
- (f) **Notice:** Any notice given by the Vendor under paragraph (c), (d) or (e) must set out the revised Critical Date, as applicable, and state that the setting of such date may change other future Critical Dates, as applicable, in accordance with the terms of the Addendum.

**4. Changing the Firm Occupancy Date – Three Ways**

- (a) The Firm Occupancy Date, once set or deemed to be set in accordance with section 3, can be changed only:
  - (i) by the mutual written agreement of the Vendor and Purchaser in accordance with section 5;
  - (ii) by the Vendor setting a Delayed Occupancy Date in accordance with section 6; or
  - (iii) as the result of an Unavoidable Delay of which proper written notice is given in accordance with section 7.
- (b) If a new Firm Occupancy Date is set in accordance with section 5 or 7, then the new date is the "Firm Occupancy Date" for all purposes in this Addendum.

**5. Changing Critical Dates – By Mutual Agreement**

- (a) This Addendum sets out a structure for setting, extending and/or accelerating Occupancy dates, which cannot be altered contractually except as set out in this section 5 and in paragraph 7(c). For greater certainty, this Addendum does not restrict any extensions of the closing date (i.e., title transfer date) where Occupancy of the condominium home has already been given to the Purchaser.
- (b) The Vendor and Purchaser may at any time, after signing the Purchase Agreement, mutually agree in writing to accelerate or extend a Firm Occupancy Date or a Delayed Occupancy Date in each case to a new specified calendar date. The amendment must comply with the requirements of section 10.
- (c) The Vendor and Purchaser may at any time after signing the Purchase Agreement mutually agree in writing to accelerate the First Tentative Occupancy Date and correspondingly reset all the Critical Dates provided that:
  - (i) the mutual amendment is signed at least 180 days prior to the First Tentative Occupancy Date;
  - (ii) all the Critical Dates including the Outside Occupancy Date are moved forward by the same number of days (subject to adjustment so that Critical Dates fall on Business Days);
  - (iii) a new Statement of Critical Dates is signed by both parties at the time the amendment is signed and a copy is provided to the Purchaser; and
  - (iv) the Purchaser is given a three (3) Business Day period in which to review the amendment after signing and if not satisfied with the amendment may terminate the amendment (but not the balance of the Purchase Agreement), upon written notice to the Vendor within such 3-day period.Any such amendment must be by mutual agreement and, for greater certainty, neither party has any obligation to enter into such an amendment.
- (d) A Vendor is permitted to include a provision in the Purchase Agreement allowing the Vendor a one-time unilateral right to extend a Firm Occupancy Date or Delayed Occupancy Date, as the case may be, for one (1) Business Day to avoid the necessity of tender where a Purchaser is not ready to complete the transaction on the Firm Occupancy Date or Delayed Occupancy Date, as the case may be. Delayed occupancy compensation will not be payable for such period and the Vendor may not impose any penalty or interest charge upon the Purchaser with respect to such extension.
- (e) The Vendor and Purchaser may agree in the Purchase Agreement to any unilateral extension or acceleration rights that are for the benefit of the Purchaser.

**6. Changing the Firm Occupancy Date – By Setting a Delayed Occupancy Date**

- (a) If the Vendor cannot provide Occupancy on the Firm Occupancy Date and sections 5 and 7 do not apply, the Vendor shall select and give written notice to the Purchaser of a Delayed Occupancy Date in accordance with this section, and delayed occupancy compensation is payable in accordance with section 9.

6. *Changing the Firm Occupancy Date – By Setting a Delayed Occupancy Date (continued)*

- (b) The Delayed Occupancy Date may be any Business Day after the date the Purchaser receives written notice of the Delayed Occupancy Date but not later than the Outside Occupancy Date.
- (c) The Vendor shall give written notice to the Purchaser of the Delayed Occupancy Date as soon as the Vendor knows that it will be unable to provide Occupancy on the Firm Occupancy Date, and in any event no later than 10 days before the Firm Occupancy Date, failing which delayed occupancy compensation is payable from the date that is 10 days before the Firm Occupancy Date, in accordance with paragraph 9(c).
- (d) If a Delayed Occupancy Date is set and the Vendor cannot provide Occupancy on the Delayed Occupancy Date, the Vendor shall select and give written notice to the Purchaser of a new Delayed Occupancy Date, unless the delay arises due to Unavoidable Delay under section 7 or is mutually agreed upon under section 5, in which case the requirements of those sections must be met. Paragraphs 6(b) and 6(c) above apply with respect to the setting of the new Delayed Occupancy Date.
- (e) Nothing in this section affects the right of the Purchaser or Vendor to terminate the Purchase Agreement on the bases set out in section 11.

**7. Extending Dates – Due to Unavoidable Delay**

- (a) If Unavoidable Delay occurs, the Vendor may extend Critical Dates by no more than the length of the Unavoidable Delay Period, without the approval of the Purchaser and without the requirement to pay delayed occupancy compensation in connection with the Unavoidable Delay, provided the requirements of this section are met.
- (b) If the Vendor wishes to extend Critical Dates on account of Unavoidable Delay, the Vendor shall provide written notice to the Purchaser setting out a brief description of the Unavoidable Delay, and an estimate of the duration of the delay. Once the Vendor knows or ought reasonably to know that an Unavoidable Delay has commenced, the Vendor shall provide written notice to the Purchaser by the earlier of: 10 days thereafter; and the next Critical Date.
- (c) As soon as reasonably possible, and no later than 10 days after the Vendor knows or ought reasonably to know that an Unavoidable Delay has concluded, the Vendor shall provide written notice to the Purchaser setting out a brief description of the Unavoidable Delay, identifying the date of its conclusion, and setting new Critical Dates. The new Critical Dates are calculated by adding to the then next Critical Date the number of days of the Unavoidable Delay Period (the other Critical Dates changing accordingly), provided that the Firm Occupancy Date or Delayed Occupancy Date, as the case may be, must be at least 10 days after the day of giving notice unless the parties agree otherwise. Either the Vendor or the Purchaser may request in writing an earlier Firm Occupancy Date or Delayed Occupancy Date, and the other party's consent to the earlier date shall not be unreasonably withheld.
- (d) If the Vendor fails to give written notice of the conclusion of the Unavoidable Delay in the manner required by paragraph 7(c), the notice is ineffective, the existing Critical Dates are unchanged, and any delayed occupancy compensation payable under section 9 is payable from the existing Firm Occupancy Date.
- (e) Any notice setting new Critical Dates given by the Vendor under this section must set out the revised next Critical Date and state that the setting of such date may change other future Critical Dates, as applicable, in accordance with the terms of the Addendum.

**8. Building Code – Conditions of Occupancy**

- (a) On or before the date of Occupancy, the Vendor shall deliver to the Purchaser:
  - (i) where a registered code agency has been appointed for the building or part of the building under the *Building Code Act* (Ontario), a final certificate with respect to the condominium home that contains the prescribed information as required by s. 11(3) of the *Building Code Act*; or
  - (ii) where a registered code agency has not been so appointed, either:
    - (A) an Occupancy Permit (as defined in paragraph (d)) for the condominium home; or
    - (B) a signed written confirmation by the Vendor that: (I) provisional or temporary occupancy of the condominium home has been authorized under Article 1.3.3.1 of Division C of the *Building Code*; or (II) the conditions for residential occupancy of the condominium home as set out in s. 11 of the *Building Code Act* or Article 1.3.3.2 of Division C of the *Building Code*, as the case may be (the "Conditions of Occupancy") have been fulfilled.
- (b) Notwithstanding the requirements of paragraph (a), to the extent that the Purchaser and the Vendor agree that the Purchaser shall be responsible for certain Conditions of Occupancy (the "Purchaser Obligations"):
  - (i) the Purchaser may not refuse to take Occupancy on the basis that the Purchaser Obligations have not been completed;
  - (ii) the Vendor shall deliver to the Purchaser, upon fulfilling the Conditions of Occupancy (other than the Purchaser Obligations), a signed written confirmation that the Vendor has fulfilled such Conditions of Occupancy; and
  - (iii) if the Purchaser and Vendor have agreed that the Conditions of Occupancy (other than the Purchaser Obligations) are to be fulfilled prior to Occupancy, then the Vendor shall provide the signed written confirmation required by subparagraph (ii) on or before the date of Occupancy.
- (c) If the Vendor cannot satisfy the requirements of paragraph (a) or subparagraph (b)(iii), then the Vendor shall set a Delayed Occupancy Date (or new Delayed Occupancy Date) on a date that the Vendor reasonably expects to have satisfied the requirements of paragraph (a) or subparagraph (b)(iii), as the case may be. In setting the Delayed Occupancy Date (or new Delayed Occupancy Date), the Vendor shall comply with the requirements of section 6, and delayed occupancy compensation shall be payable in accordance with section 9. Despite the foregoing, delayed occupancy compensation shall not be payable for a delay under this paragraph (c) if the inability to satisfy the requirements of subparagraph (b)(iii) is because the Purchaser has failed to satisfy the Purchaser Obligations.
- (d) For the purposes of this section, an "Occupancy Permit" means any written document, however styled, whether final, provisional or temporary, provided by the chief building official (as defined in the *Building Code Act*) or a person designated by the chief building official, that evidences the fact that authority to occupy the condominium home has been granted.

**9. Delayed Occupancy Compensation**

- (a) The Vendor warrants to the Purchaser that, if Occupancy is delayed beyond the Firm Occupancy Date (other than by mutual agreement or as a result of Unavoidable Delay as permitted under sections 5 or 7), then the Vendor shall compensate the Purchaser for all costs incurred by the Purchaser as a result of the delay up to a total amount of \$7,500, which amount includes payment to the Purchaser of \$150 a day for living expenses for each day of delay until the date of Occupancy or the date of termination of the Purchase Agreement, as applicable under paragraph (b).
- (b) Delayed occupancy compensation is payable only if: (i) Occupancy occurs; or (ii) the Purchase Agreement is terminated or deemed to have been terminated under paragraphs 11(b), (c) or (e) of this Addendum. Delayed occupancy compensation is payable only if the Purchaser's claim is made to Tarion in writing within one (1) year after Occupancy, or after termination of the Purchase Agreement, as the case may be, and otherwise in accordance with this Addendum. Compensation claims are subject to any further conditions set out in the *Act*.
- (c) If the Vendor gives written notice of a Delayed Occupancy Date to the Purchaser less than 10 days before the Firm Occupancy Date, contrary to the requirements of paragraph 6(c), then delayed occupancy compensation is payable from the date that is 10 days before the Firm Occupancy Date.
- (d) Living expenses are direct living costs such as for accommodation and meals. Receipts are not required in support of a claim for living expenses, as a set daily amount of \$150 per day is payable. The Purchaser must provide receipts in support of any claim for other delayed occupancy compensation, such as for moving and storage costs. Submission of false receipts disentitles the Purchaser to any delayed occupancy compensation in connection with a claim.
- (e) If delayed occupancy compensation is payable, the Purchaser may make a claim to the Vendor for that compensation within 180 days after Occupancy and shall include all receipts (apart from living expenses) which evidence any part of the Purchaser's claim. The Vendor shall assess the Purchaser's claim by determining the amount of delayed occupancy compensation payable based on the rules set out in section 9 and the receipts provided by the Purchaser, and the Vendor shall promptly provide that assessment information to the Purchaser. The Purchaser and the Vendor shall use reasonable efforts to settle the claim and when the claim is settled, the Vendor shall prepare an acknowledgement signed by both parties which:
  - (i) includes the Vendor's assessment of the delayed occupancy compensation payable;

**9. Delayed Occupancy Compensation (continued)**

- (ii) describes in reasonable detail the cash amount, goods, services, or other consideration which the Purchaser accepts as compensation (the "Compensation"), if any; and
- (iii) contains a statement by the Purchaser that the Purchaser accepts the Compensation in full satisfaction of any delayed occupancy compensation payable by the Vendor.

A true copy of the acknowledgement (showing clearly the municipal address and enrolment number of the condominium home on the first page) shall be provided to Tarion by the Vendor within 30 days after execution of the acknowledgment by the parties.

- (f) If the Vendor and Purchaser cannot agree as contemplated in paragraph 9(c), then to make a claim to Tarion the Purchaser must file a claim with Tarion in writing within one (1) year after Occupancy. A claim may also be made and the same rules apply if the sales transaction is terminated under paragraphs 11(b), (c) or (e) in which case, the deadline is 180 days after termination for a claim to the Vendor and one (1) year after termination for a claim to Tarion.

**10. Changes to Critical Dates**

- (a) Whenever the parties by mutual agreement extend or accelerate either the Firm Occupancy Date or the Delayed Occupancy Date this section applies.
- (b) If the change involves acceleration of either the Firm Occupancy Date or the Delayed Occupancy Date, then the amending agreement must set out each of the Critical Dates (as changed or confirmed).
- (c) If the change involves extending either the Firm Occupancy Date or the Delayed Occupancy Date, then the amending agreement shall:
  - (i) disclose to the Purchaser that the signing of the amendment may result in the loss of delayed occupancy compensation as described in section 9 above;
  - (ii) unless there is an express waiver of compensation, describe in reasonable detail the cash amount, goods, services, or other consideration which the Purchaser accepts as compensation (the "Compensation"); and
  - (iii) contain a statement by the Purchaser that the Purchaser waives compensation or accepts the above noted Compensation, in either case, in full satisfaction of any delayed occupancy compensation payable by the Vendor for the period up to the new Firm Occupancy Date or Delayed Occupancy Date.
- (d) If the Purchaser for his or her own purposes requests a change of date or dates, then paragraph 10(c) shall not apply.

**11. Termination of the Purchase Agreement**

- (a) The Vendor and the Purchaser may terminate the Purchase Agreement by mutual written consent, such written consent to be given at the time of the termination.
- (b) If for any reason (other than breach of contract by the Purchaser) Occupancy has not been given to the Purchaser by the Outside Occupancy Date, then the Purchaser has 30 days to terminate the Purchase Agreement by written notice to the Vendor. If the Purchaser does not provide written notice of termination within such 30-day period, then the Purchase Agreement shall continue to be binding on both parties and the Delayed Occupancy Date shall be the date set by the Vendor under paragraph 6(b), regardless of whether such date is beyond the Outside Occupancy Date.
- (c) If calendar dates for the applicable Critical Dates are not inserted in the Statement of Critical Dates; or if any date for Occupancy is expressed in the Purchase Agreement or in any other document to be subject to change depending upon the happening of an event (other than as permitted in this Addendum), then the Purchaser may terminate the Purchase Agreement by written notice to the Vendor.
- (d) The Purchase Agreement may be terminated in accordance with the requirements of section 2.
- (e) Nothing in this Addendum derogates from any right of termination that either the Purchaser or the Vendor may have at law or in equity on the basis of, for example, frustration of contract or fundamental breach of contract.
- (f) Except as permitted in this section, the Purchase Agreement may not be terminated by reason of delay in Occupancy alone.

**12. Return of Monies Paid on Termination**

- (a) If the Purchase Agreement is terminated (other than as a result of breach of contract by the Purchaser), the Vendor shall return all monies paid by the Purchaser including deposit(s) and monies for upgrades and extras, within 10 days of such termination, with interest from the date each amount was paid to the Vendor to the date of return to the Purchaser. The Purchaser cannot be compelled by the Vendor to execute a release of the Vendor and/or a termination agreement as a prerequisite to obtaining the return of monies payable as a result of termination of the Purchase Agreement under this paragraph.
- (b) The rate of interest payable on the Purchaser's monies shall be calculated in accordance with the *Condominium Act*.
- (c) Notwithstanding paragraphs 12(a) and 12(b), if either party initiates legal proceedings to contest termination of the Purchase Agreement or the return of monies paid by the Purchaser, and obtains a legal determination, such amounts and interest shall be payable as determined in those proceedings.

**13. Addendum Prevails**

The Addendum forms part of the Purchase Agreement. The Vendor and Purchaser agree that they shall not include any provision in the Purchase Agreement or any amendment to the Purchase Agreement or any other document (or indirectly do so through replacement of the Purchase Agreement) that derogates from, conflicts with or is inconsistent with the provisions of this Addendum, except where this Addendum expressly permits the parties to agree or consent to an alternative arrangement. The provisions of this Addendum prevail over any such provision.

**14. Time Periods, and How Notice Must Be Sent**

- (a) Any written notice required under this Addendum may be given personally or sent by email, fax, courier or registered mail to the Purchaser or the Vendor at the address/contact numbers identified on page 2 or replacement address/contact numbers as provided in paragraph (c) below. Notices may also be sent to the solicitor for each party if necessary contact information is provided, but notices in all events must be sent to the Purchaser and Vendor, as applicable.
- (b) Written notice given by one of the means identified in paragraph (a) is deemed to be given and received: on the date of delivery or transmission, if given personally or sent by email or fax (or the next Business Day if the date of delivery or transmission is not a Business Day); on the second Business Day following the date of sending by courier; or on the fifth Business Day following the date of sending, if sent by registered mail. If a postal stoppage or interruption occurs, notices shall not be sent by registered mail, and any notice sent by registered mail within 5 Business Days prior to the commencement of the postal stoppage or interruption must be re-sent by another means in order to be effective. For purposes of this paragraph 14(b), Business Day includes Remembrance Day, if it falls on a day other than Saturday or Sunday, and Easter Monday.
- (c) If either party wishes to receive written notice under this Addendum at an address/contact number other than those identified on page 2, the party shall send written notice of the change of address/contact number to the other party.
- (d) Time periods within which or following which any act is to be done shall be calculated by excluding the day of delivery or transmission and including the day on which the period ends.
- (e) Time periods shall be calculated using calendar days including Business Days but subject to paragraphs (f), (g) and (h) below.
- (f) Where the time for making a claim under this Addendum expires on a day that is not a Business Day, the claim may be made on the next Business Day.
- (g) Prior notice periods that begin on a day that is not a Business Day shall begin on the next earlier Business Day, except that notices may be sent and/or received on Remembrance Day, if it falls on a day other than Saturday or Sunday, or Easter Monday.
- (h) Every Critical Date must occur on a Business Day. If the Vendor sets a Critical Date that occurs on a date other than a Business Day, the Critical Date is deemed to be the next Business Day.

**SCHEDULE A**  
**Types of Permitted Early Termination Conditions**  
(Section 2)

**1. The Vendor of a condominium home is permitted to make the Purchase Agreement conditional as follows:**

- (a) upon receipt of Approval from an Approving Authority for:
- (i) a change to the official plan, other governmental development plan or zoning by-law (including a minor variance);
  - (ii) a consent to creation of a lot(s) or part-lot(s);
  - (iii) a certificate of water potability or other measure relating to domestic water supply to the home;
  - (iv) a certificate of approval of septic system or other measure relating to waste disposal from the home;
  - (v) completion of hard services for the property or surrounding area (i.e., roads, rail crossings, water lines, sewage lines, other utilities);
  - (vi) allocation of domestic water or storm or sanitary sewage capacity;
  - (vii) easements or similar rights serving the property or surrounding area;
  - (viii) site plan agreements, density agreements, shared facilities agreements or other development agreements with Approving Authorities or nearby landowners, and/or any development Approvals required from an Approving Authority; and/or
  - (ix) site plans, plans, elevations and/or specifications under architectural controls imposed by an Approving Authority.

The above-noted conditions are for the benefit of both the Vendor and the Purchaser and cannot be waived by either party.

- (b) upon:
- (i) receipt by the Vendor of confirmation that sales of condominium dwelling units have exceeded a specified threshold by a specified date;
  - (ii) receipt by the Vendor of confirmation that financing for the project on terms satisfactory to the Vendor has been arranged by a specified date;
  - (iii) receipt of Approval from an Approving Authority for a basement walkout; and/or
  - (iv) confirmation by the Vendor that it is satisfied the Purchaser has the financial resources to complete the transaction.

The above-noted conditions are for the benefit of the Vendor and may be waived by the Vendor in its sole discretion.

**2. The following definitions apply in this Schedule:**

**"Approval"** means an approval, consent or permission (in final form not subject to appeal) from an Approving Authority and may include completion of necessary agreements (i.e., site plan agreement) to allow lawful access to and use and occupancy of the property for its intended residential purpose.

**"Approving Authority"** means a government (federal, provincial or municipal), governmental agency, Crown corporation, or quasi-governmental authority (a privately operated organization exercising authority delegated by legislation or a government).

**3. Each condition must:**

- (a) be set out separately;
- (b) be reasonably specific as to the type of Approval which is needed for the transaction; and
- (c) identify the Approving Authority by reference to the level of government and/or the identity of the governmental agency, Crown corporation or quasi-governmental authority.

**4. For greater certainty, the Vendor is not permitted to make the Purchase Agreement conditional upon:**

- (a) receipt of a building permit;
- (b) receipt of an occupancy permit; and/or
- (c) completion of the home.

**APPENDIX TO ADDENDUM  
TO AGREEMENT OF PURCHASE AND SALE  
EARLY TERMINATION CONDITIONS**

The Early Termination Conditions referred to in paragraph 2 (c) (ii) of the Tarion Addendum are as follows:

**CONDITIONS PERMITTED IN PARAGRAPH 1 (b) OF SCHEDULE "A" TO THE TARIION ADDENDUM**

1. **Description of Early Termination Condition:**

This Agreement is conditional upon the Vendor entering into binding Agreements of Purchase and Sale for the sale of 80% of the dwelling units within the Condominium.

**The date by which this Condition is to be satisfied is the 15<sup>th</sup> day of December, 2010.**

2. **Description of Early Termination Condition:**

This Agreement is conditional upon the Vendor obtaining financing for the construction of the project on terms satisfaction to it in its discretion.

**The date by which this Condition is to be satisfied is the 15<sup>th</sup> day of December, 2010.**

3. **Description of Early Termination Condition:**

This Agreement is conditional upon the Vendor being satisfied, in its sole and absolute discretion, with the credit worthiness of the Purchaser. The Vendor shall have sixty (60) days from the date of acceptance of this Agreement by the Vendor to satisfy itself with respect to such credit worthiness. The Purchaser covenants and agrees to provide all requisite information and materials including proof respecting income and source of funds or evidence of a satisfactory mortgage approval signed by a lending institution or other mortgagee acceptable to the Vendor, confirming that the said lending institution or acceptable mortgagee will be advancing funds to the Purchaser sufficient to pay the balance due on the Title Transfer Date, as the Vendor may require to determine the Purchaser's credit worthiness.

**The date by which this Condition is to be satisfied is the 14 day of April, 2010**

**144 Park Ltd.  
AMENDMENT TO THE  
AGREEMENT OF PURCHASE AND SALE**

BETWEEN: 144 Park Ltd. (the "Vendor") and Oliver A. Romaniuk (the "Purchaser")  
UNIT (Legal#) 01, Level 12, Suite 1201.

It is hereby understood and agreed between the Vendor and the Purchaser that the following changes(s) shall be made to the above-mentioned Agreement of Purchase and Sale, and except for such change(s) noted below, all other terms and conditions of the Agreement shall remain as stated therein, and time shall continue to be of the essence.

DELETE

INSERT

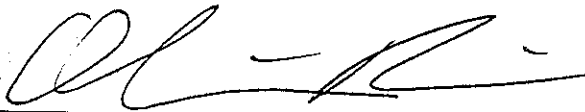
The Vendor agrees the cost to the Purchaser of paragraphs 6 (d) (iii) (v) (vi) (vii) (viii) (ix) will not exceed Three Thousand Eight Hundred (\$3,800.00) Dollars.

DATED at WATERLOO this 14<sup>TH</sup> day of FEBRUARY, 2010

IN WITNESS whereof the parties hereto have affixed their hands and seals.


SIGNED, SEALED AND DELIVERED  
In the presence of



  
Purchaser:  
Purchaser:

DATED at Waterloo this 14 day of February, 2010

**144 Park Ltd.**

Per:  c/s  
Authorized Signing Officer  
I have the authority to bind the Corporation.

THIS IS EXHIBIT "B" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.



# SUITE # 1201

18-Sep-13

Oliver A. Romaniuk  
 1048 Broadview Ave. Unit #2007  
 Toronto, ON  
 M4K 2B8  
 H: 561.529.0450  
 E: oliver.romaniuk@gmail.com

ARCH DRAWING #: A206  
 LEVEL, UNIT: 12, 1  
 TYPE: 2 Bedrm + Den  
 MODEL: EX1000  
 VERSION: A

	Type	Standard	Upgrades	Retail Price
Foyer	Flooring	Kelly, 13x13 - Ivory		
Living/ Dining/ Den	Flooring	SOHO, Oak Twilight		
Kitchen	Flooring	Kelly, 13x13 - Ivory		
	Cabinetry		SLAB PVC - Viking II - COFFEE BEAN	\$150.00
	Countertop		Laredo	\$665.00
	Countertop Edge	3/4" Polish		
	Hardware	12895		
	Granite 4" Backsplash	Delete: 4" Granite		
	Backsplash	N/A		
	Kitchen Faucet	Kohler-Coralais Pull-Out Spary Kitchen Sink Faucet		
	\Sink	Stella-ST204		
	<b>APPLIANCES:</b>			
	Refrigerator	WHIRLPOOL Refrigerator, WRT3595FYM-Stainless		
	Stove	WHIRLPOOL Electric Range, YWFE51050AS-Stainless Steel		
	Microwave/Hood Fan	WHIRLPOOL Microwave-Range Hood Combination, YWMH31017AS-Stainless		
	Dishwasher	WHIRLPOOL Built-In Dishwasher, WDF310PAAS-Stainless		
	Appliance Notes:			
Extra				
Extra				
Laundry Room	Flooring	Kelly, 13x13 - Ivory		
	Washer	WHIRLPOOL Front Load Washer, WFW9050XW-White		
	Dryer	WHIRLPOOL Front Load Dryer, YWED9050XW-White		
	Extra			
	Extra			
Main Bathroom	Flooring	Kelly, 13x13 - Ivory		
	Tub Wall Tile	Fabrio, 10x20 - White		
	Cabinetry		SLAB PVC - Viking II - COFFEE BEAN	Pkg Price
	Countertop	White S09		
	Hardware	12895		
	Faucet	Kohler-Coralais Bathroom Sink Faucet		
	Tub Faucet	Kohler-Coralais Bath and Shower Faucet Trim		
	Extra			
	Extra			





# SUITE # 1201

18-Sep-13

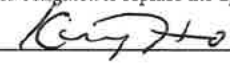

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ARCH DRAWING #: A206  
 LEVEL, UNIT: 12, 1  
 TYPE: 2 Bedrm + Den  
 MODEL: EX1000  
 VERSION: A

	Type	Standard	Upgrades	Retail Price
<b>Main Bedroom</b>	Flooring		SOHO, Oak Twilight	\$1,055.00
<b>Master Ensuite</b>	Flooring	Kelly, 13x13 - Ivory		
	Tub Wall Tile	Fabrio, 10x20 - White		
	Cabinetry		SLAB PVC - Viking II - COFFEE BEAN	
	Countertop	White S09		
	Hardware	12895		
	Faucet	Kohler-Coralais Bathroom Sink Faucet		
	Tub & Shower Faucet	Kohler-Coralais Bath and Shower Faucet Trim		
	Extra			
Master Bedroom	Flooring		SOHO, Oak Twilight	\$1,394.00
Baseboard & Trim		Standard		
Crown Molding		N/A		
Gas Fireplace		N/A		
Electric Fireplace		N/A		
GAS LINE		N/A		
Notes:				
Notes:				
Notes:				
Notes:				
		<b>Subtotal</b>	\$3,264.00	
		<b>Tax Amount</b>	\$424.32	
		<b>Total</b>	\$3,688.32	
		<b>Adjustment(s)</b>	\$0.00	
		<b>Total Due Amount After Tax</b>	\$3,688.32	
		<b>Deposit Required</b>	<b>\$1,844.16</b>	
		<b>Final Balance</b>	<b>\$1,844.16</b>	

\* All cheques to be made payable to Harris Sheaffer LLP, In Trust.

I hereby agree that I have selected the above noted colours, materials and finishes for my unit at 144 Park in Waterloo from the Vendor's standard and/or upgrade samples. All selections are final. I further agree to pay in full for such selections/upgrades, failing which it is agreed that any or all selections may be cancelled and replaced with finishes selected by the Vendor. A 50% deposit on all upgrade selection is required. I acknowledge and agree that natural materials, including granite, wood, marble, etc., are subject to natural variations in colour and grain. Ceramic tile and broadloom are subject to pattern, shade and colour variations. The Vendor reserves the right to cancel or reject any or all upgrades, or selections made by the Purchaser, provided that any payments made by the Purchaser for the upgrades, or selections, are returned in full upon cancellation. In the event that any or all of the upgrades are not installed or provided as specified, the Purchaser's sole recourse shall be the return of the monies paid for the particular incorrectly supplied or installed upgrades or selections. The Vendor shall not be responsible or obligated to replace the upgrade, or to install it in a different location.


 Date: Sept 18 / 13  
 Décor Consultant  

 Date: SEPT / 18 / 13  
 Purchaser

MADY DEVELOP  
8791 W  
MAR

Term ID: 28320503

**Purchase**

XXXXXXXXXXXX0535

VISA

Entry Method: M

Total:

\$ 1,844.16

2013/10/07

11:16:40

Seq #: 0010960100

Appr Code: 092481

Resp Code: 01/027

**APPROVED**  
**Thank You**

Customer Copy

- IMPORTANT -  
retain this copy for your records

Oliver,

Receipt enclosed

Thank you

Ellen

Decor CTR

MADY DEVELOPMENT CORPORATION  
8791 WOODBINE AVE  
MARKHAM, ON

Term ID: 28320503

**Purchase**

XXXXXXXXXXXX0535

VISA

Entry Method: C

Total:

\$ 1,844.16

2013/09/18

17:13:14

Seq #: 0010950010

Appr Code: 094608

Resp Code: 01/027

VISA CREDIT  
#0000000031010  
41 00 88 BE 8E 5A 97 20  
00 00 00 00 00  
5E CA A1 8D E1 97 04 FD

**APPROVED**  
**Thank You**

Customer Copy

- IMPORTANT -  
retain this copy for your records

THIS IS EXHIBIT "C" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.

## INTERIM STATEMENT OF ADJUSTMENTS

RE: 144 Park Ltd. sale to Oliver Romaniuk  
Unit 1, Level 12, Unit 63, Level A, Unit 64, Level A, Unit 69, Level A, WSCP TBR  
Suite 1201, 144 Park Street, Waterloo, Ontario N2L 0B6

Tarion Builder Registration Number: 39278  
Tarion Unit Enrolment Number: H1816729

**Closing Date: June 3, 2014**

<b>PURCHASE PRICE</b> inclusive of HST (where applicable)		\$ 357,990.00
<b>UPGRADE CHARGES</b> inclusive of HST		\$ 3,688.32
<b>TOTAL DEPOSITS</b>	\$ 35,800.00	
<b>UPGRADE CHARGES PAID TO VENDOR</b>	\$ 1,844.16	
<b>UNADJUSTED BALANCE DUE ON THE UNIT TRANSFER DATE</b>	\$ 322,190.00	
<b>BALANCE DUE ON CLOSING</b> paid by certified cheque to <i>Harris, Sheaffer LLP, In Trust</i>	\$1,844.16	
E. & O.E.	<u>361,678.32</u>	<u>361,678.32</u>

**NOTE:** In addition to the unadjusted balance due on closing, if any, the Purchaser must deliver the following cheques:

- (i) **Certified Cheque** payable to **Harris, Sheaffer LLP** in the sum of \$1,474.63 being the pro-rated amount of monthly Occupancy Fee from June 3, 2014 to the day prior to the first day of the following month.
- (ii) 8 post-dated cheques each dated the 1st of the month, in the sum of \$1,579.96 commencing July 1, 2014 payable to 144 Park Ltd.

In accordance with the Condominium Act, 1998 and the Agreement of Purchase and Sale, the Occupancy Fee comprises the following:

Estimated Total Common Expenses:	\$536.90
Estimated Realty Taxes:	\$200.00
Interest on the Unadjusted Balance Due on the Unit Transfer Date at the prescribed rate of 3.1400%	\$843.06
<b>TOTAL</b>	<u>\$1,579.96</u>

**NOTE 1:** All calculations with respect to Goods and Services Tax or the Harmonized Sales Tax (if applicable), will be addressed on the Final Statement of Adjustments.

E. & O. E.

**NOTE 2:**

*Please note it is the policy of this firm that funds being delivered to us by certified cheque for a closing must be from the purchaser's solicitor's trust account and not directly from a purchaser or any other person. No bank drafts are permitted.*

THIS IS EXHIBIT "D" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.

This Assignment of Agreement of Purchase and Sale dated this 3 day of November 2014

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer), agrees to purchase from  
(Full legal names of all Assignees)

**ASSIGNOR**, Oliver Romaniuk (Seller), the following:  
(Full legal names of all Assignors)

**THE ASSIGNOR'S INTEREST IN THE REAL PROPERTY:**

a unit in the condominium property located at 1201 - 144 Park Street  
in the City of Waterloo being

Unit No. 01 Level No. 12 Condominium Plan No. Not Set

Building No. \_\_\_\_\_ known as Suite No. 1201 together with ownership  
(Apartment/Townhouse/Suite/Unit)

or exclusive use of Parking Space(s) 2 Parking Spaces (A63, A64), together with ownership or exclusive use of  
(Number(s), level(s))

Locker(s) 1 Locker (A69), together with Seller's proportionate undivided tenancy-in-common interest  
(Number(s), level(s))

in the common elements appurtenant to the Unit as described in the Declaration and Description including the exclusive right to use such other parts of the common elements appurtenant to the Unit as may be specified in the Declaration and Description: the Unit, the proportionate interest in the common elements appurtenant thereto, and the exclusive use portions of the common elements, being herein called the "property".

**PURCHASE PRICE:** Dollars (CDN\$) [REDACTED]  
[REDACTED] Dollars

**DEPOSIT:** Assignee submits as otherwise described in this Agreement  
(Herewith/Upon Acceptance/as otherwise described in this Agreement)  
Five Thousand Dollars (CDN\$) 5,000.00

by negotiable cheque payable to Mint Realty Inc., Brokerage "Deposit Holder" to be held in trust pending completion or other termination of this Assignment agreement ("Assignment") and to be credited toward the Purchase Price on completion. For the purposes of this Assignment, "Upon Acceptance" shall mean that the Assignee is required to deliver the deposit to the Deposit Holder within 24 hours of the acceptance of this Assignment agreement. The parties to this Assignment hereby acknowledge that, unless otherwise provided for in this Assignment, the Deposit Holder shall place the deposit in trust in the Deposit Holder's non-interest bearing Real Estate Trust Account and no interest shall be earned, received or paid on the deposit.

The Assignee and Assignor acknowledge that the Purchase Price noted above includes both the purchase price the Assignor is paying for the property as indicated in the Agreement of Purchase and Sale between the Assignor and the seller of the property attached hereto as Schedule C, and also includes the amount being paid by the Assignee to the Assignor as payment for the Assignment Agreement. The Assignee and Assignor agree that the funds for this transaction will be calculated and paid as set out in Schedule B attached hereto and forming part of this Agreement.

Assignee agrees to pay the balance as more particularly set out in Schedules A and B attached.  
Schedules A, B (Calculation of funds for this Agreement),  
C (Agreement of Purchase and Sale that is the subject of this Assignment),  
..... attached hereto form(s) part of this Assignment.

INITIALS OF ASSIGNEE(S): [Signature] INITIALS OF ASSIGNOR(S): [Signature]

1. **IRREVOCABILITY:** This offer shall be irrevocable by Assignee until 11:59PM on the 5 day of November, 2014, after which time, if not accepted, this offer shall be null and void and the deposit shall be returned to the Assignee in full without interest.

2. **ASSIGNMENT:** The Assignor agrees to grant and assign to the Assignee, forthwith all the Assignor's rights, title and interest, in, under and to the Agreement of Purchase and Sale attached hereto in Schedule "C".

3. **ASSIGNEE COVENANTS:** The Assignee hereby covenants and agrees with the Assignor that forthwith upon the assignment of the Agreement of Purchase and Sale it will assume, perform, comply with and be bound by, all obligations, warranties and representations of the Assignor as contained in the Agreement of Purchase and Sale as if the Assignee had originally executed the Agreement of Purchase and Sale as buyer with the seller.

4. **ASSIGNOR COVENANTS:** The Assignor covenants and represents that:  
(a) the Assignor has the full right, power and authority to assign the prior Agreement of Purchase and Sale attached hereto as Schedule "C" (the "Agreement of Purchase and Sale") and the Assignor's interest in the property;  
(b) the Agreement of Purchase and Sale attached hereto as Schedule "C" is a full and complete copy thereof and has not been amended, supplemented, terminated or otherwise changed in any way and is in good standing and has not previously been assigned.  
(c) the Assignor will not amend the Agreement of Purchase and Sale without the Assignee's prior written consent;  
(d) after acceptance of this Assignment Agreement until the earlier of termination or completion of the Agreement of Purchase and Sale attached hereto as Schedule "C", the Assignor will not further assign the Agreement of Purchase and Sale.  
(e) neither party to the Agreement of Purchase and Sale (Schedule C) has done any act in breach of the said Agreement of Purchase and Sale or committed any omission with respect to the said Agreement of Purchase and Sale.

5. **NOTICES:** The Assignor hereby appoints the Listing Brokerage as agent for the Assignor for the purpose of giving and receiving notices pursuant to this Agreement. Where a Brokerage (Assignee's Brokerage) has entered into a representation agreement with the Assignee, the Assignee hereby appoints the Assignee's Brokerage as agent for the purpose of giving and receiving notices pursuant to this Agreement. **Where a Brokerage represents both the Assignor and the Assignee (multiple representation), the Brokerage shall not be appointed or authorized to be agent for either the Assignee or the Assignor for the purpose of giving and receiving notices.** Any notice relating hereto or provided for herein shall be in writing. In addition to any provision contained herein and in any Schedule hereto, this offer, any counter-offer, notice of acceptance thereof or any notice to be given or received pursuant to this Agreement or any Schedule hereto (any of them, "Document") shall be deemed given and received when delivered personally or hand delivered to the Address for Service provided in the Acknowledgement below, or where a facsimile number or email address is provided herein, when transmitted electronically to the facsimile number or email address, respectively, in which case, the signature(s) of the party (parties) shall be deemed to be original.

FAX No.: ..... FAX No.: .....  
(For delivery of Documents to Assignor) (For delivery of Documents to Assignee)

Email Address: ..... Email Address: .....  
(For delivery of Documents to Assignor) (For delivery of Documents to Assignee)

6. **HST:** If the sale of the property (Real Property as described above) is subject to Harmonized Sales Tax (HST) then such tax shall be Included in the Purchase Price. If the sale of the property is not subject to HST, (included in/in addition to) Assignor agrees to certify on or before closing, that the sale of the property is not subject to HST. Any HST on chattels, if applicable, is not included in the Purchase Price.

7. **FUTURE USE:** Assignor and Assignee agree that there is no representation or warranty of any kind that the future intended use of the property by Assignee is or will be lawful except as may be specifically provided for in this Assignment.

8. **INSPECTION:** Assignee acknowledges having had the opportunity to inspect the property or the plans and documents for the property to be constructed and understands that upon acceptance of this offer there shall be a binding Assignment agreement between Assignee and Assignor.

9. **PLANNING ACT:** Provided that this Assignment shall not be effective to create or convey an interest in the property unless and until the provisions of the Planning Act RSO 1990 c. P13, as amended are complied with.

10. **RESIDENCY:** Assignee shall be credited towards the Purchase Price with the amount, if any, necessary for Assignee to pay to the Minister of National Revenue to satisfy Assignee's liability in respect of tax payable by Assignor under the non-residency provisions of the Income Tax Act by reason of this Assignment. Assignee shall not claim such credit if Assignor delivers on completion the prescribed certificate or a statutory declaration that Assignor is not then a non-resident of Canada.

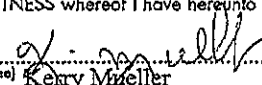
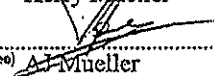
INITIALS OF ASSIGNEE(S): [Signature] INITIALS OF ASSIGNOR(S): [Signature]



11. **ADJUSTMENTS:** Any rents, mortgage interest, realty taxes including local improvement rates and unmetered public or private utility charges and unmetered cost of fuel, as applicable, shall be apportioned and allowed to the day of completion, the day of completion itself to be apportioned to Assignee.
12. **PROPERTY ASSESSMENT:** The Assignee and Assignor hereby acknowledge that the Province of Ontario has implemented current value assessment and properties may be re-assessed on an annual basis. The Assignee and Assignor agree that no claim will be made against the Assignee or Assignor, or any Brokerage, Broker or Salesperson, for any changes in property tax as a result of a re-assessment of the property, save and except any property taxes that accrued prior to the completion of this transaction.
13. **TIME LIMITS:** Time shall in all respects be of the essence hereof provided that the time for doing or completing of any matter provided for herein may be extended or abridged by an agreement in writing signed by Assignor and Assignee or by their respective lawyers who may be specifically authorized in that regard.
14. **TENDER:** Any tender of documents or money hereunder may be made upon the Assignor or Assignee or their respective lawyers on the day set for completion. Money shall be tendered with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System.
15. **APPROVAL OF THE AGREEMENT:** In the event that consent to this Assignment is required to be given by the seller in the Agreement of Purchase and Sale attached hereto in Schedule C, the Assignor will apply, at the sole expense of the Assignor, forthwith for the requisite consent, and if such consent is refused, then this agreement shall be null and void and the deposit monies paid hereunder shall be refunded without interest or other penalty to the Assignee.
16. **AGREE TO CO-OPERATE:** Except as otherwise expressed herein to the contrary, each of the Assignor and Assignee shall, without receiving additional consideration therefor, co-operate with and take such additional actions as may be requested by the other party, acting reasonably, in order to carry out the purpose and intent of this Assignment.
17. **DEFAULT BY SELLER:** The Assignee and Assignor acknowledge and agree that if this Assignment Agreement is not completed due to the default of the seller for the Agreement of Purchase and Sale (Schedule C) that is the subject of this Assignment, the Assignor shall not be liable for any expenses, losses or damages incurred by the Assignee and this Assignment Agreement shall become null and void and all moneys paid by the Assignee under this Assignment Agreement shall be returned to the Assignee in full without interest.
18. **LEGAL, ACCOUNTING AND ENVIRONMENTAL ADVICE:** The parties acknowledge that any information provided by the Brokerage is not legal, tax or environmental advice.
19. **CONSUMER REPORTS:** The Assignee is hereby notified that a consumer report containing credit and/or personal information may be referred to in connection with this transaction.
20. **AGREEMENT IN WRITING:** If there is conflict or discrepancy between any provision added to this Assignment (including any Schedule attached hereto) and any provision in the standard pre-set portion hereof, the added provision shall supersede the standard pre-set provision to the extent of such conflict or discrepancy. This Assignment including any Schedule attached hereto, shall constitute the entire agreement between Assignee and Assignor. There is no representation, warranty, collateral agreement or condition, which affects this Assignment other than as expressed herein. This Assignment shall be read with all changes of gender or number required by the context.
21. **TIME AND DATE:** Any reference to a time and date in this Agreement shall mean the time and date where the property is located.
22. **SUCCESSORS AND ASSIGNS:** The heirs, executors, administrators, successors and assigns of the undersigned are bound by the terms herein.

SIGNED, SEALED AND DELIVERED in the presence of:

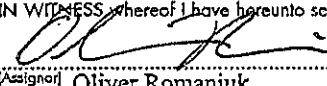
IN WITNESS whereof I have hereunto set my hand and seal:

		● (Seal)	DATE: <u>Nov 4/2014</u>
(Witness)	(Assignee) Kerry Mueller		
		● (Seal)	DATE: <u>Nov 4/2014</u>
(Witness)	(Assignee) AT Mueller		

I, the Undersigned Assignor, agree to the above offer. I hereby irrevocably instruct my lawyer to pay directly to the brokerage(s) with whom I have agreed to pay commission, the unpaid balance of the commission together with applicable Harmonized Sales Tax (and any other taxes as may hereafter be applicable), from the proceeds of the sale prior to any payment to the undersigned on completion, as advised by the brokerage(s) to my lawyer.

SIGNED, SEALED AND DELIVERED in the presence of:

IN WITNESS whereof I have hereunto set my hand and seal:

		● (Seal)	DATE: <u>NOV 4/2014</u>
(Witness)	(Assignor) Oliver Romaniuk		
		● (Seal)	DATE: _____
(Witness)	(Assignor)		





**CONFIRMATION OF ACCEPTANCE:** Notwithstanding anything contained herein to the contrary, I confirm this Agreement with all changes both typed and written was finally accepted by all parties at 10:50 AM this 5<sup>TH</sup> day of NOVEMBER, 2014.

*[Signature]*  
(Signature of Assignor or Assignee)

**INFORMATION ON BROKERAGE(S)**

Listing Brokerage: <u>MINT REALTY INC., BROKERAGE</u>	Tel.No. <u>800-344-0901</u>
<u>191 KING ST S., UT 108</u>	<u>WATERLOO</u>
Co-op/Assignee's Brokerage: <u>MINT REALTY INC., BROKERAGE</u>	Tel.No. <u>800-344-0901</u>
<u>191 KING ST S., UT 108</u>	<u>WATERLOO</u>

**ACKNOWLEDGEMENT**

I acknowledge receipt of my signed copy of this accepted Assignment Agreement and I authorize the Brokerage to forward a copy to my lawyer.

*[Signature]* DATE NOV 9/2014  
(Assignor) \_\_\_\_\_ DATE \_\_\_\_\_  
(Assignor)

Address for Service \_\_\_\_\_  
Tel.No. \_\_\_\_\_  
Assignor's Lawyer \_\_\_\_\_  
Address \_\_\_\_\_  
Tel.No. \_\_\_\_\_ FAX No. \_\_\_\_\_

I acknowledge receipt of my signed copy of this accepted Assignment Agreement and I authorize the Brokerage to forward a copy to my lawyer.

*[Signature]* DATE NOV 9/2014  
(Assignee) \_\_\_\_\_ DATE NOV 9/2014  
(Assignee)

Address for Service \_\_\_\_\_  
Tel.No. \_\_\_\_\_  
Assignee's Lawyer \_\_\_\_\_  
Address \_\_\_\_\_  
Tel.No. \_\_\_\_\_ FAX No. \_\_\_\_\_

INITIALS OF ASSIGNEE(S): *[Signature]*

INITIALS OF ASSIGNOR(S): *[Signature]*

**FOR OFFICE USE ONLY**

**COMMISSION TRUST AGREEMENT**

To: Co-operating Brokerage shown on the foregoing Assignment Agreement: MINT REALTY INC., BROKERAGE  
In consideration for the Co-operating Brokerage procuring the foregoing Assignment Agreement, I hereby declare that all moneys received or receivable by me in connection with the Transaction as contemplated in the MLS® Rules and Regulations of my Real Estate Board shall be receivable and held in trust. This agreement shall constitute a Commission Trust Agreement as defined in the MLS® Rules and shall be subject to and governed by the MLS® Rules pertaining to Commission Trust.

DATED as of the date and time of the acceptance of the foregoing Assignment Agreement.

Acknowledged by:

\_\_\_\_\_  
(Authorized to bind the Listing Brokerage)

\_\_\_\_\_  
(Authorized to bind the Co-operating Brokerage)

This Schedule is attached to and forms part of the Assignment of Agreement of Purchase and Sale between:

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer)....., and

**ASSIGNOR**, Oliver Romaniuk (Seller).....

for the purchase and sale of 1201 - 144 Park Street ..... Waterloo

..... dated the 3 ..... day of November ..... 2014

**BALANCE OF PAYMENT UNDER THIS ASSIGNMENT AGREEMENT:** The Assignee will deliver the balance of payment for this Assignment Agreement as more particularly set out in Item 6. on Schedule B, subject to adjustments, with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System, to the Assignor prior to completing the transaction in the Agreement of Purchase and Sale attached hereto as Schedule "C" to be held in trust without interest pending completion or other termination of the Agreement of Purchase and Sale attached hereto as Schedule "C".

*Handwritten initials: AJ, KM, OR*

The Assignee shall be responsible for payment, with applicable HST, of any and all improvements and upgrades requested by the Assignee of the Vendor, 144 Park Ltd. and provided by the said Vendor to the Assignee. The Assignor shall be responsible for payment, with applicable HST of any and all improvements and upgrades requested by the Assignor of the Vendor 144 Park Ltd. and provided by the Vendor to the Assignor.

The Assignor and Assignee acknowledge that the Assignor shall be responsible for paying the \$2500.00 charge for the assignment process at the Assignor's expense prior to completion.

The Assignor and Assignee agree that the Assignee will take Occupancy on December 1, 2014.

The Assignee is responsible for the Interim Occupancy fee beginning December 1, 2014 and will provide post dated cheques for December 1, 2014, January 1, 2015 and February 1, 2015 payable to "144 Park Ltd." prior to completion.

Assignor and Assignee agree that the Assignee will pay for Tarrion enrollment fee.

All deposit money currently held by Vendor will be transferred on closing to Assignee as per Section 9 on Vendor Assignment Agreement.

Balance of Payment under Assignment Agreement: The Assignee will deliver the balance of payment for this Assignment Agreement as more particularly set out in Item 6 on Schedule B subject to adjustments with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System, to the Assignor's Solicitor prior to completing the transaction in the Agreement of Purchase and Sale attached hereto as Schedule C to be held in trust without interest pending completion or other termination of the Agreement of Purchase and Sale attached hereto as Schedule C.

*Handwritten initials: OR*

Assignee agrees to provide Vendor with interim occupancy cheques in amount of \$1579.96 for December 2014 to February 2015 not later than not later than November 7, 2014. Assignee is responsible to Vendor for all interim costs from December 1, 2014 onward once this agreement is firm.

This form must be initialed by all parties to the Assignment of Agreement of Purchase and Sale.

**INITIALS OF ASSIGNEE(S):** *Handwritten initials: AJ, KM*

**INITIALS OF ASSIGNOR(S):** *Handwritten initials: OR*

**Assignment of Agreement of Purchase and Sale - Condominium**

This Schedule is attached to and forms part of the Assignment of Agreement of Purchase and Sale between:

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer) ....., and

**ASSIGNOR**, Oliver Romaniuk (Seller) .....

for the purchase and sale of 1201 - 144 Park Street ..... Waterloo

..... dated the 3 ..... day of November ..... 2014

**BALANCE OF PAYMENT UNDER THIS ASSIGNMENT AGREEMENT:** ~~The Assignee will deliver the balance of payment for this Assignment Agreement as more particularly set out in Item 6. on Schedule B, subject to adjustments, with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System, to the Assignor prior to completing the transaction in the Agreement of Purchase and Sale attached hereto as Schedule "C" to be held in trust without interest pending completion or other termination of the Agreement of Purchase and Sale attached hereto as Schedule "C".~~

*OAR*

All deposit money as per Schedule B to be held by Listing Brokerage in trust until completion of this Assignment of Agreement and the original Agreement of Purchase and Sale.

Assignor and Assignee agree that upon acceptance by both parties, this Assignment of Agreement of Purchase and Sale will replace an existing firm Assignment of Agreement of Purchase and Sale dated October 10, 2014. Parties agree that deposit money held in trust from Agreement dated October 10, 2014 will remain to satisfy terms of this agreement.

This form must be initialed by all parties to the Assignment of Agreement of Purchase and Sale.

INITIALS OF ASSIGNEE(S): *[Handwritten initials]*

INITIALS OF ASSIGNOR(S): *[Handwritten initials OAR]*

This Schedule is attached to and forms part of the Assignment of Agreement of Purchase and Sale between:

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer) ....., and

**ASSIGNOR**, Oliver Romaniuk (Seller) .....

for the purchase and sale of 1201 - 144 Park Street ..... Waterloo

..... dated the 3 ..... day of November ..... 2014

The Assignee and Assignor agree that the calculation of funds to be paid for this Assignment Agreement, subject to adjustments, is as set out in the following items:

- 1. Total Purchase Price including the original Agreement of Purchase and Sale and this Assignment Agreement: \$
- 2. Purchase Price of original Agreement of Purchase and Sale as indicated in Schedule C: \$ 357990
- 3. Deposit(s) paid by Assignor to the seller under the original Agreement of Purchase and Sale as indicated in Schedule C, to be paid by the Assignee to the Assignor as follows: \$ 35799

Upon acceptance of this Assignment Agreement and receipt of consent to assign from original seller, if applicable

(Upon acceptance of this Assignment Agreement and receipt of consent to assign from original seller, if applicable)  
(Upon occupancy by the Assignee and receipt of consent to assign from the original seller, if applicable)  
(Upon final closing of original Agreement of Purchase and Sale and this Assignment Agreement)

- 4. Payment by Assignee to Assignor for this Assignment Agreement: \$
- 5. Deposit paid under this Assignment Agreement (in accordance with Page 1 of this Assignment Agreement): \$ 5000
- 6. Balance of the payment for this Assignment Agreement: \$

INITIALS OF ASSIGNEE(S):

*[Handwritten initials]*

INITIALS OF ASSIGNOR(S):

*[Handwritten initials OAR]*



# Confirmation of Co-operation and Representation

BUYER: AJ Mueller and Kerry Mueller (Buyer) (Assignee) *[Initials]*

SELLER: Oliver A. Romaniuk (Seller) (Assignor) *[Initials]*

For the transaction on the property known as: Suite 1201 - 144 Park Street Waterloo

For the purposes of this Confirmation of Co-operation and Representation, "Seller" includes a vendor, a landlord, or a prospective, seller, vendor or landlord and "Buyer" includes a purchaser, a tenant, or a prospective, buyer, purchaser or tenant, "sale" includes a lease, and "Agreement of Purchase and Sale" includes an Agreement to Lease.

The following information is confirmed by the undersigned salesperson/broker representatives of the Brokerage(s). If a Co-operating Brokerage is involved in the transaction, the brokerages agree to co-operate, in consideration of, and on the terms and conditions as set out below.

**DECLARATION OF INSURANCE:** The undersigned salesperson/broker representative(s) of the Brokerage(s) hereby declare that he/she is insured as required by the Real Estate and Business Brokers Act, 2002 (REBBA 2002) and Regulations.

### 1. LISTING BROKERAGE

- a)  The Listing Brokerage represents the interests of the Seller in this transaction. It is further understood and agreed that:
  - 1)  The Listing Brokerage is not representing or providing Customer Service to the Buyer. (If the Buyer is working with a Co-operating Brokerage, Section 3 is to be completed by Co-operating Brokerage)
  - 2)  The Listing Brokerage is providing Customer Service to the Buyer.
- b)  **MULTIPLE REPRESENTATION:** The Listing Brokerage has entered into a Buyer Representation Agreement with the Buyer and represents the interests of the Seller and the Buyer, with their consent, for this transaction. The Listing Brokerage must be impartial and equally protect the interests of the Seller and the Buyer in this transaction. The Listing Brokerage has a duty of full disclosure to both the Seller and the Buyer, including a requirement to disclose all factual information about the property known to the Listing Brokerage. However, the Listing Brokerage shall not disclose:
  - That the Seller may or will accept less than the listed price, unless otherwise instructed in writing by the Seller;
  - That the Buyer may or will pay more than the offered price, unless otherwise instructed in writing by the Buyer;
  - The motivation of or personal information about the Seller or Buyer, unless otherwise instructed in writing by the party to which the information applies, or unless failure to disclose would constitute fraudulent, unlawful or unethical practice;
  - The price the Buyer should offer or the price the Seller should accept;
  - And; the Listing Brokerage shall not disclose to the Buyer the terms of any other offer.

However, it is understood that factual market information about comparable properties and information known to the Listing Brokerage concerning potential uses for the property will be disclosed to both Seller and Buyer to assist them to come to their own conclusions.

Additional comments and/or disclosures by Listing Brokerage: (e.g. The Listing Brokerage represents more than one Buyer offering on this property.)

### 2. PROPERTY SOLD BY BUYER BROKERAGE – PROPERTY NOT LISTED

- The Brokerage represents the Buyer and the property is not listed with any real estate brokerage. The Brokerage will be paid
  - by the Seller in accordance with a Seller Customer Service Agreement
- or:  by the Buyer directly

Additional comments and/or disclosures by Buyer Brokerage: (e.g. The Buyer Brokerage represents more than one Buyer offering on this property.)

### INITIALS OF BUYER(S)/SELLER(S)/BROKERAGE REPRESENTATIVE(S) (Where applicable)

*[Initials]*  
LISTING BROKERAGE

*[Initials]*  
CO-OPERATING/BUYER BROKERAGE

*[Initials]*  
SELLER  
(Assignor)

*[Initials]*  
BUYER  
(Assignee)

3. Co-operating Brokerage completes Section 3 and Listing Brokerage completes Section 1.

**CO-OPERATING BROKERAGE- REPRESENTATION:**

- a)  The Co-operating Brokerage represents the interests of the Buyer in this transaction.
- b)  The Co-operating Brokerage is providing Customer Service to the Buyer in this transaction.
- c)  The Co-operating Brokerage is not representing or providing Customer Service to the Buyer in this transaction.

**CO-OPERATING BROKERAGE- COMMISSION:**

- a)  The Listing Brokerage will pay the Co-operating Brokerage the commission as indicated in the MLS® information for the property ..... from the amount paid by the Seller to the Listing Brokerage.  
(Commission As Indicated In MLS® Information)
- b)  The Co-operating Brokerage will be paid as follows:

Additional comments and/or disclosures by Co-operating Brokerage: (e.g., The Co-operating Brokerage represents more than one Buyer offering on this property.)

Commission will be payable as described above, plus applicable taxes.

**COMMISSION TRUST AGREEMENT:** If the above Co-operating Brokerage is receiving payment of commission from the Listing Brokerage, then the agreement between Listing Brokerage and Co-operating Brokerage further includes a Commission Trust Agreement, the consideration for which is the Co-operating Brokerage procuring an offer for a trade of the property, acceptable to the Seller. This Commission Trust Agreement shall be subject to and governed by the MLS® rules and regulations pertaining to commission trusts of the Listing Brokerage's local real estate board, if the local board's MLS® rules and regulations so provide. Otherwise, the provisions of the OREA recommended MLS® rules and regulations shall apply to this Commission Trust Agreement. For the purpose of this Commission Trust Agreement, the Commission Trust Amount shall be the amount noted in Section 3 above. The Listing Brokerage hereby declares that all monies received in connection with the trade shall constitute a Commission Trust and shall be held, in trust, for the Co-operating Brokerage under the terms of the applicable MLS® rules and regulations.

**SIGNED BY THE BROKER/SALESPERSON REPRESENTATIVE(S) OF THE BROKERAGE(S) (Where applicable)**

**MINT REALTY INC., BROKERAGE**  
(Name of Listing Brokerage)  
191 KING ST S., UT 108 WATERLOO  
Tel: 800-344-0901 Fax: \_\_\_\_\_  
Date: Oct 10/14  
(Authorized to bind the Listing Brokerage)  
Jim Bolton  
(Print Name of Broker/Salesperson Representative of the Brokerage)

**MINT REALTY INC., BROKERAGE**  
(Name of Co-operating/Buyer Brokerage)  
191 KING ST S., UT 108 WATERLOO  
Tel: 800-344-0901 Fax: \_\_\_\_\_  
Date: Oct 10, 2014  
(Authorized to bind the Co-operating/Buyer Brokerage)  
Jim Bolton  
(Print Name of Broker/Salesperson Representative of the Brokerage)

**CONSENT FOR MULTIPLE REPRESENTATION (To be completed only if the Brokerage represents more than one client for the transaction)**

The Seller/Buyer consent with their initials to their Brokerage representing more than one client for this transaction.

SELLER'S INITIALS: \_\_\_\_\_ BUYER'S INITIALS: \_\_\_\_\_

**ACKNOWLEDGEMENT**

I have received, read, and understand the above information.  
(Signature of Seller) \_\_\_\_\_ Date: Oct 10/2014  
(Signature of Seller) \_\_\_\_\_ Date: \_\_\_\_\_

(Signature of Buyer) \_\_\_\_\_ Date: Oct 10/2014  
(Signature of Buyer) \_\_\_\_\_ Date: Oct 10/2014

THIS IS EXHIBIT "E" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.

THIS AGREEMENT MADE this 5<sup>th</sup> day of November, 2014.

Oliver Alexander Romanuk and Leah Shoshana Weller  
(hereinafter referred to as the "Assignor")

-AND-

Kerry Mueller and Achim Mueller  
(hereinafter referred to as the "Assignee")

-AND-

144 PARK LTD.  
(hereinafter referred to as the "Vendor")

WHEREAS the Assignor and the Vendor entered into an agreement of purchase and sale dated the 14<sup>th</sup> of February 2010 (the "Purchase Agreement"), a complete copy of which is attached hereto, whereby the Assignor agreed to purchase and the Vendor agreed to sell proposed Residential Unit 1, Level 12, known as Suite 1201 (the "Unit"), which Unit was to be purchased by the Assignor together with its appurtenant interest in the common elements in accordance with the Condominium Plan documentation proposed to be registered against the land and premises described in the Purchase Agreement and located at 144 Park Street, Waterloo, Ontario (the "Condominium").

AND WHEREAS the Assignor and the Assignee desire that the Assignor assign unto the Assignee all of their right, title and benefits under the Purchase Agreement.

AND WHEREAS the Vendor wishes to consent to the said assignment on the terms hereinafter set forth.

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT in consideration of the mutual covenants and agreements herein contained and the sum of TEN DOLLARS (\$10.00) of lawful money of Canada paid by each of the parties hereto to the other and for good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of them) the parties hereby covenant and agrees as follows:

1. The parties hereto hereby acknowledge and confirm that the foregoing recitals are true both in substance and in fact.
2. The Assignor does hereby assign, transfer and set over to and in favour of the Assignee by way of absolute assignment, all of its rights, title, benefit and interest in, to and under the Purchase Agreement.
3. The Assignee hereby covenants and agrees to and with the Assignor and the Vendor to assume the burden of all obligations on the part of the Assignor to be performed and/or borne pursuant to the Purchase Agreement, and further covenants and agrees to be bound by the terms and provisions of the Purchase Agreement as though he had originally executed same as the Purchaser.
4. The Assignee covenants and agrees with the Vendor that they shall forthwith do and suffer any act, and/or execute any documentation, which the Vendor may require from time to time in its sole, absolute and unfettered discretion for the purposes of confirming the assumption by the Assignee of the Assignor's obligations pursuant to the Purchase Agreement.
5. The Vendor hereby consents to the within assignment from the Assignor to the Assignee.
6. This Agreement shall be construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.
7. Time shall be of the essence of this Agreement, and the Purchase Agreement, and all terms of the Purchase Agreement shall continue in full force and effect.
8. This Agreement shall enure to the benefit of and be binding upon the parties hereto their respective successors and assigns.
9. The Vendor warrants and confirms that the Purchase Agreement is in good standing and all deposits paid by Purchaser to date under paragraph 1 therein, totaling \$35,800.00, shall be credited to the Assignee on closing as part of the purchase price.
10. The Assignee agrees to pay all further deposits payable under the Purchase Agreement, if any, and the balance of the purchase price by bank draft or by certified cheque to the Vendor on closing in accordance with the provisions of the Purchase Agreement.



- 11. The Assignor and Assignee acknowledge and agree that any agreement between the Vendor and Assignor with respect to the reimbursement of the Assignor for interest payable in respect of a deposit loan (i.e. a loan entered into by the Assignor to fund the Assignor's deposit obligations) by the Vendor is personal to the Assignor. Accordingly, the Assignor and Assignee hereby release and forever discharge the Vendor, or its successors and assigns, from any obligation to reimburse the Assignor or Assignee for interest paid on account of a deposit loan.
- 12. The Assignor agrees that with the request for consent to assignment, the Assignor will pay to the Vendor a fee of \$ 2,500.00 plus applicable taxes, within 10 days following the execution of this Agreement.
- 13. The Assignor hereby guarantees the due and timely performance and fulfillment of all covenants and obligations of the Assignee arising under this Agreement and the Purchase Agreement, including without limitation, the obligation to pay the purchase price in respect of the Unit to the Vendor, and all other monies owing or payable to the Vendor by the "Purchaser" in accordance with the provisions of the Purchase Agreement, and agrees to indemnify and save the Vendor harmless from and against all losses, damages, costs and expenses which the Vendor may sustain, incur or become liable for, by reason of the Assignee's default under this Agreement, or the Purchase Agreement. In the event of the Assignee's failure to complete the transaction in accordance with the terms and conditions of the Purchase Agreement, the Assignee acknowledges and agrees that the Vendor has the right, but not the obligation, to call upon the Assignor to complete the transaction in the Assignee's place in accordance with the terms of the Purchase Agreement, and in the event that the Vendor calls upon the Assignor to complete the transaction in the Assignee's place, the parties hereto agree that: (i) the Purchase Agreement shall automatically be deemed to be re-assigned by the Assignee to the Assignor; (ii) the deposits paid to date to the Vendor pursuant to the Purchase Agreement shall be forfeited to the Vendor as liquidated damages and not as a penalty and shall not be credited to the Assignor; and (iii) the Assignee shall, through the execution of this document, release the Vendor and the Assignor from and against any and all losses, damages, costs, expenses, actions, proceedings, demands and/or claims whatsoever which the Assignee now has, or may hereafter have, against the other parties hereto, by reason of, or in connection with, the Purchase Agreement (and any and all addenda thereto or amendments thereof) and/or the completion thereof by the Assignor and Vendor in such case.
- 14. The Assignee and Assignor hereby acknowledge and waives any Delayed Occupancy Compensation that the Assignor's would be entitled to under the Agreement, for the period of delay up to the day in which the Assignor receives occupancy of the Unit(s).
- 15. The Assignee shall not further assign the Purchase Agreement without prior written consent of the Vendor, which consent may be unreasonably or arbitrarily withheld in accordance with Paragraph 17 of the Purchase Agreement.
- 16. The parties hereto agree that notice of acceptance and delivery of the within offer and all communications thereto may be made by facsimile machine addressed to the parties hereto or their solicitors or their agents. The parties hereto agree facsimile copies shall constitute original copies.

IN WITNESS WHEREOF the parties have executed this Agreement on the 5<sup>th</sup> day of Nov, 2014.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Assignor: Oliver Romaniuk

\_\_\_\_\_  
Assignor: Leah Shoshana Weller

\_\_\_\_\_  
Assignee: Kerry Mueller

\_\_\_\_\_  
Assignee: Achim Mueller

MR [initials]  
KW [initials]  
JM [initials]  
A [initials]

Address: [REDACTED]

Phone No: [REDACTED]

144 PARK LTD.  
Per \_\_\_\_\_  
Name: Jonathan A. Mueller  
Title: Vice President, Sales and Marketing  
I have the authority to bind the Corporation

Schedule C



A.K. 0241-10

Residential Unit No. 01 Level No. 12  
Suite No. 1201  
Model Type: EX1000

AGREEMENT OF PURCHASE AND SALE

The undersigned, Other A. Ramaniuk (collectively, the "Purchaser"), hereby agrees with 144 PARK LTD. (the "Vendor") to purchase the above-named unit, as outlined for identification purposes only on the sketch attached hereto as Schedule "A", together with one (2) Parking Unit(s) and one (1) Locker Unit(s), all of which shall be allocated by the Vendor to its sole discretion being (a) proposed unit(s) in the Condominium, to be registered against those lands and premises situated on the north east corner of Aiken Street and Park Street in the City of Waterloo, and which is proposed to be municipally known as 144 Park Street, Waterloo, Ontario (hereinafter called the "Property"), together with an undivided interest in the common elements appurtenant to such unit(s) and the exclusive use of those parts of the common elements attaching to such unit(s), as set out in the proposed Declaration (collectively, the "Unit") on the following terms and conditions:

The purchase price of the Unit (the "Purchase Price") is Three hundred fifty seven thousand nine hundred ninety (\$357,900.00) DOLLARS in lawful money of Canada, payable as follows:

- (a) to Harris, Sheaffer LLP, in Trust, (the "Vendor's Solicitors" or "Escrow Agent" or "Trustee") in the following amounts at the following times, by cheque or bank draft, as deposits pending completion or other termination of this Agreement and to be credited on account of the Purchase Price on the Occupancy Date:
  - (i) the sum of FIVE THOUSAND (\$5,000.00) Dollars submitted with this Agreement;
  - (ii) the sum of Twelve thousand nine hundred (\$12,900.00) Dollars submitted with this Agreement and post-dated twenty one (21) days following the date of execution of this Agreement by the Purchaser, and together with 1(a)(i) above represents 5% of the Purchase Price;
  - (iii) the sum of Seventy seven thousand nine hundred (\$77,900.00) Dollars submitted with this Agreement and post-dated one hundred eighty (180) days following the date of execution of this Agreement by the Purchaser, being 5% of the Purchase Price;
- (b) the sum of ZERO (\$0.00) Dollars by certified cheque or bank draft to the Vendor's Solicitors on the Occupancy Date, being 5% of the Purchase Price;
- (c) the balance of the Purchase Price by certified cheque on the Title Transfer Date to the Vendor or as the Vendor may direct, subject to the adjustments hereinafter set forth;
- (d) the Purchaser agrees to pay the sum as hereinbefore set out in paragraph 1 (a) as a deposit by cheque payable to the Escrow Agent with such last-mentioned party to hold such funds in trust as the escrow agent acting for and on behalf of TWL under the provisions of a Deposit Trust Agreement ("DTA") with respect to this proposed condominium on the express understanding and agreement that the Unit is substantially completed by the Vendor for occupancy by the Purchaser in accordance with the terms of this Agreement including, without limitation, the Tarion Addendum (the "Occupancy Date");

- (a) The Purchaser shall occupy the Unit on the First Tentative Occupancy Date (as defined in the Statement of Critical Dates being part of the Tarion Addendum as hereinafter defined), or such extended or accelerated date that the Unit is substantially completed by the Vendor for occupancy by the Purchaser in accordance with the terms of this Agreement including, without limitation, the Tarion Addendum (the "Occupancy Date");
- (b) The transfer of title to the Unit shall be completed on the later of the Occupancy Date or a date established by the Vendor in accordance with Paragraph 14 hereof (the "Title Transfer Date");
- (c) The Purchaser's address for delivery of any notices pursuant to this Agreement or the Act is the address set out in the Tarion Addendum;
- (d) Notwithstanding anything contained in this Agreement (or in any schedule annexed hereto) to the contrary, it is expressly understood and agreed that if the Purchaser has not executed and delivered to the Vendor or its sales representative an acknowledgement of receipt of both the Vendor's disclosure statement and a copy of this Agreement duly executed by both parties hereto, within fifteen (15) days from the date of the Purchaser's execution of this Agreement as set out below, then the Purchaser shall be deemed to be in default hereunder and the Vendor shall have the unilateral right to terminate the Agreement at any time thereafter upon delivering written notice confirming such termination to the Purchaser, whereupon the Purchaser's initial deposit cheque shall be forthwith returned to the Purchaser by or on behalf of the Vendor.

The following Schedules of this Agreement, if attached hereto, shall form a part of this Agreement. If there is a form of Acknowledgment attached hereto same shall form part of this Agreement and shall be executed by the Purchaser and delivered to the Vendor on the Closing Date. The Purchaser acknowledges that he has read all Sections and Schedules of this Agreement and the form of Acknowledgment, if any:

- Schedule "A" - Unit Plans/Sketch
- Schedule "B" - Features & Finishes
- Schedule "C" - Occupancy License
- Schedule "D" - Warming Provisions
- Schedule "E" - Receipt Confirmation
- Schedule being the Tarion Warranty Corporation Statement of Critical Dates and Addendum to Agreement of Purchase and Sale (collectively the "Tarion Addendum") and such other Schedules annexed hereto and specified as Schedule "F".

DATED, signed, sealed and delivered this 14 day of February, 2010

SIGNED, SEALED AND DELIVERED in the presence of  
[Signature]  
WITNESS:  
(as to all Purchaser's signatures, if more than one purchaser)

[Signature] PURCHASER: DOB  
[Signature] PURCHASER: DOB  
PURCHASER'S SOLICITOR:  
Address:  
Telephone: Facsimile:

The undersigned accepts the above offer and agrees to complete this transaction in accordance with the terms thereof.

DATED, signed, sealed and delivered, this 14 day of February, 2010

Vendor's Solicitors:  
HARRIS, SHEAFFER LLP  
Suite 610 - 4100 Yonge Street  
Toronto, Ontario, M2P 3J5  
attn: Mark L. KAROLY  
Telephone: (416) 250-5800 Fax: (416) 250-5700

144 PARK LTD.  
Per [Signature]  
Authorized Signing Officer  
I have the authority to bind the Corporation.

J.D. M... 3 SEP 2010  
M... 2/10  
V.M.H.

THIS IS EXHIBIT "F" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.



Oliver Romaniuk <oliver.romaniuk@gmail.com>

---

**RE: 144 Park - #1201**

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Joshua Lee <jlee@mady.com>

Fri, Dec 6, 2013 at 10:32 AM

To: "oliver.romaniuk@gmail.com" <oliver.romaniuk@gmail.com>

Cc: Ellen De Castro <ellen@mady.com>

Hello Oliver,

Ellen has passed me your inquires below. As per the letter dated September 10<sup>th</sup>, 2013, that was sent to your address, your current occupancy date is schedule for Thursday, February 6<sup>th</sup>, 2014.

Interim occupancy and Final Closing does not happen on the same day. A Final Closing date cannot be set until we have achieved registration of the condominium with the Region of Waterloo. For a building of this size we estimate a best case scenario of 3 months from the first occupancies and worst case 5 months to achieve registration and schedule the final closings.

To prepare the Assignment Agreement we require the following information:

- New purchaser(s) full name
- Address
- Contact information – phone numbers, emails
- Date of Birth
- Social Insurance Number
- Copies of Driver's License/ID
- New purchaser(s) solicitor information

We require a certified cheque payable to **144 Park Ltd.** For \$2,825 (\$2,500+HST). Please keep in mind as we move closer to interim occupancy any assignments may no longer be granted as interim documentation must be prepare by the lawyers prior to your move in date.

I hope this helps in answering your questions.

Regards,

Josh

Joshua Lee  
Sales and Marketing Assistant  
MADY Development Corporation  
tel: 905.944.0907 x123  
fax: 905.944.0916

Check out our new website at [www.MADY.com](http://www.MADY.com)



This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

---

**From:** Oliver Romaniuk [<mailto:oliver.romaniuk@gmail.com>]  
**Sent:** Sunday, December 01, 2013 1:56 PM  
**To:** Ellen De Castro  
**Cc:** Ellen De Castro  
**Subject:** 144 Park

Hello Theresa, Ellen,

Sorry I forgot, but can you please confirm for me the following?

My estimated occupancy date.

Would occupancy and closing be the same day?

What are the general terms for sale prior to occupancy, and what is the process?

Thank you, Oliver

Sent from my iPad

On Oct 11, 2013, at 9:24 AM, Theresa Vosylius <[tvosylius@mady.com](mailto:tvosylius@mady.com)> wrote:

Hello Oliver! Receipt attached, original will be sent in the mail. Thanks

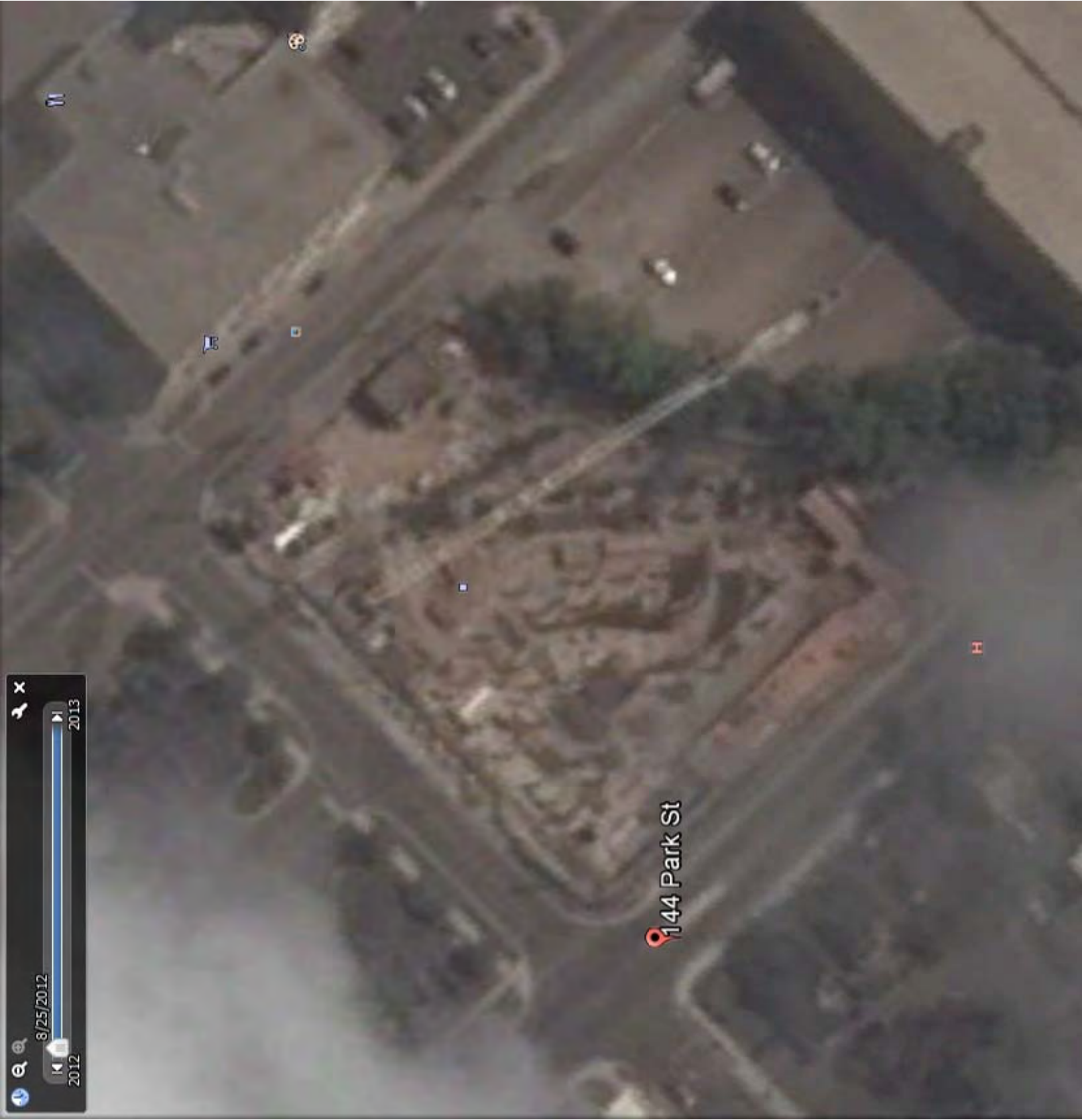
Theresa

<SC45413101108060.pdf>

THIS IS EXHIBIT "G" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 4<sup>TH</sup>  
DAY OF AUGUST, 2015

---

A Commissioner etc.



144 Park St

8/25/2012  
2012  
2013



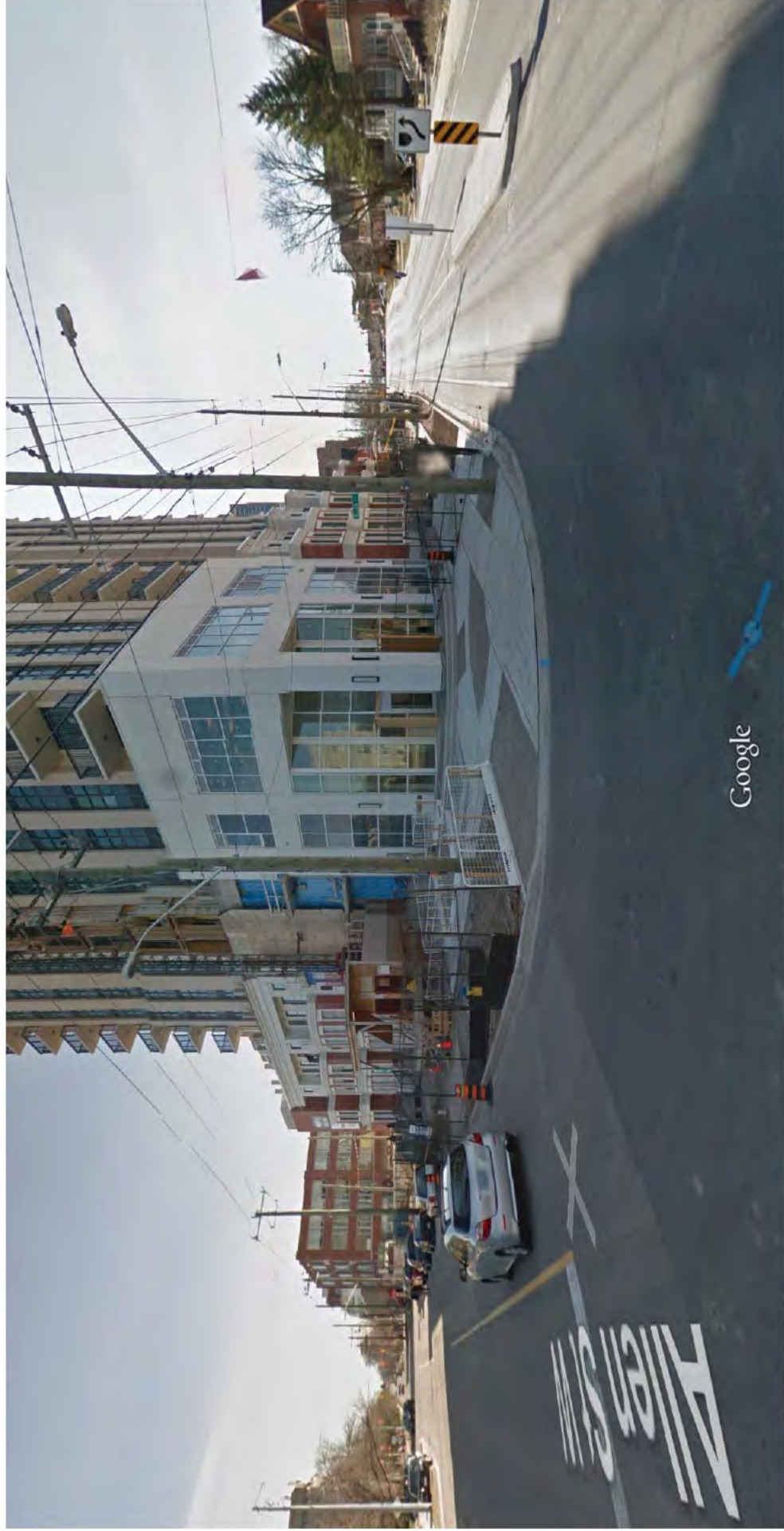


144 Park St

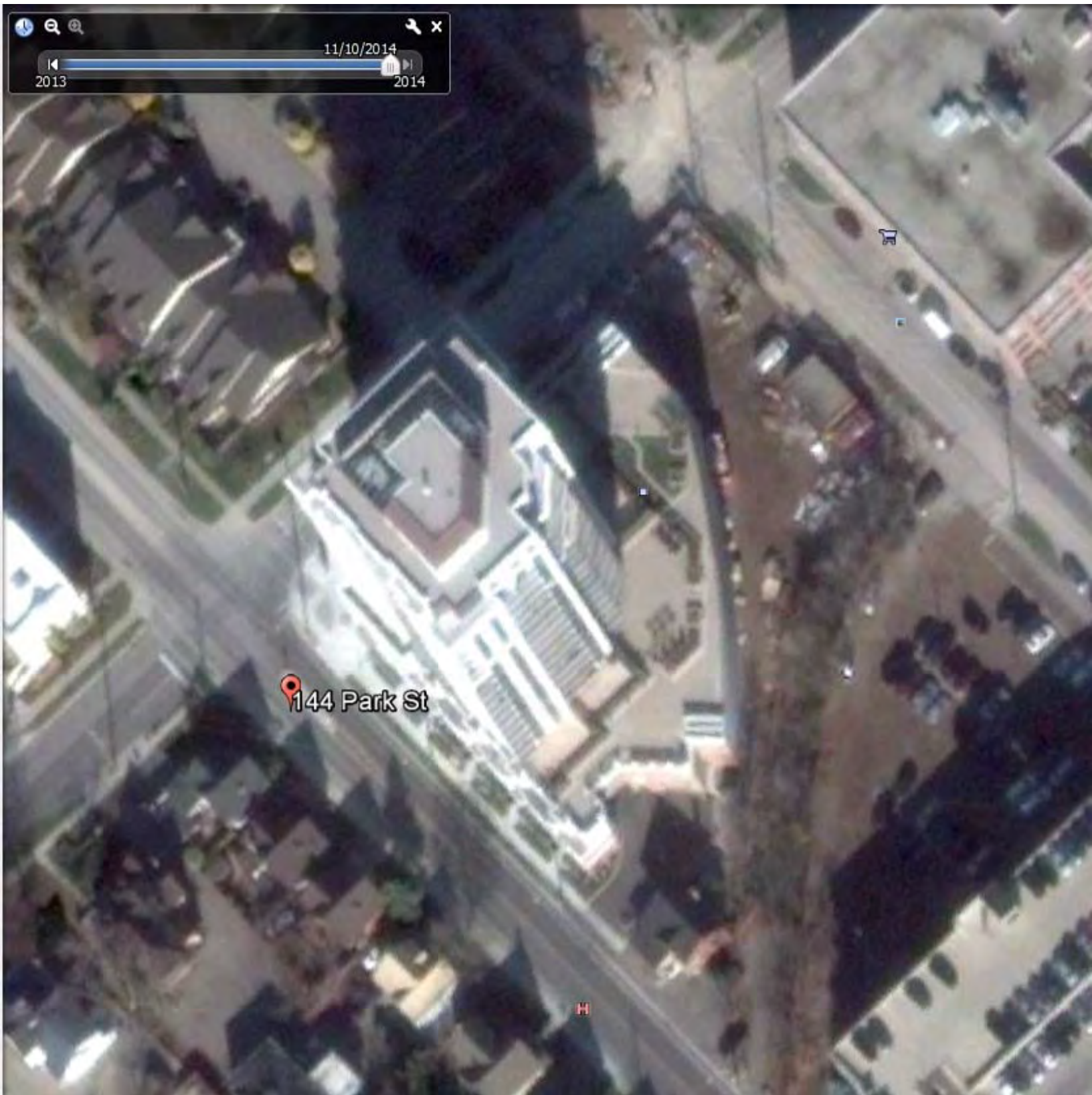
9/27/2013  
2012



Google Allen St W

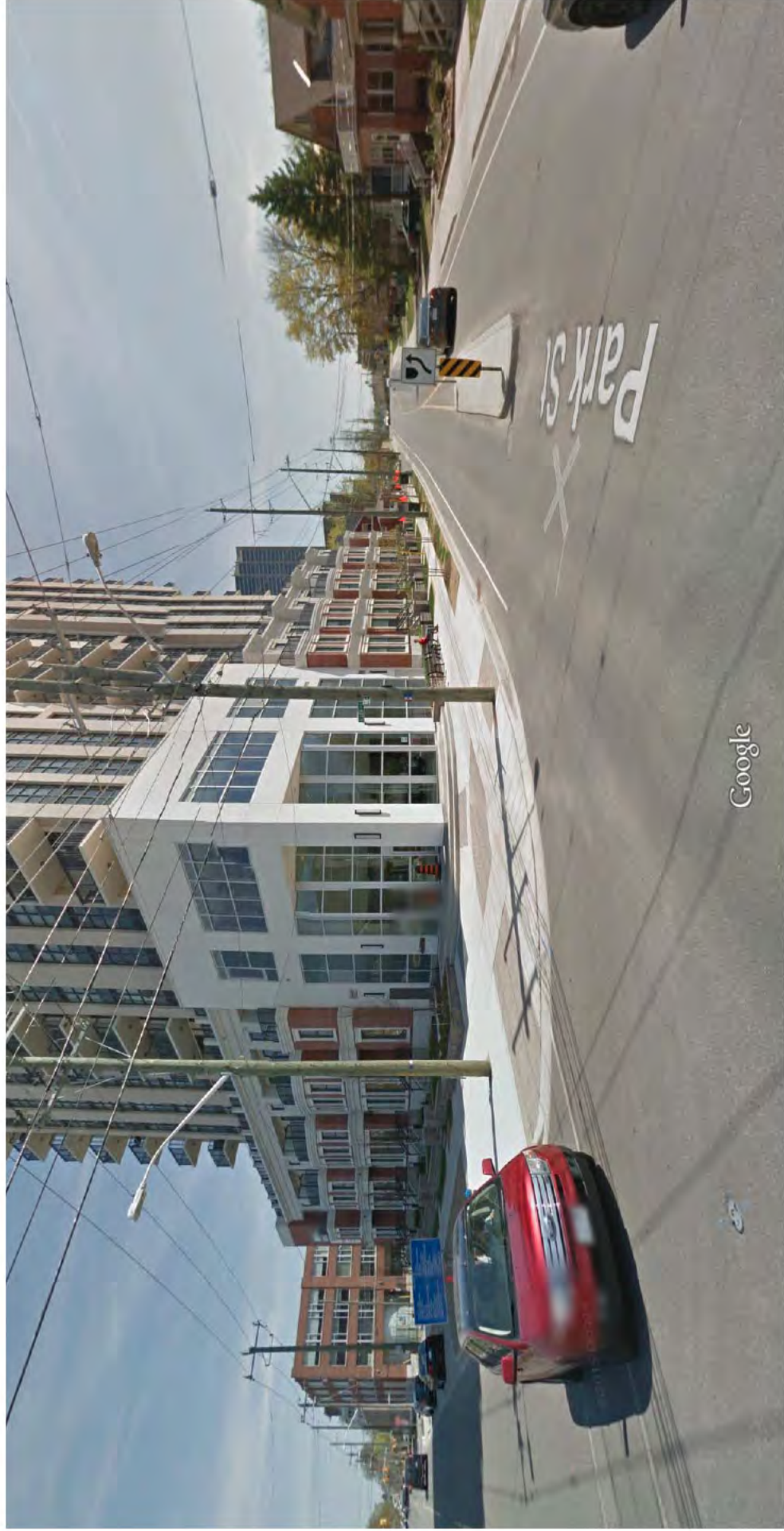


Waterloo, Ontario  
Street View - Apr 2014





Google 142 Park St



Waterloo, Ontario  
Street View - May 2015

Google

Image capture: May 2015 © 2015 Google

**IN THE MATTER OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**AFFIDAVIT OF OLIVER ROMANIUK**  
(sworn January 4, 2015)

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**IN THE MATTER OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**MOTION RECORD**  
(returnable August 5, 2015)

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: [oliver.romaniuk@gmail.com](mailto:oliver.romaniuk@gmail.com)

**Self-Represented**

**October 6, 2015**

**Sam Rappos  
Chaitons LLP  
Barristers & Solicitors  
5000 Yonge Street, 10<sup>th</sup> Floor  
Toronto, ON  
M2N 7E9**

**Oliver Romaniuk  
Self-Represented**  
oliver.romaniuk@gmail.com  
416-909-0521  
182 Westwood Ave.  
Toronto, ON  
M4K 2B1

**Re: Interrogatories to Trustee's October 6, 2015 Answers to Written Interrogatories**

**Dear Mr. Rappos,**

Attached is the Notice of Appearance of Mr. Romaniuk served to the April 23, 2015 Service List and filed with the Court on August 5, 2015. It is being resent here to the revised Service List issued on October 6, 2015.

Mr. Romaniuk has worked diligently to adhere to all the Rules of Civil Procedure, Practice, Procedures and Forms of the Ontario Superior Court of Justice (Commercial List). Being self-represented, any notice of deviation to form or process is welcome. Any opportunity to rectify is appreciated and, if permitted, will be performed expeditiously.

Please find attached follow-up interrogatories to the Trustee's responses attached to its email sent October 6, 2015, answering the questions posed by Mr. Duncan on September 30 and Mr. Kolenda on October 2.

In advance of the hearing and with the appropriate timing, Mr. Romaniuk requests that the Trustee place the contents of the materials referred to in Appendix D of this letter on file with the Court as evidence. As the materials were originally distributed by the Trustee, Mr. Romaniuk is hesitant to file them on his own, in the interest of the proper filing of potentially confidential materials.

Appendix A – Follow-up Interrogatories to the Trustee's Responses dated October 6, 2015  
Appendix B – Notice of Appearance of Mr. Romaniuk dated August 5, 2015  
Appendix C – Copy of Service Email of Mr. Romaniuk dated August 5, 2015  
Appendix D – Trustee's Email in regards to Project Documentation dated August 31, 2015  
Appendix E – Turner Fleisher Architects Inc. Site Plan dated November 15, 2011  
Appendix F – Paradigm Transportation Study dated December 10, 2011

Respectfully,



Oliver Romaniuk

CC: THE SERVICE LIST (October 6, 2015)

## Appendix A – Follow-up Interrogatories to the Trustee’s Responses dated October 6, 2015

Generally speaking and in the interest of brevity, information sharing and the three ‘C’s of the Commercial List (Cooperation, Communication and Common sense), in the questions below *Trustee* and *Applicant* are meant to be used and interpreted interchangeably. Any reason to differentiate in the Trustee’s and/or Applicant’s responses should be indicated by the respondent for clarity, if required.

In its responses, the Trustee has made a number of statements that appear to differ in comparison to information provided by the Trustee and/or the Applicant in past filings with the Court and stakeholders to the Application. The following questions are largely, but not exclusively, meant to help all understand these differences.

- 1) Can the Trustee please provide further information on the Appraisal of Land Value & Cumulative Sell-out Value for 144 Park Street prepared for 144 Park Ltd. by MacKenzie Ray Heron & Edwardh, issued on November 23, 2011, specifically in respect of:
  - a. Did the Applicant, or any non-arm’s length affiliate or entity, provide this or any other appraisal to Laurentian Bank of Canada, MarshallZehr Group or Allen Street Holdings at any time? If so, please provide any available information, details, related documentation and/or correspondence.
  - b. Can the Applicant please explain each discrepancy between the chart on page 40 of the Appraisal, ‘144 Park Pre-Sales’, with the information provided in Appendix H of the Trustee’s Fourth Report and the Trustee’s response to question 29? This includes, but is not limited to, the units listed in *Table 1 – Sales Comparison*, included below.
  - c. Preamble – By combining data in the Appraisal and Trustee’s Appendix H, it can be calculated that at the time of the Appraisal, the Applicant had sold 136 of 149 Residential Units and 160 Parking Units. Question – Can the Applicant explain the



discrepancies between the above information and the material representations made under Section 5 (Project/Secured Property) and Section 23 (Material Representations) of the Laurentian Bank of Canada Commitment Letter executed on March 7, 2012? Specifically, an explanation of the differences in the number of required and available Parking Units, as well as the valuation of the remaining units. This includes the Applicant's primary and backup plans (if any) for parking for the sold Parking Units, as well as the plan to market and sell the remaining 12 units without parking. Note: given the arms-length nature of 155 Uptown and the state of approvals, permitting and project land control (outstanding to this day), any reasoning based on parking available within the 155 Uptown Project will be met with severe skepticism.

*Table 1 - Sales Comparison*

Suite	APS Date (Appraisal)	APS Date (Trustee)
101	Unsold	August 28, 2010
103	Unsold	December 19, 2012
104	Unsold	July 5, 2013
106	January 26, 2011	Unsold
107	June 6, 2009	Unsold
502	October 18, 2010	Unsold
503	October 20, 2009	Unsold
702	March 28, 2010	Unsold
706	October 31, 2009	Unsold
710	January 25, 2010	Unsold
809	August 25, 2010	Unsold
810	January 25, 2010	Unsold
1105	December 9, 2009	Unsold
1110	July 18, 2010	Unsold
1203	October 5, 2009	Unsold
1306	June 26, 2010	Unsold
1503	October 22, 2009	Unsold
1506	September 19, 2010	Unsold
1507	Unsold	July 13, 2013
1604	February 28, 2010	September 11, 2012
1701	Unsold	March 7, 2013
1702	March 1, 2010	June 17, 2010
1705	Unsold	April 24, 2013
1805	Unsold	July 5, 2013
1806	May 22, 2010	June 29, 2013

- 2) Can the Applicant please explain the variances and associated reasons for the current parking situation in comparison to the drawings issued for site plan approval by Turner Fleisher Architects Inc. on November 15, 2011, attached hereto as Appendix “E”? An adequate explanation necessarily includes a reason why a detailed IFC (issued for construction) plan differs from the As-Built by more than 20%.
- 3) Can the Applicant please explain the Traffic Demand Management (TDM) Initiative described in Section 4.10(2) of the 144 Park Tower 2 Transportation Impact Study issued by Paradigm Transportation Solutions Limited on December 10, 2011, attached hereto as Appendix “F”? Specifically, the question lies in respect of how an “Unbundled Parking” solution could have greater benefit in Tower 2 (155 Uptown), which has a surplus of parking sufficient to meet 144 Park’s needs, in comparison to Tower 1 (144 Park) which has a deficit of parking. Also, can the Applicant describe in detail why an ‘Unbundled Parking’ solution is more or less appropriate in today’s economic and housing situation than in late 2011?
- 4) Can the Trustee please provide evidence that Mint Realty has no perverse economic incentive to skew the valuations of or the opinions regarding the various units such that the APS of current Purchasers under contract with Mint (or affiliates) are terminated and that Mint will stand to realize a larger gain from re-selling the same unit at current market prices? If such a perverse incentive exists, does the Trustee have the required oversight measures in place such that it can assure the Purchasers and the Court that all deals are being completed equitably or is there any third party oversight or a fairness advisor?
- 5) Please provide any information that may be relevant to the Honorable Court, various stakeholders, creditors and Purchasers that may indicate a conflict of interest or perceived conflict of interest (until determined definitely otherwise) amongst the various parties to the proceeding.
- 6) With regards to Question 22. Mr. Romaniuk dedicated the personal time and effort to schedule an appointment, put together a detailed presentation, meet at Trustee’s counsel’s office, explain the auction concept in detail, follow up with a detailed email of action items which specifically included Trustee’s counsel forwarding the information and presentation to the Trustee, as well as an open offer by Mr. Romaniuk to discuss the details in depth. The offer was not acknowledged and the Trustee has instead mistakenly indicated that Mr. Romaniuk will explain the concept, either written or orally, at the hearing. Mr. Romaniuk

would be pleased to further discuss the concept, but against Mr. Romaniuk's specific and repeated advice, the Trustee has released the market valuation of the parking units, thus altering the outcome of the auction. As will be described further in Mr. Romaniuk's (now necessary) filing with the Court, the auction concept is still viable, but will now come at a premium due to the Trustee's release of the Mint Realty report.

- 7) To briefly summarize a simplified variant of the Japanese auction concept that was proposed. Colloquial terminology is used for simplicity of description.
- a. The Trustee first determines a confidential 'strike price' which is the total premium it is willing to pay for all the Parking Units it requires.
  - b. The auction begins with the Purchasers each 'owning' their respective Parking Units, under the assumption that there is some price at which they will 'sell'.
  - c. The Trustee periodically 'calls out' an increasing clearing price.
  - d. With every price, each Purchaser privately notifies the Trustee if they are willing to accept the clearing price in exchange for their Parking Unit.
  - e. Once a sufficient numbers of Purchasers are willing to sell, the auction ends.
  - f. The Trustee calculates the total premium (clearing price times units).
  - g. If the premium is below the strike price, the deals are firm.
  - h. If the premium is above the strike price, the auction is void.

**ONTARIO**  
**SUPERIOR COURT OF JUSTICE**  
**(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,**  
**R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.**  
**FOR THE APPOINTMENT OF A TRUSTEE UNDER SECTION 68(1) OF THE**  
***CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**NOTICE OF APPEARANCE**

**The respondent, Oliver Romaniuk, intends to respond to this application.**

August 5, 2015

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**TO: THE SERVICE LIST**

**SERVICE LIST**  
(as of April 23, 2015)

**CHAITONS LLP**

5000 Yonge Street, 10<sup>th</sup> Floor  
Toronto, ON M2N 7E9

**Harvey Chaiton**

Tel: (416) 218-1129  
Fax: (416) 218-1849  
E-mail: harvey@chaitons.com

**Sam Rappos**

Tel: (416) 218-1137  
Fax: (416) 218-1837  
Email: samr@chaitons.com

**Lawyers for the Trustee**

**COLLINS BARROW TORONTO LIMITED**

11 King St. West  
Suite 700, Box 27  
Toronto, ON M5H 4C7

**Bryan Tannenbaum and Arif Dhanani**

Tel: (416) 238-5055 / (647) 725-0183  
Fax: (416) 480-2646  
Email: btannenbaum@collinsbarrow.com / andhanani@collinsbarrow.com

**Trustee**

**THORNTON GROUT FINNIGAN LLP**

Ste. 3200, 100 Wellington St. W.  
PO Box 329, Toronto-Dominion Centre  
Toronto, ON M5K 1K7

**Grant Moffat / Asim Iqbal**

Tel: (416) 304-0599 / (416) 304-0595  
Fax: (416) 304-1313  
Email: gmoffat@tgf.ca / aiqbal@tgf.ca

**Lawyers for Laurentian Bank of Canada**

**PAPE BARRISTERS PROFESSIONAL CORPORATION**

One Queen Street East  
Suite 1910, Box 69  
Toronto, ON M5C 2W5

**Jonathan Rosenstein**

Tel: (416) 364-8716  
Fax: (416) 364-8855  
Email: jrosenstein@papebarristers.com / jenn@papebarristers.com

**Lawyers for Aviva Insurance Company of Canada**

**AFFLECK GREENE MCMURTRY LLP**

365 Bay Street, Suite 200  
Toronto, ON M5H 2V1

**Kyle Peterson**

Tel: (416) 360-0327  
Fax: (416) 360-5960  
Email: kpeterson@agmlawyers.com

**Lawyers for MarshallZehr Group Inc.**

**BROWN BEATTIE O'DONOVAN LLP**

1600 – 380 Wellington Street  
London, ON N6A 5B5

**James Fisher**

Tel: (519) 964-3163  
Fax: (519) 679-6350  
Email: jfisher@bbo.on.ca

**Lawyers for Allen Street Holdings Inc.**

**SIMPSONWIGLE LAW LLP**

1 Hunter Street East, Suite 200  
Hamilton, ON L8N 3W1

**Derek Schmuck**

Tel: (905) 528-8411 x 363  
Fax: (905) 528-9008  
Email: schmuckd@simpsonwigle.com

**Lawyers for Screen Painting Ltd.**

**A. CONTE PROFESSIONAL CORPORATION**

242 Applewood Crescent  
Unit 12, 2<sup>nd</sup> Floor  
Concord, ON L4K 4E5

**Antonio Conte**

Tel: (416) 947-0208  
Fax: (866) 543-3165  
Email: a.conte@contelaw.ca

**Lawyers for Global Fire Protection Ltd.**

**KOSKIE MINSKY LLP**

20 Queen Street West  
Suite 900, Box 52  
Toronto, ON M5H 3R3

**Jeffrey Long**

Tel: (416) 595-2125  
Fax: (416) 204-2892  
Email: jlong@kmlaw.ca

**Lawyers for J & I Gaweda Construction Limited**

**PETKER & ASSOCIATES**

295 Weber St. N.  
Waterloo, ON N2J 3H8

**Jarvis Postnikoff**

Tel: (519) 886-1204  
Fax: (519) 886-5674  
Email: jarvis@petkerlaw.com

**Lawyer for Bast Home Comfort Inc.**

**PARENTE, BOREAN LLP**

3883 Highway 7, Suite 207  
Woodbridge, ON L4L 6C1

**Gerard Borean**

Tel: (905) 850-6066  
Fax: (905) 850-6069  
Email: gborean@parenteborean.com

**Lawyers for Frendell Kitchens Limited**

**CHODOLA REYNOLDS BINDER**

720 Walker Road  
Windsor, ON N8Y 2N3

**Robert Reynolds**

Tel: (519) 254-6433  
Fax: (519) 254-7990  
Email: reynolds@crblaw.ca

**Lawyers for T.I.C. Contracting Ltd.**

**MILLER THOMSON LLP**

60 Columbia Way, Suite 600  
Markham, ON L3R 0C9

**Enzo Di Iorio / Riccardo Del Vecchio**

Tel: (905) 415-6711 / (905) 415-6764  
Fax: (905) 415-6777  
Email: ediiorio@millerthomson.com / rdelvecchio@millerthomson.com

**Lawyers for Global Precast Inc. and 2050491 Ontario Inc. o/a The  
Downsview Group**

**CLARKS LLP**

1200 Canada Building  
374 Ouellette Avenue  
Windsor, ON N9A 1A8

**John Clark**

Tel: (519) 254-4990  
Fax: (519) 254-2294  
Email: jtclark@clarkslaw.com

**Lawyers for Sam Tortoloa Enterprises Inc.**

**DOOLEY LUCENTI**

10 Checkley Street  
Barrie, ON L4N 1W1

**Eric Gionet**

Tel: (705) 792-7963  
Fax: (705) 792-7964  
Email: egionet@dllaw.ca

**Lawyers for CRS Contractors Rental Supply General Partner Inc.**



**PALLET VALO LLP**

77 City Centre Drive  
West Tower, Suite 300  
Mississauga, ON L5B 1M5

**Anna Esposito**

Tel: (905) 273-3022 x 260  
Fax: (905) 273-6920  
Email: aesposito@pallettvalo.com

**Lawyers for Adlers Main Tile & Carpet Co. Ltd. and 694643 Ontario Limited**

**GLAHOLT LLP**

141 Adelaide St West, Suite 800  
Toronto, ON M5H 3L5

**Andrea Lee**

Tel: (416) 368-8280 x 216  
Fax: (416) 368-3467  
Email: al@glaholt.com

**Lawyers for Turner Fleischer Architects Inc.**

**BISCEGLIA & ASSOCIATES PROFESSIONAL CORPORATION**

200-7941 Jane St.  
Concord, ON L4K 4L6

**Emillio Bisceglia**

Tel: (905) 695-3100  
Fax: (905) 695-5201  
Email: ebisceglia@lawtoronto.com

**Lawyers for Hammerschlag & Joffe Inc.**

**BARRY S. GREENBERG**

Barrister and Solicitor  
7626A Yonge Street  
Thornhill, ON L4J 1V9

Tel: (905) 886-9535 Ext. 27  
Fax: (905) 886-9540  
Email: bsgreenberg@rogers.com

**Lawyers for Weston Flooring Limited**

**LEVINE, SHERKIN, BOUSSIDAN PROFESSIONAL CORPORATION**  
300-23 Lesmill Rd.  
North York, ON M3B 3P6

**Jeremy Sacks**

Tel: (416) 224-2400  
Fax: (416) 224-2408  
Email: [Jeremy@lsblaw.com](mailto:Jeremy@lsblaw.com)

**Lawyers for Great Pyramid Aluminum Ltd.**

**NORTON ROSE FULBRIGHT CANADA LLP**  
Suite 3800, Royal Bank Plaza  
South Tower, 200 Bay Street, P.O. Box 84  
Toronto, ON M5J 2Z4

**Michael Tamblyn**

Tel: (416) 202-6705  
Fax: (416) 216-3930  
Email: [michael.tamblyn@nortonrosefulbright.com](mailto:michael.tamblyn@nortonrosefulbright.com)

**Lawyers for Lipton's Audio Video Unlimited**

**HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF  
ONTARIO AS REPRESENTED BY THE MINISTER OF FINANCE**  
PO Box 620  
33 King Street West, 6th Floor  
Oshawa, ON L1H 8E9

**Kevin J. O'Hara**

Tel: (905) 433-6934  
Fax: (905) 436-451  
Email: [kevin.ohara@ontario.ca](mailto:kevin.ohara@ontario.ca)

**REGIONAL MUNICIPALITY OF WATERLOO**

150 Frederick St., 8th Floor  
Kitchener, ON N2G 4J3

**Fiona M. McCrea - Solicitor, Property**

Tel: (519) 575-4518  
Fax: (519) 575-4466  
Email: [fmccrea@regionofwaterloo.ca](mailto:fmccrea@regionofwaterloo.ca)

**CITY OF WATERLOO**

Waterloo City Centre  
100 Regina Street South

PO Box 337 STN Waterloo  
Waterloo, ON N2J 4A8

**Steve Ross, *Director, Legal Services***

Tel: (519) 747-8758

Fax: (519) 747-8523

Email: Steve.Ross@waterloo.ca

**HAMMOND FLESIAS**

3800 Steeles Ave. West, Suite 300  
Woodbridge, ON L4L 4G9

**Richard Hammond**

Tel: (905) 850-8550

Fax: (905) 850-9998

Email: rhammond@hammondflesias.com

**Lawyers for Brody Wall System Ltd.**

**MADORIN, SNYDER LLP**

55 King Street West, P.O. Box 1234  
Kitchener, ON N2G 4G9

**Tim J. McGowan**

Tel: (519) 744-4491

Fax: (519) 741-8060

Email: tmcgowan@kw-law.com

**Lawyers for Certain Unit Purchasers**

**GOWLING LAFLEUR HENDERSON**

50 Queen Street North, Suite 1020  
PO Box 2248  
Kitchener, ON N2H 6W2

**Ross Earnshaw**

Tel: (519) 575-7525

Fax: (519) 571-5025

Email: ross.earnshaw@gowlings.com

**Lawyers for Certain Unit Purchasers**

**SORBARA, SCHUMACHER, MCCANN LLP**

31 Union St. East  
Waterloo, ON N2J 1B8

**Justin Heimpel**

Tel: (519) 741-8010 ext. 224  
Fax: (519) 576-1184  
Email: [jheimpel@sorbaralaw.com](mailto:jheimpel@sorbaralaw.com)

**Lawyers for Bulldog Rebar Inc. and the City of Waterloo**

**FARHOOD BOEHLER WINNY LLP**

Marsland Center  
510-20 Erb Street West  
Waterloo, ON N2L 1T2

**Wayne Boehler**

Tel: (519) 744-9949  
Fax: (519) 744-7974  
Email: [wboehler@fblaw.ca](mailto:wboehler@fblaw.ca)

**Lawyers for Nelco Mechanical Limited**

**TORYS LLP**

79 Wellington St. W., 30th Floor  
Box 270, TD South Tower  
Toronto, ON M5K 1N2

**Adam Slavens**

Tel: (416) 865-7333  
Fax: (416) 865-7380  
Email: [aslavens@torys.com](mailto:aslavens@torys.com)

**Lawyers for Tarion Warranty Corporation**

**DUNCAN, LINTON LLP**

45 Erb St. E.  
PO Box 457, Stn. Waterloo  
Waterloo, ON N2J 4B5

**Irwin Duncan**

Tel: (519) 886-3340  
Fax: (519) 886-8651  
Email: [iad@kwlaw.net](mailto:iad@kwlaw.net)

**Lawyers for Certain Unit Purchasers**

**M.G.M. Paralegal Services**

19 Weber Street East  
Kitchener, ON N2H 1C2

**Nancy Gazzola**

Tel: (226) 647-9206

Fax: (866) 300-8682

Email: mgmlegalservice@gmail.com

**Paralegals for Gregory Moore**

**RUBIN & CHRISTIE LLP**

219 Finch Avenue West - 2nd Floor

Toronto, ON M2R 1M2

**David Rubin**

Tel: (416) 361-0900

Fax: (416) 361-3459

Email: drubin@rubinchristie.ca

**Lawyers for DKS Stone Fabrication & Design Inc.**

**ECCLESTON LLP**

Toronto Dominion Bank Tower, Ste. 4020,

66 Wellington St. W.

PO Box 230, Stn. Toronto Dom.

Toronto, ON M5K 1J3

**Maurizio Artale**

Tel: (416) 913-2043

Fax: (416) 504-2686

Email: Maurizio@ecclestonllp.com

**Lawyers for Skyway Canada Limited**

**CAPO, SGRO LLP**

400-7050 Weston Rd.

Woodbridge, ON L4L 8G7

**Gregory Hemsworth**

Tel: (905) 850-7000

Fax: (905) 850-7050

Email: ghemsworth@cslp.ca

**Lawyers for Aluminum Window Design Installations Inc.**

**SAVARIA**

85 Bessemer Road

London ON N6E 1P9

**Danielle Ryder**

Tel: (519) 681-3311 ext 4231

Fax: (519) 681-3494

Email: [danieller@savaria.com](mailto:danieller@savaria.com)

**IN THE MATTER OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF THE CONSTRUCTION LIEN ACT, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**NOTICE OF APPEARANCE**

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**



Oliver Romaniuk <oliver.romaniuk@gmail.com>

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**Service of Notice of Appearance by Oliver Romaniuk re: 144 Park Ltd. OSCJ  
CV15-10843-00CL**

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**Oliver Romaniuk** <oliver.romaniuk@gmail.com>

Wed, Aug 5, 2015 at 7:39 AM

To: "Harvey G. Chaiton" <harvey@chaitons.com>, "Sam P. Rappos" <samr@chaitons.com>, Bryan Tannenbaum <btannenbaum@collinsbarrow.com>, "Arif N. Dhanani" <andhanani@collinsbarrow.com>, gmoftat@tgf.ca, aiqbal@tgf.ca, jrosenstein@papebarristers.com, jenn@papebarristers.com, kpeterson@agmlawyers.com, jfisher@bbo.on.ca, schmuckd@simpsonwagle.com, a.conte@contelaw.ca, jlong@kmlaw.ca, jarvis@petkerlaw.com, gborean@parenteborean.com, reynolds@crblaw.ca, ediorio@millerthomson.com, rdelvecchio@millerthomson.com, jtclark@clarkslaw.com, egionet@dlaw.ca, aesposito@pallettvalo.com, al@glaholt.com, bsgreenberg@rogers.com, Jeremy@lsblaw.com, michael.tamblyn@nortonrosefulbright.com, kevin.ohara@ontario.ca, fmccrea@regionofwaterloo.ca, Steve.Ross@waterloo.ca, rhammond@hammondflsias.com, tmcgowan@kw-law.com, ross.earnshaw@gowlings.com, jheimpel@sorbaralaw.com, wboehler@fblaw.ca, aslavens@torys.com, iad@kwlaw.net, mgmlegalservice@gmail.com, drubin@rubinchristie.ca, Maurizio@ecclestonllp.com, ghemsworth@cslp.ca, danieller@savaria.com

Please find attached a Notice of Appearance from Oliver Romaniuk with regards to the January 16, 2015 Application made by 144 Park Ltd. to the Ontario Superior Court of Justice (Commercial List) in Toronto, Court file number CV15-10843-00CL.

Acknowledgment of receipt is appreciated.

Thank you,  
Oliver Romaniuk  
Self-Represented



**OSCJ CV15-10843-00CL 144 Park Ltd. NOA - Oliver Romaniuk.pdf**

211K





Oliver Romaniuk <oliver.romaniuk@gmail.com>

## 144 Park Ltd. - Documents re Project

Sam P. Rappos <samr@chaitons.com>

Mon, Aug 31, 2015 at 4:42 PM

To: "Harvey G. Chaiton" <Harvey@chaitons.com>, "Bryan A. Tannenbaum" <btannenbaum@collinsbarrow.com>, "Arif N. Dhanani" <andhanani@collinsbarrow.com>, Grant Moffat <GMoffat@tgf.ca>, Asim Iqbal <Alqbal@tgf.ca>, "rosenstein@rosensteinlaw.ca" <jrosenstein@rosensteinlaw.ca>, "Kyle J. Peterson" <kpeterson@agmlawyers.com>, "jfisher@bbo.on.ca" <jfisher@bbo.on.ca>, Antonio Conte <a.conte@contelaw.ca>, Anna Esposito <aesposito@pallettvalo.com>, "Jeffrey J. Long" <jlong@kmlaw.ca>, "jarvis@petkerlaw.com" <jarvis@petkerlaw.com>, "Gerard C. Borean, J.D." <gborean@parenteborean.com>, "reynolds@crblaw.ca" <reynolds@crblaw.ca>, "ediiorio@millerthomson.com" <ediiorio@millerthomson.com>, "rdelvecchio@millerthomson.com" <rdelvecchio@millerthomson.com>, "jtclark@clarkslaw.com" <jtclark@clarkslaw.com>, Eric Gionet <EGionet@dllaw.ca>, "ebisceglia@lawtoronto.com" <ebisceglia@lawtoronto.com>, "schmuckd@simpsonwagle.com" <schmuckd@simpsonwagle.com>, "bsgreenberg@rogers.com" <bsgreenberg@rogers.com>, "Jeremy@lsblaw.com" <Jeremy@lsblaw.com>, "rhammond@hammondfilesias.com" <rhammond@hammondfilesias.com>, "ken@ecclestonllp.com" <ken@ecclestonllp.com>, "maurizio@ecclestonllp.com" <maurizio@ecclestonllp.com>, "drubin@rubinchristie.ca" <drubin@rubinchristie.ca>, Pathik Baxi <pathik@sdsllawfirm.com>, "ghemsworth@csllp.ca" <ghemsworth@csllp.ca>, "al@glaholt.com" <al@glaholt.com>, "wboehler@fblaw.ca" <wboehler@fblaw.ca>, "information@wvllp.ca" <information@wvllp.ca>, "neilc@maxium.net" <neilc@maxium.net>, "john.nassar@81capital.com" <john.nassar@81capital.com>, "jallingham@maclawyers.ca" <jallingham@maclawyers.ca>, "Deley, Bill" <bill.deley@dentons.com>, "Slavens, Adam" <aslavens@torys.com>, "hyule@fblaw.ca" <hyule@fblaw.ca>, "michael.tamblyn@nortonrosefulbright.com" <michael.tamblyn@nortonrosefulbright.com>, "danieller@savaria.com" <danieller@savaria.com>, "jheimpel@sorbaralaw.com" <jheimpel@sorbaralaw.com>, Kevin O'Hara <Kevin.ohara@ontario.ca>, "rakhee.bhandari@justice.gc.ca" <rakhee.bhandari@justice.gc.ca>, "marko.bobar@cra-arc.gc.ca" <marko.bobar@cra-arc.gc.ca>, "fmccrea@regionofwaterloo.ca" <fmccrea@regionofwaterloo.ca>, "steve.ross@waterloo.ca" <steve.ross@waterloo.ca>, Edward Dreyer <edreyer@kw-law.com>, "cclemmer@kw-law.com" <cclemmer@kw-law.com>, "ross.earnshaw@gowlings.com" <ross.earnshaw@gowlings.com>, "Irwin A. Duncan" <iad@kwlaw.net>, "rschwill@dwpv.com" <rschwill@dwpv.com>, "mgmlegalservice@gmail.com" <mgmlegalservice@gmail.com>, "jbyrne@millerthomson.com" <jbyrne@millerthomson.com>, Eric Kraushaar <Eric@churchill-homes.com>, "Frank R. Volpini" <frv@chrisvolpinilawyers.com>, "Hanbidge, Ken" <Ken.Hanbidge@gowlings.com>, Les Protopapas <Les@pslaw.ca>, "tmcgowan@kw-law.com" <tmcgowan@kw-law.com>, Kyle Cleaver <kc@giffenlawyers.com>, Michael Wannop <Wannop@wannopandsaji.com>, Manfred Schneider <msschnei@aol.com>, Seth Jutzi <sjutzi@sorbaralaw.com>, "David R. Fedy" <dfedy@mgbwlaw.com>, Fred Heimbecker <heim@bellnet.ca>, Bryan Tham <bryan.tham@bellnet.ca>, Warren Griffin <WGriffin@ggfilaw.com>, Ana Santos <asantos@vollandsantos.com>, Jessica Sipione <jessica@vhlaw.ca>, "phil@diorlaw.ca" <phil@diorlaw.ca>, Philip Di Iorio <torontolaw@sympatico.ca>, JAMES SCHMIDT <mr.jsschmidt@rogers.com>, "smith@wolfelawfirm.com" <smith@wolfelawfirm.com>, "bobcoghill@yahoo.com" <bobcoghill@yahoo.com>, Oliver Romaniuk <oliver.romaniuk@gmail.com>, "russell.mceachnie1@igprivatewealth.com" <russell.mceachnie1@igprivatewealth.com>, Joe Siefried <krellafireplaces@hotmail.com>

Hello all,

We have received requests for production of certain documentation from counsel to lien claimants. We have established a Drop Box account that contains copies of the following documents:

- Appraisal dated November 23, 2011
- Construction Draw Worksheets re Advances
- Summary of Advances prepared by counsel to Laurentian

- Laurentian commitment letters
- Laurentian certificate of advances as of October 24, 2014
- 29 Progress Draw Reports and Certificates

Please contact me if you would like to have access to the Drop Box account. Also, please let me know if there are other documents that will be requested by parties.

Thank you,

Sam

---

**Sam P. Rappos**

Lawyer

Direct Tel: [416.218.1137](tel:416.218.1137)

Direct Fax: [416.218.1837](tel:416.218.1837)

[samr@chaitons.com](mailto:samr@chaitons.com)

5000 Yonge Street, 10th Floor, Toronto, Canada, M2N 7E9

[www.chaitons.com](http://www.chaitons.com)



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**144 Park Street**

Waterloo, Ontario  
08.104

Created: 02-Jul-08  
Modified: 15-Nov-11

**TOWER 1**

Site Area (before road widening):	3,280 m2	0.33 Hectares
Road Widening Area:	61 m2	
Site Area (after road widening):	3,219 m2	0.32 Hectares
*Landscape Area: at grade	658 m2	20%
4th Floor terrace	1,052 m2	
*Site Coverage:	2,289 m2	72%
*Road Area:	272 m2	8%
*FSI :	5.64	
*Unit Per Hectare (UPH)	460	

\*Calculation based on Site Area after road widening.

Number of Storeys:	19
Total Building Heights:	61.50 m

Townhouses	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
	1	8	24	496	5,340
	2			503	5,409
	3			399	4,298
<b>Total</b>		<b>8</b>	<b>24</b>	<b>1,398</b>	<b>15,047</b>

174.7m2 (1,880 ft2) Average Townhouse Size

Tower	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
COMMON AREAS (LOBBY, GARBAGE, LOCKERS, STAIRS)	1	N/A	N/A	637	6,856
	2	N/A	N/A	490	5,274
	3	N/A	N/A	220	2,367
AMENITY	3	N/A	N/A	218	2,349
AMENITY	4	N/A	N/A	104	1,117
TYPICAL	4-14	108	172	10,601	114,112
TYPICAL	15-18	28	56	3,668	39,486
P/H	19	4	8	813	8,749
<b>Total</b>		<b>140</b>	<b>236</b>	<b>16,751</b>	<b>180,310</b>

96.58 m2 (1,040 ft2) Average Typical Unit Size

<b>Grand total</b>	<b>148</b>	<b>260</b>	<b>18,149</b>	<b>195,357</b>
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Note: U/G level, parking areas, and Mech. P/H not included in total

**PARKING REQUIRED PARKING**

Residential	Required Ratio	Parking Required
Townhouses	1.0 per unit	8
Condos	1.0 per unit	140
<b>Total</b>		<b>148</b>

Barrier Free Parking @ 5% of required parking = 8

**PROVIDED PARKING**

P3	38
P2	28
P1	24
U/G1	69
<b>Total</b>	<b>159</b>

Barrier Free Parking included 8

**REQUIRED LOCKERS/BICYCLE STORAGE**

LOCKERS	BICYCLE
1 PER UNIT = 148	0.6 SPACE PER UNIT = 89

**PROVIDED LOCKERS/BICYCLE STORAGE**

	LOCKERS	BICYCLE	BICYCLE/LOCKERS
P3	9		9
P2	89		26
P1	13	29	13
U/G1	37		12
<b>Total</b>	<b>148</b>		<b>89</b>

**PROVIDED OUTDOOR BICYCLE STORAGE**

BICYCLE (OUTDOOR)	8
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**144 Park Street**

Waterloo, Ontario  
08.104

Created: 02-Jul-08  
Modified: 17-Nov-11

**TOWER 2**

Site Area:	4,011 m2	0.40 Hectares
(9m Strip not include in Site Area)		
Landscape Area: at grade	548 m2	14%
4th Floor terrace	2,440 m2	
Site Coverage:	3,319 m2	82%
Road Area:	144 m2	4%
FSI :	4.51	
Unit Per Hectare (UPH)	485	

Number of Storeys:	19
Total Building Heights:	60.95 m

Townhouses	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
	1	4	12	351	3,780
	2			351	3,780
	3			287	3,088
<b>Total</b>		<b>4</b>	<b>12</b>	<b>990</b>	<b>10,659</b>

247.5m2 (2,664 ft2) Average Townhouse Size

Tower	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
COMMON AREAS (LOBBY, GARBAGE, LOCKERS, STAIRS)	1	N/A	N/A	415	4,462
	2	N/A	N/A	314	3,379
	3	N/A	N/A	315	3,393
AMENITY	1	N/A	N/A	313	3,370
AMENITY	4	N/A	N/A	128	1,377
TYPICAL	4-19	190	254	15,624	168,176
<b>Total</b>		<b>190</b>	<b>254</b>	<b>17,109</b>	<b>184,156</b>

74.0 m2 (796 ft2) Average Typical Unit Size

<b>Grand total</b>	<b>194</b>	<b>266</b>	<b>18,099</b>	<b>194,816</b>
--------------------	------------	------------	---------------	----------------

Note: U/G level, parking areas, and Mech. P/H not included in total

**PARKING REQUIRED PARKING**

Residential	Required Ratio	Parking Required
Townhouses	1.0 per unit	4
Condos	1.0 per unit	190
<b>Total</b>		<b>194</b>

Barrier Free Parking @ 5% of required parking = 10

**PROVIDED PARKING**

P3-Residential	84
P2-Residential	81
P1-Retail	62
U/G1	84
<b>Total</b>	<b>311</b>

Barrier Free Parking included 12

**REQUIRED LOCKERS/BICYCLE STORAGE**

LOCKERS	BICYCLE
1 PER UNIT = 194	0.6 SPACE PER UNIT = 117

**PROVIDED LOCKERS/BICYCLE STORAGE**

	LOCKERS	BICYCLE
<b>Total</b>	<b>194</b>	<b>117</b>

**PROVIDED OUTDOOR BICYCLE STORAGE**

BICYCLE (OUTDOOR)	12
-------------------	----

**144 Park Street**

Waterloo, Ontario  
08.104

Created: 28-Jun-11  
Modified: 17-Nov-11

**Total of Towers 1 & 2**

Site Area (before road widening):	7,291 m2	0.73 Hectares
Road Widening Area:	61 m2	
Site Area (after road widening):	7,230 m2	0.72 Hectares
*Landscape Area: at grade	1,206 m2	17%
4th Floor terrace	3,492 m2	
*Site Coverage:	5,607 m2	78%
*Road Area:	416 m2	6%
*FSI :	5.01	
*Unit Per Hectare (UPH)	473	

\*Calculation based on Site Area after road widening.

Number of Storeys:	19
Total Building Heights:	T1-61.99 m T2-60.95 m

Tower	# of Units	# of Bedrooms	GFA	
			m2	ft2
1 (THs)	8	24	1,398	15,048
2 (THs)	4	12	990	10,656
<b>Total</b>	<b>12</b>	<b>36</b>	<b>2,388</b>	<b>25,704</b>

199.0m2 2,142 ft2) Average Townhouse Size

Tower	# of Units	# of Bedrooms	GFA	
			m2	ft2
1	140	236	16,751	180,306
2	190	254	17,088	183,934
<b>Total</b>	<b>330</b>	<b>490</b>	<b>33,839</b>	<b>364,240</b>

83.6 m2 (899 ft2) Average Typical Unit Size

<b>Grand total</b>	<b>342</b>	<b>526</b>	<b>36,227</b>	<b>389,944</b>
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Note: U/G level, parking areas, and Mech. P/H not included in total

**PARKING**

**REQUIRED PARKING**

Residential	Required Ratio	Parking Required
Townhouses	1.0 per unit	12
Condos	1.0 per unit	330
<b>Total</b>		<b>342</b>

Barrier Free Parking @ 5% of required parking = 16

**PROVIDED PARKING**

Phase	
1	159
2	311
<b>Total</b>	<b>470</b>

Barrier Free Parking included 20

**PROVIDED LOCKERS/BICYCLE STORAGE**

LOCKERS	BICYCLE
1 PER UNIT = 342	0.6 SPACE PER UNIT = 206

**PROVIDED LOCKERS/BICYCLE STORAGE**

PHASE	LOCKERS	BICYCLE	BICYCLE/LOCKERS
1	148	29	60
2	194	117	
<b>Total</b>	<b>342</b>		<b>206</b>

**PROVIDED OUTDOOR BICYCLE STORAGE**

BICYCLE (OUTDOOR)	20
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1	Nov 15/11	Issued for Site Plan Approval	VAG
No.	Date:	Issued/Revision:	By:

**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 Lennox Road, Toronto ON Canada M6S 1T8  
Telephone (416) 435-2322, Fax (416) 435-6777  
turnerfleischer.com



Project: **144 Park Street**  
Waterloo, Ontario

Drawing Name: **Overall Statistics**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	
Checked by:	Checker		

Drawing No: **SPA00**

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**144 Park Street**

Waterloo, Ontario  
08.104

**Unit Count**

**Tower 1**

Level	Unit Type			Total Units
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			8	8
<b>Sub-Total</b>			<b>8</b>	<b>8</b>
Tower				
4	4	5	0	9
5	4	6	0	10
6	4	6	0	10
7	4	6	0	10
8	4	6	0	10
9	4	6	0	10
10	4	6	0	10
11	4	5	0	9
12	4	6	0	10
13	4	6	0	10
14	4	6	0	10
15	0	7	0	7
16	0	7	0	7
17	0	7	0	7
18	0	7	0	7
19	0	4	0	4
<b>Sub-Total</b>	<b>44</b>	<b>96</b>	<b>0</b>	<b>140</b>

<b>Total</b>	<b>44</b>	<b>96</b>	<b>8</b>	<b>148</b>
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**Bedroom Count**

Level	# of Bedrooms			Total Bdrms
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			24	24
<b>Sub-Total</b>			<b>24</b>	<b>24</b>
Tower				
4	4	10	0	14
5	4	12	0	16
6	4	12	0	16
7	4	12	0	16
8	4	12	0	16
9	4	12	0	16
10	4	12	0	16
11	4	10	0	14
12	4	12	0	16
13	4	12	0	16
14	4	12	0	16
15	0	14	0	14
16	0	14	0	14
17	0	14	0	14
18	0	14	0	14
19	0	8	0	8
<b>Sub-Total</b>	<b>44</b>	<b>192</b>	<b>0</b>	<b>236</b>

<b>Total</b>	<b>44</b>	<b>192</b>	<b>24</b>	<b>260</b>
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<b>Grand Total</b>	<b>170</b>	<b>320</b>	<b>36</b>	<b>526</b>
--------------------	------------	------------	-----------	------------

Statistics  
N.T.S.

**144 Park Street**

Waterloo, Ontario  
08.104

**Unit Count**

**Tower 2**

Level	Unit Type			Total Units
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			4	4
<b>Sub-Total</b>			<b>4</b>	<b>4</b>
Tower				
4	6	4	0	10
5	8	4	0	12
6	8	4	0	12
7	8	4	0	12
8	8	4	0	12
9	8	4	0	12
10	8	4	0	12
11	8	4	0	12
12	8	4	0	12
13	8	4	0	12
14	8	4	0	12
15	8	4	0	12
16	8	4	0	12
17	8	4	0	12
18	8	4	0	12
19	8	4	0	12
<b>Sub-Total</b>	<b>126</b>	<b>64</b>	<b>0</b>	<b>190</b>

<b>Total</b>	<b>126</b>	<b>64</b>	<b>4</b>	<b>194</b>
--------------	------------	-----------	----------	------------

**Bedroom Count**

Level	# of Bedrooms			Total Bdrms
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			12	12
<b>Sub-Total</b>			<b>12</b>	<b>12</b>
Tower				
4	6	8	0	14
5	8	8	0	16
6	8	8	0	16
7	8	8	0	16
8	8	8	0	16
9	8	8	0	16
10	8	8	0	16
11	8	8	0	16
12	8	8	0	16
13	8	8	0	16
14	8	8	0	16
15	8	8	0	16
16	8	8	0	16
17	8	8	0	16
18	8	8	0	16
19	8	8	0	16
<b>Sub-Total</b>	<b>126</b>	<b>128</b>	<b>0</b>	<b>254</b>

<b>Total</b>	<b>126</b>	<b>128</b>	<b>12</b>	<b>266</b>
--------------	------------	------------	-----------	------------

Firm Name: Turner Fleischer Architects Inc.		Address: 67 Lesmill Road, Toronto, Ontario, M3B 2T8	
Contact: Kojo La-Aryane		Project Name: 144 Park Street	
Project Location: Waterloo, Ontario		Project Location: 144 Park Street, Waterloo, Ontario	
ITEM		ONTARIO BUILDING CODE MATRIX	
		OBC REFERENCE	
1	Project Description: 19 Residential Floors / 4 Townhouse units 1 Underground Parking Level Change of Use <input type="checkbox"/>	<input checked="" type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> Alteration	<input type="checkbox"/> Part 11 <input checked="" type="checkbox"/> Part 3 <input type="checkbox"/> Part 9
2	Major Occupancy(s): Group C (Residential)	Subsidiary Occupancy(s): Group F3 (Parking Garage) Group A2 (Amenity Areas)	3.1.2.1.(1)
3	Building Area (m <sup>2</sup> ) Existing = 0 m <sup>2</sup> New = 3455 m <sup>2</sup> Total = 3455 m <sup>2</sup>		1.4.1.2. (A)
4	Gross Area (m <sup>2</sup> ) Existing = 0 m <sup>2</sup> New = 18079 m <sup>2</sup> Total = 18079 m <sup>2</sup>		1.4.1.2. (A)
5	Number of Storeys Above Grade = 19 Below Grade = 1		1.4.1.2. (A) & 3.2.1.1.
6	Number of Streets/Fire Fighter Access: 2		3.2.2.10. & 3.2.5.
7	Building Classification: Group C, Group F3		3.2.2.20. -83
8	Sprinkler System Proposed	<input checked="" type="checkbox"/> Entire building <input type="checkbox"/> Selected compartments <input type="checkbox"/> Selected floor areas <input type="checkbox"/> Basement <input type="checkbox"/> In lieu of roof rating <input type="checkbox"/> Not required	3.2.2.20. -83 3.2.1.5. 3.2.2.17. INDEX
9	Standpipe Required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.9
10	Fire Alarm Required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.4
11	Water Service/Supply is Adequate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.5.7.
12	High Building	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.6
13	Permitted Construction Actual Construction	<input type="checkbox"/> Combustible <input type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-combustible <input checked="" type="checkbox"/> Non-combustible	<input type="checkbox"/> Both <input type="checkbox"/> Both 3.2.2.20. -83
14	Mezzanine(s) Area : 255.49 m2 (Max 10% of Ground Level)		3.2.1.1.(3)-(8)
15	Occupant load based on: <input type="checkbox"/> m <sup>2</sup> /person	<input checked="" type="checkbox"/> Design of building	3.1.17.
	Occupancy	Occupant load	
	UG1	73 persons	
	Townhouse	24 persons	
	Floor 1	51 persons	
	Floor 2	68 persons	
	Floor 3	68 persons	
	Floor 1 and 4-Amenity	288 persons	
	Floor 4-19	508 persons	
16	Barrier-free Design	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)	3.8.
17	Hazardous Substances	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2. & 3.3.1.19.
18	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (Hours) Floors 2 Hours Roof 0 Hours Mezzanine N/A	Listed Design No. or Description (SG-2) Poured Concrete Poured Concrete N/A
		FRR of Supporting Members Floors 1 Hours Roof 2 Hours Mezzanine N/A	Listed Design No. or Description (SB-2) Poured Concrete Poured Concrete N/A
19	Spatial Separation - Construction of Exterior Walls		3.2.3
	Storey	Face Automatic Sprinkler Occupancy	Suite L (m) H (m) LH A (m <sup>2</sup> ) Openings A (m <sup>2</sup> ) % Actual Openings Limiting Distance Required (m) Actual (m) % Unprotected Openings Permitted Exterior Wall Const. Type
	1st Floor	N Y C	- - - - - - - - - - - - - - - - 9* 14.5 100 PC
		E Y C/F3	- - - - - - - - - - - - - - - - 9* 9.9 100 PC
		S Y C/F3	64.9 10.6 6.1 688 90.3 13.1 9* 6.8 52 PC
		W Y C	- - - - - - - - - - - - - - - - 9* 12.7 100 PC

OBC Matrix  
N.T.S.

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**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 Lesmill Road, Toronto ON, Canada M3B 2T8  
Telephone (416) 435-2322, Facsimile (416) 435-6777  
turnerfleischer.com

ON TARIO ASSOCIATION OF ARCHITECTS  
JOHN T CHOW  
LICENSE  
5784

Project : **144 Park Street**  
Waterloo, Ontario

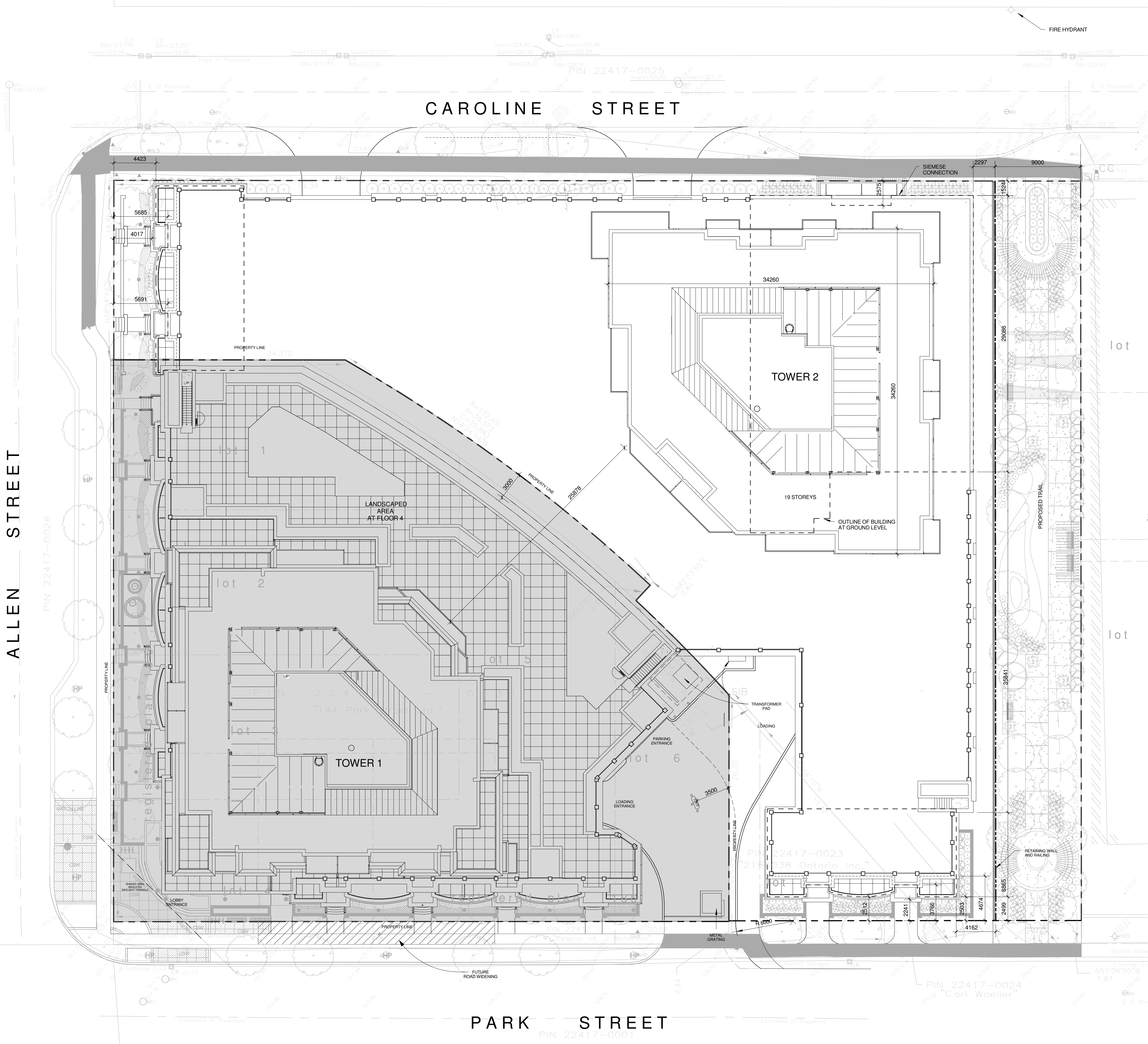
Drawing Name : **Statistics & OBC Matrix**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	1 : 1
Checked by:	Checker		

Drawing No : **SPA00a**

C:\BENTON\Bentons\Projects\144Park\144Park.dwg - Page 2 of 2

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**PART OF LOT 1  
REGISTERED PLAN 186  
AND PART OF LOTS 217, 218, 219 AND 267  
REGISTERED PLAN 385**

**NOTES:**

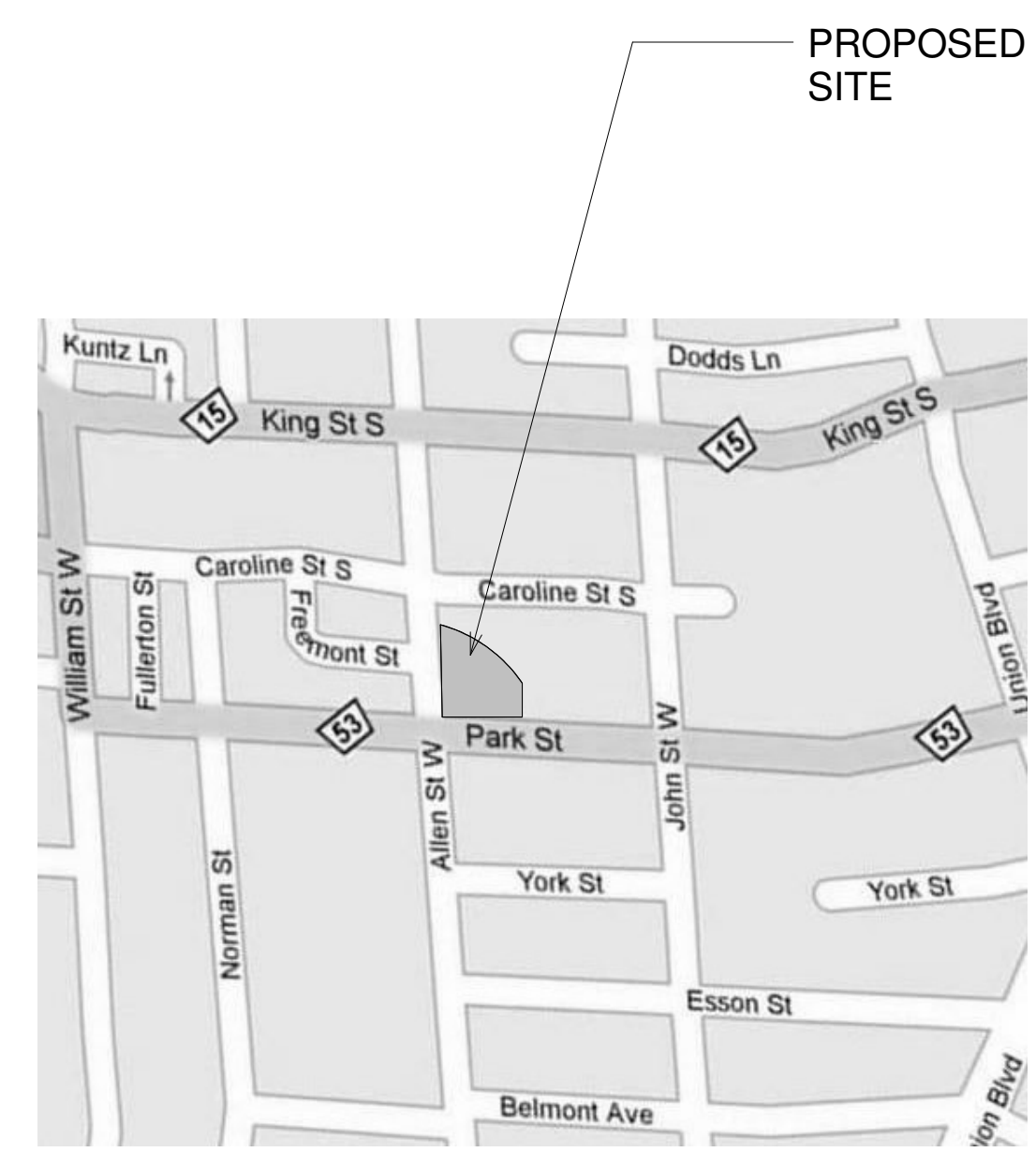
ALL OUTDOOR LIGHTING WILL BE DECORATIVE FULL CUT-OFF AND SHALL NOT PROVIDE ANY GLARE TO SURROUNDING PROPERTIES AND PUBLIC VIEW.

STREETSCAPE DETAILS PROVIDED FOR CONTEXT AND ARE SUBJECT TO SEPARATE AGREEMENT AND APPROVALS.

ALL EXCESS SNOW WILL BE REMOVED FROM SITE AT OWNER'S EXPENSE.

SITE PLAN IS COORDINATED WITH THE LANDSCAPE / VEGETATION MANAGEMENT PLAN AND ENGINEERING PLAN

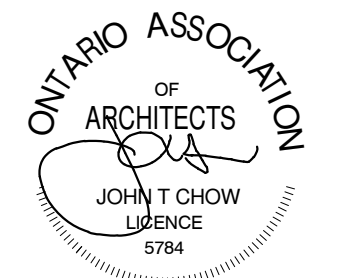
FOR LANDSCAPE DETAILS REFER TO LANDSCAPE PLANS



Key Plan  
N.T.S.

1	Nov 15/11	Issued for Site Plan Approval	VAG
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**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 Leamill Road, Toronto ON, Canada M3B 1T8  
Telephone (416) 435-2322, Fax (416) 435-6777  
turnerfleischer.com



Project: **144 Park Street**

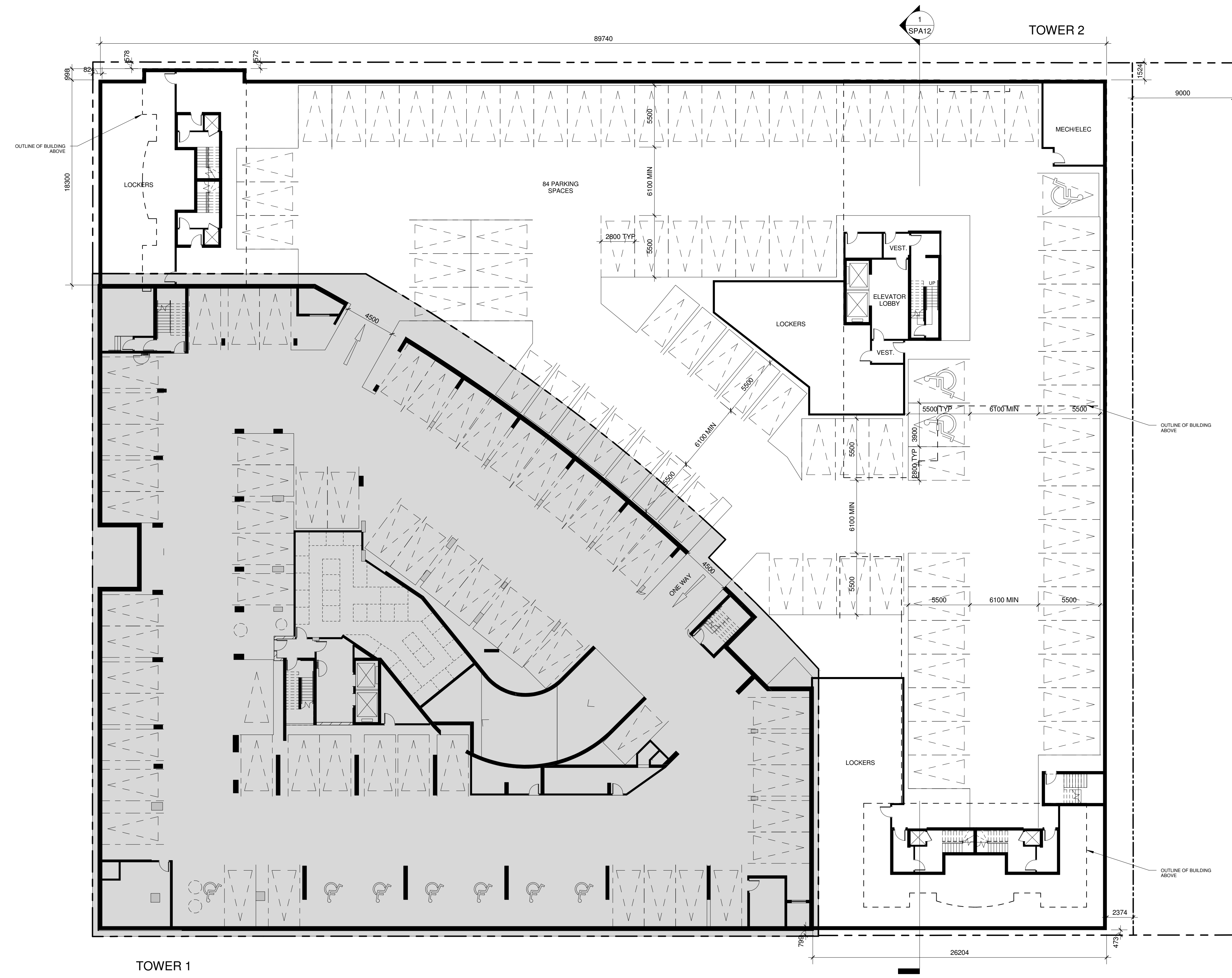
Waterloo, Ontario

Drawing Name: **Site Plan**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	As indicated
Checked by:	Checker		

Drawing No: **SPA01**

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① UG1 PARKING LEVEL  
1 : 200

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 TURNER FLEISCHER ARCHITECTS INC.  
 67 Leamill Road, Toronto ON, Canada M3B 2T8  
 Telephone (416) 435-2322, Facsimile (416) 435-6717  
 turnerfleischer.com

ONTARIO ASSOCIATION  
 OF ARCHITECTS  
 JOHN T CHOW  
 LICENCE  
 5784

Project : **144 Park Street**  
 Waterloo, Ontario

Drawing Name : **U/G Parking 1**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

Drawing No : **SPA02**



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ALLEN STREET

CAROLINE STREET

TOWER 2

PARK STREET

ALLEN STREET

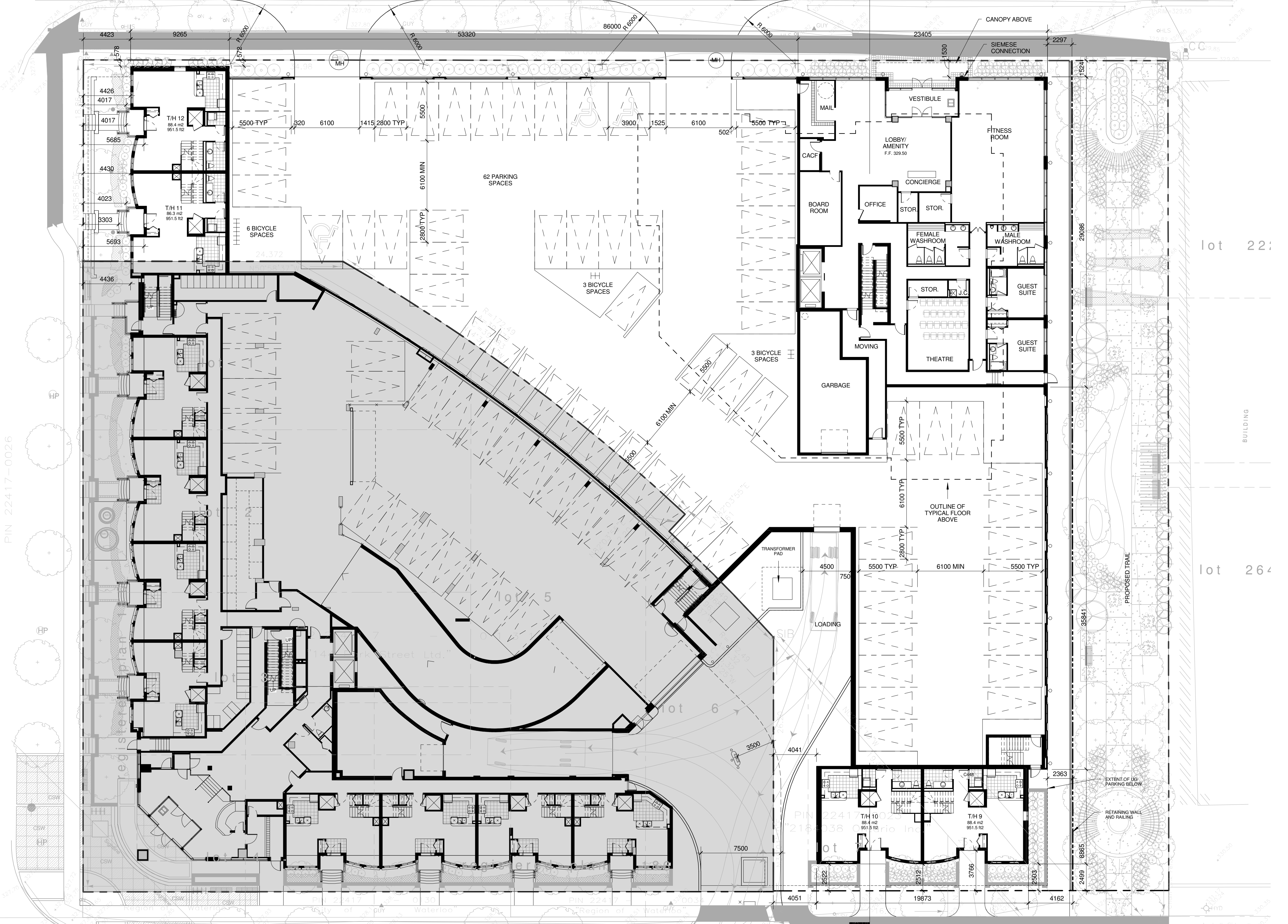
PIN 22417-0026

PIN 22417-0025

PIN 22417-0024

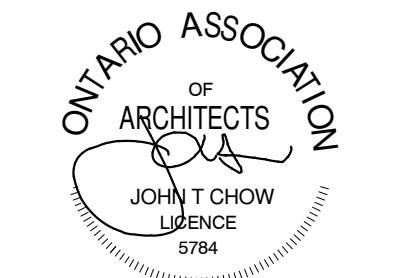
TOWER 1

GROUND LEVEL-P1  
1:200



1	Nov 15/11	Issued for Site Plan Approval	VAG
No.	Date:	Issued/Revision:	By:

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 67 Leamill Road, Toronto ON, Canada M3B 3T8  
 Telephone (416) 435-2322, Fax (416) 435-6777  
 turnerfleischer.com



Project: **144 Park Street**  
 Waterloo, Ontario

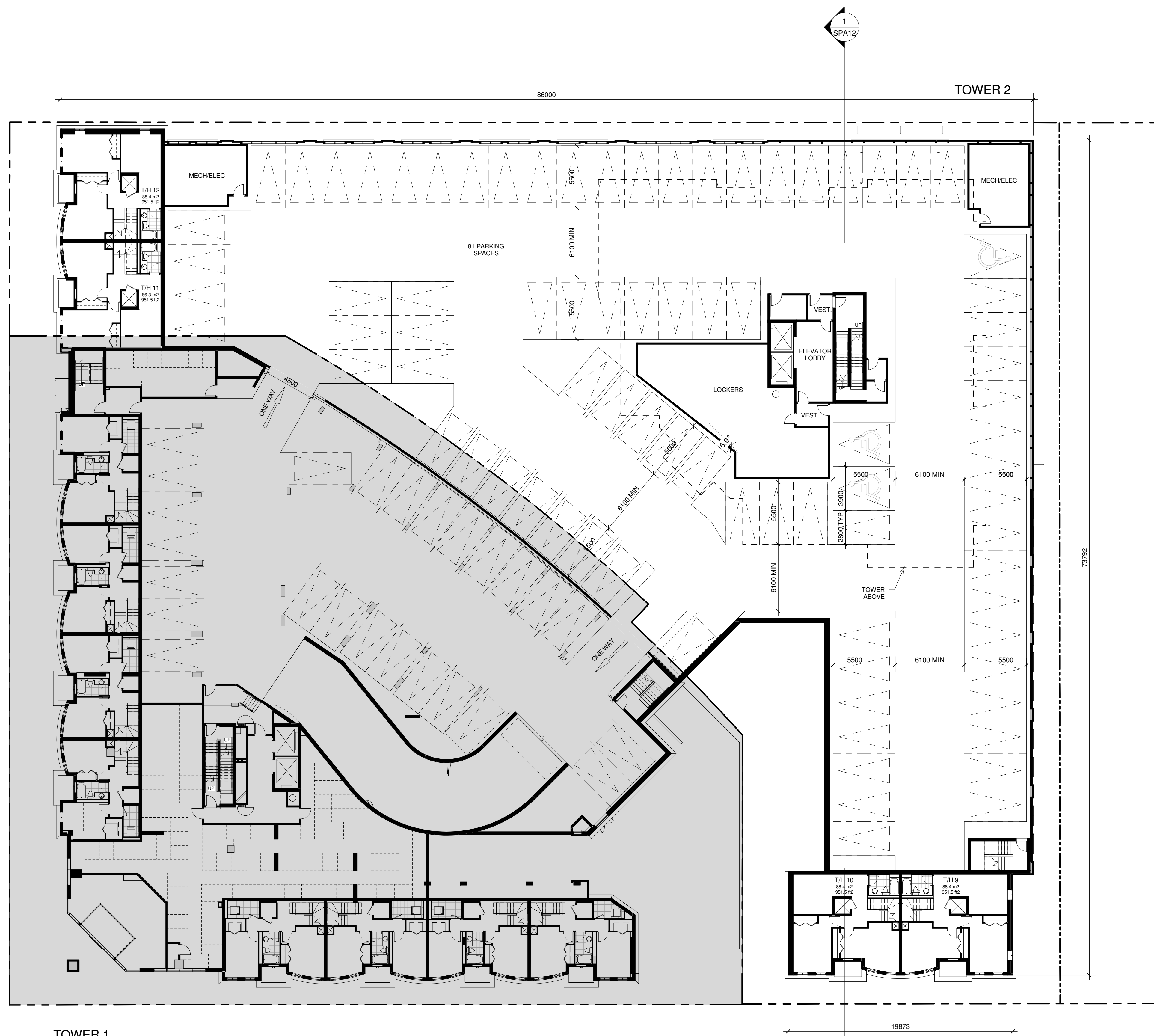
Drawing Name: **Floor 1 / P1**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	1:200
Checked by:	Checker		

Drawing No: **SPA03**

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① 2 ND FLOOR LEVEL  
1 : 200

No.	Date	Issued for Site Plan Approval	VAG
		Issued/Revision:	By:


**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 LeMill Road, Toronto ON, Canada M3B 2T8  
Telephone (416) 435-2322, Facsimile (416) 435-6717  
turnerfleischer.com



Project : **144 Park Street**  
Waterloo, Ontario

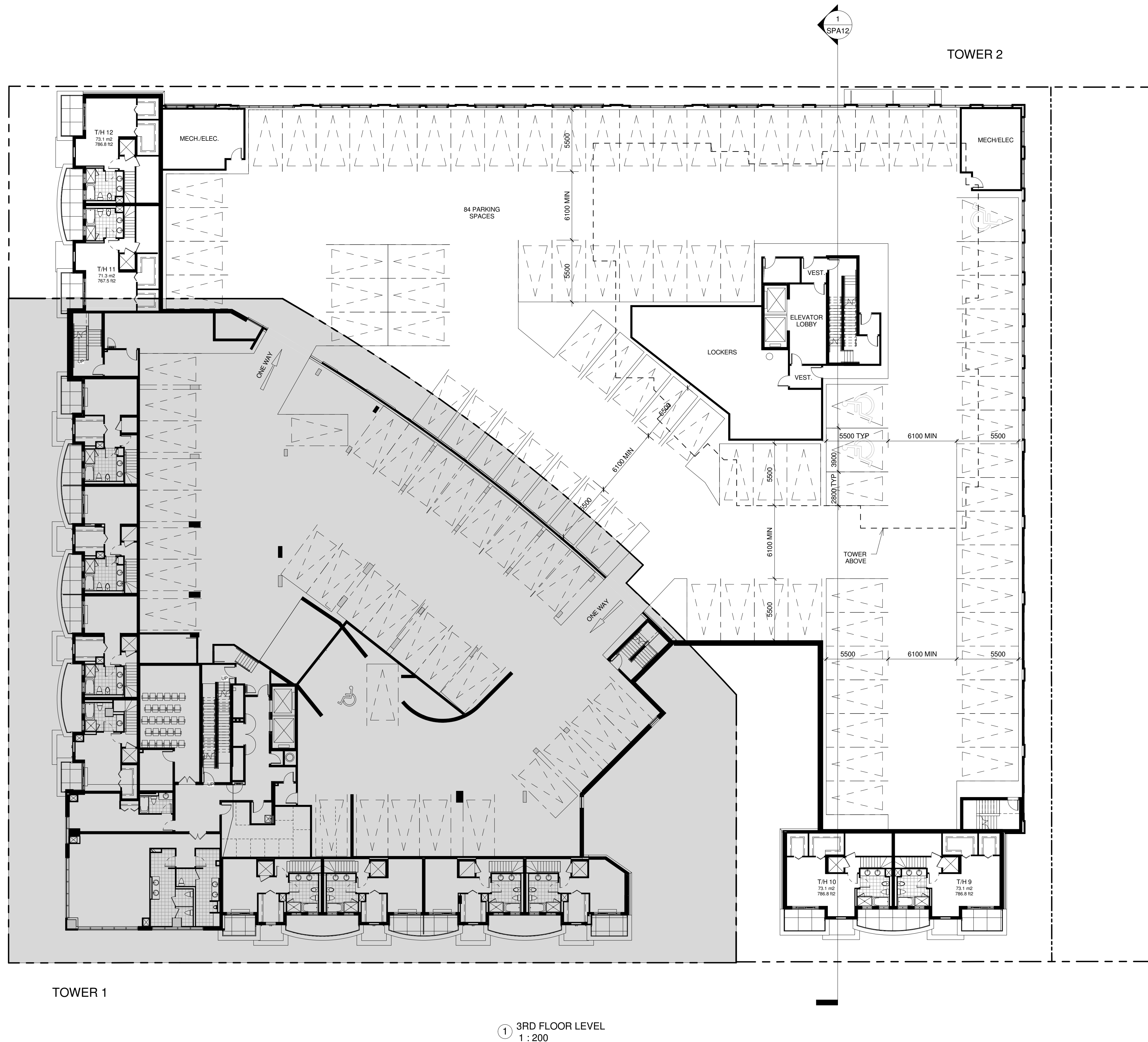
Drawing Name : **Floor 2 / P2**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker	Drawing No. :	

 **SPA04**

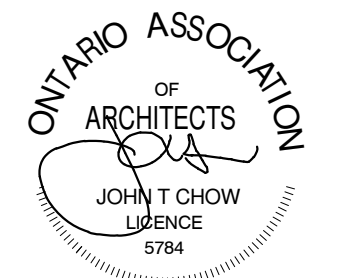


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 Telephone (416) 435-2322, Facsimile (416) 435-6777  
 turnerfleischer.com

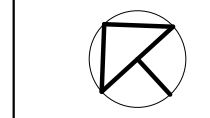


Project : **144 Park Street**  
 Waterloo, Ontario

Drawing Name : **Floor 3 / P3**

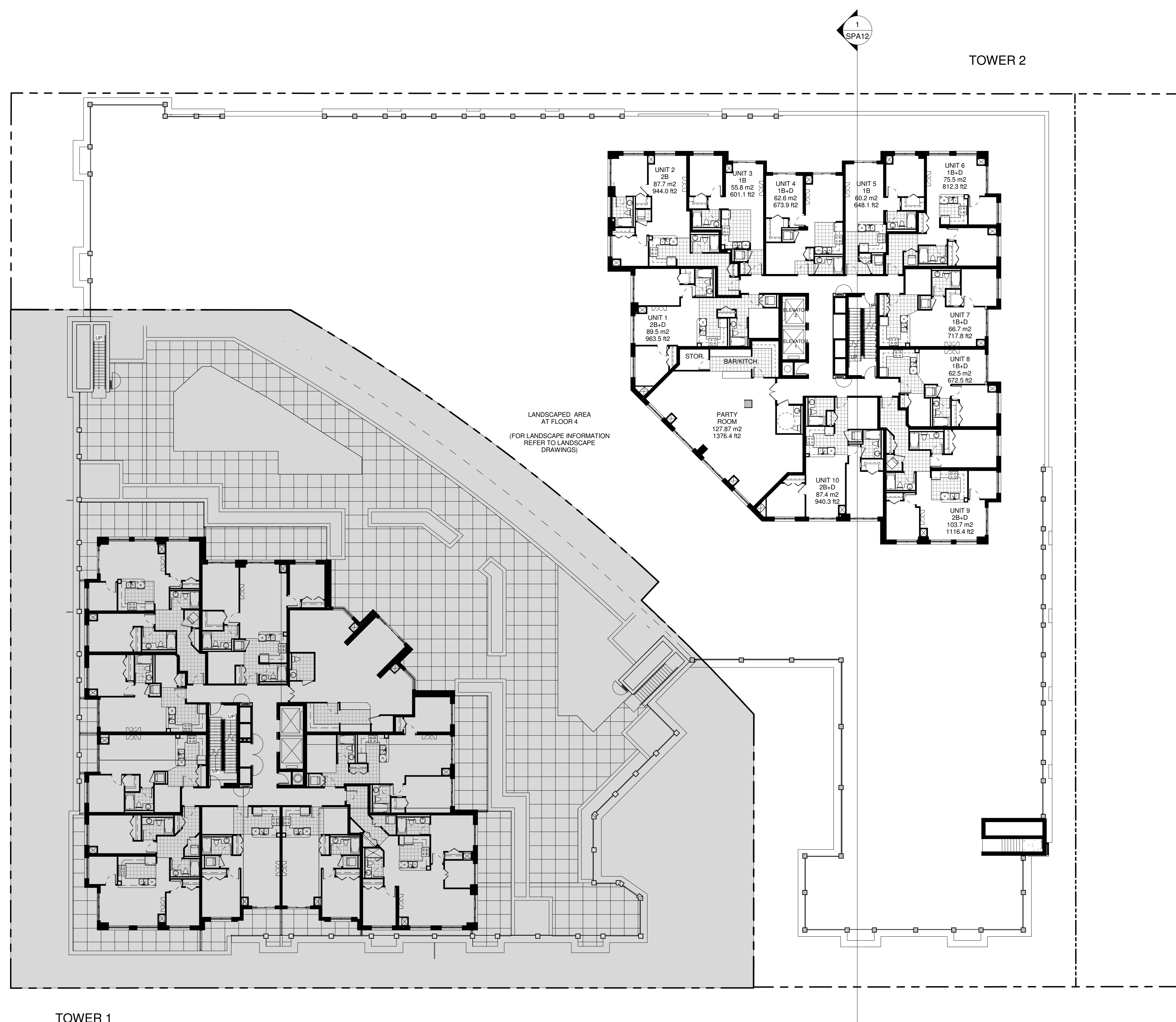
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Drawing No : **SPA05**



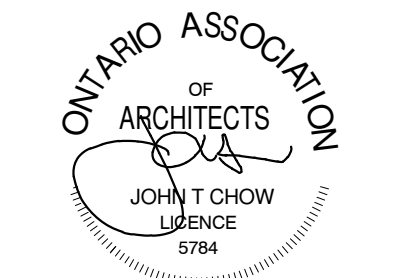
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1	Nov 15/11	Issued for Site Plan Approval	VAG
No.	Date:	Issued/Revision:	By:

**TURNER FLEISCHER**  
 TURNER FLEISCHER ARCHITECTS INC.  
 67 LeMill Road, Toronto ON, Canada M3B 3T8  
 Telephone (416) 435-2322, Fax (416) 435-6777  
 turnerfleischer.com



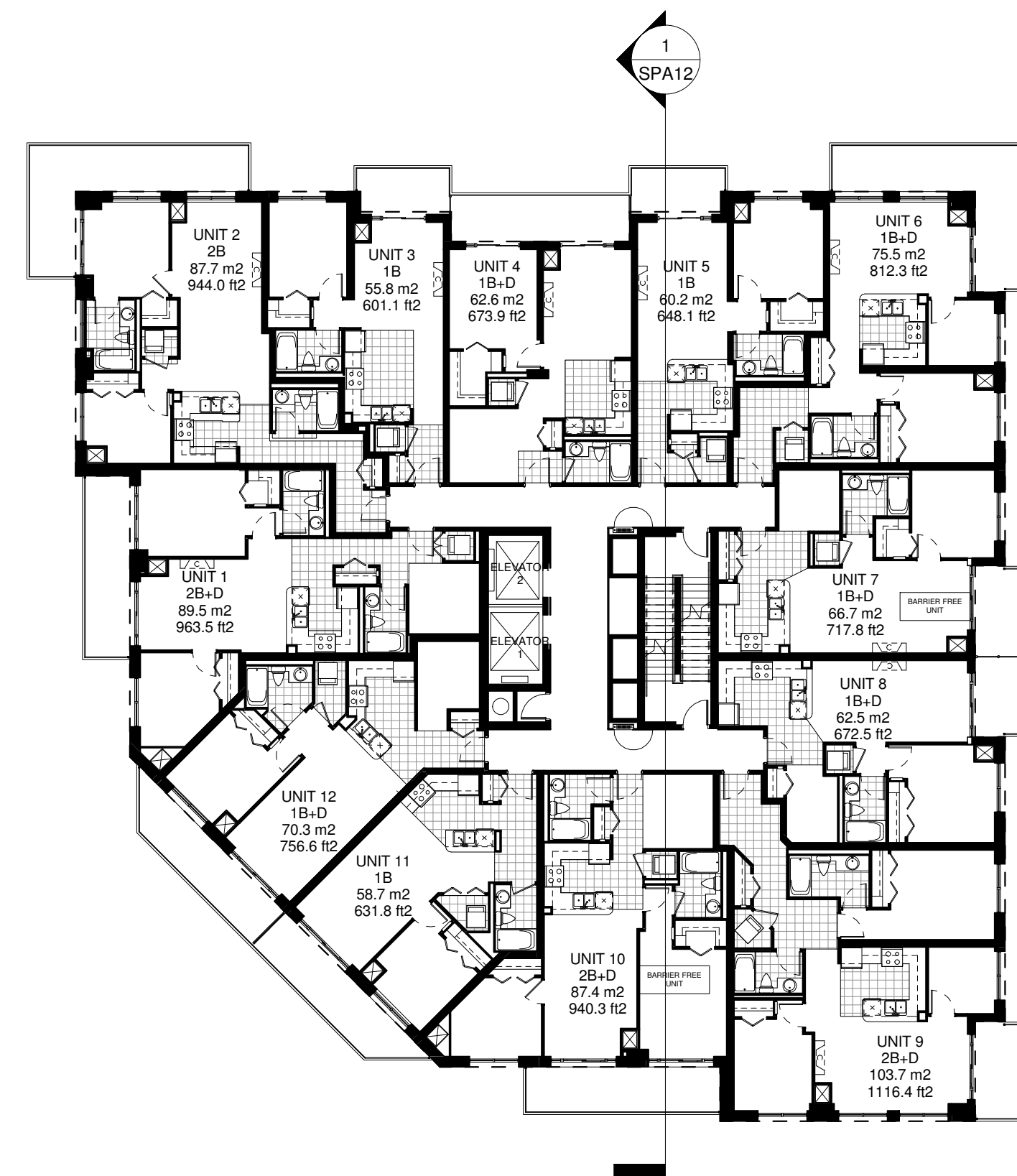
Project : **144 Park Street**  
 Waterloo, Ontario

Drawing Name : **4th Floor**

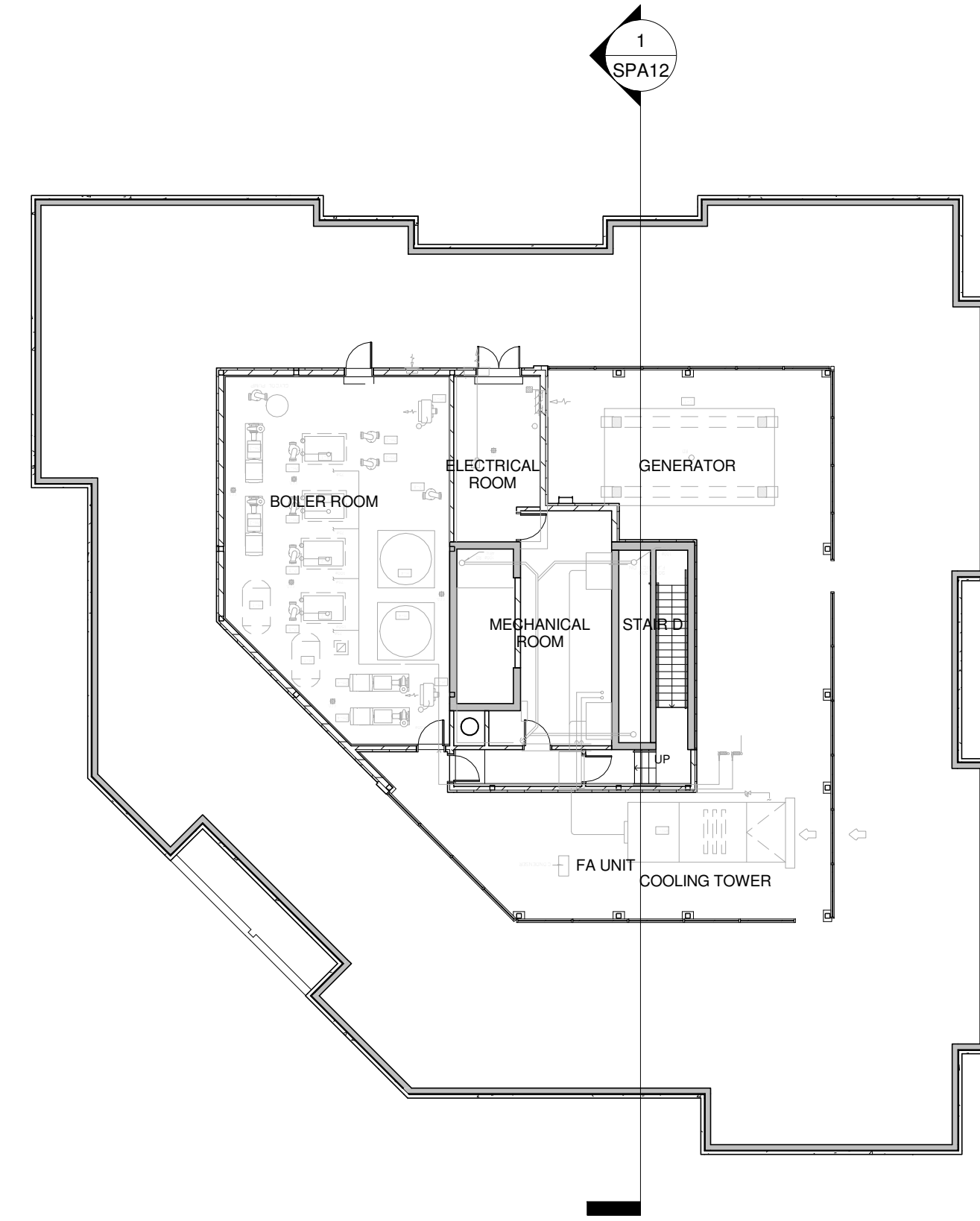
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Drawing No : **SPA06**

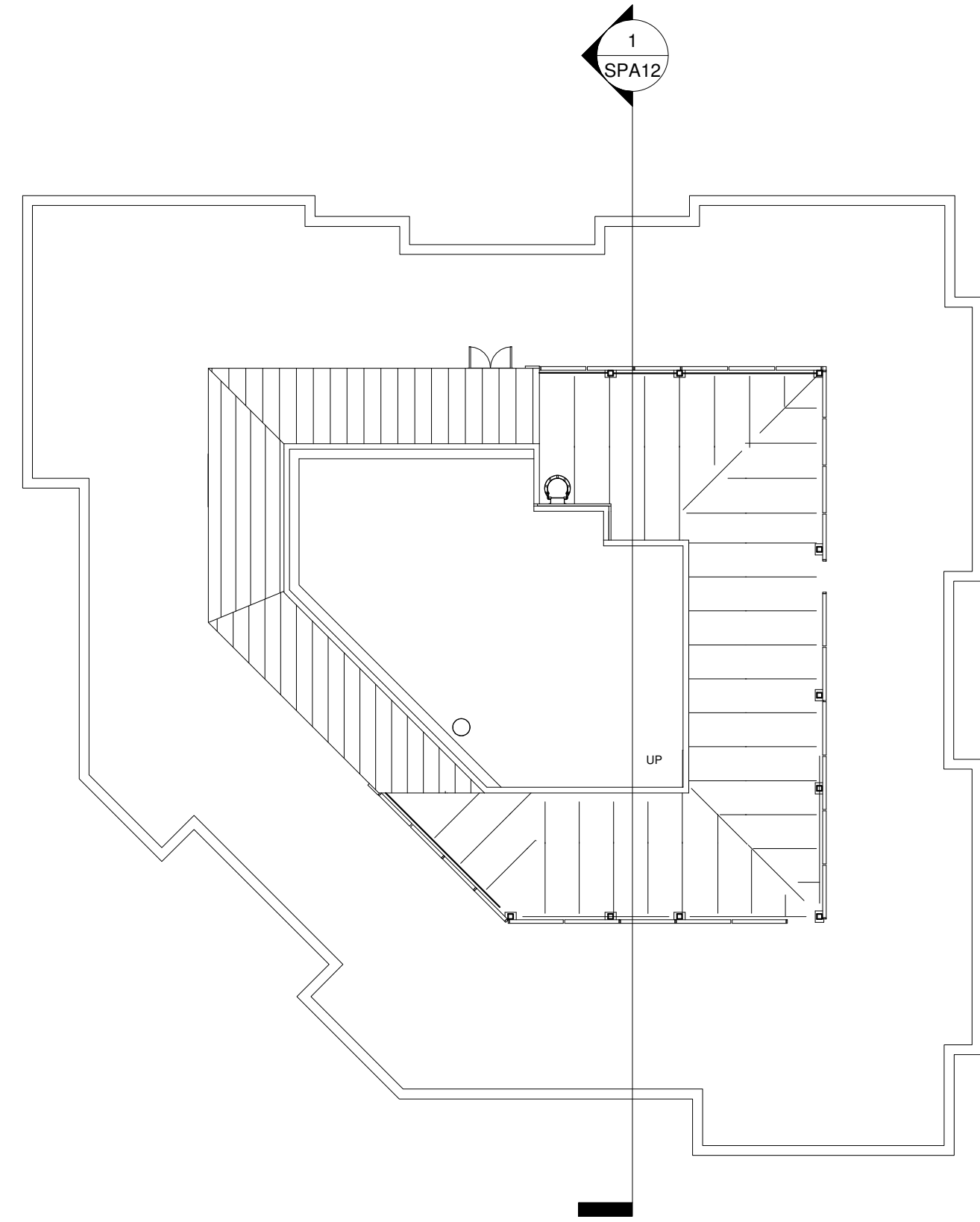
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① 5TH - 19TH FLOOR LEVEL  
1 : 200



③ MECHANICAL PENTHOUSE  
1 : 200



④ ROOF PLAN  
1 : 200

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No.	Date:	Issued/Revision:	By:

**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 LeMill Road, Toronto ON, Canada M3B 2T8  
Telephone (416) 435-2322, Fax (416) 435-6777  
turnerfleischer.com



Project : **144 Park Street**  
Waterloo, Ontario

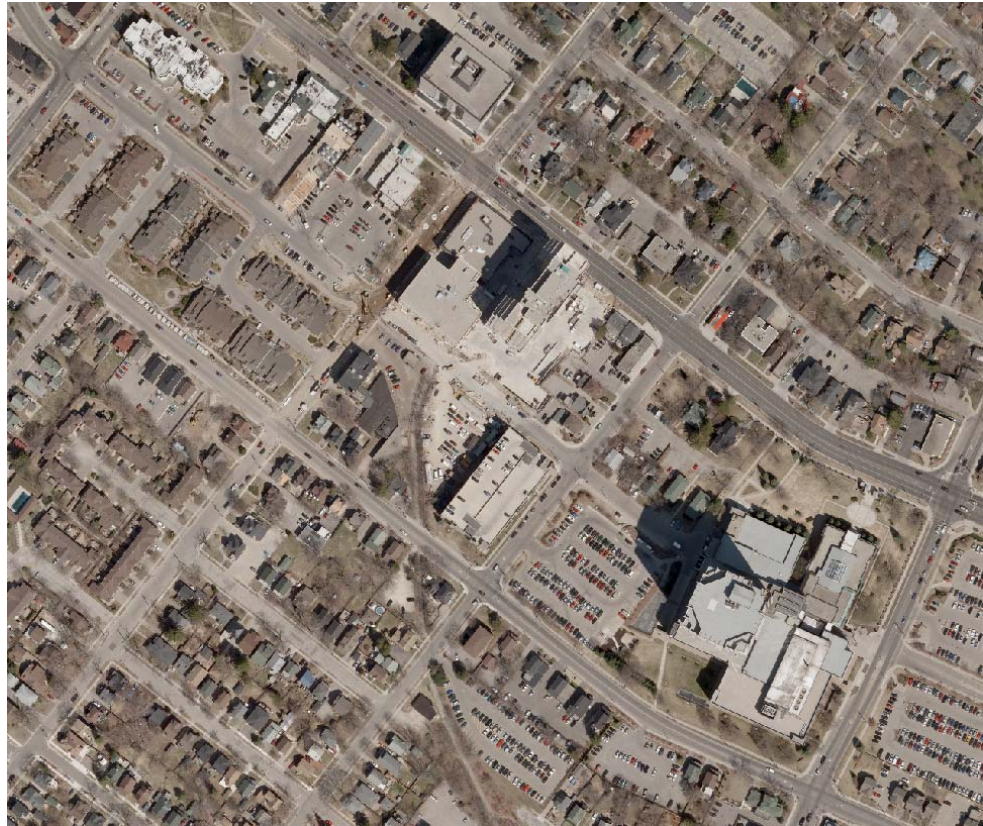
Drawing Name : **Floor Plans**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

Drawing No : **SPA07**



## **144 Park Tower 2, Waterloo Transportation Impact Study**



**Prepared for:  
Mady Development Corp.**

**December 2011**

**Paradigm Transportation Solutions Limited  
43 Forest Road  
Cambridge ON  
N1S 3B4**

✉ [pgrubb@pts1.com](mailto:pgrubb@pts1.com)  
☎ 1.519.896.3163  
Fax: 1.866.722.5117



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## **PROJECT SUMMARY**

**PROJECT NAME:** ..... **144 PARK – TOWER 2**  
**TRANSPORTATION IMPACT STUDY**

**CLIENT:** ..... **MADY DEVELOPMENT CORPORATION**  
8791 WOODBINE AVENUE, SUITE 100  
MARKHAM, ON  
L3R 0P4

**CLIENT PROJECT MANAGER:** ..... EDWARD MAK, BES

**CONSULTANT:** ..... **PARADIGM TRANSPORTATION SOLUTIONS LIMITED**  
43 FOREST ROAD  
CAMBRIDGE ON N1S 3B4  
PH: 519-896-3163  
FAX: 1-866-722-5117

**CONSULTANT PROJECT MANAGER** ..... PHIL GRUBB, P.ENG.

**REPORT DATE:** ..... DECEMBER 2011  
**PROJECT NUMBER:** ..... 111210







## **EXECUTIVE SUMMARY**

### **CONTENT**

Paradigm Transportation Solutions Ltd has prepared this Traffic Impact Study on behalf of Mady Development Corporation. This study has reviewed the traffic impacts associated with the proposed second tower of a residential development located at 144 Park Street, at the intersection of Park Street and Allen Street West in Waterloo, Ontario. The findings, conclusions and recommendations of this study are summarized below and outlined in more detail in the body of the report.

The proposed development consists of an 18-storey residential building with 4 ground-floor townhouse units and 190 upper-floor apartment units. The development will have one access on Park Street.

The report documents the net additional traffic that will occur as a result of the proposed residential development and estimates the impact of the traffic on the surrounding roadway network. The findings, conclusions and recommendations of this study are summarized below and outlined in more detail in the body of the report.

### **CONCLUSIONS**

Based on the traffic projections and analyses contained in the report, it is concluded that a southbound left-turn lane with 15 metres of storage is warranted on Park Street at the site entrance based on Ministry of Transportation criteria. This will require some widening of the road within the existing right-of-way to accommodate this geometric improvement in addition to bike lanes and the through lanes. Also, it should be noted that the westbound movements at Park Street and Allen Street West operate at LOS F under existing, background and future conditions. However, a signal is not warranted at this intersection under future conditions. Likewise, the northbound left-turn movements at William Street West and Park Street operate at LOS F under existing, background and future conditions, but a signal is also not warranted at this intersection under future conditions. All v/c ratios are below 1.0 indicating that there is still adequate capacity at the above noted intersections.

The development will have a minimal impact on changes to the above noted conditions.

### **RECOMMENDATIONS**

It is recommended that a southbound left-turn lane of 15 metres on Park Street at the development entrance be implemented. This will require some widening of the road to accommodate this geometric improvement. It is further recommended that the TDM measures that are feasible be implemented by the developer.







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## 1.0 INTRODUCTION

### 1.1 Background

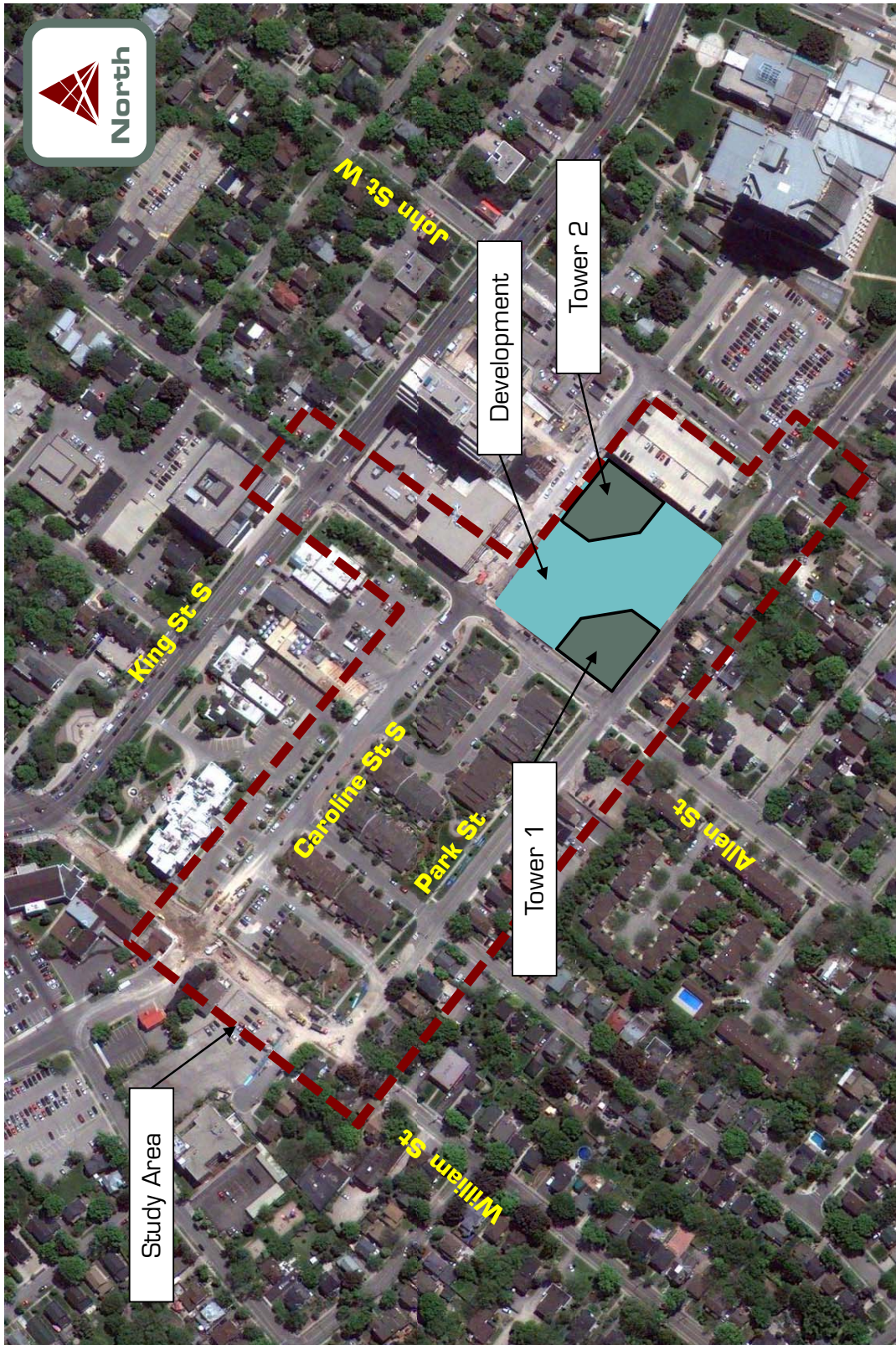
A Site Plan Application has been prepared for the second tower of a proposed residential development at 144 Park Street in Waterloo, Ontario (**Figure 1.1**). Tower 1 was previously approved by the City in 2008. The development will include an 18-storey apartment building with 4 ground-floor townhouse units and 190 apartment units. The access to this site will be on Park Street.

### 1.2 Purpose and Scope

Paradigm Transportation Solutions Limited was retained Mady Development Corporation to conduct a traffic impact study for the proposed development. The purpose of the study is to determine the impact of the development on the surrounding roadway network, particularly the intersections of

- ▶ William Street West and Caroline Street South,
- ▶ William Street West and Park Street,
- ▶ King Street South and Allen Street,
- ▶ Allen Street West and Caroline Street South,
- ▶ Park Street and Allen Street West,
- ▶ Park Street and John Street West, and
- ▶ The site access on Park Street.

The scope of the study includes determination of the current traffic and site conditions in the vicinity of the development, additional traffic that will be generated by the development, analyses of the impact of the traffic and development of recommendations on the measures required in order to accommodate this traffic in a satisfactory manner for a three-year planning horizon. The AM and PM peak hours were used for analysis in this report.



**Figure 1.1**

**Location of Proposed Development**

144 Park Tower 2, TIS







## 2.0 EXISTING CONDITIONS

This section documents current traffic conditions, operational deficiencies, and constraints experienced by the public traveling at the intersections within the study area.

### 2.1 Existing Roads within Study Area

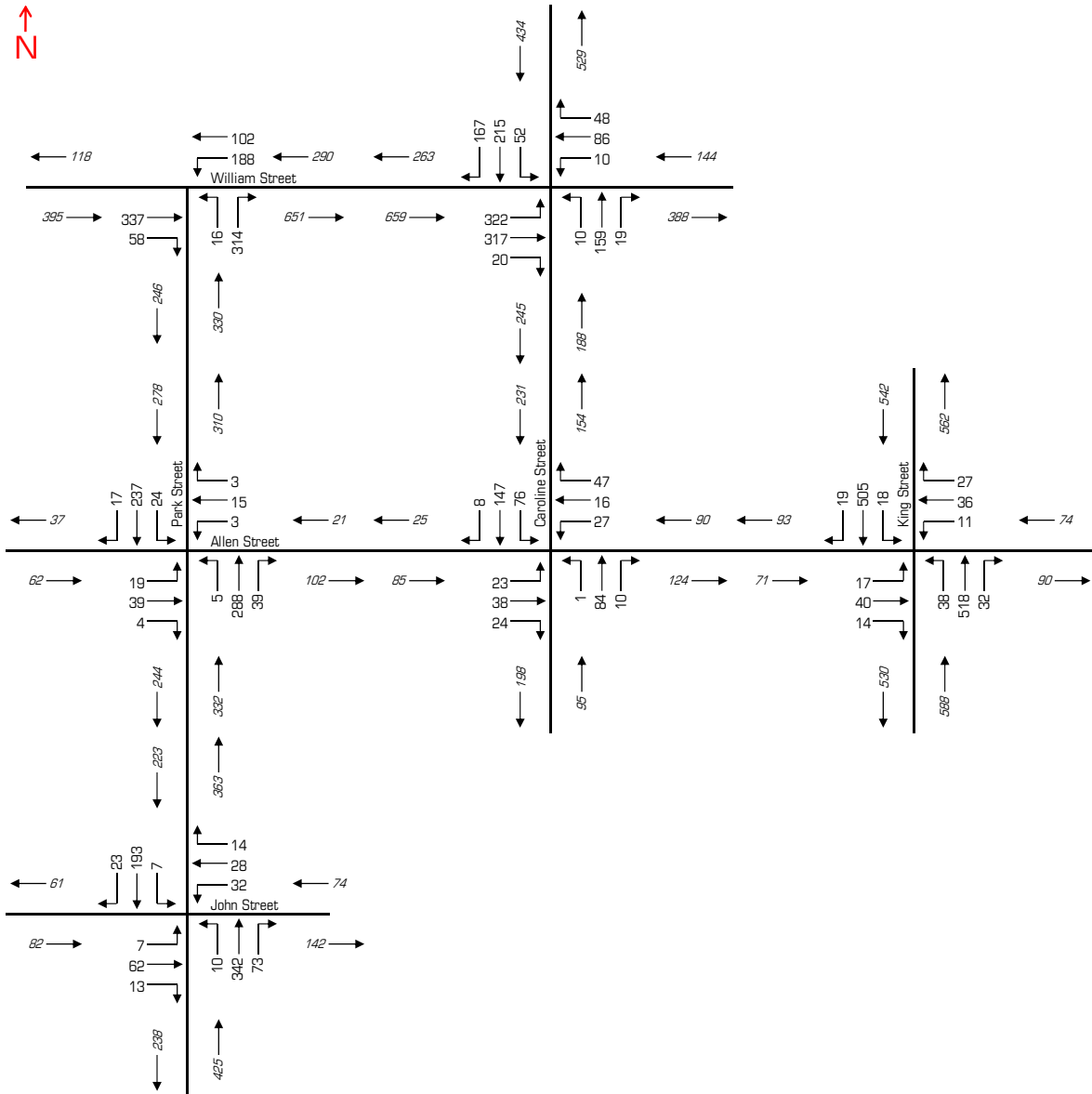
The location of the proposed development is at 144 Park Street, which is at the intersection of Park Street and Allen Street West. All streets within the study area are 2-lane roads, with the exception of King Street South, which is a 4-lane Regional Road. The intersections of William Street West and Caroline Street South, King Street South and Allen Street, and Park Street and John Street West are signalized. The speed limit on all roads within the study area is 50 km/h.

### 2.2 Existing Traffic Volumes

The turning movement counts for the intersections within the study area were updated by Paradigm on the following dates:

- ▶ William Street and Caroline Street – 5 October 2011
- ▶ Park Street and John Street – 6 October 2011
- ▶ King Street and Allen Street – 6 October 2011
- ▶ William Street and Park Street – 7 December 2011
- ▶ Park Street and Allen Street – 8 December 2011
- ▶ Caroline Street and Allen Street – 8 December 2011

The existing AM and PM peak hour traffic volumes are shown in **Figure 2.1a**, and **Figure 2.1b** respectively.

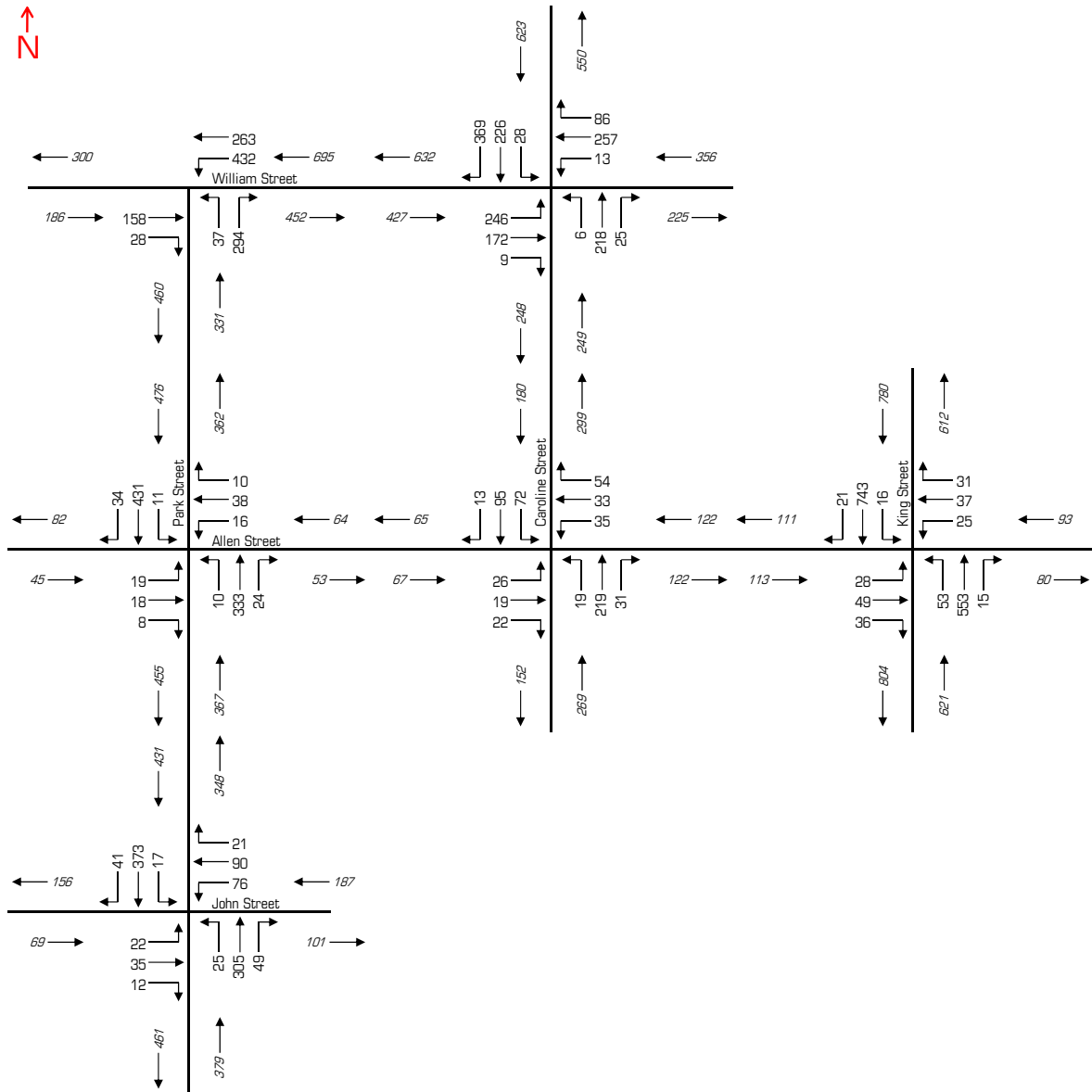


144 Park Tower 2, TIS

**Figure 2.1a**



**AM Peak Hour Existing Traffic Volumes**



144 Park Tower 2, TIS

**Figure 2.1b**



**PM Peak Hour Existing Traffic Volumes**



## 2.3 Existing Traffic Operations

Intersection level of service (LOS) is a recognized method of quantifying the average delay experienced by traffic at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles desiring to make a particular movement, compared to the estimated capacity for that movement. The capacity is based on a number of criteria related to the opposing traffic flows and intersection geometry.

The highest possible rating is LOS A, under which the average total delay is equal or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections or 50 seconds for unsignalized intersections, the movement is classed as LOS F and remedial measures are usually implemented, if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F is may be acceptable for left-turn movements at peak times, depending on delays.

The operations of intersections in the study area were evaluated using the existing turning movement volumes for the AM and PM peak hours illustrated in **Figure 2.1a** and **Figure 2.1b** respectively and existing signal timings, which were provided by the Region of Waterloo.

The intersection analysis considered two separate measures of performance:

- ▶ The volume to capacity ratio for each intersection; and
- ▶ The level of service (LOS) for each turning movement which is based on the average control delay per vehicle.

The existing intersection operations are summarized in **Table 2.1** indicating the existing levels of service and volume to capacity ratios experienced within the study area, for the AM and PM peak hours. Based on the above criteria, it was found that the northbound left-turn movement on Park Street at William Street West experiences LOS F during the PM peak hour. Detailed Synchro v7 analyses are provided in **Appendix A**.





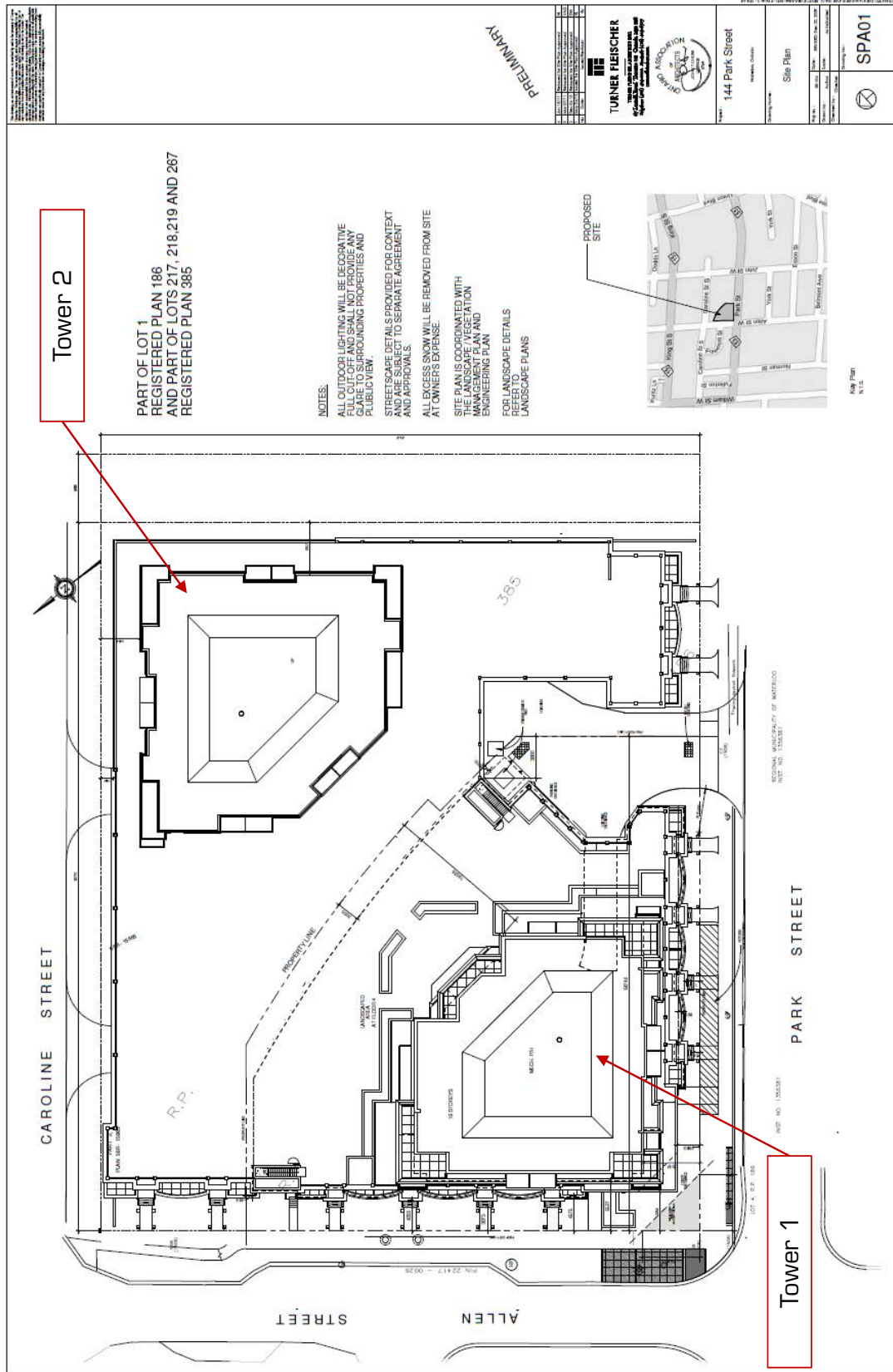
**TABLE 2.1: BASE YEAR PEAK HOUR TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																OVERALL
				Eastbound				Westbound				Northbound				Southbound				
				LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	
AM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	A	A	<b>B</b>	C	B	B	<b>B</b>	C	C	C	<b>C</b>	C	C	A	<b>C</b>	<b>B</b>
			Delay	12	10	10	<b>11</b>	20	17	17	<b>17</b>	25	25	25	<b>25</b>	32	32	5	<b>21</b>	<b>17</b>
			V/C	0.51	0.39	0.39		0.03	0.27	0.27		0.46	0.46	0.46		0.65	0.65	0.33		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	C		<b>C</b>	<b>C</b>					
			Delay		0	0	<b>0</b>	9	0		<b>6</b>	21		<b>17</b>						
			V/C		0.26	0.26		0.19	0.07		0.07	0.54								
	3 - Allen Street & King Street	Signal	LOS	B	B	B	<b>B</b>	B	B	A	<b>B</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>B</b>
			Delay	16	16	16	<b>16</b>	18	18	7	<b>14</b>	10	10	10	<b>10</b>	10	10	10	<b>10</b>	<b>11</b>
			V/C	0.16	0.16	0.16		0.10	0.10	0.06		0.38	0.38	0.38		0.34	0.34	0.34		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	9	9	9	<b>9</b>	8	8	8	<b>8</b>	8	8	8	<b>8</b>	10	10	10	<b>10</b>	<b>9</b>
			V/C	0.13	0.13	0.13		0.13	0.13	0.13		0.14	0.14	0.14		0.33	0.33	0.33		
	5 - Allen Street & Park Street	TWSC	LOS	C	C	C	<b>C</b>	C	C	C	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	19	19	19	<b>19</b>	17	17	17	<b>17</b>	0	0	0	<b>0</b>	1	1	1	<b>1</b>	<b>3</b>
			V/C	0.21	0.21	0.21		0.07	0.07	0.07		0.00	0.00	0.00		0.02	0.02	0.02		
	6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	20	20	20	<b>20</b>	20	15	15	<b>18</b>	4	6	6	<b>6</b>	4	4	4	<b>4</b>	<b>8</b>
			V/C	0.30	0.30	0.30		0.14	0.15	0.15		0.01	0.40	0.40		0.02	0.21	0.21		
PM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	A	A	<b>B</b>	B	C	C	<b>C</b>	C	C	C	<b>C</b>	C	C	A	<b>B</b>	<b>B</b>
			Delay	15	10	10	<b>13</b>	19	27	27	<b>26</b>	29	29	29	<b>29</b>	30	30	6	<b>19</b>	<b>19</b>
			V/C	0.57	0.21	0.21		0.03	0.61	0.61		0.55	0.55	0.55		0.55	0.55	0.55		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	<b>F</b>		<b>B</b>	<b>C</b>					
			Delay		0	0	<b>0</b>	9	0		<b>6</b>	69		<b>12</b>	<b>18</b>					
			V/C		0.12	0.12		0.35	0.17		0.43	0.38								
	3 - Allen Street & King Street	Signal	LOS	C	C	C	<b>C</b>	C	C	A	<b>B</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	<b>B</b>
			Delay	20	20	20	<b>20</b>	23	23	8	<b>18</b>	10	10	10	<b>10</b>	11	11	11	<b>11</b>	<b>12</b>
			V/C	0.28	0.28	0.28		0.15	0.15	0.07		0.42	0.42	0.42		0.46	0.46	0.46		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	9	9	9	<b>9</b>	9	9	9	<b>9</b>	11	11	11	<b>11</b>	10	10	10	<b>10</b>	<b>10</b>
			V/C	0.11	0.11	0.11		0.19	0.19	0.19		0.39	0.39	0.39		0.27	0.27	0.27		
	5 - Allen Street & Park Street	TWSC	LOS	D	D	D	<b>D</b>	D	D	D	<b>D</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>3</b>
			Delay	25	25	25	<b>25</b>	26	26	26	<b>26</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	<b>3</b>
			V/C	0.22	0.22	0.22		0.29	0.29	0.29		0.01	0.01	0.01		0.01	0.01	0.01		
	6 - John Street & Park Street	Signal	LOS	B	B	B	<b>B</b>	C	B	B	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	19	19	19	<b>19</b>	22	18	18	<b>20</b>	5	6	6	<b>6</b>	5	6	6	<b>6</b>	<b>9</b>
			V/C	0.26	0.26	0.26		0.30	0.33	0.33		0.05	0.34	0.34		0.03	0.40	0.40		



## **3.0 DEVELOPMENT CONCEPT**

The proposed development consists of an 18-storey residential building with 4 ground-floor townhouse units and 190 upper-floor apartment units. The development will access Park Street and will have a parking structure. There will be a section of the parking structure that will access Caroline Street that is replacing an existing parking lot at the same site and therefore will produce no net traffic. The proposed site plan is shown in **Figure 3.1**.



**Figure 3.1**  
**Development Concept**

144 Park Tower 2, TIS





## 4.0 EVALUATION OF FUTURE TRAFFIC CONDITIONS

The assessment of future traffic conditions contained in this section includes estimates of future background and total traffic and analysis for a five-year planning horizon, in order to adequately identify the impacts of the development. The likely future traffic volumes in the vicinity of the development will consist of increased non-site traffic volumes (background traffic and traffic from other developments) and the traffic generated by the proposed development (site traffic).

### 4.1 Background Traffic Growth

The non-site traffic increase is generalized traffic growth in the Region of Waterloo. This is anticipated to follow the average increase in population within the area and is estimated to be 2% per annum. The increases in background traffic are forecasted for a five-year horizon and are shown in **Figure 4.1a** and **Figure 4.1b** for the AM and PM peak hour respectively.

### 4.2 Traffic from Other Planned Developments

There are 2 planned and approved developments in the vicinity of Tower 2 of the Mady Development Waterloo: the Alexandra Apartments (on Alexandra near Caroline) and Tower 1 of the Mady Development (144 Park Street). The projected traffic from these developments (as identified in their respective traffic impact studies) is taken into account in developing the background traffic. For reference, the traffic volumes from these other developments are included in **Appendix B. Figure 4.2a** and **Figure 4.2b** show the background traffic volumes after the addition of the traffic from the other two developments for the AM and PM peak hours respectively.

### 4.3 Background Traffic Operations

Based on the estimated volumes shown in **Figure 4.2a** and **Figure 4.2b**, operations analyses have been conducted using Synchro 7 for the future background traffic conditions. The detailed Synchro reports are included in **Appendix C. Table 4.1** summarizes the future background traffic operations. The signal timings were optimized using Synchro. The analysis indicates that in addition to the poorly operating movement in the existing conditions, the westbound movements on Allen Street at Park Street will operate at LOS E during the PM peak hour in the future. The v/c ratio is less than 1.0 indicating that there will be adequate future capacity.

### 4.4 Development Traffic Generation

To determine the traffic that will be generated by the development, the rates provided by the ITE Trip Generation Manual for Apartment Building (Code 220) and Residential Townhouse/Condominium (Code 230) were used. The development is expected to generate 99 and 120 total trips in the AM and PM peak hours, respectively. **Table 4.2** summarizes the estimated trip generation.

In preparing the traffic assignment, travel distribution assumptions from the Grand River Hospital and Clarica Transportation Demand Study were used, as they were for the TIS for the nearby Bauer Buildings. The traffic generated by the development in the AM and PM peak hour is shown in **Figure 4.3a** and **Figure 4.3b**



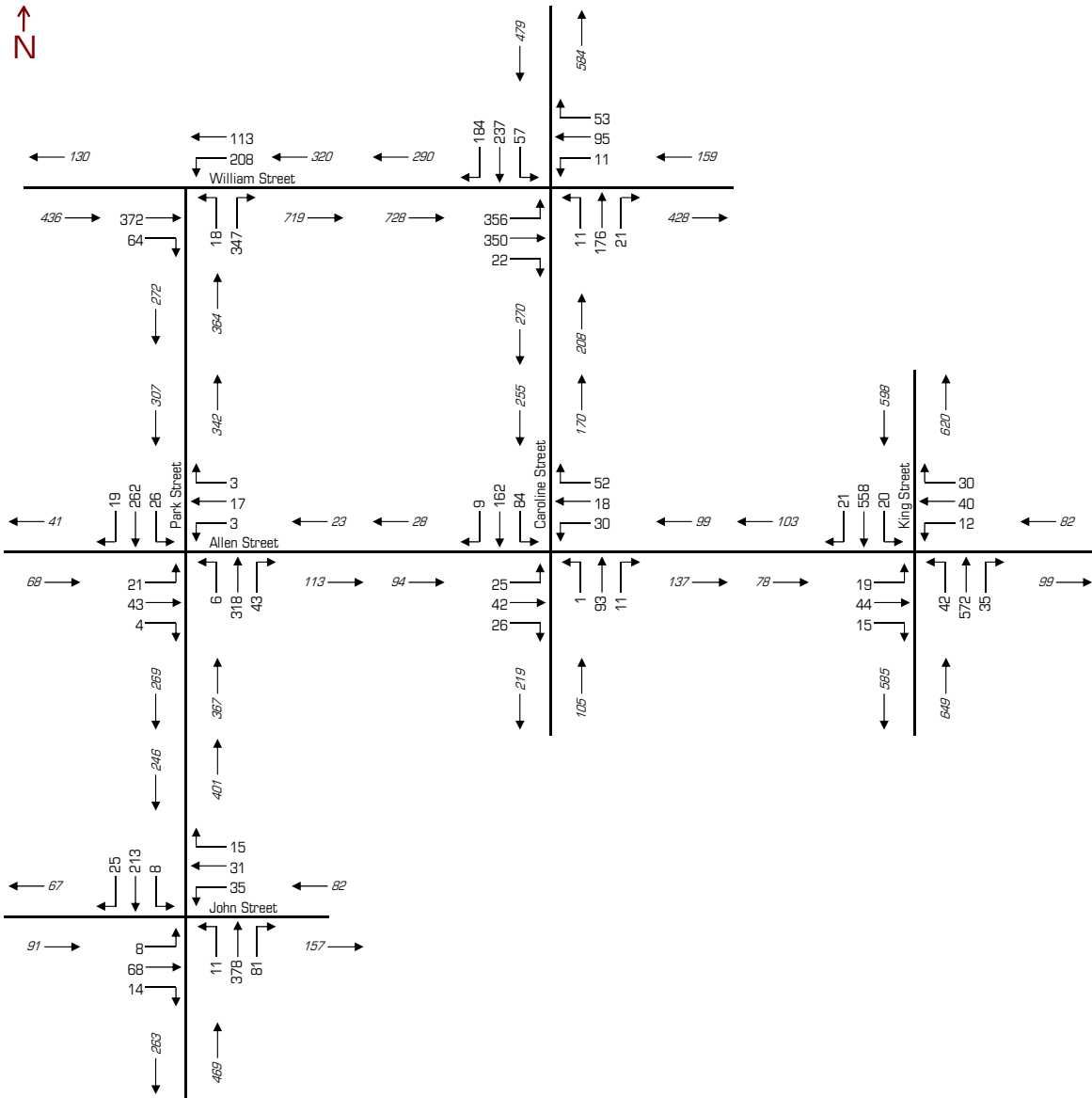
The total trips expected in the horizon year, which is the addition of the development traffic to the background traffic (including traffic from other planned developments) are shown below in **Figure 4.4a** and **Figure 4.4b** for the AM and PM peak hours respectively.

**TABLE 4.1: BACKGROUND TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MDE	Direction / Movement / Approach																OVERALL
				Eastbound				Westbound				Northbound				Southbound				
				LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	
AM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	B	B	<b>B</b>	C	B	B	<b>B</b>	C	C	C	<b>C</b>	D	D	A	<b>C</b>	<b>B</b>
			Delay	13	11	11	<b>12</b>	21	19	19	<b>19</b>	27	27	27	<b>27</b>	42	42	5	<b>28</b>	<b>19</b>
			V/C	0.58	0.44	0.44		0.04	0.33	0.33		0.51	0.51	0.51		0.80	0.80	0.38		
	2 - William Street & Park Street	TWSC	LOS	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>D</b>	<b>C</b>	<b>C</b>					
			Delay	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>27</b>	<b>0</b>	<b>21</b>	<b>22</b>					<b>9</b>
			V/C	<b>0.29</b>	<b>0.29</b>			<b>0.23</b>	<b>0.07</b>			<b>0.14</b>		<b>0.65</b>						
	3 - Allen Street & King Street	Signal	LOS	B	B	B	<b>B</b>	B	B	A	<b>B</b>	B	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>B</b>
			Delay	17	17	17	<b>17</b>	18	18	7	<b>14</b>	11	11	11	<b>11</b>	10	10	10	<b>10</b>	<b>11</b>
			V/C	0.20	0.20	0.20		0.11	0.11	0.06		0.43	0.43	0.43		0.39	0.39	0.39		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	<b>A</b>
			Delay	9	9	9	<b>9</b>	9	9	9	<b>9</b>	9	9	9	<b>9</b>	11	11	11	<b>11</b>	<b>10</b>
			V/C	0.13	0.13	0.13		0.13	0.13	0.13		0.14	0.14	0.14		0.33	0.33	0.33		
	5 - Allen Street & Park Street	TWSC	LOS	C	C	C	<b>C</b>	C	C	C	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	23	23	23	<b>23</b>	21	21	21	<b>21</b>	0	0	0	<b>0</b>	1	1	1	<b>1</b>	<b>3</b>
V/C			0.28	0.28	0.28		0.11	0.11	0.11		0.01	0.01	0.01		0.03	0.03	0.03			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>	
		Delay	20	20	20	<b>20</b>	20	14	14	<b>17</b>	4	7	7	<b>7</b>	5	5	5	<b>5</b>	<b>8</b>	
		V/C	0.33	0.33	0.33		0.16	0.17	0.17		0.02	0.45	0.45		0.09	0.26	0.26			
7 - Park Street & Development Driveway	TWSC	LOS					B		B	<b>B</b>		A	A	<b>A</b>	A	A		<b>A</b>		
		Delay					14		14	<b>14</b>		0	0	<b>0</b>	0	0		<b>0</b>	<b>1</b>	
		V/C					0.15		0.15			0.25	0.25		0.01	0.01				
PM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	C	A	A	<b>B</b>	C	D	D	<b>D</b>	C	C	C	<b>C</b>	C	C	A	<b>B</b>	<b>C</b>
			Delay	20	10	10	<b>16</b>	22	36	36	<b>36</b>	31	31	31	<b>31</b>	33	33	6	<b>17</b>	<b>23</b>
			V/C	0.71	0.24	0.24		0.04	0.76	0.76		0.62	0.62	0.62		0.65	0.65	0.60		
	2 - William Street & Park Street	TWSC	LOS	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>F</b>	<b>B</b>	<b>D</b>					
			Delay	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>145</b>	<b>0</b>	<b>13</b>	<b>28</b>					<b>11</b>
			V/C	<b>0.14</b>	<b>0.14</b>			<b>0.41</b>	<b>0.19</b>			<b>0.73</b>		<b>0.46</b>						
	3 - Allen Street & King Street	Signal	LOS	C	C	C	<b>C</b>	C	C	A	<b>B</b>	B	B	B	<b>B</b>	B	B	B	<b>B</b>	<b>B</b>
			Delay	21	21	21	<b>21</b>	23	23	8	<b>18</b>	13	13	13	<b>13</b>	13	13	13	<b>13</b>	<b>14</b>
			V/C	0.33	0.33	0.33		0.18	0.18	0.08		0.56	0.56	0.56		0.59	0.59	0.59		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>B</b>
			Delay	9	9	9	<b>9</b>	10	10	10	<b>10</b>	12	12	12	<b>12</b>	10	10	10	<b>10</b>	<b>11</b>
			V/C	0.13	0.13	0.13		0.23	0.23	0.23		0.45	0.45	0.45		0.32	0.32	0.32		
	5 - Allen Street & Park Street	TWSC	LOS	D	D	D	<b>D</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	34	34	34	<b>34</b>	41	41	41	<b>41</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	<b>5</b>
V/C			0.33	0.33	0.33		0.48	0.48	0.48		0.02	0.02	0.02		0.01	0.01	0.01			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>	
		Delay	20	20	20	<b>20</b>	23	18	18	<b>20</b>	5	6	6	<b>6</b>	5	7	7	<b>7</b>	<b>10</b>	
		V/C	0.32	0.32	0.32		0.34	0.42	0.42		0.06	0.40	0.40		0.05	0.45	0.45			
7 - Park Street & Development Driveway	TWSC	LOS					C		C	<b>C</b>		A	A	<b>A</b>	A	A		<b>A</b>		
		Delay					18		18	<b>18</b>		0	0	<b>0</b>	0	0		<b>0</b>	<b>1</b>	
		V/C					0.12		0.12			0.30	0.30		0.03	0.03				

**TABLE 4.2: TRIP GENERATION**

Development Type	Units	AM Peak			PM Peak				
		Rate per Unit	Total	In	Out	Rate per Unit	Total	In	Out
220 - Apartment Building	190	0.51	97	19	78	0.62	118	77	41
230 - Residential Condominium/Townhouse	4	0.44	2	0	2	0.52	2	1	1
<b>Total Generation</b>			<b>99</b>	<b>19</b>	<b>80</b>		<b>120</b>	<b>78</b>	<b>42</b>

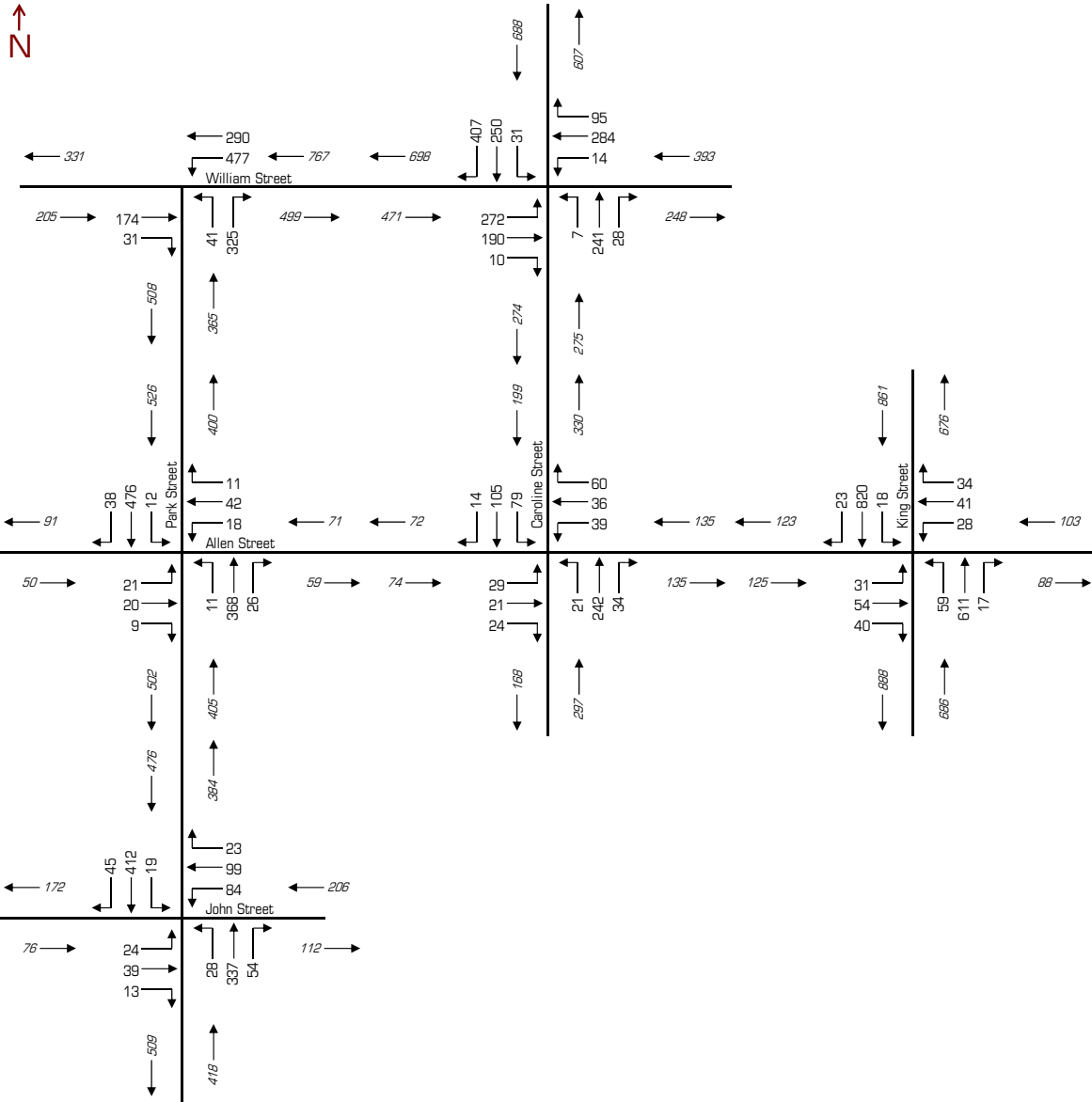


144 Park Tower 2, TIS

**Figure 4.1a**



**AM Peak Hour  
Future Background Traffic Volumes**



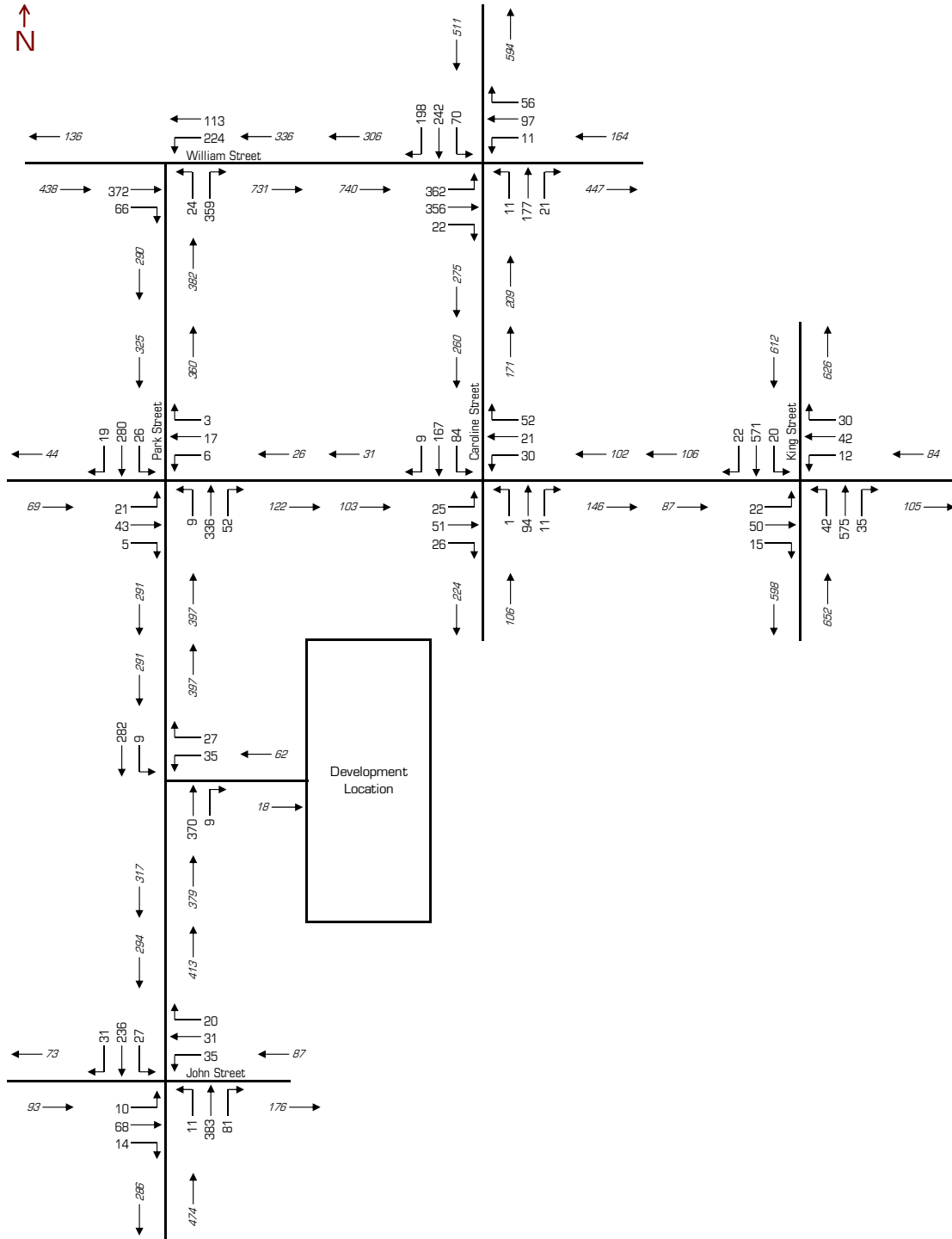
144 Park Tower 2, TIS

**Figure 4.1b**



**PM Peak Hour  
Future Background Traffic Volumes**



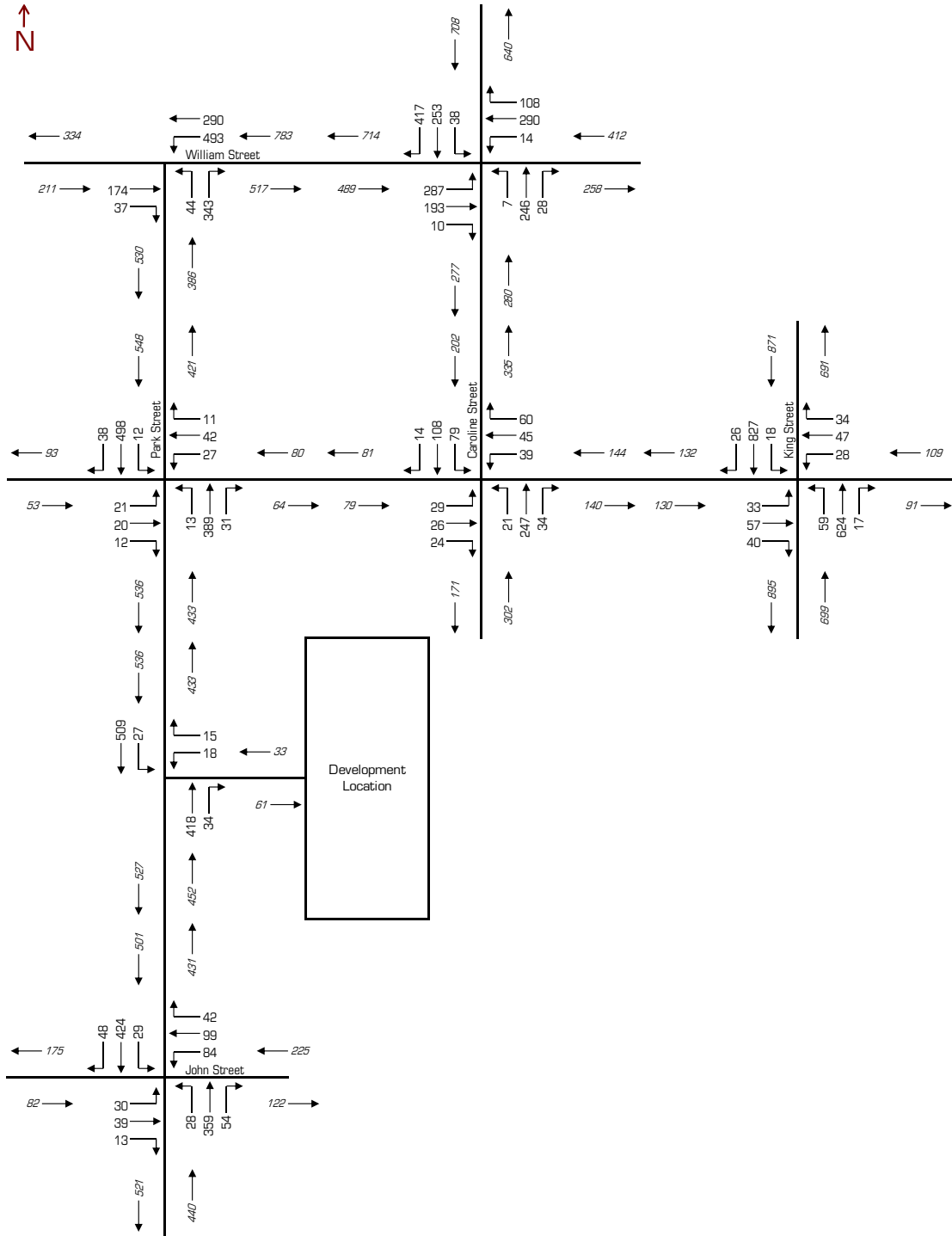


144 Park Tower 2, TIS

**Figure 4.2a**



**AM Peak Hour Future Background plus Other Development Traffic Volumes**



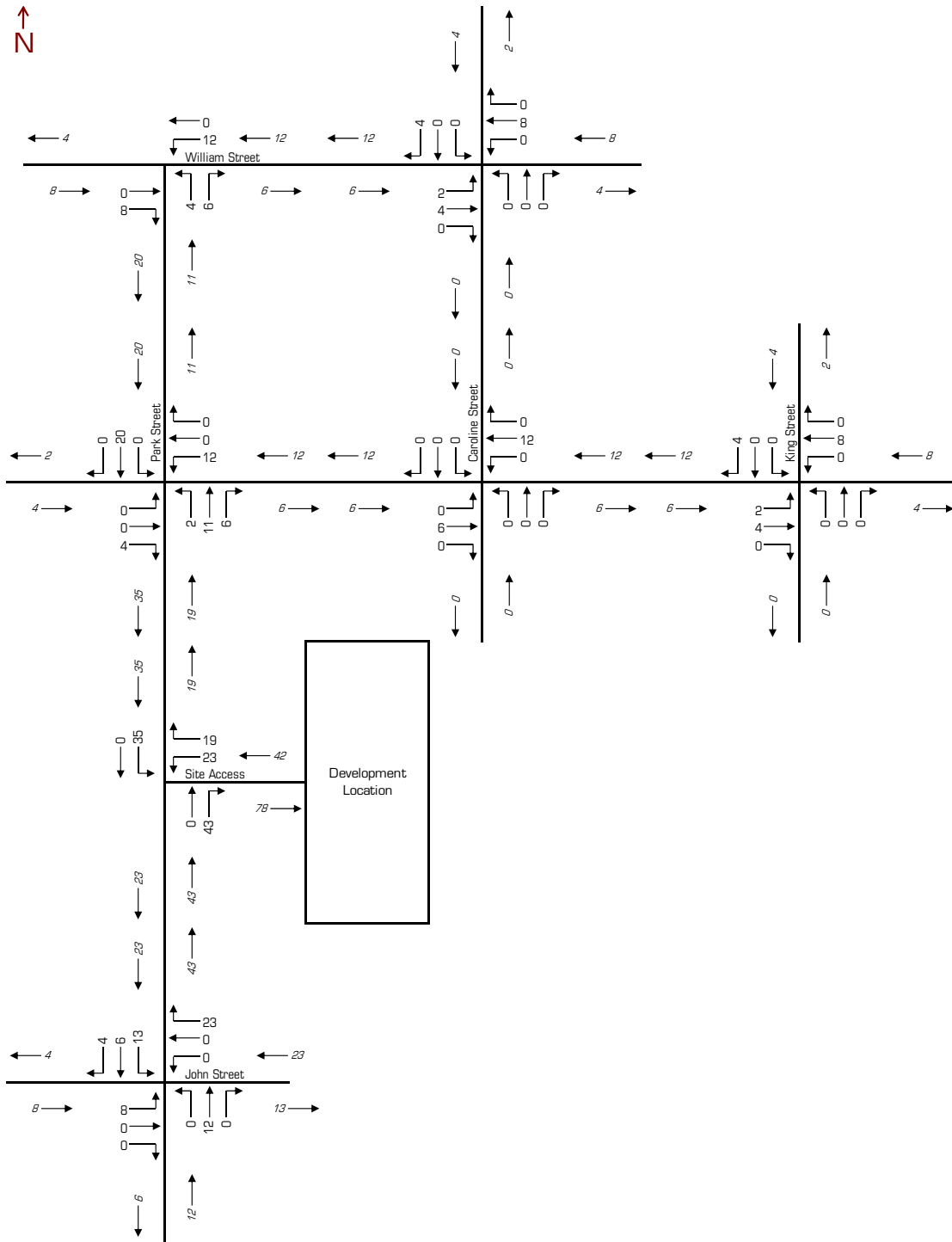
144 Park Tower 2, TIS

**Figure 4.2b**



**PM Peak Hour Future Background plus Other Development Traffic Volumes**



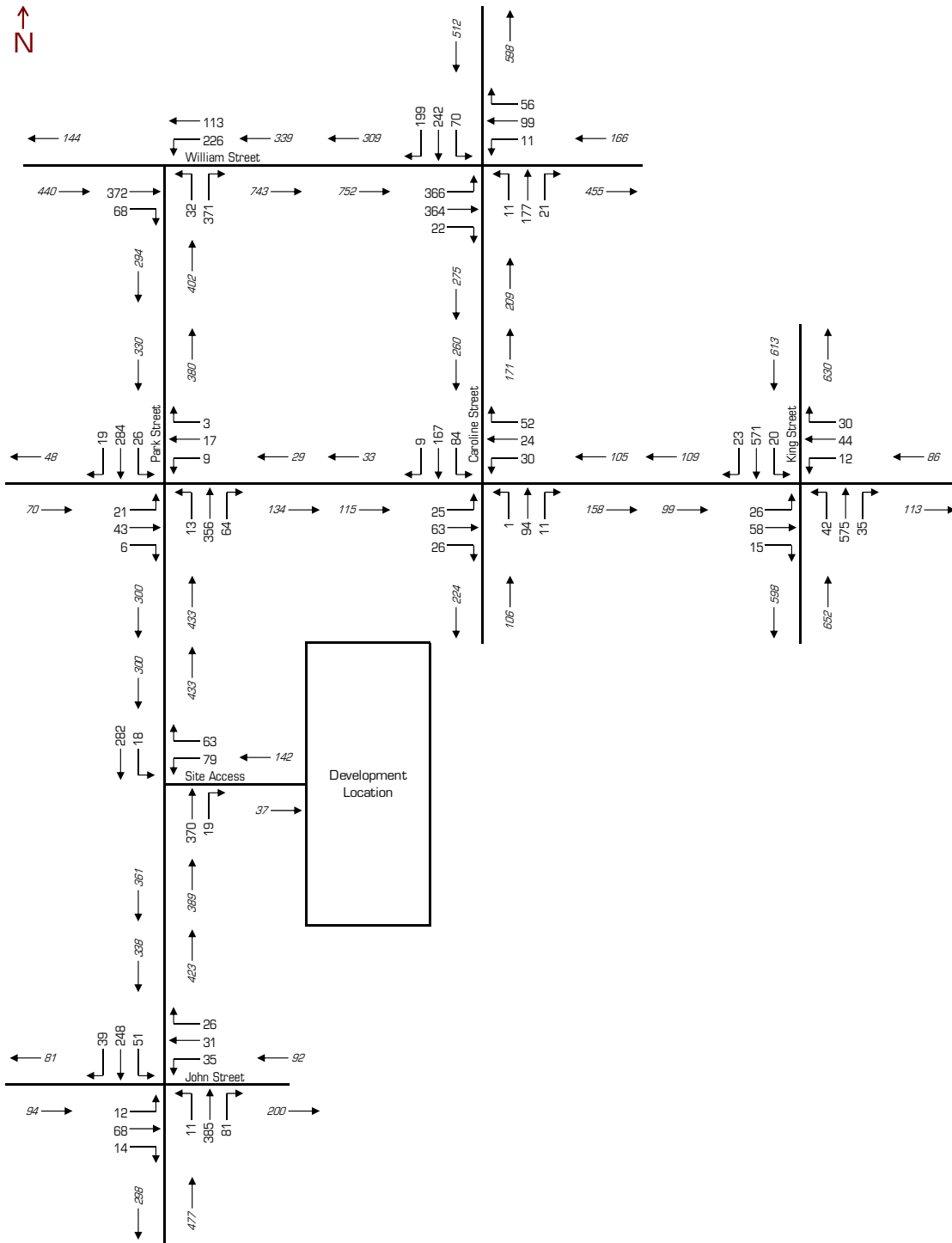


144 Park Tower 2, TIS

**Figure 4.3b**



**PM Peak Hour Development Traffic Volumes**

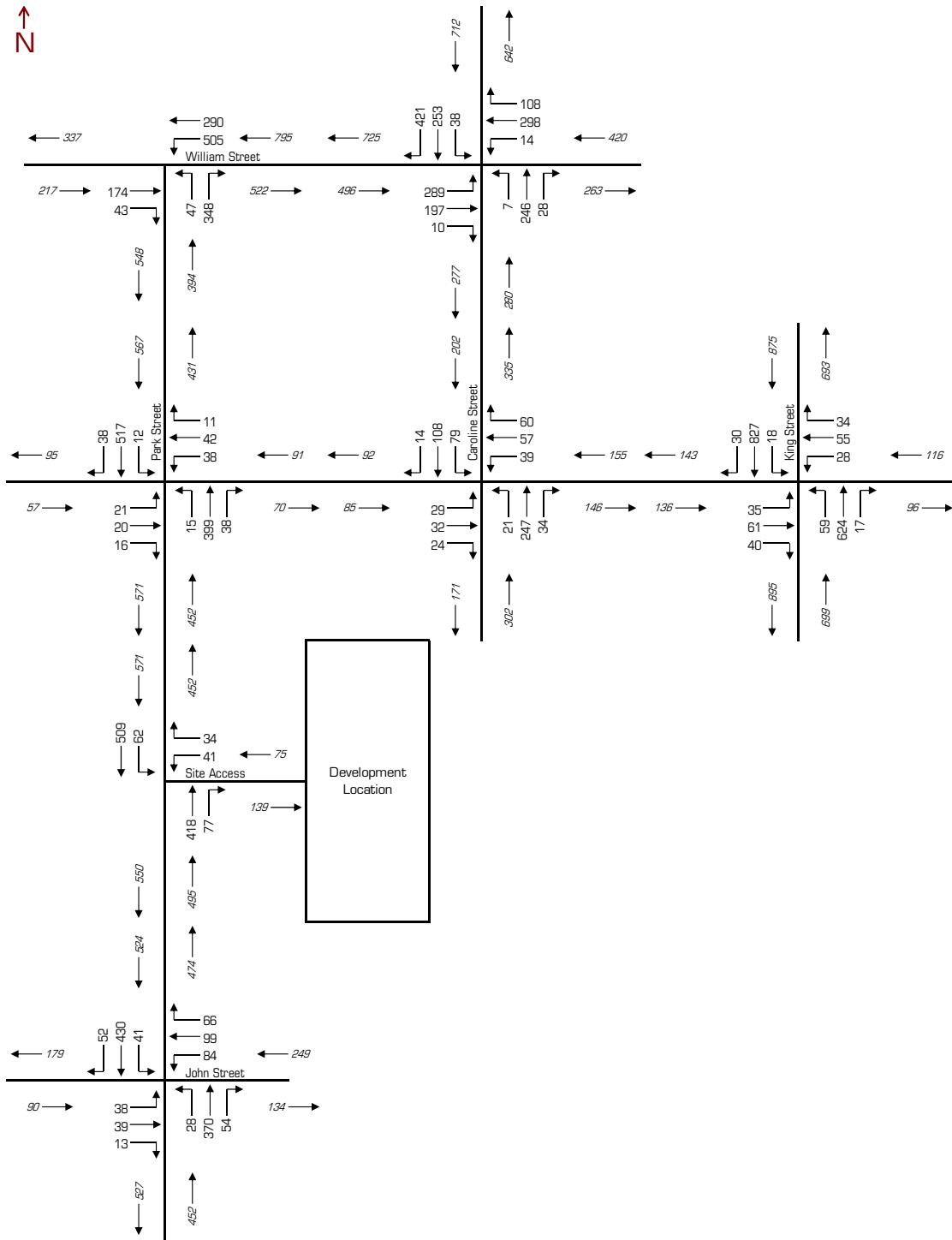


144 Park Tower 2, TIS

**Figure 4.4a**



**AM Peak Hour Future Total Traffic Volumes**



144 Park Tower 2, TIS

**Figure 4.4b**



**PM Peak Hour Future Total Traffic Volumes**



## 4.5 Future Traffic Operations

Based on the estimated volumes shown in **Figure 4.4a** and **Figure 4.4b** LOS analyses have been conducted using Synchro 7 for the AM and PM peak hour conditions for the intersections in the study area, assuming optimization of signal timings and no other improvements to the road network.

A summary of the LOS conditions is provided in **Table 4.3** and detailed Synchro reports can be found in **Appendix D**. The total future traffic will operate similarly to the background traffic conditions with the eastbound and westbound movements on Allen Street at Park Street increasing to LOS E and LOS F during the PM peak hour, respectively. V/C ratios for all movements will be less than 1.0 indicating that there is adequate capacity at the intersection.



**TABLE 4.3: TOTAL FUTURE TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																OVERALL
				Eastbound				Westbound				Northbound				Southbound				
				LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	
AM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	B	B	<b>B</b>	C	C	C	<b>C</b>	C	C	C	<b>C</b>	D	D	A	<b>C</b>	<b>B</b>
			Delay	13	11	11	<b>12</b>	21	20	20	<b>20</b>	27	27	27	<b>27</b>	42	42	5	<b>28</b>	<b>19</b>
			V/C	0.59	0.45	0.45		0.04	0.33	0.33		0.51	0.51	0.51		0.80	0.80	0.38		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	D		<b>C</b>	<b>C</b>					
			Delay		0	0	<b>0</b>	9	0		<b>6</b>	29		<b>22</b>	<b>23</b>					
			V/C		0.29	0.29		0.23	0.07		0.19	0.68								
	3 - Allen Street & King Street	Signal	LOS	B	B	B	<b>B</b>	B	B	A	<b>B</b>	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>B</b>	
Delay			18	18	18	<b>18</b>	18	18	7	<b>14</b>	11	11	11	<b>11</b>	10	10	10	<b>10</b>	<b>11</b>	
V/C			0.22	0.22	0.22		0.11	0.11	0.06		0.43	0.43	0.43		0.39	0.39	0.39			
4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	<b>A</b>	B	B	B	<b>B</b>	<b>A</b>		
		Delay	9	9	9	<b>9</b>	9	9	9	<b>9</b>	9	9	9	<b>9</b>	11	11	11	<b>11</b>	<b>10</b>	
		V/C	0.18	0.18	0.18		0.16	0.16	0.16		0.16	0.16	0.16		0.38	0.38	0.38			
5 - Allen Street & Park Street	TWSC	LOS	D	D	D	<b>D</b>	C	C	C	<b>C</b>	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>		
		Delay	25	25	25	<b>25</b>	23	23	23	<b>23</b>	0	0	0	<b>0</b>	1	1	1	<b>1</b>	<b>3</b>	
		V/C	0.30	0.30	0.30		0.14	0.14	0.14		0.01	0.01	0.01		0.03	0.03	0.03			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>		
		Delay	20	20	20	<b>20</b>	20	13	13	<b>16</b>	4	7	7	<b>7</b>	6	5	5	<b>5</b>	<b>8</b>	
		V/C	0.34	0.34	0.34		0.16	0.19	0.19		0.02	0.46	0.46		0.16	0.28	0.28			
7 - Park Street & Development Driveway	TWSC	LOS					C			<b>C</b>	A	A	<b>A</b>	A	A		<b>A</b>	<b>A</b>		
		Delay					16		16	<b>16</b>		0	0	<b>0</b>	0	0		<b>0</b>	<b>3</b>	
		V/C					0.31		0.31		0.25	0.25		0.02	0.02					
PM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	C	A	A	<b>B</b>	C	D	D	<b>D</b>	C	C	<b>C</b>	C	C	A	<b>B</b>	<b>C</b>	
			Delay	21	10	10	<b>17</b>	22	37	37	<b>37</b>	31	31	31	<b>31</b>	33	33	6	<b>17</b>	<b>23</b>
			V/C	0.73	0.25	0.25		0.04	0.78	0.78		0.62	0.62	0.62		0.65	0.65	0.60		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	<b>F</b>		<b>B</b>	<b>D</b>					
			Delay		0	0	<b>0</b>	10	0		<b>6</b>	177		<b>13</b>	<b>33</b>					
			V/C		0.14	0.14		0.42	0.19		0.83	0.47								
	3 - Allen Street & King Street	Signal	LOS	C	C	C	<b>C</b>	C	C	A	<b>B</b>	B	B	<b>B</b>	B	B	B	<b>B</b>	<b>B</b>	
Delay			22	22	22	<b>22</b>	24	24	8	<b>19</b>	13	13	13	<b>13</b>	13	13	13	<b>13</b>	<b>14</b>	
V/C			0.34	0.34	0.34		0.20	0.20	0.08		0.56	0.56	0.56		0.59	0.59	0.59			
4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	B	B	B	<b>B</b>	B	B	<b>B</b>	B	B	B	<b>B</b>	<b>B</b>		
		Delay	10	10	10	<b>10</b>	10	10	10	<b>10</b>	12	12	12	<b>12</b>	11	11	11	<b>11</b>	<b>11</b>	
		V/C	0.15	0.15	0.15		0.26	0.26	0.26		0.46	0.46	0.46		0.32	0.32	0.32			
5 - Allen Street & Park Street	TWSC	LOS	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>	A	A	<b>A</b>	A	A	A	<b>A</b>		
		Delay	36	36	36	<b>36</b>	54	54	54	<b>54</b>	1	1	1	<b>1</b>	0	0	0	<b>0</b>	<b>6</b>	
		V/C	0.36	0.36	0.36		0.60	0.60	0.60		0.02	0.02	0.02		0.01	0.01	0.01			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>B</b>		
		Delay	20	20	20	<b>20</b>	23	17	17	<b>19</b>	5	8	8	<b>7</b>	6	8	8	<b>8</b>	<b>11</b>	
		V/C	0.36	0.36	0.36		0.34	0.46	0.46		0.07	0.45	0.45		0.09	0.51	0.51			
7 - Park Street & Development Driveway	TWSC	LOS					C			<b>C</b>	A	A	<b>A</b>	A	A		<b>A</b>	<b>A</b>		
		Delay					25		25	<b>25</b>		0	0	<b>0</b>	2	2		<b>2</b>	<b>2</b>	
		V/C					0.32		0.32		0.32	0.32		0.07	0.07					





## 4.6 Signal Warrants

The intersections of William Street West and Park Street, and Park Street and Allen Street West were analyzed to determine if signals would be warranted by the future traffic conditions. The analysis used was from Book 12 of the Ontario Traffic Manual's signal warrant procedure. Region of Waterloo guidelines requires an existing intersection using forecasted volumes to meet 120% of the warrant conditions to be warranted. Signals are not warranted at either of the analyzed intersections. Summaries of the warrant analyses are included in **Appendix E**.

Therefore, although the side street delays are projected to be LOS F, there is not enough side street volume to justify signals based on Regional guidelines. Furthermore, traffic can reroute to John Street where signals are located in order to gain easier access to Park Street South and use the Caroline Street/William Street signal to gain easier access to William Street west.

## 4.7 Left-Turn Lane Warrant

The site entrance on Park Street was analyzed to determine if a southbound left-turn lane would be warranted by the future traffic conditions. Park Street is a two-lane road with a speed limit of 50 km/h. The MTO Geometric Design Manual's left-turn lane warrant nomographs for a design speed of 60 km/h (as design speed is taken to be 10 km/h over the speed limit) were used. The left-turn lane warrant nomograph is shown in **Figure 4.5**. It was found that a southbound left-turn lane with a storage length of 15 metres is warranted.

The width of Park Street at the location of the entrance of the proposed development is 10.25 metres with one traffic lane and one bicycle lane in each direction. Therefore, to accommodate the left turn lane road widening will be required.

## 4.8 Park/Allen Collision History

Concerns have been expressed by area residents regarding safety at the intersection of Allen Street and Park Street. The number of reportable collisions at this intersection between January 2005 and January 2008 (3 Years) was provided by the City of Waterloo. A total of 7 reported collisions occurred averaging about 2 collisions per year. Most (4) of these collisions occurred in 2006 under clear conditions with dry road surface and were primarily angle type collisions involving traffic entering Park Street from Allen Street causing property damage. No injuries were reported. Only two collisions occurred in 2007. Mid-block between William Street and Allen Street only one collision was reported in the three year period.

The number of reported collisions are not unusually high at this location and may be a result of the difficulty accessing Park Street although none were reported during peak traffic hours. The proposed development will increase traffic accessing Park Street from Allen Street by 4 to 15 vehicles during peak hours based on the estimates in this report representing only 1% of the total traffic at the intersection. Accordingly, the additional traffic is not expected to affect existing collision experience at this intersection.

## 4.9 Walking, Cycling and Public Transit Opportunities

The location of this development will be very near to the Region of Waterloo's planned rapid transit route and station. The latest route alignment and station location information (November 2011) shows a station for southbound trains located on Allen Street between Caroline Street and King Street and a station for northbound trains on King Street, just north of Allen Street (**Figure 4.6**). These stations will be within a 100 – 200 metre walk of the development. This will encourage residents of the development to utilize



transit more than an average residential development in the Region of Waterloo would. This will reduce the number of trips this development will generate when the rapid transit system is complete, which is projected to be in 2017, one year beyond the scope of this study. As there was no reduction of trips applied to the trip generation forecasts, this will result in the development potentially having less impact on the traffic operations than what is forecast in this study.

This development is located within walking and cycling distance of shopping, service and employment opportunities on Park Street (Clarica/Grand River Hospital), on King Street and in Uptown Waterloo. This will also result in reduced vehicle trips generated by this development.

#### 4.10 TDM Initiatives

This proposed development is high density inner-city development located within an area close to employment locations in Uptown Waterloo and other nearby shopping and employment locations within walking and cycling distances from this project. As well, the site is well served by public transit and the future LRT line. It is the location of this development that will be the most significant factor contributing to a reduction of automobile trips to/from the site. This site will be attractive to seniors and employed personnel in Uptown or nearby offices, service and retail who will either, not travel during peak hours, or will walk, cycle and take public transit. Evidence of this is shown through surveys undertaken by Paradigm in the inner city areas of Kitchener and Waterloo and previously provided to the Region<sup>1</sup>. These studies show that inner-city high density developments generate vehicle trip rates that average 0.2 and 0.24 trips per unit in the AM and PM peak hours, much less than the conservatively high rates used in this study. Due to the location along with the excellent transit service adjacent to the site, there is reason to believe that a 35% reduction in the trip rates used in this study will be exceeded simply due to the location of the site. Live/work opportunities in the adjacent area will also reduce traffic generated.

In addition to the above, the development could include other TDM measures to further assist in reducing single occupancy vehicle trips as follows:

- 4- *Secure convenient indoor/outdoor bike parking:* Bicycle parking spots can be provided on site. The development provides secure bicycle parking in storage lockers provided to tenants. The parking garage therefore provides a secure weather and theft protected enclosed area where bicycles can be parked.
2. *Unbundled Parking:* Parking for residents is necessary for the renting or sale of the units as tenants own vehicles even if they do not use them on a daily basis. The developer can sell condos or rent units with the option of purchasing a parking spot(s) at an additional cost resulting in a reduced cost if one or more parking spots are not included in the purchase. Tenants who purchase a parking space will have one assigned to them thereby ensuring that shared use of parking does not result in generating more traffic.
- 3- *Car Share Program:* There is currently a carshare location at Caroline Street and Alexandra Street within 500m walking distance of the site where carshare parking is provided and run by Grand River Carshare ([www.grandrivercarshare.ca](http://www.grandrivercarshare.ca)). Information about the car share opportunities can be posted by property management on the bulletin board and membership will allow residents to limit the number of vehicles using the site.

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<sup>1</sup> Memo to Bruce Erb/Ken Mayer- Apartment Trip Generation Studies, Arrow Loft Proposed Redevelopment, April 22, 2003.

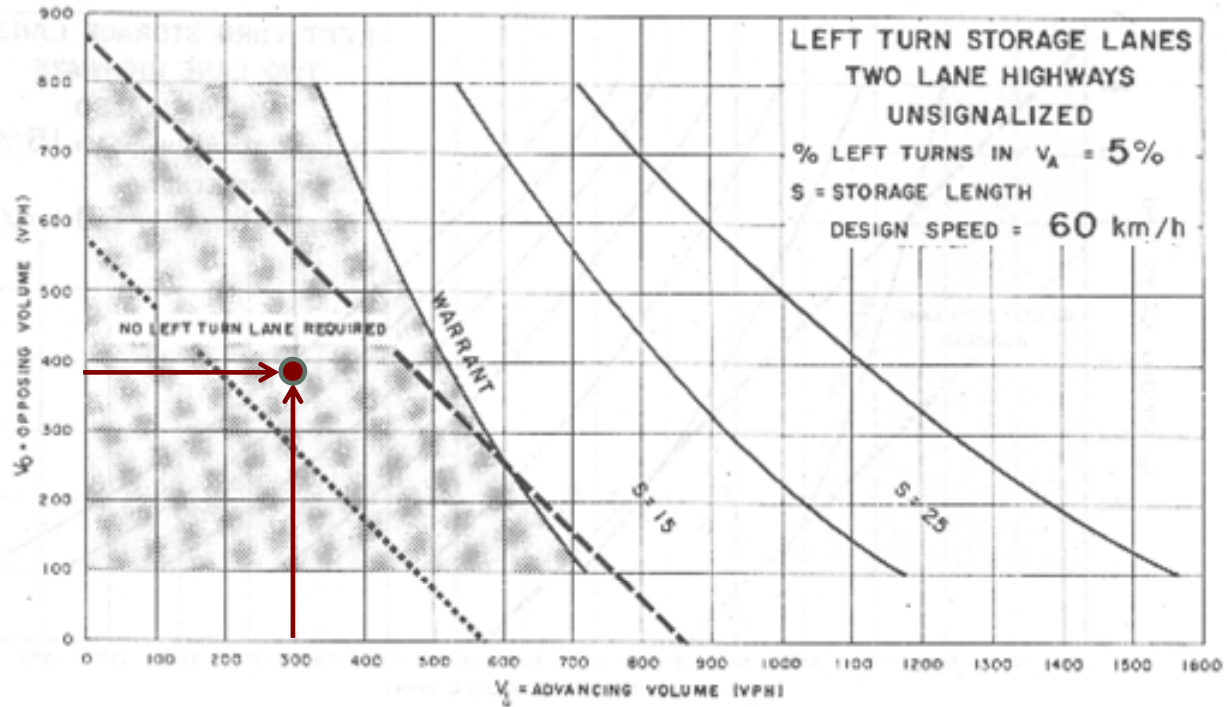


4. *Pedestrian Friendly Development:* The development provides a pedestrian friendly environment through the proposed design elements.
5. *Marketing and Promotion:* Promotion of the TDM Plan and alternative commutes could be provided in the building management and condominium corporation bulletin board as well as paper copies of information from GRT provided to tenants upon purchase or rental of residential units or office and retail space. The property manager could regularly distribute information regarding commuting alternatives on a bulletin board within the lobby. There could be a single point of contact for parking and commute alternatives by designating one of the building management staff to take on the role of TDM coordinator among other functions. The building management will hold regular Spring and Fall special events to promote the sustainability initiatives of the building including the TDM program. It is noted that GRT is able to provide promotional information for potential buyers and for marketing programs.

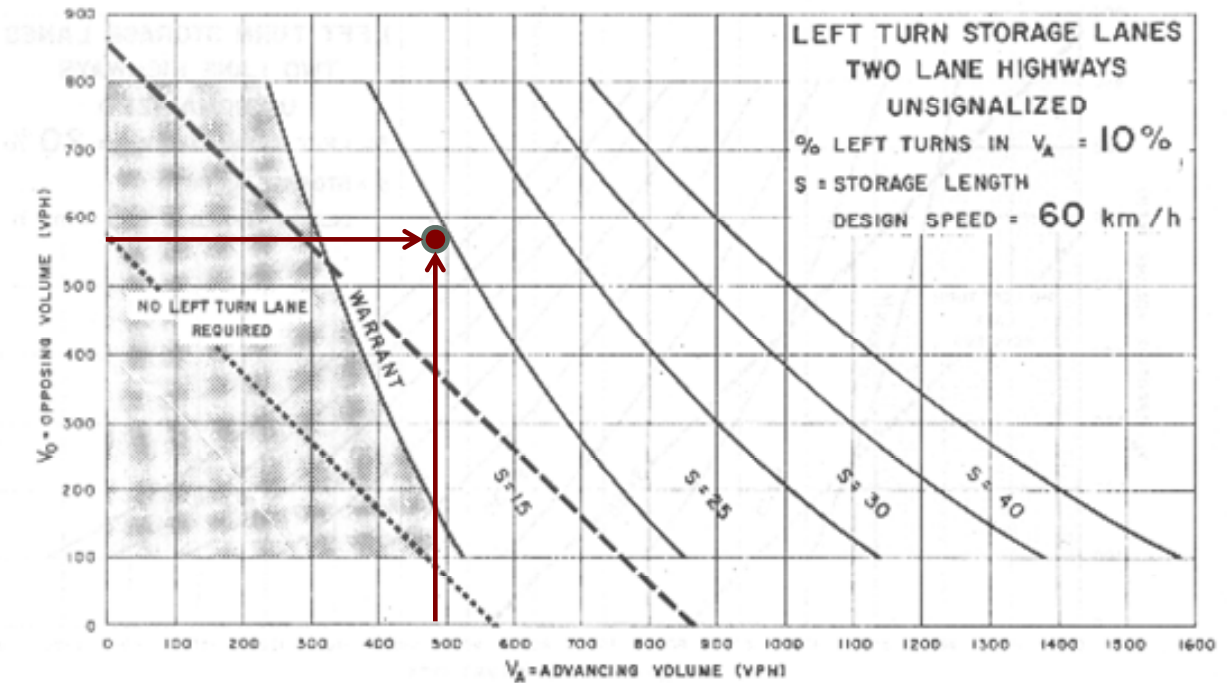
These initiatives will encourage further reduction in vehicle traffic from the site.



AM Peak Hour



PM Peak Hour

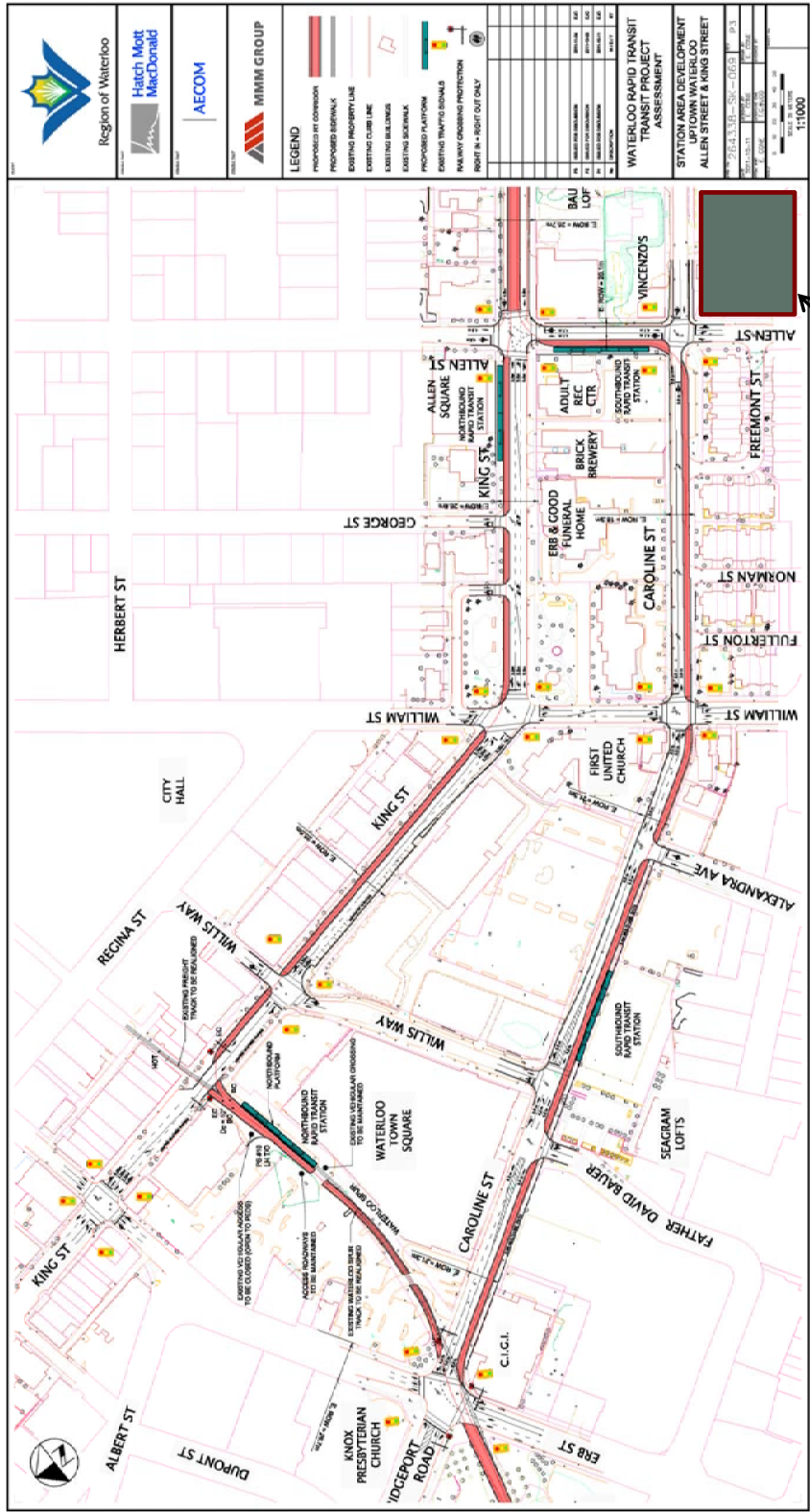


144 Park Tower 2, TIS

**Figure 4.5**



**Left-Turn Lane Warrant Nomographs**



144 Park Street

**Figure 4.6**  
**Uptown Waterloo Rapid Transit Route Alignment and Stations**  
 Source: Region of Waterloo

144 Park Tower 2, TIS





## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

Based on the traffic projections and analyses contained in the report, it is concluded that a southbound left-turn lane with 15 metres of storage is warranted on Park Street at the site entrance based on MTO criteria. With a road width of 10.25 metres which accommodates two travel lanes and 2 bicycle lanes, widening of Park Street will be required. Also, it should be noted that the westbound movements at Park Street and Allen Street West operate at LOS F under existing, background and future conditions and the eastbound movements operate at LOS F under future conditions. However, a signal is not warranted at this intersection under future conditions. Likewise, the northbound left-turn movements at William Street West and Park Street operates at LOS F under existing, background and future conditions, but a signal is also not warranted at this intersection under future conditions. The v/c ratios for these movements are less than 1.0 indicating that there is sufficient capacity at the above noted intersections.

It is the finding of this report that the development will not significantly change the above noted existing and background conditions due to the additional traffic generated.

### **5.2 Recommendations**

It is recommended that a southbound left-turn lane of 15 metres on Park Street at the development entrance be implemented and the TDM initiatives be considered by the developer.



## **Appendix A**

### **Existing Traffic Operations**

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Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	172	9	13	257	86	6	218	25	28	226	369
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			1.00			1.00	0.95
Frnt		0.993			0.962			0.986				0.850
Flt Protected	0.950			0.950				0.999			0.995	
Satd. Flow (prot)	1686	1620	0	1686	1561	0	0	1502	0	0	1608	1473
Flt Permitted	0.321			0.632				0.991			0.946	
Satd. Flow (perm)	564	1620	0	1107	1561	0	0	1490	0	0	1528	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			19			7				410
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flow (vph)	273	191	10	14	286	96	7	242	28	31	251	410
Shared Lane Traffic (%)												
Lane Group Flow (vph)	273	201	0	14	382	0	0	277	0	0	282	410
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		30.0	30.0		34.0	34.0		34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.0	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)	28.9%	62.2%	0.0%	33.3%	33.3%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	37.8%
Yellow Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	1.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	52.0	52.0		35.6	35.6			30.0			30.0	30.0
Actuated g/C Ratio	0.58	0.58		0.40	0.40			0.33			0.33	0.33
v/c Ratio	0.57	0.21		0.03	0.61			0.55			0.55	0.55
Control Delay	14.6	9.6		19.2	26.7			28.9			29.6	5.6
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	14.6	9.6		19.2	26.7			28.9			29.6	5.6
LOS	B	A		B	C			C			C	A
Approach Delay		12.5			26.4			28.9			15.3	
Approach LOS		B			C			C			B	





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	158	28	432	263	37	294
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.980					0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	1617	0	1670	1900	1686	1473
Fl <sub>t</sub> Permitted			0.950		0.950	
Satd. Flow (perm)	1617	0	1670	1900	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	176	31	480	292	41	327
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	480	292	41	327
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	158	28	432	263	37	294
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	176	31	480	292	41	327
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			207		1443	191
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			207		1443	191
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			65		57	62
cM capacity (veh/h)			1371		96	853

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	207	480	292	41	327
Volume Left	0	480	0	41	0
Volume Right	31	0	0	0	327
cSH	1700	1371	1700	96	853
Volume to Capacity	0.12	0.35	0.17	0.43	0.38
Queue Length 95th (m)	0.0	12.0	0.0	13.4	13.6
Control Delay (s)	0.0	9.0	0.0	68.5	11.8
Lane LOS		A		F	B
Approach Delay (s)	0.0	5.6		18.2	
Approach LOS				C	

Intersection Summary					
Average Delay			8.2		
Intersection Capacity Utilization		50.5%		ICU Level of Service	A
Analysis Period (min)		15			

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	28	49	36	25	37	31	53	553	15	16	743	21
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.99	0.96		1.00			1.00	
Fr <sub>t</sub>		0.957				0.850		0.996			0.996	
Fl <sub>t</sub> Protected		0.988			0.980			0.996			0.999	
Satd. Flow (prot)	0	1427	0	0	1617	1488	0	2995	0	0	2994	0
Fl <sub>t</sub> Permitted		0.922			0.867			0.811			0.935	
Satd. Flow (perm)	0	1323	0	0	1422	1430	0	2438	0	0	2802	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28				34		5			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	2%	4%	0%	6%	4%	5%
Adj. Flow (vph)	31	54	40	28	41	34	59	614	17	18	826	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	69	34	0	690	0	0	867	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0		27.0	27.0	27.0	51.0	51.0		51.0	51.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0	57.0	57.0		57.0	57.0	
Total Split (s)	33.0	33.0	0.0	33.0	33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)	36.7%	36.7%	0.0%	36.7%	36.7%	36.7%	63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		29.0			29.0	29.0		60.4			60.4	
Actuated g/C Ratio		0.32			0.32	0.32		0.67			0.67	
v/c Ratio		0.28			0.15	0.07		0.42			0.46	
Control Delay		19.5			22.9	7.9		10.3			10.6	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		19.5			22.9	7.9		10.3			10.6	
LOS		B			C	A		B			B	
Approach Delay		19.5			18.0			10.3			10.6	
Approach LOS		B			B			B			B	

Lanes, Volumes, Timings  
 3: Allen Street & King Street

144 Park Tower 2, TIS  
 Existing PM

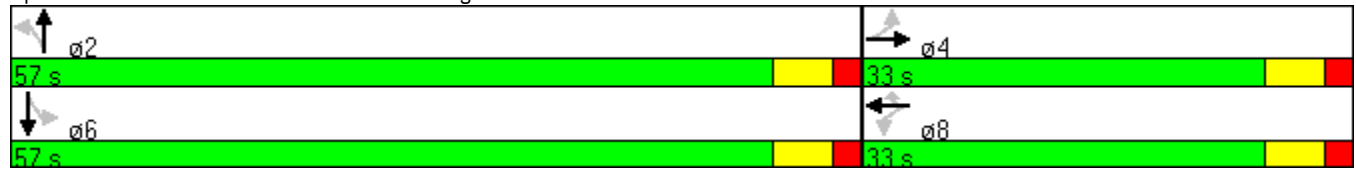


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		12.0			8.3	0.0		32.4			42.4	
Queue Length 95th (m)		25.5			17.8	6.2		45.4			57.3	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		445			458	484		1638			1882	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.28			0.15	0.07		0.42			0.46	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2.7 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	11.5
Intersection LOS:	B
Intersection Capacity Utilization	97.5%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	26	19	22	35	33	54	19	219	31	72	95	13
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.956			0.940			0.985			0.991	
Fl <sub>t</sub> Protected		0.981			0.986			0.996			0.980	
Satd. Flow (prot)	0	1454	0	0	1437	0	0	1521	0	0	1505	0
Fl <sub>t</sub> Permitted		0.981			0.986			0.996			0.980	
Satd. Flow (perm)	0	1454	0	0	1437	0	0	1521	0	0	1505	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	29	21	24	39	37	60	21	243	34	80	106	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	136	0	0	298	0	0	200	0
Sign Control		Stop			Stop			Stop			Stop	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.8%
ICU Level of Service	A
Analysis Period (min)	15



HCM Unsignalized Intersection Capacity Analysis  
 4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
 Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	26	19	22	35	33	54	19	219	31	72	95	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	29	21	24	39	37	60	21	243	34	80	106	14
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	74	136	299	200								
Volume Left (vph)	29	39	21	80								
Volume Right (vph)	24	60	34	14								
Hadj (s)	-0.12	-0.21	-0.06	0.04								
Departure Headway (s)	5.2	5.0	4.7	4.9								
Degree Utilization, x	0.11	0.19	0.39	0.27								
Capacity (veh/h)	613	647	739	697								
Control Delay (s)	8.8	9.2	10.6	9.7								
Approach Delay (s)	8.8	9.2	10.6	9.7								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay				9.9								
HCM Level of Service				A								
Intersection Capacity Utilization				49.8%	ICU Level of Service							A
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	19	18	8	16	38	10	10	333	24	11	431	34
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.976			0.979			0.991			0.990	
Flt Protected		0.979			0.987			0.999			0.999	
Satd. Flow (prot)	0	1433	0	0	1449	0	0	1485	0	0	1483	0
Flt Permitted		0.979			0.987			0.999			0.999	
Satd. Flow (perm)	0	1433	0	0	1449	0	0	1485	0	0	1483	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	21	20	9	18	42	11	11	370	27	12	479	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	71	0	0	408	0	0	529	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	19	18	8	16	38	10	10	333	24	11	431	34
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	21	20	9	18	42	11	11	370	27	12	479	38
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	990	985	538	983	991	409	541			417		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	986	981	538	979	987	401	541			409		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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		
pD queue free %	88	91	98	91	82	98	99			99		
cM capacity (veh/h)	179	235	529	196	233	634	1017			1117		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	71	408	529
Volume Left	21	18	11	12
Volume Right	9	11	27	38
cSH	228	246	1017	1117
Volume to Capacity	0.22	0.29	0.01	0.01
Queue Length 95th (m)	6.1	8.7	0.2	0.2
Control Delay (s)	25.2	25.5	0.4	0.3
Lane LOS	D	D	A	A
Approach Delay (s)	25.2	25.5	0.4	0.3
Approach LOS	D	D		

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization		53.3%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↘		↗	↘	
Volume (vph)	22	35	12	76	90	21	25	305	49	17	373	41
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	1.00		0.99	1.00	
Frnt		0.977			0.972			0.979			0.985	
Flt Protected		0.984		0.950			0.950			0.950		
Satd. Flow (prot)	0	1416	0	1637	1593	0	1686	1609	0	1686	1622	0
Flt Permitted		0.871		0.819			0.466			0.512		
Satd. Flow (perm)	0	1248	0	1282	1593	0	826	1609	0	904	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			22			19			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	24	39	13	84	100	23	28	339	54	19	414	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	84	123	0	28	393	0	19	460	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.3		13.3	13.3		42.7	42.7		42.7	42.7	
Actuated g/C Ratio		0.22		0.22	0.22		0.71	0.71		0.71	0.71	
v/c Ratio		0.26		0.30	0.33		0.05	0.34		0.03	0.40	
Control Delay		18.6		21.8	18.4		4.9	5.8		4.8	6.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		18.6		21.8	18.4		4.9	5.8		4.8	6.4	
LOS		B		C	B		A	A		A	A	
Approach Delay		18.6			19.8			5.8			6.4	
Approach LOS		B			B			A			A	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		5.8		7.9	9.4		0.9	14.2		0.6	18.0	
Queue Length 95th (m)		13.8		16.4	19.5		3.7	33.9		2.9	42.3	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		466		470	598		588	1150		644	1158	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.16		0.18	0.21		0.05	0.34		0.03	0.40	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization	44.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street

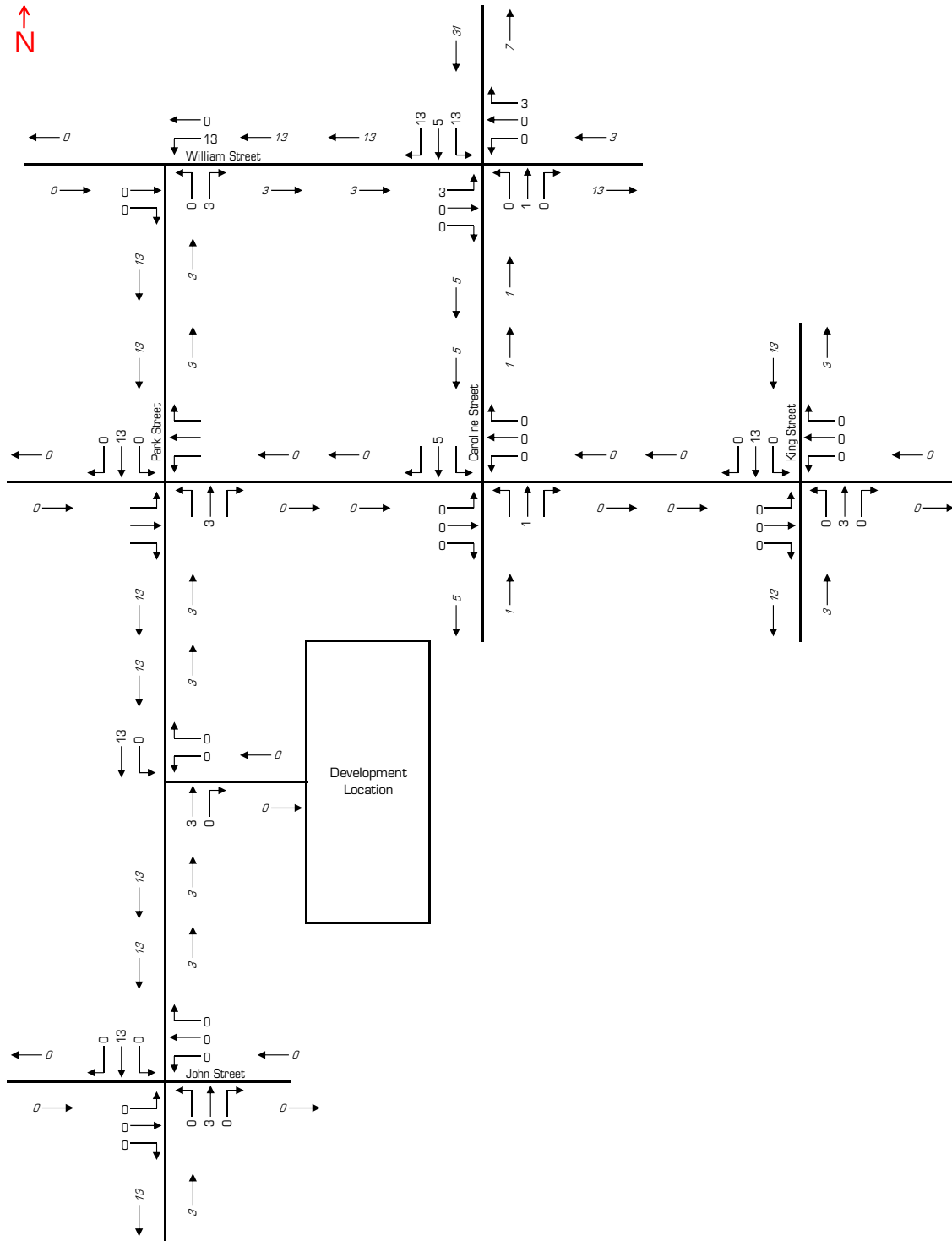


## **Appendix B**

### **Traffic Volumes from Other Developments**

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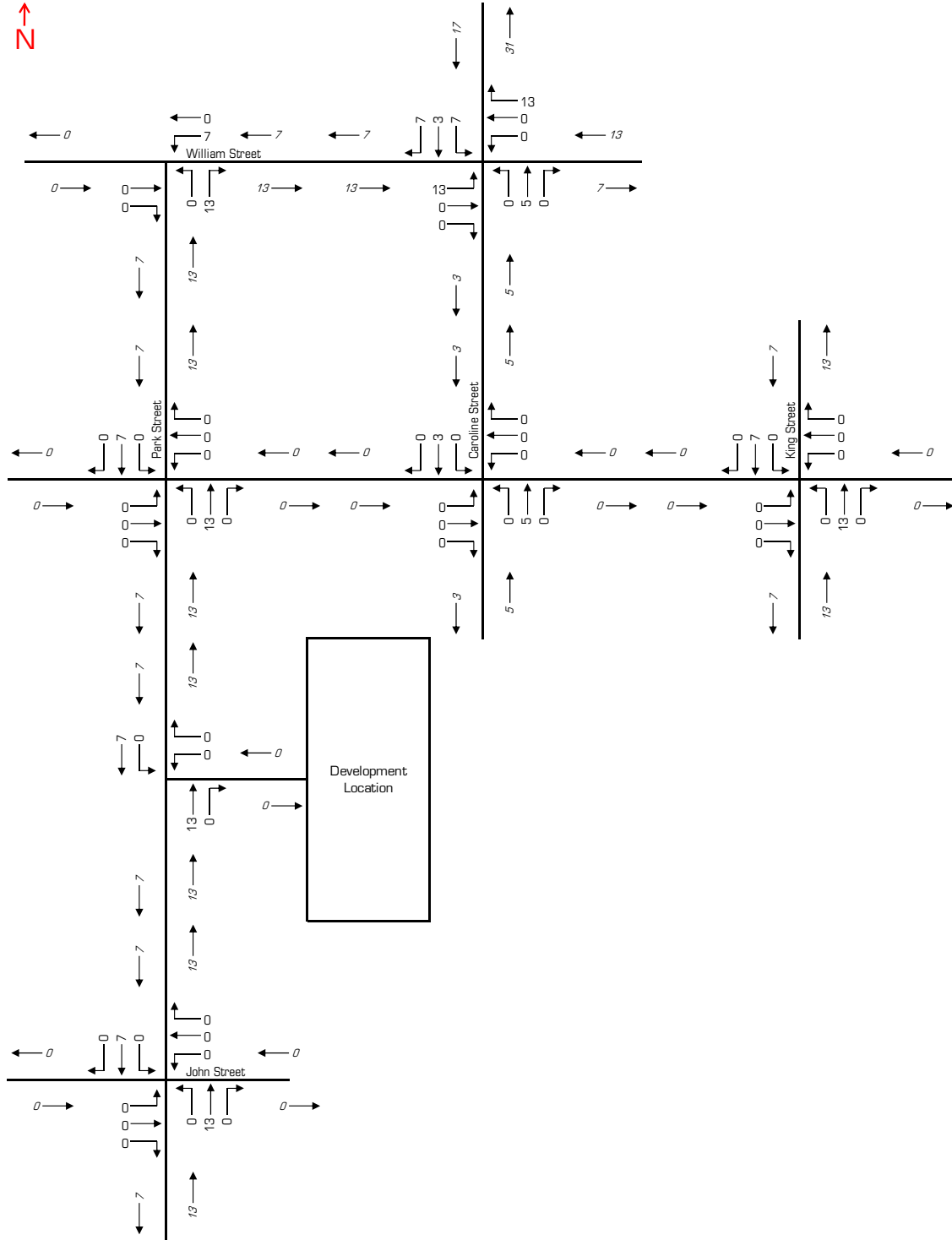
144 Park Tower 2, TIS

## Appendix B1a



**AM Peak Hour Alexandria Building Traffic**



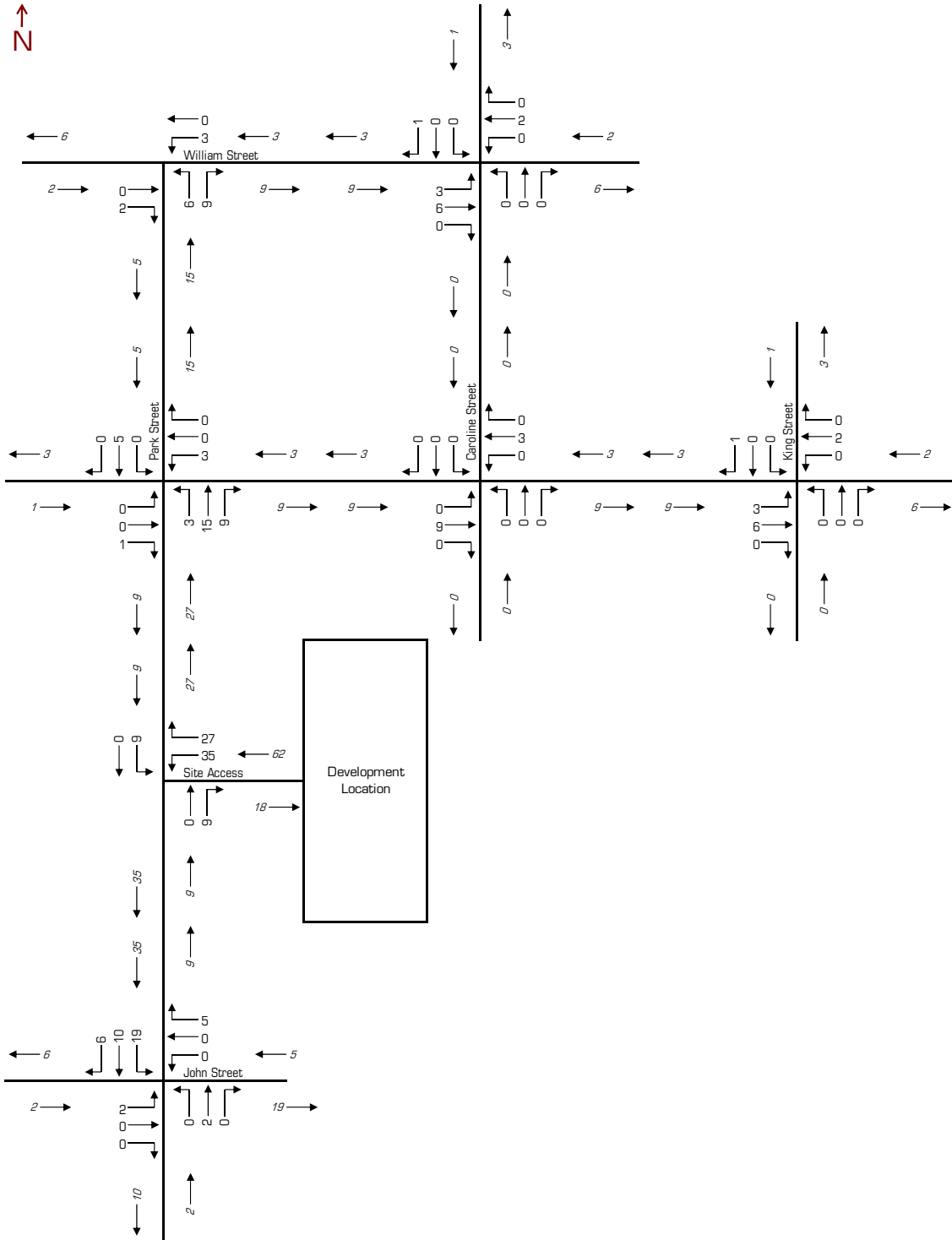


144 Park Tower 2, TIS

## Appendix B1b



**PM Peak Hour Alexandria Building Traffic**

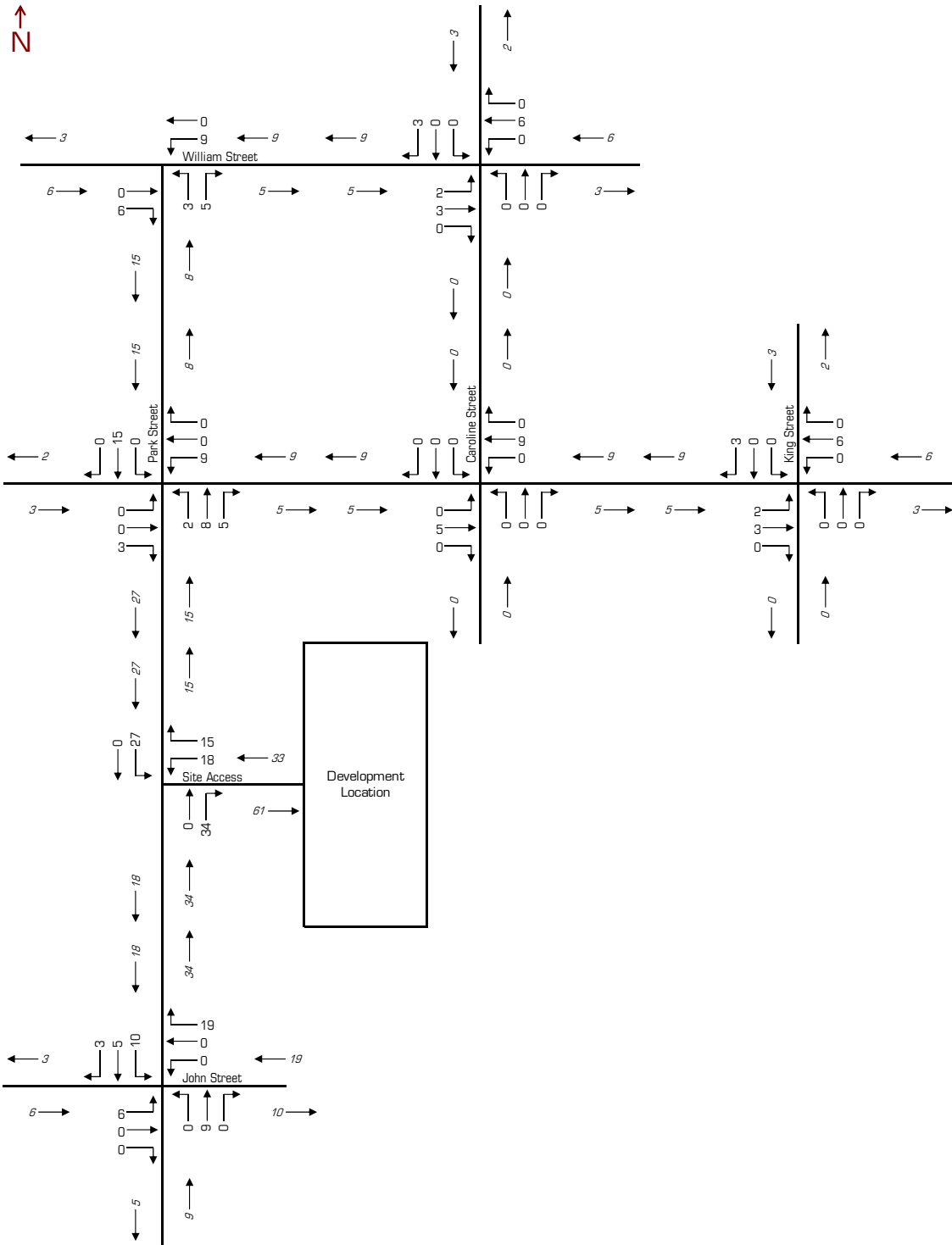


144 Park Tower 2, TIS

## Appendix B2a



**AM Peak Hour 21 Allen Street Traffic**



144 Park Tower 2, TIS

## Appendix B2b



**PM Peak Hour 21 Allen Street Traffic**

## **Appendix C**

### **Background Traffic Operations**

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Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	362	356	22	11	97	56	11	177	21	70	242	198
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00		0.99	0.98			1.00			1.00	0.95
Frnt		0.991			0.945			0.987				0.850
Flt Protected	0.950			0.950				0.997			0.989	
Satd. Flow (prot)	1686	1612	0	1686	1482	0	0	1470	0	0	1598	1458
Flt Permitted	0.525			0.517				0.975			0.856	
Satd. Flow (perm)	914	1612	0	908	1482	0	0	1437	0	0	1381	1389
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			35			7				220
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	5%	0%	3%	4%	0%	4%	0%	6%	1%	2%
Adj. Flow (vph)	402	396	24	12	108	62	12	197	23	78	269	220
Shared Lane Traffic (%)												
Lane Group Flow (vph)	402	420	0	12	170	0	0	232	0	0	347	220
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	19.0		19.0	19.0		23.0	23.0		23.0	23.0	23.0
Minimum Split (s)	9.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	26.0	51.0	0.0	25.0	25.0	0.0	29.0	29.0	0.0	29.0	29.0	29.0
Total Split (%)	32.5%	63.8%	0.0%	31.3%	31.3%	0.0%	36.3%	36.3%	0.0%	36.3%	36.3%	36.3%
Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	47.0	47.0		26.9	26.9			25.0			25.0	25.0
Actuated g/C Ratio	0.59	0.59		0.34	0.34			0.31			0.31	0.31
v/c Ratio	0.58	0.44		0.04	0.33			0.51			0.80	0.38
Control Delay	12.8	10.9		21.3	19.1			26.6			41.7	5.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	12.8	10.9		21.3	19.1			26.6			41.7	5.2
LOS	B	B		C	B			C			D	A
Approach Delay		11.8			19.3			26.6			27.6	
Approach LOS		B			B			C			C	

Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	29.7	31.3		1.2	14.5			27.3			47.3	0.0
Queue Length 95th (m)	47.3	50.4		5.2	33.4			48.0			#89.4	14.2
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	749	950		306	522			454			432	585
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.54	0.44		0.04	0.33			0.51			0.80	0.38

**Intersection Summary**

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 8 (10%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

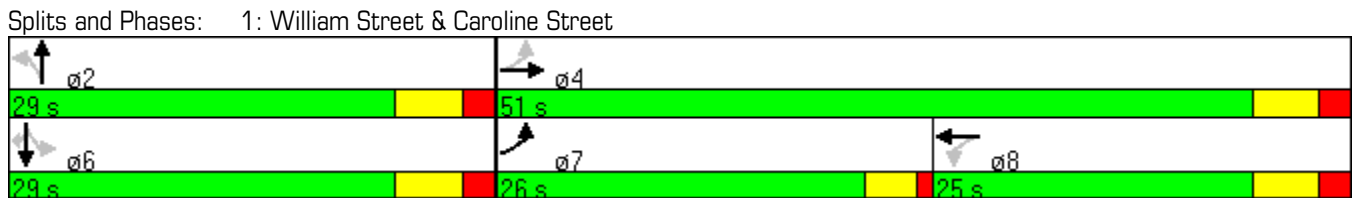
Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.4 Intersection LOS: B

Intersection Capacity Utilization 90.7% ICU Level of Service E

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	372	66	224	113	24	359
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.980					0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	1617	0	1637	1845	1686	1473
Fl <sub>t</sub> Permitted			0.950		0.950	
Satd. Flow (perm)	1617	0	1637	1845	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	3%	3%	0%	1%
Adj. Flow (vph)	413	73	249	126	27	399
Shared Lane Traffic (%)						
Lane Group Flow (vph)	486	0	249	126	27	399
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.0%
	ICU Level of Service B
Analysis Period (min)	15



HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	372	66	224	113	24	359
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	413	73	249	126	27	399
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			487	1073	450	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			487	1073	450	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
pD queue free %			77	86	35	
cM capacity (veh/h)			1071	189	611	

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	487	249	126	27	399
Volume Left	0	249	0	27	0
Volume Right	73	0	0	0	399
cSH	1700	1071	1700	189	611
Volume to Capacity	0.29	0.23	0.07	0.14	0.65
Queue Length 95th (m)	0.0	6.8	0.0	3.6	35.8
Control Delay (s)	0.0	9.4	0.0	27.2	21.3
Lane LOS		A		D	C
Approach Delay (s)	0.0	6.2		21.6	
Approach LOS				C	

Intersection Summary					
Average Delay			9.0		
Intersection Capacity Utilization			58.0%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	22	50	15	12	42	30	42	575	35	20	571	22
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.96		1.00			1.00	
Fr <sub>t</sub>		0.976				0.850		0.992			0.995	
Fl <sub>t</sub> Protected		0.988			0.989			0.997			0.998	
Satd. Flow (prot)	0	1469	0	0	1632	1488	0	3009	0	0	2987	0
Fl <sub>t</sub> Permitted		0.931			0.943			0.873			0.921	
Satd. Flow (perm)	0	1377	0	0	1551	1435	0	2634	0	0	2755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				33		11			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	3%	3%	11%	4%	0%
Adj. Flow (vph)	24	56	17	13	47	33	47	639	39	22	634	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	0	60	33	0	725	0	0	680	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0	26.0	42.0	42.0		42.0	42.0	
Minimum Split (s)	32.0	32.0		32.0	32.0	32.0	48.0	48.0		48.0	48.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	32.0	48.0	48.0	0.0	48.0	48.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		28.0			28.0	28.0		51.2			51.2	
Actuated g/C Ratio		0.35			0.35	0.35		0.64			0.64	
v/c Ratio		0.20			0.11	0.06		0.43			0.39	
Control Delay		16.7			18.4	6.9		10.7			10.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		16.7			18.4	6.9		10.7			10.2	
LOS		B			B	A		B			B	
Approach Delay		16.7			14.3			10.7			10.2	
Approach LOS		B			B			B			B	

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others AM

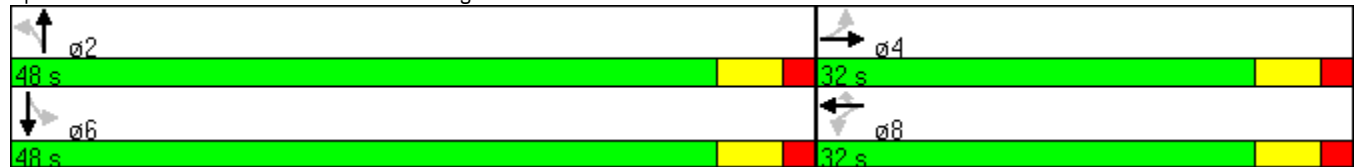


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.4			6.0	0.0		32.2			29.3	
Queue Length 95th (m)		18.6			13.7	5.3		45.8			41.5	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		492			543	524		1690			1765	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.20			0.11	0.06		0.43			0.39	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	40.8 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	11.1
Intersection LOS:	B
Intersection Capacity Utilization	88.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others AM



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	25	51	26	30	21	52	1	94	11	84	167	9
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.966			0.931			0.986			0.995	
Fl <sub>t</sub> Protected		0.988			0.986						0.984	
Satd. Flow (prot)	0	1479	0	0	1364	0	0	1502	0	0	1494	0
Fl <sub>t</sub> Permitted		0.988			0.986						0.984	
Satd. Flow (perm)	0	1479	0	0	1364	0	0	1502	0	0	1494	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	15%	0%	0%	100%	1%	0%	5%	0%	0%
Adj. Flow (vph)	28	57	29	33	23	58	1	104	12	93	186	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	114	0	0	117	0	0	289	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.9%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Background + Others AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	51	26	30	21	52	1	94	11	84	167	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	57	29	33	23	58	1	104	12	93	186	10
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	113	114	118	289								
Volume Left (vph)	28	33	1	93								
Volume Right (vph)	29	58	12	10								
Hadj (s)	-0.10	-0.17	-0.03	0.07								
Departure Headway (s)	5.0	4.9	4.8	4.7								
Degree Utilization, x	0.16	0.16	0.16	0.38								
Capacity (veh/h)	660	668	697	728								
Control Delay (s)	8.9	8.8	8.7	10.5								
Approach Delay (s)	8.9	8.8	8.7	10.5								
Approach LOS	A	A	A	B								
Intersection Summary												
Delay				9.6								
HCM Level of Service				A								
Intersection Capacity Utilization				40.9%	ICU Level of Service							A
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	43	5	6	17	3	9	336	52	26	280	19
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.989			0.986			0.982			0.992	
Flt Protected		0.985			0.988			0.999			0.996	
Satd. Flow (prot)	0	1440	0	0	1298	0	0	1459	0	0	1477	0
Flt Permitted		0.985			0.988			0.999			0.996	
Satd. Flow (perm)	0	1440	0	0	1298	0	0	1459	0	0	1477	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	0%	0%	33%	7%	0%	0%	1%	0%	0%	0%	6%
Adj. Flow (vph)	23	48	6	7	19	3	10	373	58	29	311	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	29	0	0	441	0	0	361	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	43	5	6	17	3	9	336	52	26	280	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	48	6	7	19	3	10	373	58	29	311	21
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked												
vC, conflicting volume	844	875	362	867	856	428	356			451		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	844	875	362	867	856	428	356			451		
tC, single (s)	7.1	6.5	6.2	7.4	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.8	4.1	3.3	2.2			2.2		
pD queue free %	90	82	99	97	93	99	99			97		
cM capacity (veh/h)	243	270	665	191	270	617	1189			1101		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	77	29	441	361
Volume Left	23	7	10	29
Volume Right	6	3	58	21
cSH	272	262	1189	1101
Volume to Capacity	0.28	0.11	0.01	0.03
Queue Length 95th (m)	8.4	2.8	0.2	0.6
Control Delay (s)	23.3	20.5	0.3	0.9
Lane LOS	C	C	A	A
Approach Delay (s)	23.3	20.5	0.3	0.9
Approach LOS	C	C		

Intersection Summary			
Average Delay		3.1	
Intersection Capacity Utilization		53.5%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔		↖	↗		↖	↗		↖	↗	
Volume (vph)	10	68	14	35	31	20	11	383	81	27	236	31
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	0.99		1.00	1.00	
Frnt		0.979			0.941			0.974			0.983	
Flt Protected		0.995		0.950			0.950			0.950		
Satd. Flow (prot)	0	1442	0	1637	1436	0	1686	1572	0	1074	1604	0
Flt Permitted		0.964		0.745			0.579			0.432		
Satd. Flow (perm)	0	1395	0	1174	1436	0	1026	1572	0	486	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			22			25			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	0%	8%	3%	11%	0%	0%	1%	5%	57%	1%	0%
Adj. Flow (vph)	11	76	16	39	34	22	12	426	90	30	262	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	39	56	0	12	516	0	30	296	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		12.8		12.8	12.8		43.2	43.2		43.2	43.2	
Actuated g/C Ratio		0.21		0.21	0.21		0.72	0.72		0.72	0.72	
v/c Ratio		0.33		0.16	0.17		0.02	0.45		0.09	0.26	
Control Delay		20.2		20.3	14.4		4.3	6.6		5.1	4.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		20.2		20.3	14.4		4.3	6.6		5.1	4.8	
LOS		C		C	B		A	A		A	A	
Approach Delay		20.2			16.8			6.5			4.9	
Approach LOS		C			B			A			A	





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.1		3.6	3.1		0.4	20.8		0.9	9.9	
Queue Length 95th (m)		18.1		9.5	10.0		1.9	46.3		4.0	22.5	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		522		430	540		739	1139		350	1159	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.20		0.09	0.10		0.02	0.45		0.09	0.26	

**Intersection Summary**

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay:	8.3
Intersection LOS:	A
Intersection Capacity Utilization	49.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street



Lanes, Volumes, Timings  
 7: Development Driveway & Park Street

144 Park Tower 2, TIS  
 2016 Background + Others AM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	35	27	370	9	9	282
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941		0.997			
Flt Protected	0.973					0.998
Satd. Flow (prot)	1616	0	1629	0	0	1647
Flt Permitted	0.973					0.998
Satd. Flow (perm)	1616	0	1629	0	0	1647
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Adj. Flow (vph)	39	30	411	10	10	313
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	0	421	0	0	323
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.0% ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
7: Development Driveway & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		NT		ST	ST
Volume (veh/h)	35	27	370	9	9	282
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	30	411	10	10	313
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.93	0.93			0.93	
vC, conflicting volume	749	416			421	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	696	339			345	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	90	95			99	
cM capacity (veh/h)	380	661			1144	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	69	421	323
Volume Left	39	0	10
Volume Right	30	10	0
cSH	466	1700	1144
Volume to Capacity	0.15	0.25	0.01
Queue Length 95th (m)	3.9	0.0	0.2
Control Delay (s)	14.1	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	14.1	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization		36.0%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	193	10	14	290	108	7	246	28	38	253	417
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			1.00			1.00	0.95
Frnt		0.993			0.959			0.987				0.850
Flt Protected	0.950			0.950				0.999			0.994	
Satd. Flow (prot)	1686	1620	0	1686	1554	0	0	1504	0	0	1603	1473
Flt Permitted	0.229			0.618				0.990			0.921	
Satd. Flow (perm)	403	1620	0	1083	1554	0	0	1490	0	0	1484	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			21			7				463
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flow (vph)	316	214	11	16	322	120	8	273	31	42	281	463
Shared Lane Traffic (%)												
Lane Group Flow (vph)	316	225	0	16	442	0	0	312	0	0	323	463
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		30.0	30.0		34.0	34.0		34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.0	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)	28.9%	62.2%	0.0%	33.3%	33.3%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	37.8%
Yellow Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	1.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	52.0	52.0		32.9	32.9			30.0			30.0	30.0
Actuated g/C Ratio	0.58	0.58		0.37	0.37			0.33			0.33	0.33
v/c Ratio	0.71	0.24		0.04	0.76			0.62			0.65	0.60
Control Delay	20.0	9.9		21.9	36.0			31.2			33.0	5.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	20.0	9.9		21.9	36.0			31.2			33.0	5.9
LOS	C	A		C	D			C			C	A
Approach Delay		15.8			35.5			31.2			17.0	
Approach LOS		B			D			C			B	

Lanes, Volumes, Timings  
 1: William Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Background + Others PM

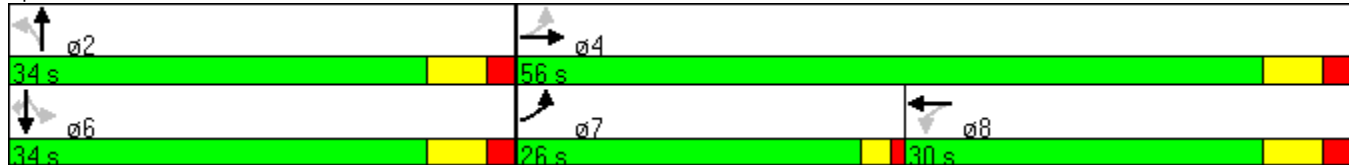


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	25.9	17.0		1.7	62.0			43.3			46.5	0.0
Queue Length 95th (m)	45.2	28.5		6.6 #	128.5			70.5			74.7	20.9
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	546	938		397	582			501			495	777
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.58	0.24		0.04	0.76			0.62			0.65	0.60

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 48 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 22.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 90.0%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	174	37	493	290	44	343
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.976					0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	1610	0	1670	1900	1686	1473
Fl <sub>t</sub> Permitted			0.950		0.950	
Satd. Flow (perm)	1610	0	1670	1900	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	193	41	548	322	49	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	234	0	548	322	49	381
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.7%
	ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	174	37	493	290	44	343
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	193	41	548	322	49	381
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			234		1632	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			234		1632	214
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			59		27	54
cM capacity (veh/h)			1339		67	829

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	234	548	322	49	381
Volume Left	0	548	0	49	0
Volume Right	41	0	0	0	381
cSH	1700	1339	1700	67	829
Volume to Capacity	0.14	0.41	0.19	0.73	0.46
Queue Length 95th (m)	0.0	15.3	0.0	24.8	18.4
Control Delay (s)	0.0	9.5	0.0	145.4	13.0
Lane LOS		A		F	B
Approach Delay (s)	0.0	6.0		28.0	
Approach LOS				D	

Intersection Summary					
Average Delay			11.3		
Intersection Capacity Utilization			55.7%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	33	57	40	28	47	34	59	624	17	18	827	26
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.99	0.96		1.00			1.00	
Frnt		0.959				0.850		0.996			0.996	
Flt Protected		0.987			0.982			0.996			0.999	
Satd. Flow (prot)	0	1428	0	0	1620	1488	0	2995	0	0	2994	0
Flt Permitted		0.917			0.873			0.785			0.931	
Satd. Flow (perm)	0	1318	0	0	1433	1430	0	2360	0	0	2790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				38		5			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	2%	4%	0%	6%	4%	5%
Adj. Flow (vph)	37	63	44	31	52	38	66	693	19	20	919	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	0	0	83	38	0	778	0	0	968	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0		27.0	27.0	27.0	51.0	51.0		51.0	51.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0	57.0	57.0		57.0	57.0	
Total Split (s)	33.0	33.0	0.0	33.0	33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)	36.7%	36.7%	0.0%	36.7%	36.7%	36.7%	63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		29.0			29.0	29.0		53.0			53.0	
Actuated g/C Ratio		0.32			0.32	0.32		0.59			0.59	
v/c Ratio		0.33			0.18	0.08		0.56			0.59	
Control Delay		21.2			23.3	7.7		13.2			13.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		21.2			23.3	7.7		13.2			13.4	
LOS		C			C	A		B			B	
Approach Delay		21.2			18.4			13.2			13.4	
Approach LOS		C			B			B			B	



Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		14.9			10.1	0.0		39.1			50.0	
Queue Length 95th (m)		30.0			20.7	6.4		54.7			67.5	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		442			462	487		1392			1645	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.33			0.18	0.08		0.56			0.59	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2.7 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	14.2
Intersection LOS:	B
Intersection Capacity Utilization	102.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others PM



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	29	26	24	39	45	60	21	247	34	79	108	14
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.959			0.943			0.985			0.990	
Fl <sub>t</sub> Protected		0.982			0.987			0.997			0.981	
Satd. Flow (prot)	0	1460	0	0	1443	0	0	1522	0	0	1505	0
Fl <sub>t</sub> Permitted		0.982			0.987			0.997			0.981	
Satd. Flow (perm)	0	1460	0	0	1443	0	0	1522	0	0	1505	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	32	29	27	43	50	67	23	274	38	88	120	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	0	0	160	0	0	335	0	0	224	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.2%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	29	26	24	39	45	60	21	247	34	79	108	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	32	29	27	43	50	67	23	274	38	88	120	16
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	88	160	336	223								
Volume Left (vph)	32	43	23	88								
Volume Right (vph)	27	67	38	16								
Hadj (s)	-0.11	-0.20	-0.05	0.04								
Departure Headway (s)	5.5	5.3	4.9	5.1								
Degree Utilization, x	0.13	0.23	0.45	0.32								
Capacity (veh/h)	575	615	710	664								
Control Delay (s)	9.3	9.9	11.8	10.4								
Approach Delay (s)	9.3	9.9	11.8	10.4								
Approach LOS	A	A	B	B								
Intersection Summary												
Delay				10.8								
HCM Level of Service				B								
Intersection Capacity Utilization				55.2%	ICU Level of Service							B
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	20	12	27	42	11	13	389	31	12	498	38
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.970			0.982			0.990			0.991	
Flt Protected		0.981			0.983			0.999			0.999	
Satd. Flow (prot)	0	1427	0	0	1448	0	0	1484	0	0	1484	0
Flt Permitted		0.981			0.983			0.999			0.999	
Satd. Flow (perm)	0	1427	0	0	1448	0	0	1484	0	0	1484	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	23	22	13	30	47	12	14	432	34	13	553	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	89	0	0	480	0	0	608	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.3%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	20	12	27	42	11	13	389	31	12	498	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	22	13	30	47	12	14	432	34	13	553	42
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked	0.98	0.98		0.98	0.98	0.98				0.98		
vC, conflicting volume	1145	1141	614	1140	1145	475	620			487		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1139	1134	614	1133	1138	457	620			469		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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		
pO queue free %	82	88	97	79	75	98	98			99		
cM capacity (veh/h)	130	188	479	146	187	584	951			1051		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	59	89	481	609
Volume Left	23	30	14	13
Volume Right	13	12	34	42
cSH	181	187	951	1051
Volume to Capacity	0.33	0.48	0.02	0.01
Queue Length 95th (m)	10.0	17.2	0.3	0.3
Control Delay (s)	34.2	40.7	0.4	0.3
Lane LOS	D	E	A	A
Approach Delay (s)	34.2	40.7	0.4	0.3
Approach LOS	D	E		

Intersection Summary			
Average Delay		4.9	
Intersection Capacity Utilization		58.3%	ICU Level of Service B
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↗		↖	↗		↖	↗	
Volume (vph)	30	39	13	84	99	42	28	359	54	29	424	48
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	1.00		0.99	1.00	
Frnt		0.979			0.955			0.980			0.985	
Flt Protected		0.982		0.950			0.950			0.950		
Satd. Flow (prot)	0	1422	0	1637	1559	0	1686	1611	0	1686	1622	0
Flt Permitted		0.833		0.778			0.424			0.467		
Satd. Flow (perm)	0	1201	0	1221	1559	0	752	1611	0	825	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			40			18			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	33	43	14	93	110	47	31	399	60	32	471	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	93	157	0	31	459	0	32	524	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.3		13.3	13.3		42.7	42.7		42.7	42.7	
Actuated g/C Ratio		0.22		0.22	0.22		0.71	0.71		0.71	0.71	
v/c Ratio		0.32		0.34	0.42		0.06	0.40		0.05	0.45	
Control Delay		19.9		22.9	18.1		5.0	6.4		4.9	7.1	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		19.9		22.9	18.1		5.0	6.4		4.9	7.1	
LOS		B		C	B		A	A		A	A	
Approach Delay		19.9			19.9			6.3			6.9	
Approach LOS		B			B			A			A	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		7.1		8.8	11.1		0.9	17.8		1.0	21.8	
Queue Length 95th (m)		16.1		17.9	22.7		4.1	42.0		4.2	51.0	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		449		448	597		535	1151		587	1158	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.20		0.21	0.26		0.06	0.40		0.05	0.45	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay:	9.9
Intersection LOS:	A
Intersection Capacity Utilization	56.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street



Lanes, Volumes, Timings  
 7: Development Entrance & Park Street

144 Park Tower 2, TIS  
 2016 Background + Others PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	18	15	418	34	27	509
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938		0.990			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1613	0	1634	0	0	1630
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1613	0	1634	0	0	1630
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	20	17	464	38	30	566
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	502	0	0	596
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.2%
ICU Level of Service	C
Analysis Period (min)	15



HCM Unsignalized Intersection Capacity Analysis  
7: Development Entrance & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	15	418	34	27	509
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	20	17	464	38	30	566
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1109	483			502	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1074	393			413	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	91	97			97	
cM capacity (veh/h)	219	607			1062	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	37	502	596
Volume Left	20	0	30
Volume Right	17	38	0
cSH	309	1700	1062
Volume to Capacity	0.12	0.30	0.03
Queue Length 95th (m)	3.0	0.0	0.7
Control Delay (s)	18.2	0.0	0.8
Lane LOS	C		A
Approach Delay (s)	18.2	0.0	0.8
Approach LOS	C		

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization		66.2%	ICU Level of Service C
Analysis Period (min)		15	

## **Appendix D**

### **Future Total Traffic Operations**

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Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	366	364	22	11	99	56	11	177	21	70	242	199
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00		0.99	0.98			1.00			1.00	0.95
Frnt		0.992			0.946			0.987				0.850
Flt Protected	0.950			0.950				0.997			0.989	
Satd. Flow (prot)	1686	1614	0	1686	1484	0	0	1470	0	0	1598	1458
Flt Permitted	0.522			0.513				0.975			0.856	
Satd. Flow (perm)	909	1614	0	901	1484	0	0	1437	0	0	1381	1389
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			34			7				221
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	5%	0%	3%	4%	0%	4%	0%	6%	1%	2%
Adj. Flow (vph)	407	404	24	12	110	62	12	197	23	78	269	221
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	428	0	12	172	0	0	232	0	0	347	221
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	19.0		19.0	19.0		23.0	23.0		23.0	23.0	23.0
Minimum Split (s)	9.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	26.0	51.0	0.0	25.0	25.0	0.0	29.0	29.0	0.0	29.0	29.0	29.0
Total Split (%)	32.5%	63.8%	0.0%	31.3%	31.3%	0.0%	36.3%	36.3%	0.0%	36.3%	36.3%	36.3%
Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	47.0	47.0		26.8	26.8			25.0			25.0	25.0
Actuated g/C Ratio	0.59	0.59		0.34	0.34			0.31			0.31	0.31
v/c Ratio	0.59	0.45		0.04	0.33			0.51			0.80	0.38
Control Delay	12.9	11.0		21.4	19.5			26.6			41.7	5.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	12.9	11.0		21.4	19.5			26.6			41.7	5.2
LOS	B	B		C	B			C			D	A
Approach Delay		11.9			19.6			26.6			27.5	
Approach LOS		B			B			C			C	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	30.2	32.3		1.2	14.9			27.3			47.3	0.0
Queue Length 95th (m)	48.1	51.8		5.2	33.8			48.0		#89.4	14.2	
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	748	951		302	520			454			432	586
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.54	0.45		0.04	0.33			0.51			0.80	0.38

**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 8 (10%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 19.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 91.1%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street





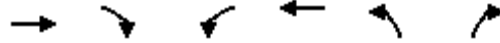
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↙	↑	↙	↖
Volume (vph)	372	68	226	113	32	371
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.979					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1615	0	1637	1845	1686	1473
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1615	0	1637	1845	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	3%	3%	0%	1%
Adj. Flow (vph)	413	76	251	126	36	412
Shared Lane Traffic (%)						
Lane Group Flow (vph)	489	0	251	126	36	412
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.9%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	372	68	226	113	32	371
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	413	76	251	126	36	412
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			489		1079	451
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			489		1079	451
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			77		81	32
cM capacity (veh/h)			1069		187	610

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	489	251	126	36	412
Volume Left	0	251	0	36	0
Volume Right	76	0	0	0	412
cSH	1700	1069	1700	187	610
Volume to Capacity	0.29	0.23	0.07	0.19	0.68
Queue Length 95th (m)	0.0	6.8	0.0	5.1	38.7
Control Delay (s)	0.0	9.4	0.0	28.8	22.3
Lane LOS		A		D	C
Approach Delay (s)	0.0	6.3		22.8	
Approach LOS				C	

Intersection Summary					
Average Delay			9.6		
Intersection Capacity Utilization			58.9%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	26	58	15	12	44	30	42	575	35	20	571	23
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.96		1.00			1.00	
Fr <sub>t</sub>		0.979				0.850		0.992			0.994	
Fl <sub>t</sub> Protected		0.987			0.990			0.997			0.998	
Satd. Flow (prot)	0	1475	0	0	1634	1488	0	3009	0	0	2984	0
Fl <sub>t</sub> Permitted		0.923			0.942			0.873			0.922	
Satd. Flow (perm)	0	1372	0	0	1550	1435	0	2634	0	0	2756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				33		11			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	3%	3%	11%	4%	0%
Adj. Flow (vph)	29	64	17	13	49	33	47	639	39	22	634	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	62	33	0	725	0	0	682	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0	26.0	42.0	42.0		42.0	42.0	
Minimum Split (s)	32.0	32.0		32.0	32.0	32.0	48.0	48.0		48.0	48.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	32.0	48.0	48.0	0.0	48.0	48.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		28.0			28.0	28.0		51.2			51.2	
Actuated g/C Ratio		0.35			0.35	0.35		0.64			0.64	
v/c Ratio		0.22			0.11	0.06		0.43			0.39	
Control Delay		17.6			18.4	6.9		10.7			10.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		17.6			18.4	6.9		10.7			10.2	
LOS		B			B	A		B			B	
Approach Delay		17.6			14.4			10.7			10.2	
Approach LOS		B			B			B			B	



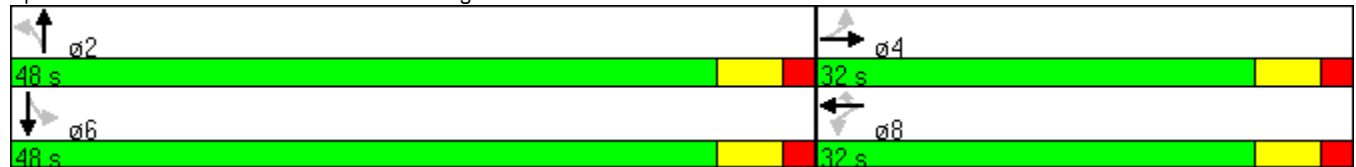


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		10.0			6.2	0.0		32.2			29.4	
Queue Length 95th (m)		21.2			14.1	5.3		45.8			41.5	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		489			543	524		1690			1766	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.22			0.11	0.06		0.43			0.39	

**Intersection Summary**

















Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	40.8 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	11.2
Intersection LOS:	B
Intersection Capacity Utilization	88.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total AM

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	63	26	30	24	52	1	94	11	84	167	9
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.969			0.934			0.986			0.995	
Fl <sub>t</sub> Protected		0.989			0.986						0.984	
Satd. Flow (prot)	0	1485	0	0	1370	0	0	1502	0	0	1494	0
Fl <sub>t</sub> Permitted		0.989			0.986						0.984	
Satd. Flow (perm)	0	1485	0	0	1370	0	0	1502	0	0	1494	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	15%	0%	0%	100%	1%	0%	5%	0%	0%
Adj. Flow (vph)	28	70	29	33	27	58	1	104	12	93	186	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	118	0	0	117	0	0	289	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Total AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	63	26	30	24	52	1	94	11	84	167	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	70	29	33	27	58	1	104	12	93	186	10
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	127	118	118	289								
Volume Left (vph)	28	33	1	93								
Volume Right (vph)	29	58	12	10								
Hadj (s)	-0.09	-0.17	-0.03	0.07								
Departure Headway (s)	5.0	4.9	4.9	4.8								
Degree Utilization, x	0.18	0.16	0.16	0.38								
Capacity (veh/h)	657	662	685	719								
Control Delay (s)	9.0	8.9	8.8	10.7								
Approach Delay (s)	9.0	8.9	8.8	10.7								
Approach LOS	A	A	A	B								
Intersection Summary												
Delay				9.7								
HCM Level of Service				A								
Intersection Capacity Utilization				41.5%	ICU Level of Service							A
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	43	6	9	17	3	13	356	64	26	284	19
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.988			0.987			0.980			0.992	
Flt Protected		0.985			0.985			0.999			0.996	
Satd. Flow (prot)	0	1439	0	0	1274	0	0	1457	0	0	1477	0
Flt Permitted		0.985			0.985			0.999			0.996	
Satd. Flow (perm)	0	1439	0	0	1274	0	0	1457	0	0	1477	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	0%	0%	33%	7%	0%	0%	1%	0%	0%	0%	6%
Adj. Flow (vph)	23	48	7	10	19	3	14	396	71	29	316	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	32	0	0	481	0	0	366	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	21	43	6	9	17	3	13	356	64	26	284	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	48	7	10	19	3	14	396	71	29	316	21
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked												
vC, conflicting volume	887	923	366	910	898	457	361			487		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	887	923	366	910	898	457	361			487		
tC, single (s)	7.1	6.5	6.2	7.4	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.8	4.1	3.3	2.2			2.2		
pD queue free %	90	81	99	94	93	99	99			97		
cM capacity (veh/h)	226	252	661	175	253	595	1185			1069		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	78	32	481	366
Volume Left	23	10	14	29
Volume Right	7	3	71	21
cSH	256	235	1185	1069
Volume to Capacity	0.30	0.14	0.01	0.03
Queue Length 95th (m)	9.3	3.5	0.3	0.6
Control Delay (s)	25.0	22.8	0.4	0.9
Lane LOS	D	C	A	A
Approach Delay (s)	25.0	22.8	0.4	0.9
Approach LOS	D	C		

Intersection Summary			
Average Delay		3.3	
Intersection Capacity Utilization	51.5%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗		↖	↗	
Volume (vph)	12	68	14	35	31	26	11	385	81	51	248	39
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.98		1.00	0.99		1.00	1.00	
Frnt		0.979			0.931			0.974			0.980	
Flt Protected		0.994		0.950			0.950			0.950		
Satd. Flow (prot)	0	1438	0	1637	1427	0	1686	1572	0	1074	1598	0
Flt Permitted		0.957		0.739			0.566			0.430		
Satd. Flow (perm)	0	1382	0	1165	1427	0	1003	1572	0	484	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			29			25			19	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	0%	8%	3%	11%	0%	0%	1%	5%	57%	1%	0%
Adj. Flow (vph)	13	76	16	39	34	29	12	428	90	57	276	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	39	63	0	12	518	0	57	319	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		12.9		12.9	12.9		43.1	43.1		43.1	43.1	
Actuated g/C Ratio		0.22		0.22	0.22		0.72	0.72		0.72	0.72	
v/c Ratio		0.34		0.16	0.19		0.02	0.46		0.16	0.28	
Control Delay		20.3		20.2	13.4		4.3	6.7		6.1	5.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		20.3		20.2	13.4		4.3	6.7		6.1	5.0	
LOS		C		C	B		A	A		A	A	
Approach Delay		20.3			16.0			6.6			5.2	
Approach LOS		C			B			A			A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.4		3.6	3.0		0.4	21.0		1.9	10.8	
Queue Length 95th (m)		18.3		9.5	10.4		1.9	47.2		7.0	24.6	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		517		427	542		721	1137		348	1154	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.20		0.09	0.12		0.02	0.46		0.16	0.28	

**Intersection Summary**

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	8.3
Intersection LOS:	A
Intersection Capacity Utilization	65.4%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	54	370	18	18	282
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941		0.994			
Flt Protected	0.973					0.997
Satd. Flow (prot)	1616	0	1625	0	0	1645
Flt Permitted	0.973					0.997
Satd. Flow (perm)	1616	0	1625	0	0	1645
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Adj. Flow (vph)	78	60	411	20	20	313
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	0	431	0	0	333
Sign Control	Stop		Free			Free

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.5%
Analysis Period (min)	15
	ICU Level of Service A



HCM Unsignalized Intersection Capacity Analysis  
7: Development Driveway & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	54	370	18	18	282
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	78	60	411	20	20	313
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.93	0.93			0.93	
vC, conflicting volume	774	421			431	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	721	342			353	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	79	91			98	
cM capacity (veh/h)	363	657			1134	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	138	431	333
Volume Left	78	0	20
Volume Right	60	20	0
cSH	451	1700	1134
Volume to Capacity	0.31	0.25	0.02
Queue Length 95th (m)	9.6	0.0	0.4
Control Delay (s)	16.4	0.0	0.7
Lane LOS	C		A
Approach Delay (s)	16.4	0.0	0.7
Approach LOS	C		

Intersection Summary			
Average Delay		2.8	
Intersection Capacity Utilization		48.5%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	289	197	10	14	298	108	7	246	28	38	253	421
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			1.00			1.00	0.95
Frnt		0.993			0.960			0.987				0.850
Flt Protected	0.950			0.950				0.999			0.994	
Satd. Flow (prot)	1686	1620	0	1686	1556	0	0	1504	0	0	1603	1473
Flt Permitted	0.218			0.615				0.990			0.921	
Satd. Flow (perm)	384	1620	0	1078	1556	0	0	1490	0	0	1484	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			20			7				468
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flow (vph)	321	219	11	16	331	120	8	273	31	42	281	468
Shared Lane Traffic (%)												
Lane Group Flow (vph)	321	230	0	16	451	0	0	312	0	0	323	468
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		30.0	30.0		34.0	34.0		34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.0	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)	28.9%	62.2%	0.0%	33.3%	33.3%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	37.8%
Yellow Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	1.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	52.0	52.0		32.8	32.8			30.0			30.0	30.0
Actuated g/C Ratio	0.58	0.58		0.36	0.36			0.33			0.33	0.33
v/c Ratio	0.73	0.25		0.04	0.78			0.62			0.65	0.60
Control Delay	21.3	10.0		22.0	37.4			31.2			33.0	5.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	21.3	10.0		22.0	37.4			31.2			33.0	5.9
LOS	C	A		C	D			C			C	A
Approach Delay		16.6			36.8			31.2			17.0	
Approach LOS		B			D			C			B	

Lanes, Volumes, Timings  
 1: William Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Total PM

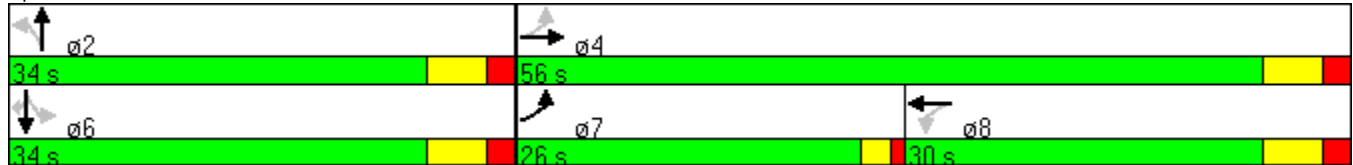


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	26.5	17.4		1.7	64.3			43.3			46.5	0.0
Queue Length 95th (m)	47.9	29.2		6.6 #	132.3			70.5			74.7	21.1
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	540	938		392	579			501			495	781
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.59	0.25		0.04	0.78			0.62			0.65	0.60

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 48 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 23.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 90.8%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↖	↑	↖	↖
Volume (vph)	174	43	505	290	47	348
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.973					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1605	0	1670	1900	1686	1473
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1605	0	1670	1900	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	193	48	561	322	52	387
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	0	561	322	52	387
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.8%
	ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	174	43	505	290	47	348
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	193	48	561	322	52	387
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			241		1662	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			241		1662	217
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			58		17	53
cM capacity (veh/h)			1331		63	825

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	241	561	322	52	387
Volume Left	0	561	0	52	0
Volume Right	48	0	0	0	387
cSH	1700	1331	1700	63	825
Volume to Capacity	0.14	0.42	0.19	0.83	0.47
Queue Length 95th (m)	0.0	16.0	0.0	28.7	19.0
Control Delay (s)	0.0	9.7	0.0	177.1	13.2
Lane LOS		A		F	B
Approach Delay (s)	0.0	6.1		32.7	
Approach LOS				D	

Intersection Summary					
Average Delay			12.6		
Intersection Capacity Utilization			56.8%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	35	61	40	28	55	34	59	624	17	18	827	30
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.96		1.00			1.00	
Frnt		0.961				0.850		0.996			0.995	
Flt Protected		0.987			0.983			0.996			0.999	
Satd. Flow (prot)	0	1431	0	0	1622	1488	0	2995	0	0	2990	0
Flt Permitted		0.913			0.882			0.784			0.931	
Satd. Flow (perm)	0	1316	0	0	1449	1430	0	2357	0	0	2786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				38		5			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	2%	4%	0%	6%	4%	5%
Adj. Flow (vph)	39	68	44	31	61	38	66	693	19	20	919	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	92	38	0	778	0	0	972	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0		27.0	27.0	27.0	51.0	51.0		51.0	51.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0	57.0	57.0		57.0	57.0	
Total Split (s)	33.0	33.0	0.0	33.0	33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)	36.7%	36.7%	0.0%	36.7%	36.7%	36.7%	63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		29.0			29.0	29.0		53.0			53.0	
Actuated g/C Ratio		0.32			0.32	0.32		0.59			0.59	
v/c Ratio		0.34			0.20	0.08		0.56			0.59	
Control Delay		22.1			23.6	7.7		13.2			13.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		22.1			23.6	7.7		13.2			13.4	
LOS		C			C	A		B			B	
Approach Delay		22.1			18.9			13.2			13.4	
Approach LOS		C			B			B			B	

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Total PM

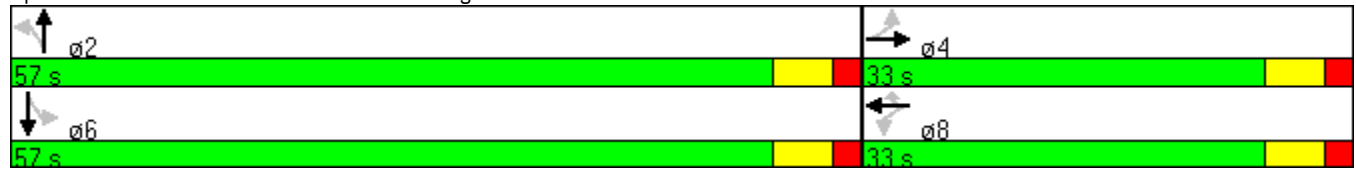


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		16.1			11.3	0.0		39.2			50.4	
Queue Length 95th (m)		31.8			22.5	6.4		54.8			67.7	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		440			467	487		1390			1644	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.34			0.20	0.08		0.56			0.59	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2.7 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	14.3
Intersection LOS:	B
Intersection Capacity Utilization	102.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	29	32	24	39	57	60	21	247	34	79	108	14
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.962			0.948			0.985			0.990	
Fl <sub>t</sub> Protected		0.983			0.988			0.997			0.981	
Satd. Flow (prot)	0	1466	0	0	1452	0	0	1522	0	0	1505	0
Fl <sub>t</sub> Permitted		0.983			0.988			0.997			0.981	
Satd. Flow (perm)	0	1466	0	0	1452	0	0	1522	0	0	1505	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	32	36	27	43	63	67	23	274	38	88	120	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	173	0	0	335	0	0	224	0
Sign Control		Stop			Stop			Stop			Stop	

















Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.2%
ICU Level of Service	B
Analysis Period (min)	15



HCM Unsignalized Intersection Capacity Analysis  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	29	32	24	39	57	60	21	247	34	79	108	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	32	36	27	43	63	67	23	274	38	88	120	16
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	94	173	336	223								
Volume Left (vph)	32	43	23	88								
Volume Right (vph)	27	67	38	16								
Hadj (s)	-0.10	-0.18	-0.05	0.04								
Departure Headway (s)	5.5	5.3	4.9	5.2								
Degree Utilization, x	0.15	0.26	0.46	0.32								
Capacity (veh/h)	568	610	688	652								
Control Delay (s)	9.5	10.1	12.0	10.6								
Approach Delay (s)	9.5	10.1	12.0	10.6								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay				10.9								
HCM Level of Service				B								
Intersection Capacity Utilization				56.2%	ICU Level of Service							B
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	20	16	38	42	11	15	399	38	12	517	38
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.961			0.984			0.989			0.991	
Flt Protected		0.982			0.980			0.998			0.999	
Satd. Flow (prot)	0	1416	0	0	1446	0	0	1481	0	0	1484	0
Flt Permitted		0.982			0.980			0.998			0.999	
Satd. Flow (perm)	0	1416	0	0	1446	0	0	1481	0	0	1484	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	23	22	18	42	47	12	17	443	42	13	574	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	101	0	0	502	0	0	629	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.0%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	21	20	16	38	42	11	15	399	38	12	517	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	22	18	42	47	12	17	443	42	13	574	42
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	1186	1185	636	1185	1185	490	641			506		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1183	1183	636	1183	1183	483	641			499		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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		
pO queue free %	81	87	96	68	74	98	98			99		
cM capacity (veh/h)	121	177	466	134	177	571	934			1035		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	63	101	502	630
Volume Left	23	42	17	13
Volume Right	18	12	42	42
cSH	177	168	934	1035
Volume to Capacity	0.36	0.60	0.02	0.01
Queue Length 95th (m)	11.3	24.4	0.4	0.3
Control Delay (s)	36.1	54.2	0.5	0.3
Lane LOS	E	F	A	A
Approach Delay (s)	36.1	54.2	0.5	0.3
Approach LOS	E	F		

Intersection Summary			
Average Delay		6.4	
Intersection Capacity Utilization		60.0%	ICU Level of Service B
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↘		↗	↘	
Volume (vph)	38	39	13	84	99	66	28	370	54	41	430	52
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	1.00		1.00	1.00	
Frnt		0.981			0.940			0.981			0.984	
Flt Protected		0.979		0.950			0.950			0.950		
Satd. Flow (prot)	0	1426	0	1637	1530	0	1686	1612	0	1686	1620	0
Flt Permitted		0.809		0.754			0.401			0.446		
Satd. Flow (perm)	0	1173	0	1187	1530	0	711	1612	0	788	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			63			18			15	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	42	43	14	93	110	73	31	411	60	46	478	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	0	93	183	0	31	471	0	46	536	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.7		13.7	13.7		38.3	38.3		38.3	38.3	
Actuated g/C Ratio		0.23		0.23	0.23		0.64	0.64		0.64	0.64	
v/c Ratio		0.36		0.34	0.46		0.07	0.45		0.09	0.51	
Control Delay		20.4		22.5	16.7		5.4	7.5		5.5	8.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		20.4		22.5	16.7		5.4	7.5		5.5	8.4	
LOS		C		C	B		A	A		A	A	
Approach Delay		20.4			18.7			7.4			8.2	
Approach LOS		C			B			A			A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.0		8.8	11.3		1.0	18.7		1.4	22.9	
Queue Length 95th (m)		17.1		17.6	23.7		4.3	45.7		5.8	55.4	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		439		435	601		454	1037		504	1041	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.23		0.21	0.30		0.07	0.45		0.09	0.51	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	10.7
Intersection LOS:	B
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street



Lanes, Volumes, Timings  
 7: Development Entrance & Park Street

144 Park Tower 2, TIS  
 2016 Total PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	41	34	418	77	62	509
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.939		0.979			
Fl <sub>t</sub> Protected	0.973					0.995
Satd. Flow (prot)	1613	0	1615	0	0	1627
Fl <sub>t</sub> Permitted	0.973					0.995
Satd. Flow (perm)	1613	0	1615	0	0	1627
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	46	38	464	86	69	566
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	0	550	0	0	635
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.2%
ICU Level of Service	D
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
7: Development Entrance & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	41	34	418	77	62	509
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	46	38	464	86	69	566
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.89	0.89			0.89	
vC, conflicting volume	1211	507			550	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1176	388			436	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	74	94			93	
cM capacity (veh/h)	178	593			1013	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	83	550	634
Volume Left	46	0	69
Volume Right	38	86	0
cSH	260	1700	1013
Volume to Capacity	0.32	0.32	0.07
Queue Length 95th (m)	10.0	0.0	1.6
Control Delay (s)	25.2	0.0	1.8
Lane LOS	D		A
Approach Delay (s)	25.2	0.0	1.8
Approach LOS	D		

Intersection Summary			
Average Delay		2.5	
Intersection Capacity Utilization		80.2%	ICU Level of Service D
Analysis Period (min)		15	

## **Appendix E**

### **Signal Warrant Analyses**

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## Signal Warrant Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)



Horizon Year: Future Total  
 Region/City/Township: Waterloo

Major Street: William Street  
 Minor Street: Park Street

North/South?: N

Number of Approach Lanes: 1  
 Tee Intersection?: Y  
 Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	No	Warrant for new intersections with forecast traffic
120% Satisfied	No	Warrant for existing intersections with forecast traffic

Time Period	Major Street						Minor Street					
	William Street						Park Street					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
AM Peak Hour		372	68	226	113		32			371		
PM Peak Hour		174	43	505	290		47			348		

Average Hourly Volumes			
Volume	AM	PM	AHV
1A - All	1182	1407	647
1B - Minor	403	395	200
2A - Major	779	1012	448
2B - Cross	32	47	20

### Warrant 1 - Minimum Vehicular Volume

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	647
		% Fulfilled				89.9%

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	180	255	180	255	200
		% Fulfilled				78.2%

### Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	448
		% Fulfilled				62.2%

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	20
		% Fulfilled				26.3%

## Signal Warrant Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)



Horizon Year: Future Total  
 Region/City/Township: Waterloo

Major Street: Park Street  
 Minor Street: Allen Street

North/South?: Y

Number of Approach Lanes: 1  
 Tee Intersection?: N  
 Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	No	Warrant for new intersections with forecast traffic
120% Satisfied	No	Warrant for existing intersections with forecast traffic

Time Period	Major Street Park Street						Minor Street Allen Street					
	Northbound			Southbound			Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
	AM Peak Hour	13	356	64	26	284	19	21	43	6	9	17
PM Peak Hour	15	399	38	12	517	38	21	20	16	38	42	11

Average Hourly Volumes			
Volume	AM	PM	AHV
1A - All	861	1167	507
1B - Minor	99	148	62
2A - Major	762	1019	445
2B - Cross	73	101	44

### Warrant 1 - Minimum Vehicular Volume

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
	All Approaches	480	720	600	900	
		% Fulfilled				70.4%
1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
	Minor Street Approaches	120	170	120	170	
		% Fulfilled				36.3%

### Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
	Major Street Approaches	480	720	600	900	
		% Fulfilled				61.8%
2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
	Traffic Crossing Major Street	50	75	50	75	
		% Fulfilled				58.0%

**ONTARIO**  
**SUPERIOR COURT OF JUSTICE**  
**(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,**  
**R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.**  
**FOR THE APPOINTMENT OF A TRUSTEE UNDER SECTION 68(1) OF THE**  
***CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**RESPONSE RECORD**

(returnable October 5, 2015, hearing rescheduled to October 16, 2015)

OCTOBER 8, 2015

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**TO: THE SERVICE LIST**

**SERVICE LIST**  
(as of October 6, 2015)

<p><b>CHAITONS LLP</b> 5000 Yonge Street, 10<sup>th</sup> Floor Toronto, ON M2N 7E9</p> <p><b>Harvey Chaiton</b> Tel: (416) 218-1129 Fax: (416) 218-1849 E-mail: harvey@chaitons.com</p> <p><b>Sam Rappos</b> Tel: (416) 218-1137 Fax: (416) 218-1837 Email: samr@chaitons.com</p> <p><b>Lawyers for the Trustee</b></p>	<p><b>COLLINS BARROW TORONTO LIMITED</b> 11 King St. West, Suite 700, Box 27 Toronto, ON M5H 4C7</p> <p><b>Bryan Tannenbaum and</b> Tel: (416) 238-5055 Fax: (416) 480-2646 Email: btannenbaum@collinsbarrow.com</p> <p><b>Arif Dhanani</b> Tel: (647) 725-0183 Fax: (416) 480-2646 Email: andhanani@collinsbarrow.com</p> <p><b>Trustee</b></p>
<p><b>THORNTON GROUT FINNIGAN LLP</b> Ste. 3200, 100 Wellington St. W. PO Box 329, Toronto-Dominion Centre Toronto, ON M5K 1K7</p> <p><b>Grant Moffat / Asim Iqbal</b> Tel: (416) 304-0599 / (416) 304-0595 Fax: (416) 304-1313 Email: gmoffat@tgf.ca / aiqbal@tgf.ca</p> <p><b>Lawyers for Laurentian Bank of Canada</b></p>	<p><b>ROSENSTEIN LAW</b> 6 Adelaide Street East, Suite 1000 Toronto, ON M5C 1H6</p> <p><b>Jonathan Rosenstein</b> Tel: (416) 639-2123 Fax: (647) 827-0424 Email: jrosenstein@rosensteinlaw.ca</p> <p><b>Lawyers for Aviva Insurance Company of Canada</b></p>
<p><b>AFFLECK GREENE MCMURTRY LLP</b> 365 Bay Street, Suite 200 Toronto, ON M5H 2V1</p> <p><b>Kyle Peterson / Michael Binetti</b> Tel: (416) 360-0327 / 360-0777 Fax: (416) 360-5960 Email: kpeterson@agmlawyers.com / mbinetti@agmlawyers.com</p> <p><b>Lawyers for MarshallZehr Group Inc.</b></p>	<p><b>BROWN BEATTIE O'DONOVAN LLP</b> 1600 – 380 Wellington Street London, ON N6A 5B5</p> <p><b>James Fisher</b> Tel: (519) 964-3163 Fax: (519) 679-6350 Email: jfisher@bbo.on.ca</p> <p><b>Lawyers for Allen Street Holdings Inc.</b></p>
<p><b>A. CONTE PROFESSIONAL CORPORATION</b> 242 Applewood Crescent, Unit 12, 2<sup>nd</sup> Floor Concord, ON L4K 4E5</p> <p><b>Antonio Conte</b> Tel: (416) 947-0208 Fax: (866) 543-3165</p>	<p><b>PALLET VALO LLP</b> 77 City Centre Drive, West Tower, Suite 300 Mississauga, ON L5B 1M5</p> <p><b>Anna Esposito</b> Tel: (905) 273-3022 x 260 Fax: (905) 273-6920</p>

<p>Email: a.conte@contelaw.ca</p> <p><b>Lawyers for Global Fire Protection Ltd.</b></p>	<p>Email: aesposito@pallettvalo.com</p> <p><b>Lawyers for Adlers Main Tile &amp; Carpet Co. Ltd. and 694643 Ontario Limited</b></p>
<p><b>KOSKIE MINSKY LLP</b> 20 Queen Street West, Suite 900, Box 52 Toronto, ON M5H 3R3</p> <p><b>Jeffrey Long</b> Tel: (416) 595-2125 Fax: (416) 204-2892 Email: jlong@kmlaw.ca</p> <p><b>Lawyers for J &amp; I Gaweda Construction Limited</b></p>	<p><b>PETKER &amp; ASSOCIATES</b> 295 Weber St. N. Waterloo, ON N2J 3H8</p> <p><b>Jarvis Postnikoff</b> Tel: (519) 886-1204 Fax: (519) 886-5674 Email: jarvis@petkerlaw.com</p> <p><b>Lawyer for Bast Home Comfort Inc.</b></p>
<p><b>PARENTE, BOREAN LLP</b> 3883 Highway 7, Suite 207 Woodbridge, ON L4L 6C1</p> <p><b>Gerard Borean</b> Tel: (905) 850-6066 Fax: (905) 850-6069 Email: gborean@parenteborean.com</p> <p><b>Lawyers for Frendel Kitchens Limited</b></p>	<p><b>CHODOLA REYNOLDS BINDER</b> 720 Walker Road Windsor, ON N8Y 2N3</p> <p><b>Robert Reynolds</b> Tel: (519) 254-6433 Fax: (519) 254-7990 Email: reynolds@crblaw.ca</p> <p><b>Lawyers for T.I.C. Contracting Ltd.</b></p>
<p><b>BARRY S. GREENBERG</b> 7626A Yonge Street Thornhill, ON L4J 1V9 Tel: (905) 886-9535 Ext. 27 Fax: (905) 886-9540 Email: bsgreenberg@rogers.com</p> <p><b>Lawyers for Weston Flooring Limited</b></p>	<p><b>CLARKS LLP</b> 1200 Canada Building , 374 Ouellette Avenue Windsor, ON N9A 1A8</p> <p><b>John Clark</b> Tel: (519) 254-4990 Fax: (519) 254-2294 Email: jtclark@clarkslaw.com</p> <p><b>Lawyers for Sam Tortoloa Enterprises Inc.</b></p>
<p><b>DOOLEY LUCENTI</b> 10 Checkley Street Barrie, ON L4N 1W1</p> <p><b>Eric Gionet</b> Tel: (705) 792-7963 Fax: (705) 792-7964 Email: egionet@dllaw.ca</p> <p><b>Lawyers for CRS Contractors Rental Supply General Partner Inc.</b></p>	<p><b>BISCEGLIA &amp; ASSOCIATES</b> 200-7941 Jane St. Concord, ON L4K 4L6</p> <p><b>Emillio Bisceglia</b> Tel: (905) 695-3100 Fax: (905) 695-5201 Email: ebisceglia@lawtoronto.com</p> <p><b>Lawyers for Hammerschlag &amp; Joffe Inc.</b></p>

<p><b>SIMPSONWIGLE LAW LLP</b> 1 Hunter Street East, Suite 200 Hamilton, ON L8N 3W1</p> <p><b>Derek Schmuck</b> Tel: (905) 528-8411 x 363 Fax: (905) 528-9008 Email: schmuckd@simpsonwigle.com</p> <p><b>Lawyers for Screen Painting Ltd.</b></p>	<p><b>ECCLESTON LLP</b> Toronto Dominion Bank Tower, Ste. 4020, 66 Wellington St. W. PO Box 230, Stn. Toronto Dom. Toronto, ON M5K 1J3</p> <p><b>Ken Eccleston and Maurizio Artale</b> Tel: (416) 504-3364 / (416) 913-2043 Fax: (416) 504-2686 Email: ken@ecclestonllp.com / Maurizio@ecclestonllp.com</p> <p><b>Lawyers for Skyway Canada Limited</b></p>
<p><b>LEVINE, SHERKIN, BOUSSIDAN</b> 300-23 Lesmill Rd. North York, ON M3B 3P6</p> <p><b>Jeremy Sacks</b> Tel: (416) 224-2400 Fax: (416) 224-2408 Email: Jeremy@lsblaw.com</p> <p><b>Lawyers for Great Pyramid Aluminum Ltd.</b></p>	<p><b>HAMMOND FLESIAS</b> 3800 Steeles Ave. West, Suite 300 Woodbridge, ON L4L 4G9</p> <p><b>Richard Hammond</b> Tel: (905) 850-8550 Fax: (905) 850-9998 Email: rhammond@hammondfilesias.com</p> <p><b>Lawyers for Brody Wall System Ltd.</b></p>
<p><b>MILLER THOMSON LLP</b> 60 Columbia Way, Suite 600 Markham, ON L3R 0C9</p> <p><b>Enzo Di Iorio / Riccardo Del Vecchio</b> Tel: (905) 415-6711 / (905) 415-6764 Fax: (905) 415-6777 Email: ediiorio@millerthomson.com / rdelvecchio@millerthomson.com</p> <p><b>Lawyers for Global Precast Inc. and 2050491 Ontario Inc. o/a The Downsview Group</b></p>	<p><b>RUBIN &amp; CHRISTIE LLP</b> 219 Finch Avenue West - 2nd Floor Toronto, ON M2R 1M2</p> <p><b>David Rubin</b> Tel: (416) 361-0900 Fax: (416) 361-3459 Email: drubin@rubinchristie.ca</p> <p><b>Lawyers for DKS Stone Fabrication &amp; Design Inc.</b></p>
<p><b>SIMMONS DA SILVA LLP</b> Suite 200; 201 County Court Blvd Brampton, ON L6W 4L2</p> <p><b>Pathik Baxi</b> Tel: (905) 861-2822 Fax: (905) 457-5641 E-mail: pathik@sdslawfirm.com</p> <p><b>Lawyers for Clonard Group Inc.</b></p>	<p><b>CAPO, SGRO LLP</b> 400-7050 Weston Rd. Woodbridge, ON L4L 8G7</p> <p><b>Gregory Hemsworth</b> Tel: (905) 850-7000 Fax: (905) 850-7050 Email: ghemsworth@cslp.ca</p> <p><b>Lawyers for Aluminum Window Design Installations Inc.</b></p>

<p><b>GLAHOLT LLP</b> 141 Adelaide St West, Suite 800 Toronto, ON M5H 3L5</p> <p><b>Andrea Lee</b> Tel: (416) 368-8280 x 216 Fax: (416) 368-3467 Email: al@glaholt.com</p> <p><b>Lawyers for Turner Fleischer Architects Inc.</b></p>	<p><b>FARHOOD BOEHLER WINNY LLP</b> Marsland Center, 510-20 Erb Street West Waterloo, ON N2L 1T2</p> <p><b>Wayne Boehler</b> Tel: (519) 744-9949 Fax: (519) 744-7974 Email: wboehler@fblaw.ca</p> <p><b>Lawyers for Nelco Mechanical Limited</b></p>
<p><b>WILSON VUKELICH LLP</b> Valleywood Corporate Centre 60 Columbia Way, Suite 710 Markham, ON L3R 0C9</p> <p>Tel: (905) 940-8700 Fax: (905) 940-8785 Email: information@wvllp.ca</p> <p><b>Lawyers for 81 Capital Inc.</b></p>	<p><b>DENTONS CANADA LLP</b> 77 King Street West, Suite 400, TD Centre Toronto, ON M5K 0A1</p> <p><b>Bill Deley</b> Tel: (416) 367-6834 Fax: (416) 863-4592 Email: bill.deley@dentons.com</p> <p><b>Lawyers for Atlas-Apex Roofing (Kitchener) Inc.</b></p>
<p><b>MACDONALD ASSOCIATES PC</b> 5 Wertheim Court, Suite 702 Richmond Hill, ON L4B 3H7</p> <p><b>Jason R. Allingham</b> Tel: (905) 731-6564 Fax: (905) 731-7989 Email: jallingham@maclawyers.ca</p> <p><b>Lawyers for HTS Engineering Ltd.</b></p>	<p><b>FARHOOD BOEHLER WINNY</b> Suite 510, 20 Erb Street West Waterloo, ON N2L 1T2</p> <p><b>Harley N.K. Yule</b> Tel: (519) 744-9949 ext. 27 Fax: (519) 744-7974 Email: HYule@fblaw.ca</p> <p><b>Lawyers for Re/Max Twin City Inc.</b></p>
<p><b>TORYS LLP</b> 79 Wellington St. W., 30th Floor Box 270, TD South Tower Toronto, ON M5K 1N2</p> <p><b>Adam Slavens</b> Tel: (416) 865-7333 Fax: (416) 865-7380 Email: aslavens@torys.com</p> <p><b>Lawyers for Tarion Warranty Corporation</b></p>	<p><b>DUNCAN, LINTON LLP</b> 45 Erb St. E. PO Box 457, Stn. Waterloo Waterloo, ON N2J 4B5</p> <p><b>Irwin Duncan</b> Tel: (519) 886-3340 Fax: (519) 886-8651 Email: iad@kwlaw.net</p> <p><b>Lawyers for Richard and Marilyn Magnussen, Joseph and Susan Siefried, Ryan and Laurie Cyrankiewicz, and AJ and Kerry Mueller</b></p>
<p><b>NORTON ROSE FULBRIGHT CANADA LLP</b> Suite 3800, Royal Bank Plaza South Tower, 200 Bay Street, P.O. Box 84 Toronto, ON M5J 2Z4</p>	<p><b>HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ONTARIO AS REPRESENTED BY THE MINISTER OF FINANCE</b> PO Box 620</p>



<p><b>Michael Tamblyn</b> Tel: (416) 202-6705 Fax: (416) 216-3930 Email: michael.tamblyn@nortonrosefulbright.com</p> <p><b>Lawyers for Lipton's Audio Video Unlimited</b></p>	<p>33 King Street West, 6th Floor Oshawa, ON L1H 8E9</p> <p><b>Kevin J. O'Hara</b> Tel: (905) 433-6934 Fax: (905) 436-451 Email: kevin.ohara@ontario.ca</p>
<p><b>SORBARA, SCHUMACHER, MCCANN LLP</b> 31 Union St. East Waterloo, ON N2J 1B8</p> <p><b>Justin Heimpel</b> Tel: (519) 741-8010 ext. 224 Fax: (519) 576-1184 Email: jheimpel@sorbaralaw.com</p> <p><b>Lawyers for Bulldog Rebar Inc. and the City of Waterloo</b></p>	<p><b>DEPARTMENT OF JUSTICE CANADA</b> Ontario Regional Office, Tax Law Services The Exchange Tower 130 King Street West, Suite 3400 Toronto, ON M5X 1K6</p> <p><b>Rakhee Bhandari</b> Tel: (416) 952-8563 Fax: (416) 973-0810 Email: Rakhee.Bhandari@justice.gc.ca</p> <p><b>Lawyers for Canada Revenue Agency</b></p>
<p><b>REGIONAL MUNICIPALITY OF WATERLOO</b> 150 Frederick St., 8th Floor Kitchener, ON N2G 4J3</p> <p><b>Fiona M. McCrea - Solicitor, Property</b> Tel: (519) 575-4518 Fax: (519) 575-4466 Email: fmccrea@regionofwaterloo.ca</p>	<p><b>CITY OF WATERLOO</b> Waterloo City Centre 100 Regina Street South, PO Box 337 STN Waterloo Waterloo, ON N2J 4A8</p> <p><b>Steve Ross, Director, Legal Services</b> Tel: (519) 747-8758 Fax: (519) 747-8523 Email: Steve.Ross@waterloo.ca</p>
<p><b>MADORIN, SNYDER LLP</b> 55 King Street West, P.O. Box 1234 Kitchener, ON N2G 4G9</p> <p><b>Ted Dreyer and Christopher Clemmer</b> Tel: (519) 744-4491 Fax: (519) 741-8060 Email: edreyer@kw-law.com / cclemmer@kw-law.com</p> <p><b>Lawyers for Robert Coghill</b></p>	<p><b>GOWLING LAFLEUR HENDERSON</b> 50 Queen Street North, Suite 1020, PO Box 2248 Kitchener, ON N2H 6W2</p> <p><b>Ross Earnshaw</b> Tel: (519) 575-7525 Fax: (519) 571-5025 Email: ross.earnshaw@gowlings.com</p> <p><b>Lawyers for John Allen Miller and Douglas Jamieson Miller</b></p>
<p><b>JAMES SCHMIDT</b> 305 King Street West, . unit 1108 Kitchener ON N2G 1B9</p> <p>Tel: (519) 578-2115 Fax: (519) 578 1927 Email: mr.jsschmidt@rogers.com</p>	<p><b>DAVIES WARD PHILLIPS &amp; VINEBERG LLP</b> 155 Wellington Street West Toronto, ON M5V 3J7</p> <p><b>Robin Schwill</b> Tel: (416) 863-5502 Fax: (416) 863-0871 Email: rschwill@dwpv.com</p>

<b>Lawyer for Mirjana Radulovic and Jovan Bernard Marjanac</b>	<b>Lawyers for Certain Unit Purchasers represented by Robson Carpenter LLP</b>
<b>M.G.M. Paralegal Services</b> 19 Weber Street East Kitchener, ON N2H 1C2  <b>Nancy Gazzola</b> Tel: (226) 647-9206 Fax: (866) 300-8682 Email: mgmlegalservice@gmail.com  <b>Paralegals for Gregory Moore</b>	<b>MILLER THOMSON LLP</b> Accelerator Building 295 Hagey Blvd., Suite 300 Waterloo, ON N2L 6R5  <b>Judy A. Byrne</b> Tel: (519) 579-3660 Fax: (519) 743-2540 Email: jbyrne@millerthomson.com  <b>Lawyers for Gregory Moore</b>
<b>ERIC M. KRAUSHAAR LAW OFFICE</b> 5-620 Davenport Road Waterloo, ON N2V 2C2  <b>Eric M. Kraushaar</b> Tel: (519) 886-0088 Fax: (519) 746-1122 Email: Eric@churchill-homes.com  <b>Lawyers for Michael Herbert Robinson Williams</b>	<b>CHRIS &amp; VOLPINI</b> 375 University Avenue East Waterloo, ON N2K 3M7  <b>Frank R. Volpini</b> Tel: (519) 888-0999 Fax: (519) 888-0995 Email: frv@chrisvolpinilawyers.com  <b>Lawyers for Kassandra Alayna Cortes and Christopher Bruce Edward Boehmer</b>
<b>GOWLING LAFLEUR HENDERSON</b> 50 Queen Street North, Suite 1020, PO Box 2248 Kitchener, ON N2H 6W2  <b>Kenneth Hanbidge</b> Tel: (519) 569-4551 Fax: (519) 569-4051 Email: ken.hanbidge@gowlings.com  <b>Lawyers for Stephanie Lynn Pollard</b>	<b>VOLL &amp; SANTOS</b> 30 Spetz St. Kitchener, ON N2H 1K1  <b>Ana Santos</b> Tel: (519) 578-3400 Fax: (519) 578-9521 Email: asantos@vollandsantos.com  <b>Lawyer for Brian Santos</b>
<b>MADORIN, SNYDER LLP</b> 55 King Street West, P.O. Box 1234 Kitchener, ON N2G 4G9  <b>Tim McGowan</b> Tel: (519) 744-4491 Fax: (519) 741-8060 Email: tmcgowan@kw-law.com  <b>Lawyers for Elizabeth and William Wendt</b>	<b>GIESBRECHT, GRIFFIN, FUNK AND IRVINE</b> 60 College Street Kitchener, ON N2H 5A1  <b>Richard Strype</b> Tel: (519) 579-4300 x 264 Fax: (519) 579-8745 Email: rstrype@ggfilaw.com  <b>Lawyers for Joe Woodhouse</b>
<b>LENCZNER SLAGHT ROYCE SMITH GRIFFIN LLP</b> Suite 2600, 130 Adelaide Street West	<b>MCCARTER GRESPAN</b> 675 Riverbend Drive Kitchener, ON N2K 3S3

<p>Toronto ON MSH 3P5</p> <p><b>Peter H. Griffin and Brian Kolenda</b> Tel: (416) 865-2921 / (416) 865-2897 Fax: (416) 865-3558 / (416) 865-9010 Email: pgriffin@litigate.com / bkolenda@litigate.com</p> <p><b>Lawyers for William Seegmiller</b></p>	<p><b>David R. Fedy</b> Tel: (519) 571.8800 Ext. 215 Fax: (519) 742.1841 Email: dfedy@mgbwlaw.com</p> <p><b>Lawyers for William Seegmiller</b></p>
<p><b>HUSSEIN LAW OFFICE</b> 275 Lancaster Street West, 2nd Floor Kitchener, ON N2H 4V2</p> <p><b>Jessica Sipione</b> Tel: (519) 744-8585 Fax: (519) 744-8569 Email: jessica@vhlaw.ca</p> <p><b>Lawyers for Xiaoli Wang and Maochun Pan</b></p>	<p><b>BRYAN J. THAM</b> 127 Duke St. E. Kitchener, ON N2H 1A6 Tel: (519) 578-6476 Fax: (519) 578-6721 Email: bryan.tham@bellnet.ca</p> <p><b>Lawyer for Kam Fung Lam, and Cau Chac</b></p>
<p><b>WOLFE, SMITH &amp; FORSTER LLP</b> 140 St. Andrew St. W. PO Box 99, Stn. Main Fergus, ON N1M 2W7</p> <p><b>Deryk Smith</b> Tel: (519) 843-3650 Fax: (519) 843-6907 Email: smith@wolfelawfirm.com</p> <p><b>Lawyers for The Estate of Geoffrey Guy and Joann Louise Martin, Russ McEachnie and Rita McEachnie</b></p>	<p><b>SAVARIA</b> 85 Bessemer Road London ON N6E 1P9</p> <p><b>Danielle Ryder</b> Tel: (519) 681-3311 ext 4231 Fax: (519) 681-3494 Email: danieller@savaria.com</p>
<p><b>ROBERT COGHILL</b> Email: bobcoghill@yahoo.com</p>	<p><b>OLIVER ROMANIUK</b> 182 Westwood Ave. Toronto, ON M4K 2B1 Tel: (416) 909-0521 Email: oliver.romaniuk@gmail.com</p>
<p><b>RUSSELL MCEACHNIE</b> Email: russell.mceachnie1@igprivatewealth.com</p>	<p><b>JOSEPH SIEFRIED</b> Email: krellafireplaces@hotmail.com</p>
<p><b>81 CAPITAL INC.</b> c/o Neil Cruickshank - neilc@maxium.net and John Nassar - john.nassar@81capital.com</p>	<p><b>CANADA REVENUE AGENCY</b> <b>c/o Marko Bobar</b> Tel: (416) 973-3720 Email: Marko.Bobar@cra.gc.ca</p>

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**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

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**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.  
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# **TAB 1**

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,  
R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.  
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*CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**NOTICE OF RESPONSE**

(returnable October 5, 2015, hearing rescheduled to October 16, 2016)

**Oliver Romaniuk** (“**Mr. Romaniuk**”), having served and filed Notice of Appearance on August 5, 2015 in respect of the application, will be responding to the Trustee’s Motions before a Judge of the Commercial List on October 16, 2015 at 330 University Avenue, Toronto, Ontario.

**PROPOSED METHOD OF HEARING:** The response is to be heard orally.

**THE RESPONSE IS TO:**

- (a) provide the Honourable Court with arguments in opposition to the Motions;
- (b) provide information, arguments, ideas and propose solutions that may be used to find a resolution to the parking issue that is equitable to all stakeholders; and
- (c) request further information on the lands referred to in the Trustee’s Motion.



- (d) such further and other relief as Mr. Romaniuk may request and this Honourable Court may permit.

**General**

1. The inherent jurisdiction of the Court.
2. Such other grounds as Mr. Romaniuk may advise and this Honourable Court may permit.

**THE FOLLOWING DOCUMENTARY EVIDENCE** will be used at the hearing:

1. The Factum of Oliver Romaniuk dated October 8, 2015;
2. The Affidavit of Oliver Romaniuk sworn October 8, 2015 and the exhibits attached thereto; and
3. such further and other material as Mr. Romaniuk may advise and this Honourable Court may permit.

October 8, 2015

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**TO: THE SERVICE LIST**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF *THE CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

***ONTARIO*  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**NOTICE OF RESPONSE**  
(returnable October 5, 2015, hearing  
rescheduled to October 16, 2015)

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

## **TAB 2**

**ONTARIO**  
**SUPERIOR COURT OF JUSTICE**  
**(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,**  
**R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.**  
**FOR THE APPOINTMENT OF A TRUSTEE UNDER SECTION 68(1) OF THE**  
***CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**FACTUM OF OLIVER ROMANIUK**  
(returnable October 5, 2015, hearing rescheduled to October 16, 2015)

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

**TO: THE SERVICE LIST**

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,  
R.S.O. 1990, c. C.30, AS AMENDED**

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**FACTUM OF OLIVER ROMANIUK  
October 8, 2015**

**PART 1 – INTRODUCTION AND PURPOSE OF THE FACTUM**

1. This Factum is submitted by Oliver Romaniuk (“**Mr. Romaniuk**”). It, along with the Affidavit of Oliver Romaniuk and its various exhibits are being filed in response to the Notice of Motion served by the Trustee on September 25, 2015.
2. There are no formal motions being made in conjunction with this Factum, although it contains proposals and recommendations that may be adopted by the Court or other parties as they deem to be appropriate.
3. Mr. Romaniuk claims to be adversely affected by a judgment in the proceeding, in that:
  - (a) paragraph 13 of the Assignment Approval retains Mr. Romaniuk as guarantor; with liabilities, among others, including forfeiture of deposit; and

(b) upon final closing of the Unit, Mr. Romaniuk stands to realize a reasonable profit from the Assignment, commensurate with the magnitude of investment, time, personal effort and opportunity cost involved over these 5.5 years.

4. The three primary reasons for this filing are to:

- (a) provide the Honourable Court with arguments in opposition to the Motions;
- (b) provide information, arguments, ideas and propose solutions that may be used to find a resolution to the parking issue that is equitable to all stakeholders; and
- (c) request further information on the lands referred to in the Trustee's Motion.

5. With regards to opposing the Motion, Mr. Romaniuk plans to show:

- (a) Trustee lacks the contractual rights required to reallocate Parking Units;
- (b) Trustee's legal reasoning supporting its ability to terminate the APS is flawed;
- (c) there is no basis in equity upon which the Trustee can make an argument to terminate the APS; and
- (d) additional information is needed before the Trustee should be provided a vesting order in respect of the lands bearing PINs 22417-0135 and 22417-0153.

6. With regards to potential solutions to the parking issue, Mr. Romaniuk plans to show:

- (a) the auction proposal made by Mr. Romaniuk to Trustee's counsel could have been, and may still be, a reasonable resolution to the parking issue;
- (b) having ignored the auction proposal, an equitable and expedient path forward is for the Trustee to help Purchasers obtain fair compensation for damages as a result of the parking issue through the Ontario New Home Warranties Plan by filing, defending and receiving a Tarion claim payment on behalf of the Purchasers and the Condominium Corporation; and

(c) if the Trustee cannot or will not attempt to access the Tarion Guarantee Fund on behalf of the Purchasers, arguments are made that may justification for the Court to grant the Trustee a vesting order so that it may complete the proposed parking agreement between the Applicant and One 55 Uptown, as described in Appendix E of Trustee's First Report.

7. As further described in his Affidavit, for financial reasons Mr. Romaniuk is unable to retain external counsel and is therefore self-represented. He has no intention to unduly increase the duration or cost of the proceeding, only to assist the Honourable Court in reaching an equitable decision by providing information and arguments. If the Court finds them to be excessive, inappropriate, or legally naïve, Mr. Romaniuk begs the Court's forgiveness and on request is willing to retract his Factum, or parts thereof.

## **PART 2 – LACK OF CONTRACTUAL RIGHTS TO REALLOCATE PARKING UNITS**

8. It will be shown that:

- (a) *contra proferentem* applies to the APS;
- (b) Trustee is mistaken in its interpretation that allocation and reallocation are equivalent and the Vendors documents demonstrate intentional usage;
- (c) the Court Order appointing the Trustee limits the Trustee's powers; and
- (d) reallocations are inconsistent with the Ontario New Home Warranties Plan.

### ***2.1 Contra Proferentem Applies***

9. The APS is an adhesion contract, with little to no room for negotiation by the Purchaser. The Trustee filed the standard form in its Appendix G and 128 Purchasers have currently entered into that contract. While there are efficiency benefits from using standard form contracts, it is

nonetheless standard practice is that in the event of ambiguity in such a contract it should be resolved *contra proferentem* against the party who drafted the language.

## ***2.2 Trustee's Interpretation of the Contract Language is Incorrect***

10. The preamble in the APS states that the Vendor “*retains the right to allocate Parking Units and Locker Units in its sole discretion*”. This right does not provide for the Vendor to perform a reallocation once an allocation has been completed. The Trustee’s interpretation is that the initial act of allocation is the same as a subsequent reallocation.
11. As allowed by the APS and exhibited by the Interim Statement of Adjustments, the Vendor used and retired its right to unilaterally allocate Units to Mr. Romaniuk at the time of interim occupancy.
12. Documents issued by the Vendor demonstrate intentional usage of both allocate and reallocate, as well as full understanding of their difference. There are 3 instances of such usage in the APS on page 3, paragraph 6(d)(i), and Schedule D, paragraphs 8 and 10. There are an additional 8 instances in the Applicant’s three Disclosure Statements.

## ***2.3 Court Order Appointing the Trustee Limits the Trustee's Powers***

13. Section 3 of the January 22, 2015 Court Order appointing the Trustee describes the Trustee’s powers, including granting the Trustee broad and general powers. The subsequent list of duties appears to play a dual role.
14. First, to the layman reader it examples the common types of duties a Trustee would undertake. Second, in a number of instances the list provides additional detail that can only be to greater define and qualify the duty itself.
15. The specific mention of adherence to the Condominium Act, 1998 (Ontario) (“**Condominium Act**”) in Section 3(j) must mean that if the Trustee is performing any duties in respect of the



condominium, then it is obligated to do so in accordance with and subject to the provisions of the Condominium Act. Variance would therefore require an additional Order of the Court to grant the Trustee sufficient power to operate a condominium without being, in whole or in part, subject to the Condominium Act.

16. The Condominium Act references the Ontario New Home Warranties Plan Act, (“**ONHWPA**”) and therefore the Trustee must respect, in all its dealings with Purchasers, all aspects of the Act. In essence, when dealing with condominium matters, the Trustee is limited in the same manner as the Vendor would have been.

#### ***2.4 Reallocations are Inconsistent with the Ontario New Home Warranties Plan***

17. The concept that the Vendor is required to definitively allocate the appurtenant units at the time of occupancy is supported in two ways by the ONHWPA, which defines a “*home*” as a “*condominium dwelling unit, including the common elements...and includes any structure or appurtenance used in conjunction therewith*”. This appears to mean all units that form part of the home, including parking and/or storage unit(s).
18. First, the ONHWPA contains deadlines and time restrictions for making claims. In the case of Mr. Romaniuk’s home, the entire one-year claim period from June 3, 2014 to June 3, 2015 had elapsed prior to the Trustee’s reallocation of the Parking Units. Both Mr. Romaniuk and the Muellers were precluded from performing a Tarion inspection on the reallocated Parking Unit and filing any warranty claims if required. This appears counter to the intent of the legislation.
19. Second, the Trustee’s interpretation results in an unintended and counterintuitive result. The ONHWPA regulations, ONHWPA RRO 1990, Reg. 892 (Administration of the Plan), require that “*the vendor and either one or both of the purchaser and the purchaser’s designate conduct an inspection of the home*”. Under the Trustee’s interpretation, the right to a post-inspection reallocation would imply that the Vendor could require **Purchaser A** to perform an

inspection on what will eventually become a portion of **Purchaser B**'s home, where **Purchaser A** would be neither the *purchaser* nor the *purchaser's designate*.

20. For these reasons, any reallocation the Trustee has performed to date should be nullified. In any cannot be nullified, the Trustee should be required to determine the impact of the reallocation to the Purchaser and provide appropriate alternative relief.

### **PART 3 – TRUSTEE’S FLAWED REASONING FOR TERMINATION RIGHTS**

21. In its Fourth Report, the Trustee states that paragraphs 15 and 16 of the APS provide it with the legal ability to terminate the APS, as Purchasers have expressly agreed, *inter alia*, to subordination to any mortgages and that Purchasers have not acquired any equitable or legal interest in the Unit or the Property.
22. It will be shown that:
- (a) being a residential project subject to the ONHWPA, the use of contract language cannot be used to terminate the APS;
  - (b) *Firm Capital Mortgage Fund Inc. v. 2012241 Ontario Limited*, 2013 ONSC 147 (“**Firm Capital**”) is distinguishable from this proceeding;
  - (c) the purposes for which the Trustee intended to use the contract language would make for an unusual and onerous provision on the Purchaser.

#### ***3.1 Purchaser Protection under the Ontario New Home Warranties Plan Act***

23. The Trustee is subject to the Condominium Act and by extension the ONHWPA. Tarion is the administrator of the Warranty Program and to that effect, requires that the APS contain the Tarion Addendum to Agreement of Purchase and Sale (“**Addendum**”). The Addendum includes, *inter alia*, a description of, and limitations to, the conditions for which the Vendor may terminate the APS.

24. In the Addendum, from page 3 of 7, Section 2(b):

*“The Vendor is not permitted to include any conditions in the Purchase Agreement other than: the types of Early Termination Conditions listed in Schedule A; and/or the conditions referred to in paragraphs 2(h), (I and (j) below. Any other condition included in a Purchase Agreement for the benefit of the Vendor that is not expressly permitted under Schedule A or paragraphs 2(h) or (i) is deemed null and void and is not enforceable by the Vendor, but does not affect the validity of the balance of the Purchase Agreement.”*

25. From the Addendum, page 6 of 7, Section 13:

*“The Addendum forms part of the Purchase Agreement. The Vendor and Purchaser agree that they shall not include any provision in the Purchase Agreement or any amendment to the Purchase Agreement or any other document (or indirectly do so through replacement of the Purchase Agreement) that derogates from, conflicts with or is inconsistent with the provisions of this Addendum, except where this Addendum expressly permits the parties to agree or consent to an alternative arrangement. The provisions of this Addendum prevail over any such provision.”*

26. From the Addendum, page 7 of 7, Section 4:

*“For greater certainty, the Vendor is not permitted to make the Purchase Agreement conditional upon:*

*(a) receipt of a building permit;*

*(b) receipt of an occupancy permit; and/or*

*(c) completion of the home.”*

27. For Purchasers that will not receive the two Parking Units for which they contracted in their APS, the homes will remain incomplete. A coarse analogy is a contractor completing half of a two car garage.
28. Paragraph 16 of the APS is for the benefit of the Vendor, stating “...*notwithstanding any rule of law to the contrary, that by executing this Agreement, it [Purchaser] has not acquired any equitable or legal interest in the Unit or the Property.*”
29. If used to effect termination of the APS, the Addendum prevails, the condition is deemed unenforceable but does not affect the validity of the balance of the APS.
30. The above concepts are supported by Toronto Standard Condominium Corporation No. 2095 v. West Harbour City (I) Residences Corp., 2013 ONSC 5987, where Justice Corbett wrote “*There is nothing illegitimate about a developer seeking to limit its risk in this way, provided, of course, it does not seek to contract out of the statutory requirements of the ONHWP Act.*” The decision was upheld in Toronto Standard Condominium Corporation No. 2095 v. West Harbour City (I) Residences Corp., 2014 ONCA 724 (together the “**TSCC 2095 Decisions**”).
31. These clauses now seem to remain in the contract on a ‘partial basis’. That is, they remain in the contract to be used but only under circumstances that do not interfere with the rights afforded by the ONHWPA. If a general rule can be proposed, it is that when discussing any matter having to do with a threat to the continuation of the contract, the contract should be read with those provisions removed.
32. Furthering the concept, when discussing termination and the clauses are removed, the APS becomes similar in nature to a standard real estate agreement of purchase and sale, where upon the agreement ‘going firm’, the Purchaser obtains a valid legal interest.

### ***3.2 Firm Capital is Distinguishable from this Proceeding***

33. The strategy of using a subordination clause was successful in *Firm Capital Mortgage Fund Inc. v. 2012241 Ontario Limited*, 2013 ONSC 147. The differences are detailed below.
34. Firm Capital was brought by application under Subsection 243(1) of the Bankruptcy and Insolvency Act, RSC 1985, c B-3 and Section 101 of the Courts of Justice Act, RSO 1990, c C-43. This proceeding was brought by application under Section 68(1) of the Construction Lien Act, RSO 1990, c C-30. Each Act was written by legislators for different purposes and therefore provide for various rights, obligations and restrictions that must be viewed in the context of the specific legislation and the references among them. In this proceeding, the magnitude of the Applicant's financial distress is unclear. Being cash-flow insolvent and needing a Trustee to break a deadlock has very different consequences than being formally bankrupt.
35. The Firm Capital property was in receivership and the Receiver was appointed by the Court at the request of the primary creditor. 144 Park Ltd. initiated this proceeding.
36. In Firm Capital, the Receiver described the financial records of the debtor as "not clear" and contained "numerous inconsistencies which made it impossible for the Receiver to determine with certainty whose deposits remain in trust". In this proceeding, the Trustee has progressed the project past registration and all of the APS are well documented with the associated funds held appropriately in trust.
37. In Firm Capital, most, if not all, sales and leases occurred after the registration of the priority mortgage. Even without the subordination clause, the mortgagee would have had priority over the purchasers and lessees through seniority in timing. In this proceeding, the first charges were registered on the project lands on September 1, 2011, by which point 120 Residential Units had entered into agreements of purchase and sale, along with 145 Parking Units. This is

graphically demonstrated in the Project Timeline and Parking Chart, attached hereto as Appendix E.

38. In Firm Capital, the Receiver advised it did not have and could not obtain the financial resources required to complete the property to the point of registration as a condominium, or to market the large proportion of unsold and unleased units. The Receiver took the position that the only practical approach to maximizing recovery for the stakeholders was to market and sell the property as a whole to make the property available to the widest potential pool of purchasers. In this proceeding, the Trustee has registered the condominium and 97 of 128 APS (76%) have closed, representing over 2/3 of the total residential units in the project.
39. In Firm Capital, the order sought by the Receiver was such that it could terminate agreements *if and only if* the potential purchaser required vacant possession or wished to complete the project as a condominium, but wanted to retain the option to adopt, renegotiate or terminate any particular agreement or lease. For clarity, the decision on the ability to terminate an agreement was ultimately to be made by the purchaser of the project, and not the Receiver.
40. The above comprehensive analysis and comparison should provide sufficient reasoning as to why Firm Capital is distinguishable from this proceeding.

### ***3.3 Termination through Subordination would make for an Unusual and Onerous Provision***

41. The final argument in law is with respect to how the various clauses are communicated and used. *Tilden Rent-A-Car Co. v. Clendenning, 1978 CanLII 1446 (ON CA)* set strong precedent, where it was decided that reasonable effort should be made to draw the attention of the other party to certain clauses, and that a clause can be neither of limitless, unusual, or onerous.
42. It can be argued that the use of paragraph 15 (subordination) and paragraph 16 (waiver of interest) can be considered overly broad and effectively limitless, in that a mortgagee has effectively no limits on what the subordination can be used for.

43. In addition, terminating the agreements of Purchasers under these circumstances would most certainly be unusual and for almost every Purchaser, absolutely onerous. Termination would be akin to eviction and come with all of the associated financial costs and personal duress.
44. Finally, no reasonable purchaser could foresee a situation where such clauses would be used to terminate a valid APS, for a finished and registered building, more than one year post-occupancy, for the purpose of increasing the sale value of the remaining, unsold units. If this was clearly explained, any reasonable purchaser would think twice.
45. Given that the mortgagee subordination language is also mixed in with easements, licenses, consumer and credit reports, consents and other agreements, the Vendor should be subject to a high standard for active disclosure of the potential power of subordination in a contract having to do with a residential dwelling.
46. In the commercial realm, sophisticated parties use fully drafted subordination, non-disturbance and attornment agreements (“SNDA”) in order to further delineate what is the reasoning behind the language and for what purposes it can and cannot be used. It is hopeful that the condominium community will begin to incorporate similar, more reasonable language in future contracts.

#### **PART 4 – TRUSTEE HAS NO BASIS IN EQUITY FOR TERMINATING AN APS**

47. It will be shown that:
  - (a) the Trustee has no basis in law to terminate the APS and therefore the Court can only consider termination in the context of equitable remedies;
  - (b) the appointment of a Trustee under Section 68(1) of the CLA and the use of vesting orders are extraordinary, discretionary and must be used with care, taking into account the interests of all stakeholders;

- (c) Purchasers are not the same form of stakeholder as creditors and should therefore not be viewed in the same light;
- (d) the equities in this case are overwhelmingly in favour of the Purchasers;
- (e) the primary creditor should accept a disproportionate share of the deficit; and
- (f) the Trustee is bound by good-faith obligation to complete Purchasers contracts.

#### ***4.1 Extraordinary Equitable Remedies to be used with Care***

48. In the Brief of Authorities of the Applicant filed January 16, 2015, in paragraph 8 of *Ru-Ko Inc. v. Croatia (Republic)*, 1998 CarswellOnt 1865 (S.C.J.), the Master states:

*“The power under section 68 is a discretionary one and, as pointed out by Mr. [Kevin P.] McGuinness in his text: [at page 497 of Construction Lien Remedies in Ontario (Toronto: Carswell, 1983)] care must be taken to ensure that other persons having an interest in the premises will not be adversely affected.”*

49. In *Firm Capital*, the Judge stated the basis upon which a decision should be reached:

*“...whether the Receiver should be authorized to terminate purchase agreements and leases and be entitled to a vesting order that terminates the interest of parties to purchase agreements and leases, it is necessary for the Receiver to take into account equitable considerations of all stakeholders. The remaining question is whether there are any “equities” in favour of the purchasers and lessees that would justify overriding first mortgagee’s legal priority rights.”*

50. In *Firm Capital*, the mortgagee’s had legal rights and priority over the purchasers and lessees. Therefore, the only case that could be made was one in equity. After analysis of the respective ‘equities’, the Judge found none and granted the Receiver its motion.



51. This proceeding is a mirror to Firm Capital. The Purchasers have strong legal standing for the APS to remain intact. The Trustee must therefore make the case that completing the Purchasers agreements or providing them with fair relief is so overwhelmingly inequitable to the creditors that it outweighs the Purchaser's legal rights.

#### ***4.2 Purchasers are not Creditors***

52. Citing the opening paragraphs of "Construction Lien Act", a summary written by the McMillan Construction Law Group:

*"Construction Lien legislation was established to provide some financial protection for those persons who supplied services or materials to a construction project. .... [T]he legislation provides them remedies in the form of construction liens, mandatory holdbacks and statutory trusts.*

*Because the protections of the Act are entirely statutory and create rights and remedies that impact third parties, the judicial approach to interpretation of these statutory rights is important. Courts have acknowledged that the Act provides individuals supplying services or materials to a construction project remedies they would not otherwise have and a priority over other creditors. Accordingly, the Act is given a strict interpretation in determining who is entitled to its remedial protections, but once rights are found to apply to the creditor, the Act is liberally construed."*

53. The quote is not legislation, precedent, or an academic text, but allows for a plain language and functional comparison of various stakeholders. Purchasers are not 'other creditors', vying for priority in the distribution of proceeds. Purchasers are the singular source of proceeds. Only through the execution of many APS can a project proceed.

54. Purchaser's rights are defined in contract and in law under the ONHWPA and should not be conflated with the statutory rights of various creditors to the proceeds. Purchasers had an interest in the development well before any mortgages or liens. As Purchasers are not creditors, the concept that they should be 'ranked and weighted' under the CLA's prioritization methodology is an incorrect analogy.

#### ***4.3 The Equities are overwhelmingly in Favour of the Purchaser***

55. According to the information provided by the Trustee in the *Chart re APSs*, Mr. Romaniuk was the 48<sup>th</sup> Purchaser and contracted for the 59<sup>th</sup> and 60<sup>th</sup> Parking Units in the project.

56. Mr. Romaniuk's affidavit details his payments made in respect of the project, totaling almost \$50,000. These funds could have been invested elsewhere had it not been for the expectations set by the Applicant in its Disclosure Statements, letters and emails. Mr. Romaniuk now finds himself and his family in a position of financial hardship.

57. Since late July Mr. Romaniuk has spent well over 200 hours of his personal time, including using over a week of vacation days from work, reading and responding to the Trustee's proposals and attempting to find various solutions.

58. The completion of Mr. Romaniuk's sale will result in an annual after tax rate of return of approximately 7%, hardly a windfall. Including Mr. Romaniuk's time to respond to the proceeding and inflation, this becomes less than 2%.

59. To add to the strict financial calculation of inequity, there are also the aspects of power, knowledge and ability to control the outcome. The Purchasers have none.

60. Aside from a letter issued by the Applicant on May 26, 2011 indicating that a parking issue had been identified and was now mitigated through the purchase of the adjacent lands, Purchasers had little to no information regarding the state of the project until the Supplemental Disclosure Statement of November 1, 2014, well past occupancy.

61. The Project Timeline and Parking Chart and the Table of Units Available, Sold and Required indicate strong sales in both residential units and parking, as well an evident need for increased parking beginning in late 2010. From the shape of the curve it appears that the Applicant had begun restricting the sale of second Parking Units as early as April of 2010.
62. In the Trustee's response to Interrogatory 28, issued in its letter on October 6, 2015, the Trustee states its understanding that at no time did the Applicant market units for sale without parking.
63. This may be factually correct, although does not convey any information about the Applicant's knowledge or understanding that a certain number of parking spaces were required in order to be able to effectively market and sell the unsold units.
64. In January of 2012, Mady Development Corporation held an open house for the 155 Uptown project, also known as 144 Park Tower 2. Detailed information regarding both phases of the project were shared with the City of Waterloo's ("**City**") planning department and the public. These documents, obtained from an archived version of the City's website shown in the screen capture attached hereto as Appendix "**I**", include detailed Site Plan Drawings ("**Site Plan**") by Turner Fleischer Associates and a Transportation Impact Study ("**Traffic Study**") by Paradigm Transportation Solutions Limited. Both documents were issues by the respective consultants in late 2011. These documents are attached hereto as Appendices "**J**" and "**K**", respectively.
65. The table on the first page of the Site Plan clearly indicates 158 parking spaces in Tower 1 and includes drawings where the actual parking spaces can be counted on each floor. The Tower 1 total is not 158, but 149. These two values are found in the same document.
66. At the same time, the Traffic Study included a section on Transportation Demand Management. On page 24, the consultant outlines a number of initiatives that can be used,

which included ‘Unbundled Parking’ in which the “*developer can sell condos or rent units with the option of purchasing a parking spot(s) at an additional cost resulting in a reduced cost if one or more parking spots are not included in the purchase.*”

67. The parking issue was one solely created by the Applicant and the Applicant had already proposed the potential for selling units without parking. The Purchasers are now being forced to fight the Trustee on the issue, lest the Trustee effectively evict them.
68. While an unfortunate circumstance, it would be wholly inequitable to place the financial burden on the shoulders of the Purchasers, who had the least amount of power, knowledge and control out of all involved.
69. An analysis by Mint Realty states that the 20 unsold units, without parking, would result in a total reduction in sale proceeds of \$3.8M, or \$190,000 per Parking Unit. The Trustee has been offering Purchasers their original purchase price plus HST, or \$33,900. For an equitable solution to be found, this discrepancy needs to be reconciled.
70. If the Purchasers could retain their parking, they could theoretically sell their second Parking Units to the Purchasers of the Unsold Units, theoretically for \$190,000 each. For the 7 Purchasers that have released their Parking Units to the Trustee, they have effectively forgone \$150,000 each in value, totaling over \$1M, hardly equitable. This is not meant to imply that each of the 20 purchasers should be expecting \$190,000 for their second Parking Unit, only that an equitable solution must lie in some form of compromise.
71. Purchasers legal rights are being infringed without consideration and given these circumstances, an Order of the Court for termination would be interference with valid, duly executed and lawfully binding contracts, leaving them without remedy for breach.

#### ***4.4 Trustee has a Good Faith Obligation to Complete Contracts or Find Alternative Remedy***

72. In Peel Condominium Corporation No. 505 v. Cam-Valley Homes Limited, 2001 CanLII 24035 (ON CA) (“**Peel**”), Justice Finlayson wrote:

*“The developer’s good faith obligation is to carry out the agreement and deliver whatever title the contract between the parties calls for. This duty is circumscribed by the documentation required by the Condominium Act. There is no overarching fiduciary duty arising out of the relationship of a vendor and purchaser as such. The purchaser is protected by the statutory requirement of full disclosure, not the extension of fiduciary principles to the bargaining process.”*

73. In the same proceeding, Justice Weiler concurred but for different reasons, writing:

*“The Supreme Court [has] left open the question of the existence of an implied duty of good faith at common law in the performance of existing contracts. The requirement to exercise a contractual right in a reasonable manner is recognized in special categories of relationships and equity may also be the foundation for an independent doctrine of good faith in the performance of a contract.... The appropriate remedy for breach of a duty of good faith was an increase in damages within the context of a broader action.”*

74. Examples of relationships where good faith has long been implied are contract interpretation, employment, landlord-lessee and insurance. In the case of the Vendor/Purchaser relationship, the Purchaser is at a disadvantage in both negotiations and information. The ONHWPA and Condominium Act have taken steps to mitigate this by requiring timely and accurate disclosure statements.

75. Since the Peel decision, in *Bhasin v. Hrynew*, 2014 SCC 71, [2014] 3 S.C.R. 494 (“**Bhasin**”), the Supreme Court acknowledged that:

*“...good faith contractual performance is a general organizing principle of the common law of contract which underpins and informs the various rules in which the common law, in various situations and types of relationships, recognizes obligations of good faith contractual performance. The second is to recognize, as a further manifestation of this organizing principle of good faith, that there is a common law duty which applies to all contracts to act honestly in the performance of contractual obligations.”*

76. In summary, Purchasers are due good faith in two forms. The first is simply in the execution of a contract in general. The second is specifically in respect of the difference in negotiating power and access to information, making the relationship a significantly one sided one. As described by Justice Weiler, the appropriate remedy for breach of a duty of good faith is an increase in damages.

#### ***4.5 The Primary Creditor should accept a Disproportionate Share of the Deficit***

77. As per the Laurentian Bank of Canada (“**Laurentian**”) & Mady Development Corporation Commitment Letter (“**Commitment Letter**”) dated March 7, 2012, Laurentian’s original agreement with the Vendor was for a project that included the following provisions for parking: *“Parking will be provided for up to 161 vehicles. Parking stalls will be provided as follows: 148 stalls for residents, 13 stalls for visitors.”*

78. The Commitment Letter includes language which speaks to material representation and the obligation to forthwith disclose material adverse changes, discrepancies or inaccuracies.

79. An appraisal by MacKenzie Ray Heron & Edwardh (“**Appraisal**”) dated November 23, 2011, provided an estimate of project revenue. The assumptions included “*one parking spot and a locker (which is the norm for the marketplace) and taxes.*”
80. This assumption is inaccurate. Mr. Romaniuk’s sales information is contained in the appraisal and includes the sale price with both Parking Units. The unit area price changes from \$357.90 to \$324.00 after accounting for the second unit, a 9.5% reduction.
81. The chart shows 136 Residential Units had been sold. Mr. Romaniuk’s calculations show that 160 Parking Units had also been sold, 12 more than the Commitment Letter contemplated, leaving 12 Residential Units without parking.
82. The monthly Progress Draw Reports provided to Laurentian by its cost consultant, O’Keefe and Associates Limited, indicate that the parking garage was substantially complete in April or May of 2013. If the detailed building drawings were insufficient, completion of the garage is the latest in time that the Applicant should have realized the problem, well in advance of occupancy and with sufficient time to investigate mitigation measures.
83. At some point, Laurentian must have been subject to one or more of misleading project information, inadequate due diligence, poor project controls and project oversight.
84. For the former, Laurentian has guarantors to pursue, for the latter, it should not have the ability to influence the Trustee to keep it whole at Purchaser’s expense.
85. For the above reasons and in either of the case of negligence or its own failures, Laurentian should be required to absorb an amount of deficit equal to the ramifications of the parking issue, calculated by Mint Realty to be \$3.8M.

#### **PART 5 – AUCTION AS A POTENTIAL SOLUTION TO THE PARKING ISSUE**

86. Mr. Romaniuk met with Trustee’s counsel on September 2<sup>nd</sup> to discuss a number of matters, which included proposing an auction as a potential solution to the parking issue, among others.

During the one hour meeting, Mr. Romaniuk gave a 30 minute presentation that included a detailed explanation of what is informally known as a Japanese auction. The presentation is attached hereto as Appendix “H”.

87. The auction concept allows for the Trustee to attempt solving the situation through self-selection as opposed to the various, more intrusive tactics that have been used to date. In addition, with the right preparation, if the auction is successful, then all parties should walk away in agreement or at least have agreed to the outcome in advance.
88. Mr. Romaniuk states the conversation concluded with the actions described in his subsequent summary email to Trustee’s counsel, attached hereto as Appendix “G”, including forwarding the presentation to the Trustee and Mr. Romaniuk offering to discuss the concept further.
89. Mr. Romaniuk stated during the meeting and again in the summary email that it is imperative that the Trustee maintain its ‘auction strike price’ in confidence in order to ensure an optimal (i.e. transparent and objectively fair) auction result. If the auction proceeds, the outcome will now be different as the Trustee has published the estimated market value of the Parking Units, although may still result in an acceptable outcome.
90. A brief description of the auction concept is included in Mr. Romaniuk’s Affidavit.

#### **PART 6 – ACCESSING THE TARIION WARRANTY GUARANTEE FUND**

91. Another potential solution, first being proposed here, is to view the ‘missing’ Parking Units as an issue to be addressed through the Tarion New Home Warranty Plan. These Parking Units can be viewed as the Vendor having not completing the Purchaser’s home.
92. As well, there is no visitor parking whatsoever. This could possibly give the Condominium Corporation an avenue to file a claim for incomplete common elements.
93. As the Vendor sold Purchasers 154 Parking Units and the Trustee is adamant that 20 Parking Units are required for the Unsold Units, there are 25 Purchasers that will be forced to close



without a second Parking Unit. Under the duress associated with the threat of APS termination and the significant costs associated with greatly delayed closings, 12 of the Purchasers have relinquished their rights to a second Parking Unit.

94. The Tarion New Home Warranty Plan includes provisions for incomplete work and a process for obtaining funds for the purposes of repair and/or damages if repairs cannot be performed.
95. The Condominium Act, Section 100(4) states:

*“Despite any provision in a mortgage or subsection 6 (2) of the Mortgages Act, a mortgagee may not require that proceeds received under an insurance policy on the property or on a part of the property or a payment received out of the guarantee fund under subsection 14 (3) or (4) of the Ontario New Home Warranties Plan Act be applied towards the discharge of the mortgage; a requirement that contravenes this subsection is void.”*

96. Sections 14(3) and (4) of the ONHWPA are with respect to payment out of the fund for damages for breach of warranty and damages for major structural defects, respectively. Any payments to the Declarant, Condominium Corporation and/or Owners would be unavailable for payment to mortgagees of the premises, that is, the primary creditors.
97. As the Trustee has stated its intention to appropriate the second Parking Unit of any Two Parking Units Purchaser, part of its duties should be to obtain equitable relief on the Purchaser’s behalf as compensation. It should also be required to do so on behalf of the Condominium Corporation, as the same deficit is true for the visitor parking.
98. The damages payable to each of the Purchasers should include, at a minimum, returning the original purchase amount for the second Parking Unit plus a reasonable interest rate, any losses associated with the delay in mitigating the parking issue, including the principal portion of any occupancy fees paid past the date when unit closing should have occurred, any legal

fees or the value of an individual's time incurred in the legal proceedings with respect to parking, as well as any indirect costs as put forth by the Purchasers.

99. In the case of Mr. Romaniuk's Unit assigned to the Muellers, failing to close, or being forced to close with only one Parking Unit, would result in a significant loss of income, solely due to the actions of the Applicant over the past 5 years.

#### **PART 7 – EXTRAORDINARY MEASURES TO REMEDY THE PARKING ISSUE**

100. In the event that the Court finds all of the preceding are insufficient to achieve their stated purposes, Mr. Romaniuk will attempt here to provide here one additional potential remedy for the Purchasers. It is extraordinary, although evidence has been provided that the initial act of appointing a Trustee is extraordinary in itself and therefore the circumstances may warrant such measures.
101. Given the circumstances, it may be that various parties to the proceeding could have reason to claim for oppression based on the appearance of unfair conduct by the Applicant and its various related entities. It may also be that the protection of the corporate veil afforded to the Applicant's related entities should be set aside.
102. If it is determined that these allegations are valid, the Trustee could be granted a vesting order to place the required number of Parking Units directly on title of the 155 Uptown project lands as was originally proposed and described in Appendix E of Trustee's First Report, as well as providing an avenue for various parties to claim appropriate damages.
103. Given the nature of the proceeding and the desired outcome, it is proposed that the investigation regarding these allegations and the resulting remedies should be initiated by, and the responsibility of, the Trustee, as it has maintained an unwavering duty to maximize proceeds in the interests of all stakeholders. Any ability to offset the losses of Purchasers such

that additional funds find their way into the hands of the lien claimants and mortgagees, is indeed to the benefit of all.

104. An application for a claim of oppression can be brought under Section 241 of the Canada Business Corporations Act (“CBCA”) as well as under Section 135 of the Condominium Act. In either case, the first requirement is to prove eligibility.

### ***7.1 Eligibility to Claim Oppression***

105. Under the CBCA, the Courts have generally found the definition of a complainant to be broad and mean any person who can reasonably be considered a creditor at the time the alleged oppression occurred. By this definition, Purchasers are included as they had deposits in trust with the Vendor and were owed specific performance.
106. Under the Condominium Act, the parties eligible to make an application are “*an owner, a corporation, a declarant or a mortgagee of a unit*”. The project currently has approximately 97 owners and a Condominium Corporation, all of which would be eligible. For the balance of Purchasers, it may also be argued that they would be eligible under the definition (that is, they would be owners) if it were not for the allegations.

### ***7.2 Determining if the Conduct was Oppressive***

107. The next step is to determine if oppressive conduct has occurred. Paragraph 68 of *BCE Inc. v. 1976 Debentureholders*, [2008] 3 SCR 560, 2008 SCC 69 (“**BCE**”) outlines the test for oppression:

*Does the evidence support the reasonable expectation asserted by the claimant?*

*Does the evidence establish that the reasonable expectation was violated by conduct falling within the terms “oppression”, “unfair prejudice” or “unfair disregard” of a relevant interest?*

108. Purchasers had contracted for a given number of Parking Units, as well as implicitly agreed to the Disclosure Statements which stated the amount of parking available in the proposed project, as well as the Vendor's rights to unilaterally add or remove parking. It is reasonable to assume that any changes to this information would be disclosed in further disclosure statements in an accurate and timely fashion.
109. It may be easier to argue in the alternative: Is it reasonable to expect that the Vendor would oversell parking in a project and assume that the independently acting project on the adjoining lands would proceed to a point where the Vendor could purchase the parking required in order to market and sell the remaining 20 of 149 residential units? Is it reasonable to expect that if the project on the adjacent lands did not proceed, the Vendor, in the interests of paying its creditors, would terminate existing agreements?
110. Below is information that can be used as *prima facie* evidence that it appears the reasonable expectation was violated with unfair disregard for the Purchasers and the eventual Condominium Corporation.
111. Disclosure Statements are user to provide transparency to Purchasers and to provide them opportunity to rescind if the project changes in a material way. It appears that the Applicant did not update the statements other than on April 1, 2010 in order to increase the amount of available parking and provide the legal coverage required in order to continue with sales.
112. Had the Applicant openly stated to Purchasers that the design plans for the building could not accommodate the required number of Parking Units and visitor stalls, it is likely that some Purchasers would have reconsidered their investment and rescinded.
113. In addition, prospective Purchasers may have been weary, seeing the future problem.
114. In the Parking Chart, it can also be seen that the Applicant increased the total available parking in the building, just as parking was becoming an issue and any further residential unit sales

would have to be without parking. To date, no evidence has been filed that indicates that the Vendor took any material steps towards increasing the number of parking spaces to be constructed. It appears it was a paper exercise only.

115. Through the latter stages of design, appraisal, permitting, financing, preparing bid and construction documentation, and even through construction, it appears the Applicant continued to sell knowing it could not meet its existing commitments with respect to parking, as well as its revenue commitments to Laurentian.
116. Simultaneously with the above, it appears the Applicant's parent company, Mady Development Corporation or a related entity, was proceeding with the design, studies, public consultation, permitting and approvals for, and sales in, the 155 Uptown project. As shown in the filed evidence, the project was publically promoted as 144 Park Phase 2 or Tower 2. During this time, the Disclosure Statement was not updated to reflect this or any other pertinent information regarding the parking issue.
117. It can be imagined that as the project neared completion, the Applicant realized the state of Tower 1 and Tower 2, and the likely outcome for both. With the inability to meet its obligations, the Applicant issued a final Disclosure Statement revising the available parking to what had been constructed approximately 18 months earlier. It then began discussions with lenders and subsequently handed over the project, contained within a single purpose corporate vehicle, to the Court Appointed Trustee to manage the resulting complex issues.
118. Once under Trustee control, the Applicant claimed that in order to market and sell the Unsold Units, additional parking would be required and that 155 Uptown was an independent entity with which no agreement could be reached with respect to parking, the same agreement that had been used as a marketing tool but not formally included in the Disclosure Statements for the past 4 years.

119. To summarize colloquially, the Vendor's conduct appears to have unfair disregard for the Purchasers as follows: 144 Park Ltd. had a public and a private face, where it told Purchasers what they wanted to hear when they wanted to hear it, while behind the scenes betting the second, larger project next door would be completed and cover its promises. If this statement is incorrect and the Applicant had exhibited any regard for the concerns of the Purchasers, it makes sense that accurate changes to the disclosure statements would have been made at the appropriate time in order to allow Purchasers to make their own decisions, instead of waiting until full occupancy of the sold units and then telling the captive Purchasers that it couldn't deliver what it had contracted.
120. Mr. Romaniuk believes that sufficient *prima facie* evidence and argument has been presented such that, if the Court finds it to be warranted, the Trustee could be granted Leave of the Court to proceed with developing a more fulsome argument to present on behalf of the affected Purchasers and Condominium Corporation.
121. The second component of the relief is the Trustee being able to access entities outside of simply the Applicant. A strong precedent for this was made in *Downtown Eatery (1993) Ltd. v. Ontario*, 2001 CanLII 8538 (ON CA) ("**Downtown**").
122. Particularly relevant is the determination that oppressive conduct need not be undertaken with the intention of harming the complainant, only that it be unfairly prejudicial and/or unfairly disregard a person's interests.
123. In *Downtown*, the Judge wrote:

*Provided that it is established that a complainant has a reasonable expectation that a company's affairs will be conducted with a view to protecting his interests, the conduct complained of need not be undertaken with the intention of harming the complainant.*

*If the effect of the conduct results in harm to the complainant, recovery under s. 248(2) may follow.”*

124. As well, the decision in Downtown includes indicators that can be used to determine whether the various entities are truly separate. Asking simple questions can be indicative, as illustrated below.

125. Who is the property developer?

Based on the email signature lines from project employees, the welcome blanket and keychain provided at interim occupancy, presentations to the public and City, project reports commissioned and paid for, as well the person who applied to the city for re-zoning, it would appear to be MADY.

126. What is the name of the project next door and is it closely related?

Presentations to the public and the City, the Site Plan and the Transportation Study commissioned by Mady would indicate 144 Park Tower 2 and that the co-parking agreement, the condominium declaration etc would indicate that the two projects are effectively working as one.

127. The Judge in Downtown referred to the common employee doctrine as considered in Sinclair, the leading case at that time, noting that:

*“As long as there exists a sufficient degree of relationship between the different legal entities who apparently compete for the role of employer, there is no reason in law or in equity why they ought not all to be regarded as one for the purpose of determining liability for obligations owed to those employees who, in effect, have served all without regard for any precise notion of to whom they were bound in contract. What will constitute a sufficient degree of relationship will depend, in each case, on the*

*details of such relationship, including such factors as individual shareholdings, corporate shareholdings, and interlocking directorships. The essence of that relationship will be the element of common control”.*

128. The analogy of the employer/employee relationship has been drawn in this filing. For an experienced property developer such as the Mady Development Corporation, there are a number of benefits that accrue to a project portfolio through co-branding and leveraging successes. But, when issues start to arise, the Applicant should not be entitled to distance related entities. If 144 Park Tower 1 and Tower 2 were being co-developed, then they are sufficiently interrelated. The onus should lie on the Applicant to satisfy the Court that such a relationship does not exist.
129. The Trustee has offered two additional specific examples where it appears that the two towers are closely related.
130. First, in the proposed parking agreement the Trustee offered \$250,000 for 35 Parking Units in the future project. Using the 2010 prices being offered to Purchasers, 35 Parking Units are valued at over \$1M + HST. If there was not an underlying relationship between the two entities, then offering to purchase 35 units at a 75% discount would be considered offensive to a reasonable developer and it wouldn't require mortgagee's intervention to kill the deal.
131. Second, in the Motion at hand, the Trustee has requested the Court grant an Order vesting title in some excess lands to the owners of the adjacent lands. If the price to be paid by the adjacent owners is anything less than a commercially reasonable amount then it will be evident that the two entities are acting in concert.
132. In summary, it appears that there may be reason to believe that the Applicant may have acted in concert with related entities and the resulting conduct unfairly disregarded the interests of the Condominium Corporation, the Purchasers and potentially the balance of the creditors.



Sufficient *prima facie* evidence and argument has been provided that, if the Court finds it to be warranted, the Trustee could be granted Leave of the Court to proceed with developing a more fulsome argument to present on behalf of the affected Purchasers and Condominium Corporation.

133. If it is found that the conduct exhibited by the Applicant was indeed oppressive, further conduct of this sort should be actively discouraged. There is a very real possibility that the creditors could be fully repaid and that the Applicant could emerge with the remaining funds, without having declared bankruptcy or entering into a formal creditor arrangement. In effect, Vendors would be able to bet and hedge the downside through the protections afforded by the CLA. A strong message should be sent against this practice, in that the law and Courts cannot be used to this end, be it intentionally or by chance.

#### **PART 8 – OPPOSITION TO VESTING ORDER IN RESPECT OF ADJOINING LANDS**

134. The final matter in this filing is with respect to the Trustee's request for a vesting order to grant free and clear title of certain project lands to the adjacent owners. As indicated in the previous section, this should only be granted under the condition that it be done in a commercially reasonable manner.
135. With only one available Purchaser, standard market mechanisms cannot be brought to bear in order to determine a fair price. Instead, the land should be sold at a minimum of an independent valuation plus a reasonable leverage premium. The adjacent owner needs the land for the 155 Uptown project to proceed and therefore any reasonably skilled negotiator would be able to command a premium on a transaction under such circumstances.
136. This would be in the benefit of all creditors and stakeholders, apart from the adjacent landowners, but they have already maintained their independence and so should understand the ramifications of negotiating with an unrelated party from a position of weakness.

137. In addition, the Trustee has stated that the lands are being transferred by instruction of the City. Further clarification should be sought in respect of the City's request to determine if the City demands it, requested it, and or if it was originally offered by the Applicant or a related entity and then made a condition of site plan approval (or other) by the City. Each has very different effects on the valuation of the land.

**ALL OF WHICH IS RESPECTFULLY SUBMITTED,**



---

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: [oliver.romaniuk@gmail.com](mailto:oliver.romaniuk@gmail.com)

**Self-Represented**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF *THE CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

***ONTARIO***  
**SUPERIOR COURT OF JUSTICE**  
**(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**FACTUM OF OLIVER ROMANIUK**  
(returnable October 5, 2015, hearing  
rescheduled to October 16, 2015)

**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

## **TAB 3**

**ONTARIO  
SUPERIOR COURT OF JUSTICE  
(COMMERCIAL LIST)**

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*,  
R.S.O. 1990, c. C.30, AS AMENDED**

**AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD.  
FOR THE APPOINTMENT OF A TRUSTEE UNDER SECTION 68(1) OF THE  
*CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

**AFFIDAVIT OF OLIVER ROMANIUK  
(sworn October 8, 2015)**

**I, OLIVER ROMANIUK, of the city of Toronto, in the Province of Ontario, MAKE  
OATH AND SAY AS FOLLOWS:**

1. I am Oliver Romaniuk, the original Purchaser of Residential Unit 01, Level 12, together two Parking Units and one Locker Unit (collectively the “Unit”). The facts set forth herein are within my personal knowledge and determined from the face of the documents attached hereto as exhibits.

**Qualifications**

2. I have a Bachelors and Masters of Electrical Engineering from the University of Waterloo. I am a Registered Professional Engineer in the Province of Ontario. I have been

employed for over a decade managing the development and execution of various types and sizes of projects in the electricity industry.

3. I am currently employed as Project Manager, Development with NextEra Energy Canada, a wholly owned subsidiary of NextEra Energy Inc. NextEra's primary business is the development, construction and operation of electric generation, transmission and distribution infrastructure, as well as energy sales and marketing.

4. My current project is the early stage development of a 435 kilometre electric transmission line between Thunder Bay and Wawa, Ontario. The development budget is \$22.4 million CAD. Upon completion it is estimated to have a capital cost of between \$400 and \$500 million CAD. Physically, the project will consist of approximately 1100 individual towers on a 50-60 metre wide right-of-way, each tower standing approximately 40-50 meters in height.

5. My development team consists of professionals in the areas of project management (including budgeting, scheduling, supply chain and contract management), engineering (including electrical, geotechnical and structural), construction, real estate and land acquisition, environmental assessments and permitting, regulatory (specifically the Ontario Energy Board), corporate legal and stakeholder relations.

6. I believe that the preceding provides me with the requisite background in order to make reasonable estimations regarding general aspects of the development and execution of large infrastructure projects.

7. During the course of my career, I have been intimately involved in a number of hearings at the Ontario Energy Board, a quasi-judicial regulatory body in Ontario. I have participated in

the drafting of a number of filings for those hearings. That experience has provided me with an understanding of proper process, procedure and decorum in formal proceedings.

**Appeal to the Court for Tolerance**

8. I am well aware of the complexity of the law and the judicial system. I have no intention to unduly increase the duration or cost of the proceeding. I will attempt to provide to the Honourable Court and other parties to the proceeding information, perspective, proposals and ideas within a legal framework and context, as best I understand them. My goal is to facilitate an equitable decision, but, admittedly, my arguments are primarily in the favour of the Purchasers.

9. Between the afternoon of July 28, 2015 and the filing of this document, I have spent over 200 hours of my personal time, including over a week of vacation days from work, reading and responding to the Trustee's proposals and attempting to find various solutions. I have attempted to understand, as best I can in the time available, the following:

- (a) *the Rules of Civil Procedure (Ontario)*;
- (b) forms relating to the *Rules of Civil Procedure (Ontario)*;
- (c) the Policies and Practice Direction of the Ontario Superior Court of Justice, including those specific to the Toronto Region and the Commercial List;
- (d) the entire contents of the proceeding to date;
- (e) the Construction Lien Act, Condominium Act, Ontario New Home Warranty Plan Act, and to a lesser extent, the Canada Business Corporations Act, Bankruptcy and Insolvency Act and the Companies Creditor Arrangement Act;

- (f) precedent relevant to the issues before the Court, reviewing hundreds of decisions on the database of the Canadian Legal Information Institute.

10. I defer to the Court to determine if it is of sufficient quality, depth, or importance to be considered in this proceeding. To that effect, I will not be filing any formal motions before the Court, only this Affidavit, its associated exhibits, and a Factum. I will be in attendance at the hearing to provide oral evidence, if the Court so requests or requires.

11. If the Court finds any of my filing to be excessive, inappropriate, or legally naïve, I beg the Honourable Court's forgiveness and on request will retract my filing, or parts thereof.

12. I respectfully request that if any of my filed materials, arguments or evidence are found to be of use within the proceeding, that the Court or another party take the initiative to pursue them. I have none of the qualifications, ability or means to do so. I have included proposals and reasoning for such action by other parties in my Factum.

13. For the reasons described herein, I am financially unable to retain external counsel and am therefore self-represented.

### **Timeline of Events and Overview**

14. On February 14, 2010, I entered into an Agreement of Purchase and Sale ("APS") with 144 Park Ltd. for Unit 1, Level 12, together with two Parking Units and one Locker Unit. All required payments and obligations on my part with respect to the APS have been met. The Trustee has filed the *Standard form of Agreement of Purchase and Sale* in its Appendix G.



15. I was relocated by my employer from Kitchener, Ontario to Jupiter, Florida in ~~April~~ <sup>AUGUST</sup> ~~2014~~. My wife, Leah Weller (“**Leah**”) and I were married on October 20, 2012.

16. On September 18, 2013, I invested \$3,688.32 in additional unit upgrades.

17. Nearing the end of 2013, Leah and I discussed the possibility of selling or assigning the Unit, as we had to make a large personal decision that would incur significant medical expenses over the course of 2014 and 2015.

18. I requested information regarding possible assignment of the APS and received an email response from Joshua Lee, Sales and Marketing Assistant with the MADY Development Corporation, on December 6, 2013. A copy of the email is attached hereto as **Exhibit “A”**. At that time, interim occupancy for my Unit was tentatively scheduled for February 6, 2014. In addition, Mr. Lee indicated that for a building such as 144 Park, there was a *“worst case 5 months to achieve registration and schedule the final closings.”*

19. At the time of the email, the construction of 144 Park had progressed significantly. The structure was largely complete and occupancy was only a few months away. I had no reason to believe that the project was in any jeopardy.

20. I was relocated by my employer from Jupiter, Florida to Toronto, Ontario in April 2014.

21. On June 3, 2014, I took interim occupancy of Unit 1, Level 12, together with Parking Unit 63, Level A, Parking Unit 64, Level A, and Storage Unit 69, Level A (collectively the “**Unit**”), as described in the Interim Statement of Adjustments, attached hereto as **Exhibit “B”**.

22. I listed the Unit for assignment with Mint Realty in August of 2014.

23. On November 3, 2014, I entered into an assignment of the Agreement of Purchase and Sale for the Unit (“**Assignment**”) with Achim Mueller and Kerry Mueller (“**Mueller**”), attached hereto as **Exhibit “C”**. In consideration of the Mueller’s, I have redacted certain information in the agreement, although I am willing to share any of said information with interested parties, subject to the Mueller’s consent.

24. On November 5, 2014, I paid 144 Park Ltd. \$2,500+HST for their approval of the Assignment (“**Assignment Approval**”), attached hereto as **Exhibit “D”**. A condition of the approval is that I remain as guarantor for the timely performance and fulfillment of all covenants and obligations of the Assignee. This includes forfeiture of my deposit payment if I cannot.

25. During November 2014, I was paid my Tarion Delayed Occupancy payment by the Applicant in the amount of \$7,500.

26. It is my understanding that on July 21, 2015, the Mueller’s counsel received a fax from the Applicant’s counsel on behalf of the Trustee, notifying them that Parking Unit 64, Level A had been reallocated to another Purchaser and the Muellers had been allocated Parking Unit 32, Level 1. The Trustee has filed the *Harris Sheaffer letter to purchasers re Level 1 Parking Units* in its Appendix P.

**Statement of Personal Status**

27. Upon closing of the Unit, Leah and I stand to make a reasonable profit from the Assignment, commensurate with the magnitude of the financial investment, risk involved, the time that has elapsed, amount of personal effort that has been expended and the opportunity cost of the invested finances over the past 5.5 years.

28. My deposit of approximately \$35,800 has been in trust with the Vendor since the first quarter of 2010. I paid \$3,688.32 for additional upgrades to the Unit in September of 2013. I have paid approximately \$7,500 in occupancy fees between June 2014 and the time of the Assignment to the Muellers in November 2014. I've paid \$2,500+HST to the Vendor for their approval of the assignment. My accountant, based on the circumstances, recommended I pay taxes on a portion of the capital gains in 2014, without having received any profit. To date, my cash outlays are approaching \$50,000.

29. For the purposes of responding to this proceeding, I have received some legal advice and had to pay various Court fees, totaling approximately \$1,500.

30. If closing occurs, I will realize an annual after tax rate of return of approximately 7%. If my time participating in the proceeding and inflation are taken into account, it becomes less than 2%. If the closing does not occur I will realize a negative return and be worse off than where I was in 2010. I could have rescinded my agreement numerous times, received prescribed interest on my deposit and invested these same funds elsewhere. If the agreement is terminated, I also stand to lose my deposit.

31. Leah and I have long been anticipating the closing of the Unit to help pay for recent and significant medical expenses. We made these decisions in part based on the information and expectations set by the Applicant with respect to the progress of the Project. These expenses, while elective, are core to our family. To date, Leah and I have spent approximately \$40,000 attempting to conceive our first child. We have suffered many setbacks and it has taken a personal, physical and financial toll on us both, and our journey is far from over.

32. My intent is not to sway the Court or Trustee with pity. I provide just my own personal example of how accurate and timely disclosure in such projects is not just a legal requirement, but also necessary for individuals to be able to make proper, informed decisions. I am confident that the termination of other Purchaser's contracts can be just as distressing, if not more so.

**Evidence Provided to the Court**

33. I have created two exhibits based on information shared by the Trustee. I hope that they will be of use to the Court. I have made every effort to ensure they are accurate and objective.

34. The Project Timeline and Parking Chart, attached hereto as **Exhibit "E"**, graphically displays the available Parking Units, visitor parking stalls and Leased Parking Units as background shading. Overlaid are line graphs that display the number of Residential Units and Parking Units sold, and based on the provided sales figures, the number of Parking Units that would be required at that time for at least one Parking Unit per Residential unit. For chronological reference, major project milestones are included.

35. The Table of Units Available, Sold and Required, attached hereto as **Exhibit "F"**, is similar to the above chart but provides a numerical representation. In addition, it includes information from an Appraisal commissioned by the Applicant or a related entity, in which the sales figures vary greatly from those provided in the *Chart re APSs* filed by the Trustee in its Appendix H. I make no inference as to the reason for the variances. Purchasers have opportunities to rescind agreements and sales figures can change with time.

36. In its filing, the Trustee indicated that I would be filing information with regards to an auction proposal. To that effect I attached hereto **Exhibit "G"** and **Exhibit "H"**. They are,

respectively, an email exchange between myself and Trustee's counsel and the presentation I delivered during the meeting and emailed later that evening.

37. To briefly summarize a simplified variant of the Japanese auction concept that was proposed. Colloquial terminology is used for simplicity of description.

- a) The Trustee first determines a confidential 'strike price' which is the total premium it is willing to pay for all the Parking Units it requires.
- b) The auction begins with the Purchasers each 'owning' their respective Parking Units, under the assumption that there is some price at which they will 'sell'.
- c) The Trustee periodically 'calls out' an increasing clearing price.
- d) With every price, each Purchaser privately notifies the Trustee if they are willing to accept the clearing price in exchange for their Parking Unit.
- e) Once a sufficient numbers of Purchasers are willing to sell, the auction ends.
- f) The Trustee calculates the total premium (clearing price times units).
- g) If the premium is below the strike price, the deals are firm.
- h) If the premium is above the strike price, the auction is void.

38. Finally, having searched the internet for information on the larger, multiphase project, I have attached documents that were provided by Mady Development Corporation to the City of Waterloo's planning department for the purposes of a public meetings on the re-zoning of the project lands for the second phase of the project. They are a screen capture of the source of the

information, a website that archives other websites, Site Plan Drawings by Turner Fleischer Architects Inc., dated November 15, 2011, and a Transportation Study by Paradigm Transportation Solutions Limited, dated November 10, 2011.

39. In addition I have requested the Trustee file a number of documents with the Court that it has shared with parties to the proceeding. I will reference some of these documents in my Factum.

**SWORN BEFORE ME** at the City of  
Toronto, in the Province of Ontario on  
October 8, 2015



Commissioner for Taking Affidavits  
(or as may be)



**OLIVER ROMANIUK**

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

**RED SEAL NOTARY INC.**

25 ADELAIDE ST. EAST.  
TORONTO ON M5C 3A1  
(888) 922-7325  
[www.redsealnotary.com](http://www.redsealnotary.com)



THIS IS EXHIBIT "A" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8<sup>TH</sup>  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

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(888) 922-7325  
[www.redsealnotary.com](http://www.redsealnotary.com)



Oliver Romaniuk <oliver.romaniuk@gmail.com>

---

**RE: 144 Park - #1201**

---

Joshua Lee <jlee@mady.com>

Fri, Dec 6, 2013 at 10:32 AM

To: "oliver.romaniuk@gmail.com" <oliver.romaniuk@gmail.com>

Cc: Ellen De Castro <ellen@mady.com>

Hello Oliver,

Ellen has passed me your inquires below. As per the letter dated September 10<sup>th</sup>, 2013, that was sent to your address, your current occupancy date is schedule for Thursday, February 6<sup>th</sup>, 2014.

Interim occupancy and Final Closing does not happen on the same day. A Final Closing date cannot be set until we have achieved registration of the condominium with the Region of Waterloo. For a building of this size we estimate a best case scenario of 3 months from the first occupancies and worst case 5 months to achieve registration and schedule the final closings.

To prepare the Assignment Agreement we require the following information:

- New purchaser(s) full name
- Address
- Contact information – phone numbers, emails
- Date of Birth
- Social Insurance Number
- Copies of Driver's License/ID
- New purchaser(s) solicitor information

We require a certified cheque payable to **144 Park Ltd.** For \$2,825 (\$2,500+HST). Please keep in mind as we move closer to interim occupancy any assignments may no longer be granted as interim documentation must be prepare by the lawyers prior to your move in date.

I hope this helps in answering your questions.

Regards,

Josh



Joshua Lee  
Sales and Marketing Assistant  
MADY Development Corporation  
tel: 905.944.0907 x123  
fax: 905.944.0916

Check out our new website at [www.MADY.com](http://www.MADY.com)



This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

---

**From:** Oliver Romaniuk [<mailto:oliver.romaniuk@gmail.com>]  
**Sent:** Sunday, December 01, 2013 1:56 PM  
**To:** Ellen De Castro  
**Cc:** Ellen De Castro  
**Subject:** 144 Park

Hello Theresa, Ellen,

Sorry I forgot, but can you please confirm for me the following?

My estimated occupancy date.

Would occupancy and closing be the same day?

What are the general terms for sale prior to occupancy, and what is the process?

Thank you, Oliver

Sent from my iPad

On Oct 11, 2013, at 9:24 AM, Theresa Vosylius <[tvosylius@mady.com](mailto:tvosylius@mady.com)> wrote:

Hello Oliver! Receipt attached, original will be sent in the mail. Thanks

Theresa

<SC45413101108060.pdf>

THIS IS EXHIBIT "B" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
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## INTERIM STATEMENT OF ADJUSTMENTS

RE: 144 Park Ltd. sale to Oliver Romaniuk  
Unit 1, Level 12, Unit 63, Level A, Unit 64, Level A, Unit 69, Level A, WSCP TBR  
Suite 1201, 144 Park Street, Waterloo, Ontario N2L 0B6

Tarion Builder Registration Number: 39278  
Tarion Unit Enrolment Number: H1816729

**Closing Date:** June 3, 2014

<b>PURCHASE PRICE</b> inclusive of HST (where applicable)		\$ 357,990.00
<b>UPGRADE CHARGES</b> inclusive of HST		\$ 3,688.32
<b>TOTAL DEPOSITS</b>	\$ 35,800.00	
<b>UPGRADE CHARGES PAID TO VENDOR</b>	\$ 1,844.16	
<b>UNADJUSTED BALANCE DUE ON THE UNIT TRANSFER DATE</b>	\$ 322,190.00	
<b>BALANCE DUE ON CLOSING</b> paid by certified cheque to <i>Harris, Sheaffer LLP, In Trust</i>	\$1,844.16	
E. & O.E.	<u>361,678.32</u>	<u>361,678.32</u>

**NOTE:** In addition to the unadjusted balance due on closing, if any, the Purchaser must deliver the following cheques:

- (i) **Certified Cheque** payable to **Harris, Sheaffer LLP** in the sum of \$1,474.63 being the pro-rated amount of monthly Occupancy Fee from June 3, 2014 to the day prior to the first day of the following month.
- (ii) 8 post-dated cheques each dated the 1st of the month, in the sum of \$1,579.96 commencing July 1, 2014 payable to 144 Park Ltd.

In accordance with the Condominium Act, 1998 and the Agreement of Purchase and Sale, the Occupancy Fee comprises the following:

Estimated Total Common Expenses:	\$536.90
Estimated Realty Taxes:	\$200.00
Interest on the Unadjusted Balance Due on the Unit Transfer	\$843.06
Date at the prescribed rate of 3.1400%	
<b>TOTAL</b>	<u>\$1,579.96</u>

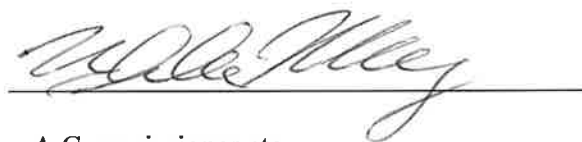
**NOTE 1:** All calculations with respect to Goods and Services Tax or the Harmonized Sales Tax (if applicable), will be addressed on the Final Statement of Adjustments.

E. & O. E.

**NOTE 2:**

*Please note it is the policy of this firm that funds being delivered to us by certified cheque for a closing must be from the purchaser's solicitor's trust account and not directly from a purchaser or any other person. No bank drafts are permitted.*

THIS IS EXHIBIT "C" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
in and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

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This Assignment of Agreement of Purchase and Sale dated this 3 day of November 2014

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer), agrees to purchase from  
(Full legal names of all Assignees)

**ASSIGNOR**, Oliver Romaniuk (Seller), the following:  
(Full legal names of all Assignors)

**THE ASSIGNOR'S INTEREST IN THE REAL PROPERTY:**

a unit in the condominium property located at 1201 - 144 Park Street  
in the City of Waterloo being

Unit No. 01 Level No. 12 Condominium Plan No. Not Set

Building No. \_\_\_\_\_ known as Suite No. 1201 together with ownership  
(Apartment/Townhouse/Suite/Unit)

or exclusive use of Parking Space(s) 2 Parking Spaces (A63, A64), together with ownership or exclusive use of  
(Number(s), level(s))

Locker(s) 1 Locker (A69), together with Seller's proportionate undivided tenancy-in-common interest  
(Number(s), level(s))

in the common elements appurtenant to the Unit as described in the Declaration and Description including the exclusive right to use such other parts of the common elements appurtenant to the Unit as may be specified in the Declaration and Description: the Unit, the proportionate interest in the common elements appurtenant thereto, and the exclusive use portions of the common elements, being herein called the "property".

**PURCHASE PRICE:** \_\_\_\_\_ Dollars (CDN\$) \_\_\_\_\_  
\_\_\_\_\_ Dollars

**DEPOSIT:** Assignee submits as otherwise described in this Agreement  
(Herewith/Upon Acceptance/as otherwise described in this Agreement)  
Five Thousand Dollars (CDN\$) 5,000.00

by negotiable cheque payable to Mint Realty Inc., Brokerage "Deposit Holder" to be held in trust pending completion or other termination of this Assignment agreement ("Assignment") and to be credited toward the Purchase Price on completion. For the purposes of this Assignment, "Upon Acceptance" shall mean that the Assignee is required to deliver the deposit to the Deposit Holder within 24 hours of the acceptance of this Assignment agreement. The parties to this Assignment hereby acknowledge that, unless otherwise provided for in this Assignment, the Deposit Holder shall place the deposit in trust in the Deposit Holder's non-interest bearing Real Estate Trust Account and no interest shall be earned, received or paid on the deposit.

The Assignee and Assignor acknowledge that the Purchase Price noted above includes both the purchase price the Assignor is paying for the property as indicated in the Agreement of Purchase and Sale between the Assignor and the seller of the property attached hereto as Schedule C, and also includes the amount being paid by the Assignee to the Assignor as payment for the Assignment Agreement. The Assignee and Assignor agree that the funds for this transaction will be calculated and paid as set out in Schedule B attached hereto and forming part of this Agreement.

Assignee agrees to pay the balance as more particularly set out in Schedules A and B attached.

Schedules A, B (Calculation of funds for this Agreement),  
C (Agreement of Purchase and Sale that is the subject of this Assignment),

\_\_\_\_\_ attached hereto form(s) part of this Assignment.

INITIALS OF ASSIGNEE(S): \_\_\_\_\_

INITIALS OF ASSIGNOR(S): \_\_\_\_\_



1. **IRREVOCABILITY:** This offer shall be irrevocable by Assignee ..... until 11:59PM ..... on the 5 ..... day of November ..... 20.14, after which time, if not accepted, this offer shall be null and void and the deposit shall be returned to the Assignee in full without interest.

2. **ASSIGNMENT:** The Assignor agrees to grant and assign to the Assignee, forthwith all the Assignor's rights, title and interest, in, under and to the Agreement of Purchase and Sale attached hereto in Schedule "C".

3. **ASSIGNEE COVENANTS:** The Assignee hereby covenants and agrees with the Assignor that forthwith upon the assignment of the Agreement of Purchase and Sale it will assume, perform, comply with and be bound by, all obligations, warranties and representations of the Assignor as contained in the Agreement of Purchase and Sale as if the Assignee had originally executed the Agreement of Purchase and Sale as buyer with the seller.

4. **ASSIGNOR COVENANTS:** The Assignor covenants and represents that:  
(a) the Assignor has the full right, power and authority to assign the prior Agreement of Purchase and Sale attached hereto as Schedule "C" (the "Agreement of Purchase and Sale") and the Assignor's interest in the property;  
(b) the Agreement of Purchase and Sale attached hereto as Schedule "C" is a full and complete copy thereof and has not been amended, supplemented, terminated or otherwise changed in any way and is in good standing and has not previously been assigned.  
(c) the Assignor will not amend the Agreement of Purchase and Sale without the Assignee's prior written consent;  
(d) after acceptance of this Assignment Agreement until the earlier of termination or completion of the Agreement of Purchase and Sale attached hereto as Schedule "C", the Assignor will not further assign the Agreement of Purchase and Sale.  
(e) neither party to the Agreement of Purchase and Sale (Schedule C) has done any act in breach of the said Agreement of Purchase and Sale or committed any omission with respect to the said Agreement of Purchase and Sale.

5. **NOTICES:** The Assignor hereby appoints the Listing Brokerage as agent for the Assignor for the purpose of giving and receiving notices pursuant to this Agreement. Where a Brokerage (Assignee's Brokerage) has entered into a representation agreement with the Assignee, the Assignee hereby appoints the Assignee's Brokerage as agent for the purpose of giving and receiving notices pursuant to this Agreement. **Where a Brokerage represents both the Assignor and the Assignee (multiple representation), the Brokerage shall not be appointed or authorized to be agent for either the Assignee or the Assignor for the purpose of giving and receiving notices.** Any notice relating hereto or provided for herein shall be in writing. In addition to any provision contained herein and in any Schedule hereto, this offer, any counter-offer, notice of acceptance thereof or any notice to be given or received pursuant to this Agreement or any Schedule hereto (any of them, "Document") shall be deemed given and received when delivered personally or hand delivered to the Address for Service provided in the Acknowledgement below, or where a facsimile number or email address is provided herein, when transmitted electronically to the facsimile number or email address, respectively, in which case, the signature(s) of the party (parties) shall be deemed to be original.

FAX No.: ..... FAX No.: .....  
(For delivery of Documents to Assignor) (For delivery of Documents to Assignee)

Email Address: ..... Email Address: .....  
(For delivery of Documents to Assignor) (For delivery of Documents to Assignee)

6. **HST:** If the sale of the property (Real Property as described above) is subject to Harmonized Sales Tax (HST) then such tax shall be Included in ..... the Purchase Price. If the sale of the property is not subject to HST, (included in/in addition to) Assignor agrees to certify on or before closing, that the sale of the property is not subject to HST. Any HST on chattels, if applicable, is not included in the Purchase Price.

7. **FUTURE USE:** Assignor and Assignee agree that there is no representation or warranty of any kind that the future intended use of the property by Assignee is or will be lawful except as may be specifically provided for in this Assignment.

8. **INSPECTION:** Assignee acknowledges having had the opportunity to inspect the property or the plans and documents for the property to be constructed and understands that upon acceptance of this offer there shall be a binding Assignment agreement between Assignee and Assignor.

9. **PLANNING ACT:** Provided that this Assignment shall not be effective to create or convey an interest in the property unless and until the provisions of the Planning Act RSO 1990 c. P13, as amended are complied with.

10. **RESIDENCY:** Assignee shall be credited towards the Purchase Price with the amount, if any, necessary for Assignee to pay to the Minister of National Revenue to satisfy Assignee's liability in respect of tax payable by Assignor under the non-residency provisions of the Income Tax Act by reason of this Assignment. Assignee shall not claim such credit if Assignor delivers on completion the prescribed certificate or a statutory declaration that Assignor is not then a non-resident of Canada.

INITIALS OF ASSIGNEE(S):

INITIALS OF ASSIGNOR(S):



11. **ADJUSTMENTS:** Any rents, mortgage interest, realty taxes including local improvement rates and unmetered public or private utility charges and unmetered cost of fuel, as applicable, shall be apportioned and allowed to the day of completion, the day of completion itself to be apportioned to Assignee.
12. **PROPERTY ASSESSMENT:** The Assignee and Assignor hereby acknowledge that the Province of Ontario has implemented current value assessment and properties may be re-assessed on an annual basis. The Assignee and Assignor agree that no claim will be made against the Assignee or Assignor, or any Brokerage, Broker or Salesperson, for any changes in property tax as a result of a re-assessment of the property, save and except any property taxes that accrued prior to the completion of this transaction.
13. **TIME LIMITS:** Time shall in all respects be of the essence hereof provided that the time for doing or completing of any matter provided for herein may be extended or abridged by an agreement in writing signed by Assignor and Assignee or by their respective lawyers who may be specifically authorized in that regard.
14. **TENDER:** Any tender of documents or money hereunder may be made upon the Assignor or Assignee or their respective lawyers on the day set for completion. Money shall be tendered with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System.
15. **APPROVAL OF THE AGREEMENT:** In the event that consent to this Assignment is required to be given by the seller in the Agreement of Purchase and Sale attached hereto in Schedule C, the Assignor will apply, at the sole expense of the Assignor, forthwith for the requisite consent, and if such consent is refused, then this agreement shall be null and void and the deposit monies paid hereunder shall be refunded without interest or other penalty to the Assignee.
16. **AGREE TO CO-OPERATE:** Except as otherwise expressed herein to the contrary, each of the Assignor and Assignee shall, without receiving additional consideration therefor, co-operate with and take such additional actions as may be requested by the other party, acting reasonably, in order to carry out the purpose and intent of this Assignment.
17. **DEFAULT BY SELLER:** The Assignee and Assignor acknowledge and agree that if this Assignment Agreement is not completed due to the default of the seller for the Agreement of Purchase and Sale (Schedule C) that is the subject of this Assignment, the Assignor shall not be liable for any expenses, losses or damages incurred by the Assignee and this Assignment Agreement shall become null and void and all moneys paid by the Assignee under this Assignment Agreement shall be returned to the Assignee in full without interest.
18. **LEGAL, ACCOUNTING AND ENVIRONMENTAL ADVICE:** The parties acknowledge that any information provided by the Brokerage is not legal, tax or environmental advice.
19. **CONSUMER REPORTS:** The Assignee is hereby notified that a consumer report containing credit and/or personal information may be referred to in connection with this transaction.
20. **AGREEMENT IN WRITING:** If there is conflict or discrepancy between any provision added to this Assignment (including any Schedule attached hereto) and any provision in the standard pre-set portion hereof, the added provision shall supersede the standard pre-set provision to the extent of such conflict or discrepancy. This Assignment including any Schedule attached hereto, shall constitute the entire agreement between Assignee and Assignor. There is no representation, warranty, collateral agreement or condition, which affects this Assignment other than as expressed herein. This Assignment shall be read with all changes of gender or number required by the context.
21. **TIME AND DATE:** Any reference to a time and date in this Agreement shall mean the time and date where the property is located.
22. **SUCCESSORS AND ASSIGNS:** The heirs, executors, administrators, successors and assigns of the undersigned are bound by the terms herein.

SIGNED, SEALED AND DELIVERED in the presence of:

IN WITNESS whereof I have hereunto set my hand and seal:

(Witness)

(Seal)

DATE Nov 4/2014

(Witness)

(Seal)

DATE Nov 4/2014

I, the Undersigned Assignor, agree to the above offer. I hereby irrevocably instruct my lawyer to pay directly to the brokerage(s) with whom I have agreed to pay commission, the unpaid balance of the commission together with applicable Harmonized Sales Tax (and any other taxes as may hereafter be applicable), from the proceeds of the sale prior to any payment to the undersigned on completion, as advised by the brokerage(s) to my lawyer.

SIGNED, SEALED AND DELIVERED in the presence of:

IN WITNESS whereof I have hereunto set my hand and seal:

(Witness)

(Seal)

DATE NOV 4/2014

(Witness)

(Seal)

DATE \_\_\_\_\_





**CONFIRMATION OF ACCEPTANCE:** Notwithstanding anything contained herein to the contrary, I confirm this Agreement with all changes both typed and written was finally accepted by all parties at 10:50 AM this 5<sup>TH</sup> day of NOVEMBER, 2014.

*[Signature]*  
(Signature of Assignor or Assignee)

**INFORMATION ON BROKERAGE(S)**

Listing Brokerage: <u>MINT REALTY INC., BROKERAGE</u>	Tel.No. <u>800-344-0901</u>
<u>191 KING ST S., UT 108</u>	<u>WATERLOO</u>
Co-op/Assignee's Brokerage: <u>MINT REALTY INC., BROKERAGE</u>	Tel.No. <u>800-344-0901</u>
<u>191 KING ST S., UT 108</u>	<u>WATERLOO</u>

**ACKNOWLEDGEMENT**

I acknowledge receipt of my signed copy of this accepted Assignment Agreement and I authorize the Brokerage to forward a copy to my lawyer.

*[Signature]* DATE NOV 9/2014

..... DATE .....

Address for Service.....


..... Tel.No. ....

Assignor's Lawyer.....

Address.....

Tel.No. .... FAX No. ....

I acknowledge receipt of my signed copy of this accepted Assignment Agreement and a copy to my lawyer.

 DATE Nov 9/2014

..... DATE NOV 9/2014 .....

Address for Service.....

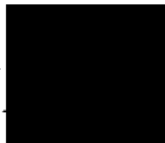
..... Tel.No. ....

Assignee's Lawyer.....

Address.....

Tel.No. .... FAX No. ....

INITIALS OF ASSIGNEE(S):



INITIALS OF ASSIGNOR(S):

*[Signature]*

**FOR OFFICE USE ONLY**

**COMMISSION TRUST AGREEMENT**

To: Co-operating Brokerage shown on the foregoing Assignment Agreement: MINT REALTY INC., BROKERAGE  
In consideration for the Co-operating Brokerage procuring the foregoing Assignment Agreement, I hereby declare that all moneys received or receivable by me in connection with the Transaction as contemplated in the MLS® Rules and Regulations of my Real Estate Board shall be receivable and held in trust. This agreement shall constitute a Commission Trust Agreement as defined in the MLS® Rules and shall be subject to and governed by the MLS® Rules pertaining to Commission Trust.

DATED as of the date and time of the acceptance of the foregoing Assignment Agreement.

Acknowledged by:

.....  
(Authorized to bind the Listing Brokerage)

.....  
(Authorized to bind the Co-operating Brokerage)

This Schedule is attached to and forms part of the Assignment of Agreement of Purchase and Sale between:

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer)....., and

**ASSIGNOR**, Oliver Romaniuk (Seller).....

for the purchase and sale of 1201 - 144 Park Street ..... Waterloo

..... dated the 3 ..... day of November ..... 2014

**BALANCE OF PAYMENT UNDER THIS ASSIGNMENT AGREEMENT:** The Assignee will deliver the balance of payment for this Assignment Agreement as more particularly set out in Item 6. on Schedule B, subject to adjustments, with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System, to the Assignor prior to completing the transaction in the Agreement of Purchase and Sale attached hereto as Schedule "C" to be held in trust without interest pending completion or other termination of the Agreement of Purchase and Sale attached hereto as Schedule "C".



*AMK*

The Assignee shall be responsible for payment, with applicable HST, of any and all improvements and upgrades requested by the Assignee of the Vendor, 144 Park Ltd. and provided by the said Vendor to the Assignee. The Assignor shall be responsible for payment, with applicable HST of any and all improvements and upgrades requested by the Assignor of the Vendor 144 Park Ltd. and provided by the Vendor to the Assignor.

The Assignor and Assignee acknowledge that the Assignor shall be responsible for paying the \$2500.00 charge for the assignment process at the Assignor's expense prior to completion.

The Assignor and Assignee agree that the Assignee will take Occupancy on December 1, 2014.

The Assignee is responsible for the Interim Occupancy fee beginning December 1, 2014 and will provide post dated cheques for December 1, 2014, January 1, 2015 and February 1, 2015 payable to "144 Park Ltd." prior to completion.

Assignor and Assignee agree that the Assignee will pay for Tarion enrollment fee.

All deposit money currently held by Vendor will be transferred on closing to Assignee as per Section 9 on Vendor Assignment Agreement.

Balance of Payment under Assignment Agreement: The Assignee will deliver the balance of payment for this Assignment Agreement as more particularly set out in Item 6 on Schedule B subject to adjustments with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System, to the Assignor's Solicitor prior to completing the transaction in the Agreement of Purchase and Sale attached hereto as Schedule C to be held in trust without interest pending completion or other termination of the Agreement of Purchase and Sale attached hereto as Schedule C.

*AMK*

Assignee agrees to provide Vendor with interim occupancy cheques in amount of \$1579.96 for December 2014 to February 2015 not later than not later than November 7, 2014. Assignee is responsible to Vendor for all interim costs from December 1, 2015 onward once this agreement is firm.

*2014*

This form must be initialed by all parties to the Assignment of Agreement of Purchase and Sale.

**INITIALS OF ASSIGNEE(S):** [Redacted]

**INITIALS OF ASSIGNOR(S):** *AMK*

**Assignment of Agreement of Purchase and Sale - Condominium**

This Schedule is attached to and forms part of the Assignment of Agreement of Purchase and Sale between:

**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer) ....., and

**ASSIGNOR**, Oliver Romaniuk (Seller) .....

for the purchase and sale of 1201 - 144 Park Street ..... Waterloo

..... dated the 3 ..... day of November ..... 20 14

**BALANCE OF PAYMENT UNDER THIS ASSIGNMENT AGREEMENT:** The Assignee will deliver the balance of payment for this Assignment Agreement as more particularly set out in Item 6. on Schedule B, subject to adjustments, with funds drawn on a lawyer's trust account in the form of a bank draft, certified cheque or wire transfer using the Large Value Transfer System, to the Assignor prior to completing the transaction in the Agreement of Purchase and Sale attached hereto as Schedule "C" to be held in trust without interest pending completion or other termination of the Agreement of Purchase and Sale attached hereto as Schedule "C".

*OAR*

All deposit money as per Schedule B to be held by Listing Brokerage in trust until completion of this Assignment of Agreement and the original Agreement of Purchase and Sale.

Assignor and Assignee agree that upon acceptance by both parties, this Assignment of Agreement of Purchase and Sale will replace an existing firm Assignment of Agreement of Purchase and Sale dated October 10, 2014. Parties agree that deposit money held in trust from Agreement dated October 10, 2014 will remain to satisfy terms of this agreement.

This form must be initialed by all parties to the Assignment of Agreement of Purchase and Sale.

**INITIALS OF ASSIGNEE(S):** [Redacted]

**INITIALS OF ASSIGNOR(S):** *OAR*

**Schedule B  
Assignment of Agreement of Purchase and Sale - Condominium**

This Schedule is attached to and forms part of the Assignment of Agreement of Purchase and Sale between:


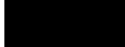
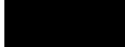
**ASSIGNEE**, AJ Mueller and Kerry Mueller (Buyer) ....., and

**ASSIGNOR**, Oliver Romaniuk (Seller) .....

for the purchase and sale of 1201 - 144 Park Street ..... Waterloo .....

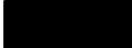
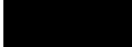
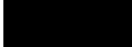
..... dated the 3 ..... day of November ..... 2014 .....

The Assignee and Assignor agree that the calculation of funds to be paid for this Assignment Agreement, subject to adjustments, is as set out in the following items:

- 1. Total Purchase Price including the original Agreement of Purchase and Sale and this Assignment Agreement: 
- 2. Purchase Price of original Agreement of Purchase and Sale as indicated in Schedule C: 
- 3. Deposit(s) paid by Assignor to the seller under the original Agreement of Purchase and Sale as indicated in Schedule C, to be paid by the Assignee to the Assignor as follows: 

Upon acceptance of this Assignment Agreement and receipt of consent to assign from original seller, if applicable

(Upon acceptance of this Assignment Agreement and receipt of consent to assign from original seller, if applicable)  
(Upon occupancy by the Assignee and receipt of consent to assign from the original seller, if applicable)  
(Upon final closing of original Agreement of Purchase and Sale and this Assignment Agreement)

- 4. Payment by Assignee to Assignor for this Assignment Agreement: 
- 5. Deposit paid under this Assignment Agreement (in accordance with Page 1 of this Assignment Agreement): 
- 6. Balance of the payment for this Assignment Agreement: 

INITIALS OF ASSIGNEE(S) 

INITIALS OF ASSIGNOR(S): 



# Confirmation of Co-operation and Representation

BUYER: AJ Mueller and Kerry Mueller (Buyer) (Assignee)

*(Signature)*

SELLER: Oliver A. Romaniuk (Seller) (Assignor)

*(Signature)*

For the transaction on the property known as: Suite 1201 - 144 Park Street Waterloo

For the purposes of this Confirmation of Co-operation and Representation, "Seller" includes a vendor, a landlord, or a prospective, seller, vendor or landlord and "Buyer" includes a purchaser, a tenant, or a prospective, buyer, purchaser or tenant, "sale" includes a lease, and "Agreement of Purchase and Sale" includes an Agreement to Lease.

The following information is confirmed by the undersigned salesperson/broker representative of the Brokerage(s). If a Co-operating Brokerage is involved in the transaction, the Brokerages agree to co-operate, in consideration of, and on the terms and conditions as set out below.

**DECLARATION OF INSURANCE:** The undersigned salesperson/broker representative(s) of the Brokerage(s) hereby declare that he/she is insured as required by the Real Estate and Business Brokers Act, 2002 (REBBA 2002) and Regulations.

### 1. LISTING BROKERAGE

a)  The Listing Brokerage represents the interests of the Seller in this transaction. It is further understood and agreed that:

- 1)  The Listing Brokerage is not representing or providing Customer Service to the Buyer.  
(If the Buyer is working with a Co-operating Brokerage, Section 3 is to be completed by Co-operating Brokerage)
- 2)  The Listing Brokerage is providing Customer Service to the Buyer.

b)  **MULTIPLE REPRESENTATION:** The Listing Brokerage has entered into a Buyer Representation Agreement with the Buyer and represents the interests of the Seller and the Buyer, with their consent, for this transaction. The Listing Brokerage must be impartial and equally protect the interests of the Seller and the Buyer in this transaction. The Listing Brokerage has a duty of full disclosure to both the Seller and the Buyer, including a requirement to disclose all factual information about the property known to the Listing Brokerage. However, the Listing Brokerage shall not disclose:

- That the Seller may or will accept less than the listed price, unless otherwise instructed in writing by the Seller;
- That the Buyer may or will pay more than the offered price, unless otherwise instructed in writing by the Buyer;
- The motivation of or personal information about the Seller or Buyer, unless otherwise instructed in writing by the party to which the information applies, or unless failure to disclose would constitute fraudulent, unlawful or unethical practice;
- The price the Buyer should offer or the price the Seller should accept;
- And; the Listing Brokerage shall not disclose to the Buyer the terms of any other offer.

However, it is understood that factual market information about comparable properties and information known to the Listing Brokerage concerning potential uses for the property will be disclosed to both Seller and Buyer to assist them to come to their own conclusions.

Additional comments and/or disclosures by Listing Brokerage: (e.g. The Listing Brokerage represents more than one Buyer offering on this property.)

### 2. PROPERTY SOLD BY BUYER BROKERAGE - PROPERTY NOT LISTED

The Brokerage represents the Buyer and the property is not listed with any real estate brokerage. The Brokerage will be paid

by the Seller in accordance with a Seller Customer Service Agreement

or:  by the Buyer directly

Additional comments and/or disclosures by Buyer Brokerage: (e.g. The Buyer Brokerage represents more than one Buyer offering on this property.)

### INITIALS OF BUYER(S)/SELLER(S)/BROKERAGE REPRESENTATIVE(S) (Where applicable)

*(Signature)*  
LISTING BROKERAGE

*(Signature)*  
CO-OPERATING/BUYER BROKERAGE

*(Signature)*  
SELLER  
(Assignor)

*(Signature)*  
BUYER  
(Assignee)

3. Co-operating Brokerage completes Section 3 and Listing Brokerage completes Section 1.

**CO-OPERATING BROKERAGE- REPRESENTATION:**

- a)  The Co-operating Brokerage represents the interests of the Buyer in this transaction.
- b)  The Co-operating Brokerage is providing Customer Service to the Buyer in this transaction.
- c)  The Co-operating Brokerage is not representing or providing Customer Service to the Buyer in this transaction.

**CO-OPERATING BROKERAGE- COMMISSION:**

- a)  The Listing Brokerage will pay the Co-operating Brokerage the commission as indicated in the MLS® information for the property ..... from the amount paid by the Seller to the Listing Brokerage.  
(Commission As Indicated In MLS® Information)
- b)  The Co-operating Brokerage will be paid as follows:

Additional comments and/or disclosures by Co-operating Brokerage: (e.g., The Co-operating Brokerage represents more than one Buyer offering on this property.)

Commission will be payable as described above, plus applicable taxes.

**COMMISSION TRUST AGREEMENT:** If the above Co-operating Brokerage is receiving payment of commission from the Listing Brokerage, then the agreement between Listing Brokerage and Co-operating Brokerage further includes a Commission Trust Agreement, the consideration for which is the Co-operating Brokerage procuring an offer for a trade of the property, acceptable to the Seller. This Commission Trust Agreement shall be subject to and governed by the MLS® rules and regulations pertaining to commission trusts of the Listing Brokerage's local real estate board, if the local board's MLS® rules and regulations so provide. Otherwise, the provisions of the OREA recommended MLS® rules and regulations shall apply to this Commission Trust Agreement. For the purpose of this Commission Trust Agreement, the Commission Trust Amount shall be the amount noted in Section 3 above. The Listing Brokerage hereby declares that all monies received in connection with the trade shall constitute a Commission Trust and shall be held, in trust, for the Co-operating Brokerage under the terms of the applicable MLS® rules and regulations.

**SIGNED BY THE BROKER/SALESPERSON REPRESENTATIVE(S) OF THE BROKERAGE(S) (Where applicable)**

**MINT REALTY INC., BROKERAGE**  
(Name of Listing Brokerage)  
191 KING ST S., UT 108 WATERLOO  
Tel: 800-344-0901 Fax: \_\_\_\_\_  
Date: Oct 10, 2014  
(Authorized to bind the Listing Brokerage)  
Jim Bolton  
(Print Name of Broker/Salesperson Representative of the Brokerage)

**MINT REALTY INC., BROKERAGE**  
(Name of Co-operating/Buyer Brokerage)  
191 KING ST S., UT 108 WATERLOO  
Tel: 800-344-0901 Fax: \_\_\_\_\_  
Date: Oct 10, 2014  
(Authorized to bind the Co-operating/Buyer Brokerage)  
Jim Bolton  
(Print Name of Broker/Salesperson Representative of the Brokerage)

**CONSENT FOR MULTIPLE REPRESENTATION (To be completed only if the Brokerage represents more than one client for the transaction)**  
The Seller/Buyer consent with their initials to their Brokerage representing more than one client for this transaction.

SELLER'S INITIALS BUYER'S INITIALS

**ACKNOWLEDGEMENT**

I have received, read, and understand the above information.  
(Signature of Seller) Date: OCT 10/2014  
Date: \_\_\_\_\_  
(Signature of Seller) Date: \_\_\_\_\_



Date: Oct 10/2014  
Date: Oct 10/2014

THIS IS EXHIBIT "D" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

**RED SEAL NOTARY INC.**

25 ADELAIDE ST. EAST,  
TORONTO ON M5C 3A1  
(888) 922-7325  
[www.redsealnotary.com](http://www.redsealnotary.com)

THIS AGREEMENT MADE this 5<sup>th</sup> day of November, 2014.

Oliver Alexander Romanuk and Leah Shoshana Weller  
(hereinafter referred to as the "Assignor")



-AND-

Kerry Mueller and Achim Mueller  
(hereinafter referred to as the "Assignee")



-AND-

144 PARK LTD.  
(hereinafter referred to as the "Vendor")

WHEREAS the Assignor and the Vendor entered into an agreement of purchase and sale dated the 14<sup>th</sup> of February 2010 (the "Purchase Agreement"), a complete copy of which is attached hereto, whereby the Assignor agreed to purchase and the Vendor agreed to sell proposed Residential Unit 1, Level 12, known as Suite 1201 (the "Unit"), which Unit was to be purchased by the Assignor together with its appurtenant interest in the common elements in accordance with the Condominium Plan documentation proposed to be registered against the land and premises described in the Purchase Agreement and located at 144 Park Street, Waterloo, Ontario (the "Condominium").

AND WHEREAS the Assignor and the Assignee desire that the Assignor assign unto the Assignee all of their right, title and benefits under the Purchase Agreement.

AND WHEREAS the Vendor wishes to consent to the said assignment on the terms hereinafter set forth.

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT in consideration of the mutual covenants and agreements herein contained and the sum of TEN DOLLARS (\$10.00) of lawful money of Canada paid by each of the parties hereto to the other and for good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of them) the parties hereby covenant and agrees as follows:

1. The parties hereto hereby acknowledge and confirm that the foregoing recitals are true both in substance and in fact.
2. The Assignor does hereby assign, transfer and set over to and in favour of the Assignee by way of absolute assignment, all of its rights, title, benefit and interest in, to and under the Purchase Agreement.
3. The Assignee hereby covenants and agrees to and with the Assignor and the Vendor to assume the burden of all obligations on the part of the Assignor to be performed and/or borne pursuant to the Purchase Agreement, and further covenants and agrees to be bound by the terms and provisions of the Purchase Agreement as though he had originally executed same as the Purchaser.
4. The Assignee covenants and agrees with the Vendor that they shall forthwith do and suffer any act, and/or execute any documentation, which the Vendor may require from time to time in its sole, absolute and unfettered discretion for the purposes of confirming the assumption by the Assignee of the Assignor's obligations pursuant to the Purchase Agreement.
5. The Vendor hereby consents to the within assignment from the Assignor to the Assignee.
6. This Agreement shall be construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.
7. Time shall be of the essence of this Agreement, and the Purchase Agreement, and all terms of the Purchase Agreement shall continue in full force and effect.
8. This Agreement shall endure to the benefit of and be binding upon the parties hereto their respective successors and assigns.
9. The Vendor warrants and confirms that the Purchase Agreement is in good standing and all deposits paid by Purchaser to date under paragraph 1 therein, totaling \$35,800.00 shall be credited to the Assignee on closing as part of the purchase price.
10. The Assignee agrees to pay all further deposits payable under the Purchase Agreement, if any, and the balance of the purchase price by bank draft or by certified cheque to the Vendor on closing in accordance with the provisions of the Purchase Agreement.



- 11. The Assignor and Assignee acknowledge and agree that any agreement between the Vendor and Assignor with respect to the reimbursement of the Assignor for interest payable in respect of a deposit loan (i.e. a loan entered into by the Assignor to fund the Assignor's deposit obligations) by the Vendor is personal to the Assignor. Accordingly, the Assignor and Assignee hereby release and forever discharge the Vendor, or its successors and assigns, from any obligation to reimburse the Assignor or Assignee for interest paid on account of a deposit loan.
- 12. The Assignor agrees that with the request for consent to assignment, the Assignor will pay to the Vendor a fee of \$ 2,500.00 plus applicable taxes, within 10 days following the execution of this Agreement.
- 13. The Assignor hereby guarantees the due and timely performance and fulfillment of all covenants and obligations of the Assignee arising under this Agreement and the Purchase Agreement, including without limitation, the obligation to pay the purchase price in respect of the Unit to the Vendor, and all other monies owing or payable to the Vendor by the "Purchaser" in accordance with the provisions of the Purchase Agreement, and agrees to indemnify and save the Vendor harmless from and against all losses, damages, costs and expenses which the Vendor may sustain, incur or become liable for, by reason of the Assignee's default under this Agreement, or the Purchase Agreement. In the event of the Assignee's failure to complete the transaction in accordance with the terms and conditions of the Purchase Agreement, the Assignee acknowledges and agrees that the Vendor has the right, but not the obligation, to call upon the Assignor to complete the transaction in the Assignee's place in accordance with the terms of the Purchase Agreement, and in the event that the Vendor calls upon the Assignor to complete the transaction in the Assignee's place, the parties hereto agree that: (i) the Purchase Agreement shall automatically be deemed to be re-assigned by the Assignee to the Assignor; (ii) the deposits paid to date to the Vendor pursuant to the Purchase Agreement shall be forfeited to the Vendor as liquidated damages and not as a penalty and shall not be credited to the Assignor; and (iii) the Assignee shall, through the execution of this document, release the Vendor and the Assignor from and against any and all losses, damages, costs, expenses, actions, proceedings, demands and/or claims whatsoever which the Assignee now has, or may hereafter have, against the other parties hereto, by reason of, or in connection with, the Purchase Agreement (and any and all addenda thereto or amendments thereof) and/or the completion thereof by the Assignor and Vendor in such case.
- 14. The Assignee and Assignor hereby acknowledge and waives any Delayed Occupancy Compensation that the Assignor's would be entitled to under the Agreement, for the period of delay up to the day in which the Assignor receives occupancy of the Unit(s).
- 15. The Assignee shall not further assign the Purchase Agreement without prior written consent of the Vendor, which consent may be unreasonably or arbitrarily withheld in accordance with Paragraph 17 of the Purchase Agreement.
- 16. The parties hereto agree that notice of acceptance and delivery of the within offer and all communications thereto may be made by facsimile machine addressed to the parties hereto or their solicitors or their agents. The parties hereto agree facsimile copies shall constitute original copies.

IN WITNESS WHEREOF the parties have executed this Agreement on the 5<sup>th</sup> day of Nov, 2014.

[Signature]  
Witness

[Signature]  
Witness

[Signature]  
Witness

[Signature]  
Witness

[Signature]  
Assignor: Oliver Romaniuk

[Signature]  
Assignor: Leah Sheeha Walker

[Signature]  
Assignee: Kerry Michler

[Signature]  
Assignee: Achim Mueller

[Circular Stamp]



Address: L7C8  
Dunbro RI, ON N0L 1G0  
Phone No: 519-503-7900

144 PARK LTD.  
Per: [Signature]  
Name: Jonathan A. Mueller  
Title: Vice President, Sales and Marketing  
I have the authority to bind the Corporation

THIS IS EXHIBIT "E" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



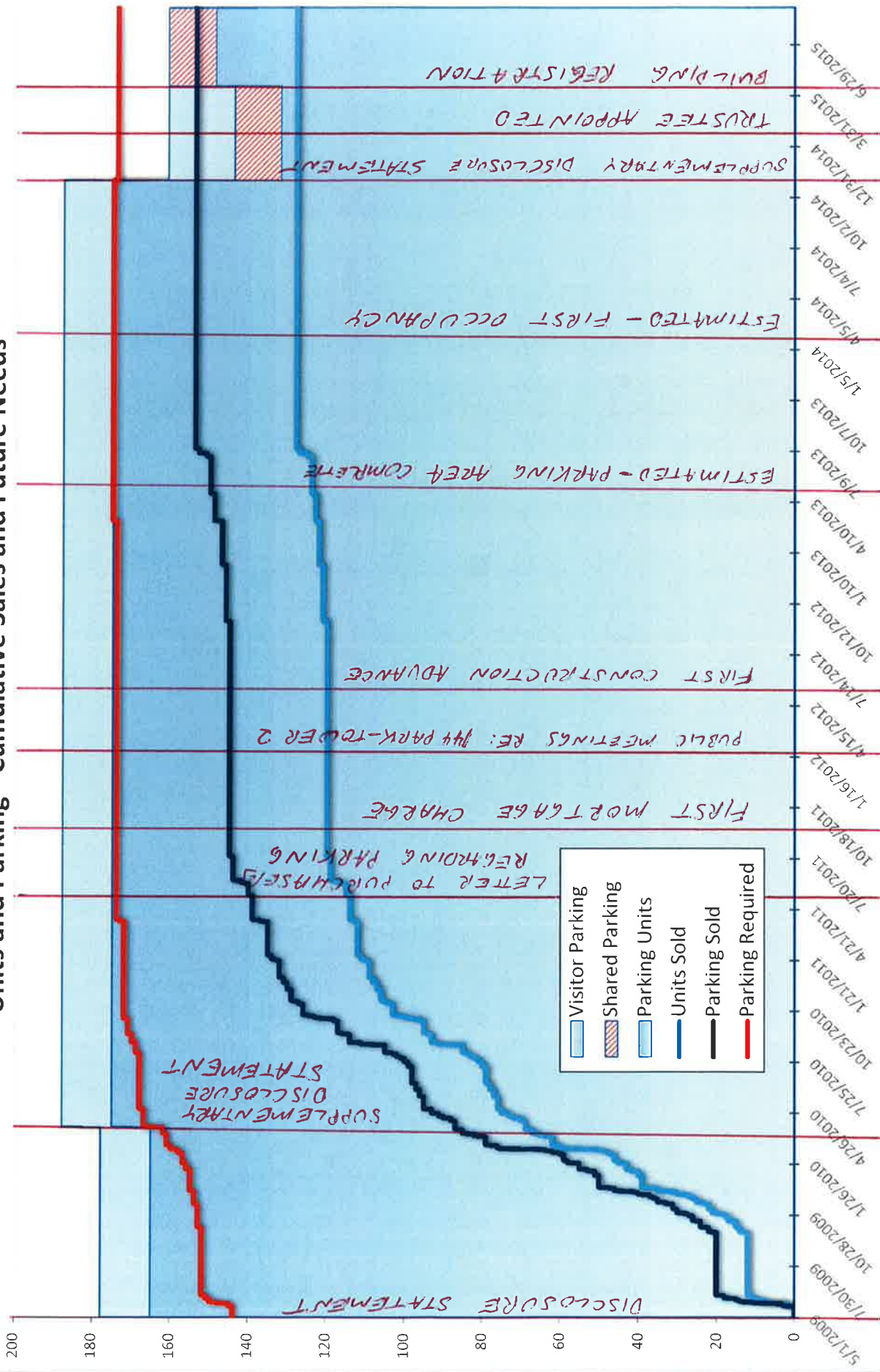
A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

**RED SEAL NOTARY INC.**

25 ADFLAIDE ST. EAST.  
TORONTO ON M5C 3A1  
(888) 922-7325  
[www.redsealnotary.com](http://www.redsealnotary.com)

# Units and Parking - Cumulative Sales and Future Needs



MILESTONE DATES ARE DRAWN APPROXIMATELY

THIS IS EXHIBIT "F" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
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		Residential Units		Parking Units		Parking Available	Disclosure Statement Info.		
		Total	Sold	Sold	Required		Units	Leased	Visitor
Disclosure Statement	April 27, 2009	144	0	0	144	178	165	0	13
Supplemental Disclosure Statement	April 1, 2010	149	80	98	167	188	175	0	13
Allen Street Holdings Charge	September 1, 2011	149	120	145	174	188	175	0	13
Appraisal	November 23, 2011	149	136	160	173	188	175	0	13
MarshallZehr & Aviva Charge	December 13, 2011	149	120	145	174	188	175	0	13
Laurentian Commitment Letter	March 7, 2012	149	120	145	174	188	175	0	13
Laurentian Charge	May 25, 2012	149	120	145	174	188	175	0	13
Parking Areas Complete (estimated)	May 1, 2013	149	124	150	175	188	175	0	13
First Occupancy (estimated)	February 1, 2014	149	128	154	175	188	175	0	13
Supplemental Disclosure Statement	November 1, 2014	148	128	154	174	149	132	0	17
Appointment of Trustee	January 22, 2015	148	128	154	174	149	132	0	17
Current	October 1, 2015	148	128	154	174	149	139	10	0

THIS IS EXHIBIT "G" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
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No legal advice given.

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Oliver Romaniuk <oliver.romaniuk@gmail.com>

## 144 Park - Questions and Solutions

Oliver Romaniuk <oliver.romaniuk@gmail.com>  
To: "Sam P. Rappos" <samr@chaitons.com>

Wed, Sep 2, 2015 at 6:33 PM

Hello Sam,

Thank you again for your time today.

As promised, attached is the presentation that shows how the Japanese auction\* would work. As I mentioned, I have a Master's in Electrical Engineering and my grad work focused on simulation of electric power systems and real-world power markets, as well as the economic and mathematical theory behind them. Therefore, I'm quite familiar with creating algorithms that allocate scarce resources through self-selection. (\*\*I've included a simple, real world example below) I'm happy to step anyone through the slides and/or answer any questions that come up. I really do believe that if implemented and attempted as I described, it could be a potential, low-risk solution, but it requires buy-in from stakeholders.

A few more comments about the auction:

I forgot to mention the Trustee would hold back 20 parking spaces and auction the balance. (Parking Units and Leased Spaces)  
The invitation to participate should be extended to every Purchaser in the Project, this will serve to increase supply and reduce the clearing price for the Trustee. I have assumed that no Parking Units in 155 would be made available, if there were, I'm certain the auction would clear at a much lower cost. In my mind the difference in marginal utility between having to wait 3-2 years vs never getting one is vast.  
I want to reiterate not to use a pay-as-bid system, there is a very high chance you will end up paying much more overall. I know it seems counterintuitive, I'm happy to explain why. Also, there are often feelings of inequality and therefore buyer's remorse with pay-as-bid. The last thing you would want is to have someone contest the results.

Finally to reiterate the overall value proposition. Take a small % of the \$3M that is estimated and attempt a solution. There is no risk as the pre-agreed upon limit will be in a sealed envelope at the meeting. If it goes over that number, the auction ends unfulfilled.

- 1) Request information from H&S regarding the history and current status of the lands originally associated with PIN 22417-0315.
- 2) Confirm that Mint's fees are appropriate and in line with being handed the opportunity to be the sole seller, and not the 2.5% that a realtor would earn on a standard transaction. There are economies to be found in selling over 20 units.
- 3) Explain to the Trustee my belief, supported by a real-estate and bankruptcy litigator, that I have strong arguments in both law and equity that could prevent termination of my agreement. All of my arguments apply to me and some would apply to all Purchasers. I didn't want to divulge them today, but I do plan to file them in advance of the deadline for the hearing. I'd rather not have the argument put forward that there wasn't enough time to digest them and the hearing should be postponed.
- 4) Forward the information and attached presentation regarding the Japanese auction to the Trustee. (positive or negative, I would like to hear their comments)
- 5) Forward to the Trustee my request for them to investigate measures that could be used to put the parking spaces onto title of the 155 lands. As I acknowledged during our meeting you are also counsel to Mady. If you cannot pass my ideas onto the Trustee yourself, please direct me to the appropriate entity or individual.

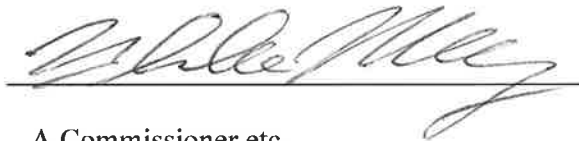
Thank you, Oliver

\* Formally, it is referred to as a single dimensional, one sided, first price, seller bids, sequential Japanese auction.

\*\* A friend of mine co-signed a lease on a two bedroom apartment with unequal sized bedrooms. They couldn't decide who would get the bigger one. I suggested that they split the rent equally (\$500/\$500) and then ask each other the question, "Do we both still want the bigger room?". If yes, change the rent split by \$10 (\$490/\$510), then ask the question again. Keep doing that until one of the two takes the deal. The split ended up being about \$450/\$550, and both of them walked away very happy with the result since they had both had an equal hand in deciding their own outcome.

Auction Example.pdf  
214K

THIS IS EXHIBIT "H" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
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# Japanese Auction

A Possible Solution to the 144 Park-ing Issue

Oliver Romaniuk

August 29, 2015

## Reference Information

- 128 Sold Units + 154 Parking Units (129 → 1104/5)
- 20 Unsold Units, need 20 Parking Units
- Total of 174 Parking Units sold and/or required
- 149 Parking Units available, 10 lease stalls
- Assume 8 street parking stalls will become available
- Assume 155 Parking **will not** be made available
- 75 units have closed, 7+12 will: 35 Units and 60 Parking Units to go

# Modified Japanese Auction

- Trustee is the buyer
- Purchasers are the sellers
- Purchasers are the ones bidding
- Trustee has set a limit for each round
- Only publically available information is the auction price
- Auctioneer raises price until required number of bidders accept price
- If auction runs to the end, everyone has agreed, decision is made
- If auction hits a limit, everyone goes home, nothing happens

# Auction Description

- 60 parking spaces in four tranches (types)
  - 35 Parking Units
  - 10 Leased stalls (deposit returned, lease payments begin)
  - 10 Street (deposit returned)
  - 5 None (deposit returned)
- Everyone starts off with 'Owned' Parking Units
- Price is announced
  - Each bidder makes a yes, no vote
  - Once there are enough yeses, the announced price is the clearing price

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$0	\$0	\$0	
Available	2	2	1	1	
Current	6	0	0	0	
A	1				
B	1				
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$0	\$0	\$0	<b>\$0</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$1,000	\$0	\$0	
Available	2	2	1	1	
Current	6	0	0	0	
A	1				
B	1				
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$0	\$0	\$0	<b>\$0</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$2,000	\$0	\$0	
Available	2	2	1	1	
Current	6	0	0	0	
A	1				
B	1				
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$0	\$0	\$0	<b>\$0</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$3,000	\$0	\$0	
Available	2	2	1	1	
Current	6	0	0	0	
A	1				
B	1				
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$0	\$0	\$0	<b>\$0</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$4,000	\$0	\$0	
Available	2	2	1	1	
Current	5	1	0	0	
A	1				
B		1			
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$4,000	\$0	\$0	<b>\$4,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$5,000	\$0	\$0	
Available	2	2	1	1	
Current	5	1	0	0	
A	1				
B		1			
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$5,000	\$0	\$0	<b>\$5,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$6,000	\$0	\$0	
Available	2	2	1	1	
Current	5	1	0	0	
A	1				
B		1			
C	1				
D	1				
E	1				
F	1				
					<b>Total</b>
<b>Trustee Premium</b>		\$6,000	\$0	\$0	<b>\$6,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$7,000	\$0	\$0	
Available	2	2	1	1	
Current	4	2	0	0	
A	1				
B		1			
C	1				
D	1				
E	1				
F		1			
					<b>Total</b>
<b>Trustee Premium</b>		\$14,000	\$0	\$0	<b>\$14,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$8,000	\$0	\$0	
Available	2	2	1	1	
Current	4	2	0	0	
A	1				
B		1			
C	1				
D	1				
E	1				
F		1			
					<b>Total</b>
<b>Trustee Premium</b>		\$16,000	\$0	\$0	<b>\$16,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$9,000	\$0	\$0	
Available	2	2	1	1	
Current	3	3	0	0	
A	1				
B		1			
C		1			
D	1				
E	1				
F		1			
					<b>Total</b>
<b>Trustee Premium</b>		\$27,000	\$0	\$0	<b>\$27,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$0	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		1			
B		1			
C		1			
D	1				
E	1				
F		1			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$0	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		\$10,000			
B		\$10,000			
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>



# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$1,000	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		\$10,000			
B		\$10,000			
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$2,000	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		\$10,000			
B		\$10,000			
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$3,000	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		\$10,000			
B		\$10,000			
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$4,000	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		\$10,000			
B		\$10,000			
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$5,000	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		\$10,000			
B		\$10,000			
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$0	\$0	<b>\$40,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$6,000	\$0	
Available	2	2	1	1	
Current	2	3	1	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$6,000	\$0	<b>\$46,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$7,000	\$0	
Available	2	2	1	1	
Current	2	3	1	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$7,000	\$0	<b>\$47,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$8,000	\$0	
Available	2	2	1	1	
Current	2	3	1	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$8,000	\$0	<b>\$48,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$9,000	\$0	
Available	2	2	1	1	
Current	2	3	1	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$9,000	\$0	<b>\$49,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$10,000	\$0	
Available	2	2	1	1	
Current	2	3	1	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$10,000	\$0	<b>\$50,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$11,000	\$0	
Available	2	2	1	1	
Current	2	3	1	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000			<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$11,000	\$0	<b>\$51,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$0	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	1		
C		\$10,000			
D	1				
E	1				
F		\$10,000	1		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$0	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$2,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$4,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$6,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>



# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$8,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$10,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$12,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$14,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$16,000	
Available	2	2	1	1	
Current	2	2	2	0	
A		\$10,000			
B		\$10,000	\$12,000		
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$0	<b>\$64,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$18,000	
Available	2	2	1	1	
Current	2	2	1	1	
A		\$10,000			
B		\$10,000	\$12,000	1	
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$18,000	<b>\$82,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$18,000	
Available	2	2	1	1	
Current	2	2	1	1	
A		\$10,000			
B		\$10,000	\$12,000	\$18,000	
C		\$10,000			
D	1				
E	1				
F		\$10,000	12,000		<b>Total</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$18,000	<b>\$82,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$12,000	\$18,000	
Available	2	2	1	1	
Current	2	2	1	1	
A		\$10,000			\$10,000
B		\$10,000	\$12,000	\$18,000	\$40,000
C		\$10,000			\$10,000
D	1				\$0
E	1				\$0
F		\$10,000	12,000		\$22,000
<b>Trustee Premium</b>		\$40,000	\$24,000	\$18,000	<b>\$82,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example

Type	Owned	Leased	Outside	None		
Price		\$10,000	\$12,000	\$18,000		
Available	2	2	1	1		
Current	2	2	1	1		
A		\$10,000			\$10,000	\$33,900
B		\$10,000	\$12,000	\$18,000	\$40,000	\$33,900
C		\$10,000			\$10,000	\$33,900
D	1				\$0	
E	1				\$0	
F		\$10,000	12,000		\$22,000	\$33,900
<b>Trustee Premium</b>		\$40,000	\$24,000	\$18,000	<b>\$82,000</b>	
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>	

# Auction Example

Type	Owned	Leased	Outside	None			
Price		\$10,000	\$12,000	\$18,000			
Available	2	2	1	1			
Current	2	2	1	1			<b>Discount</b>
A		\$10,000			\$10,000	\$33,900	<b>\$43,900</b>
B		\$10,000	\$12,000	\$18,000	\$40,000	\$33,900	<b>\$73,900</b>
C		\$10,000			\$10,000	\$33,900	<b>\$43,900</b>
D	1				\$0		
E	1				\$0		
F		\$10,000	12,000		\$22,000	\$33,900	<b>\$55,900</b>
<b>Trustee Premium</b>		\$40,000	\$24,000	\$18,000	<b>\$82,000</b>		
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>		

# Auction Example – Trustee Limit

Type	Owned	Leased	Outside	None	
Price		\$9,000	\$0	\$0	
Available	2	2	1	1	
Current	3	3	0	0	
A	1				
B		1			
C		1			
D	1				
E	1				
F		1			
					<b>Total</b>
<b>Trustee Premium</b>		\$27,000	\$0	\$0	<b>\$27,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example – Trustee Limit

Type	Owned	Leased	Outside	None	
Price		\$10,000	\$0	\$0	
Available	2	2	1	1	
Current	3	3	0	0	
A	1				
B		1			
C		1			
D	1				
E	1				
F		1			
					<b>Total</b>
<b>Trustee Premium</b>		\$30,000	\$0	\$0	<b>\$30,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example – Trustee Limit

Type	Owned	Leased	Outside	None	
Price		\$11,000	\$0	\$0	
Available	2	2	1	1	
Current	3	3	0	0	
A	1				
B		1			
C		1			
D	1				
E	1				
F		1			<b>Total</b>
<b>Trustee Premium</b>		\$33,000	\$0	\$0	<b>\$33,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example – Trustee Limit

Type	Owned	Leased	Outside	None	
Price		\$12,000	\$0	\$0	
Available	2	2	1	1	
Current	3	3	0	0	
A	1				
B		1			
C		1			
D	1				
E	1				
F		1			<b>Total</b>
<b>Trustee Premium</b>		\$36,000	\$0	\$0	<b>\$36,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example – Trustee Limit

Type	Owned	Leased	Outside	None	
Price		\$13,000	\$0	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		1			
B		1			
C		1			
D	1				
E	1				
F		1			<b>Total</b>
<b>Trustee Premium</b>		\$52,000	\$0	\$0	<b>\$52,000</b>
<b>Trustee Limit</b>		\$50,000	\$50,000	\$50,000	<b>\$150,000</b>

# Auction Example – Trustee Limit

Type	Owned	Leased	Outside	None	
Price		\$13,000	\$0	\$0	
Available	2	2	1	1	
Current	2	4	0	0	
A		1			
B		1			
C		1			
D	1				
E	1				
F		1			<b>Total</b>
<b>Trustee Premium</b>		\$52,000	\$0	\$0	<b>\$52,000</b>
<b>Trustee Limit</b>		\$52,000	\$48,000	\$50,000	<b>\$150,000</b>



THIS IS EXHIBIT "I" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

**RED SEAL NOTARY INC.**  
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## 141, 145 and 155 Caroline St. and 156 Park St.

**Zone change:** Z-11-12

**Address:** 141, 145 and 155 Caroline St. and 156 Park St.

**Applicant:** Mady Development Group

**Request:** The applicant is proposing to amend the City of Waterloo's official plan by redesignating the subject lands from industrial and commercial (office commercial) to high-density residential with a new special policy area to permit an increase in density from 250 units per hectare to 485 units per hectare.

The applicant is also proposing to amend zoning by-law no. 1108 by rezoning the subject lands from industrial 25 (I-25) and commercial two (C2-25) to multiple residence 25 (MR-25) with the following site-specific provisions:

- To permit townhomes on the subject lands, whereas the MR zone does not permit townhomes
- To exempt the development from the requirement to provide 10 per cent of required parking as surface parking outside the building or structure
- To provide 20 per cent habitable room within the at-grade parking structure, whereas the by-law requires 25 per cent, and to not require the habitable space across the entire building frontage
- To reduce the minimum required landscape area from 30 per cent to 14 per cent at grade and to provide the remainder as amenity space above the parking structure
- To increase the maximum permitted density from 250 units per hectare to 485 units per hectare
- To permit a zero-metre front-yard and flankage-yard setback for the underground parking structure whereas the by-law requires a five-metre setback
- To reduce the rear-yard setback from 7.5 metres to 2.3 metres (abutting the proposed relocated Iron Horse Trail)
- To reduce the front-yard setback (Allen Street) from five metres to four metres for the townhouse units
- To reduce the flankage-yard setback (Park Street) from five metres to 4.6 metres for the townhouse units
- To reduce the flankage yard setback (Caroline Street) from five metres to 0.5 metres for the townhouse units and 2.5 metres for the main building
- To exempt the building from the requirement for a side-yard setback (the side lot line abuts the approved development known as 144 Park)

**Purpose:** This application is being advanced to permit a 19-storey residential building with 194 units. Parking will be provided both underground and in an above-ground parking structure. The proposed building will be physically and functionally linked with the approved development of 144 Park St. The proposal also includes the relocation of a portion of the Iron Horse Trail from its current location between Park and Caroline streets further to the southwest.

**Informal public meeting:** Jan. 30, 2012

**Formal public meeting:** Pending

**Contact:** Trevor Hawkins at 519-747-8583

### Related documents

- [155 Park proposed residential tower](#) - community meeting presentation
- [Concept building elevations](#)
- [Concept site plan](#)
- [Functional servicing brief](#)

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- [Shadow study](#)
- [Site plan drawings](#)
- [Transportation impact study](#)
- [Urban design brief](#)

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THIS IS EXHIBIT "J" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
Notary Public and Commissioner of Oaths  
In and for the Province of Ontario.  
My Commission is of unlimited duration,  
No legal advice given.

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(888) 922-7325  
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**144 Park Street**

Waterloo, Ontario  
08.104

Created: 02-Jul-08  
Modified: 15-Nov-11

**TOWER 1**

Site Area (before road widening):	3,280 m2	0.33 Hectares
Road Widening Area:	61 m2	
Site Area (after road widening):	3,219 m2	0.32 Hectares
*Landscape Area: at grade	658 m2	20%
4th Floor terrace	1,052 m2	
*Site Coverage:	2,289 m2	72%
*Road Area:	272 m2	8%
*FSI :	5.64	
*Unit Per Hectare (UPH)	460	

\*Calculation based on Site Area after road widening.

Number of Storeys:	19
Total Building Heights:	61.50 m

Townhouses	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
	1	8	24	496	5,340
	2			503	5,409
	3			399	4,298
<b>Total</b>		<b>8</b>	<b>24</b>	<b>1,398</b>	<b>15,047</b>

174.7m2 (1,880 ft2) Average Townhouse Size

Tower	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
COMMON AREAS (LOBBY, GARBAGE, LOCKERS, STAIRS)	1	N/A	N/A	637	6,856
	2	N/A	N/A	490	5,274
	3	N/A	N/A	220	2,367
AMENITY	3	N/A	N/A	218	2,349
AMENITY	4	N/A	N/A	104	1,117
TYPICAL	4-14	108	172	10,601	114,112
TYPICAL	15-18	28	56	3,668	39,486
P/H	19	4	8	813	8,749
<b>Total</b>		<b>140</b>	<b>236</b>	<b>16,751</b>	<b>180,310</b>

96.58 m2 (1,040 ft2) Average Typical Unit Size

<b>Grand total</b>	<b>148</b>	<b>260</b>	<b>18,149</b>	<b>195,357</b>
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Note: U/G level, parking areas, and Mech. P/H not included in total

**PARKING  
REQUIRED PARKING**

Residential	Required Ratio	Parking Required
Townhouses	1.0 per unit	8
Condos	1.0 per unit	140
<b>Total</b>		<b>148</b>

Barrier Free Parking @ 5% of required parking = 8

**PROVIDED PARKING**

P3	38
P2	28
P1	24
U/G1	69
<b>Total</b>	<b>159</b>

Barrier Free Parking included 8

**REQUIRED LOCKERS/BICYCLE STORAGE**

LOCKERS	BICYCLE
1 PER UNIT = 148	0.6 SPACE PER UNIT = 89

**PROVIDED LOCKERS/BICYCLE STORAGE**

	LOCKERS	BICYCLE	BICYCLE/LOCKERS
P3	9		9
P2	89		26
P1	13	29	13
U/G1	37		12
<b>Total</b>	<b>148</b>		<b>89</b>

**PROVIDED OUTDOOR BICYCLE STORAGE**

BICYCLE (OUTDOOR)	8
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**144 Park Street**

Waterloo, Ontario  
08.104

Created: 02-Jul-08  
Modified: 17-Nov-11

**TOWER 2**

Site Area:	4,011 m2	0.40 Hectares
(9m Strip not include in Site Area)		
Landscape Area: at grade	548 m2	14%
4th Floor terrace	2,440 m2	
Site Coverage:	3,319 m2	82%
Road Area:	144 m2	4%
FSI :	4.51	
Unit Per Hectare (UPH)	485	

Number of Storeys:	19
Total Building Heights:	60.95 m

Townhouses	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
	1	4	12	351	3,780
	2			351	3,780
	3			287	3,088
<b>Total</b>		<b>4</b>	<b>12</b>	<b>990</b>	<b>10,659</b>

247.5m2 (2,664 ft2) Average Townhouse Size

Tower	Floor	# of Units	# of Bedrooms	GFA	
				m2	ft2
COMMON AREAS (LOBBY, GARBAGE, LOCKERS, STAIRS)	1	N/A	N/A	415	4,462
	2	N/A	N/A	314	3,379
	3	N/A	N/A	315	3,393
AMENITY	1	N/A	N/A	313	3,370
AMENITY	4	N/A	N/A	128	1,377
TYPICAL	4-19	190	254	15,624	168,176
<b>Total</b>		<b>190</b>	<b>254</b>	<b>17,109</b>	<b>184,156</b>

74.0 m2 (796 ft2) Average Typical Unit Size

<b>Grand total</b>	<b>194</b>	<b>266</b>	<b>18,099</b>	<b>194,816</b>
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Note: U/G level, parking areas, and Mech. P/H not included in total

**PARKING  
REQUIRED PARKING**

Residential	Required Ratio	Parking Required
Townhouses	1.0 per unit	4
Condos	1.0 per unit	190
<b>Total</b>		<b>194</b>

Barrier Free Parking @ 5% of required parking = 10

**PROVIDED PARKING**

P3-Residential	84
P2-Residential	81
P1-Retail	62
U/G1	84
<b>Total</b>	<b>311</b>

Barrier Free Parking included 12

**REQUIRED LOCKERS/BICYCLE STORAGE**

LOCKERS	BICYCLE
1 PER UNIT = 194	0.6 SPACE PER UNIT = 117

**PROVIDED LOCKERS/BICYCLE STORAGE**

	LOCKERS	BICYCLE
<b>Total</b>	<b>194</b>	<b>117</b>

**PROVIDED OUTDOOR BICYCLE STORAGE**

BICYCLE (OUTDOOR)	12
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**144 Park Street**

Waterloo, Ontario  
08.104

Created: 28-Jun-11  
Modified: 17-Nov-11

**Total of Towers 1 & 2**

Site Area (before road widening):	7,291 m2	0.73 Hectares
Road Widening Area:	61 m2	
Site Area (after road widening):	7,230 m2	0.72 Hectares
*Landscape Area: at grade	1,206 m2	17%
4th Floor terrace	3,492 m2	
*Site Coverage:	5,607 m2	78%
*Road Area:	416 m2	6%
*FSI :	5.01	
*Unit Per Hectare (UPH)	473	

\*Calculation based on Site Area after road widening.

Number of Storeys:	19
Total Building Heights:	T1-61.99 m T2-60.95 m

Tower	# of Units	# of Bedrooms	GFA	
			m2	ft2
1 (THs)	8	24	1,398	15,048
2 (THs)	4	12	990	10,656
<b>Total</b>	<b>12</b>	<b>36</b>	<b>2,388</b>	<b>25,704</b>

199.0m2 2,142 ft2) Average Townhouse Size

Tower	# of Units	# of Bedrooms	GFA	
			m2	ft2
1	140	236	16,751	180,306
2	190	254	17,088	183,934
<b>Total</b>	<b>330</b>	<b>490</b>	<b>33,839</b>	<b>364,240</b>

83.6 m2 (899 ft2) Average Typical Unit Size

<b>Grand total</b>	<b>342</b>	<b>526</b>	<b>36,227</b>	<b>389,944</b>
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Note: U/G level, parking areas, and Mech. P/H not included in total

**PARKING  
REQUIRED PARKING**

Residential	Required Ratio	Parking Required
Townhouses	1.0 per unit	12
Condos	1.0 per unit	330
<b>Total</b>		<b>342</b>

Barrier Free Parking @ 5% of required parking = 16

**PROVIDED PARKING**

Phase	
1	159
2	311
<b>Total</b>	<b>470</b>

Barrier Free Parking included 20

**PROVIDED LOCKERS/BICYCLE STORAGE**

LOCKERS	BICYCLE
1 PER UNIT = 342	0.6 SPACE PER UNIT = 206

**PROVIDED LOCKERS/BICYCLE STORAGE**

PHASE	LOCKERS	BICYCLE	BICYCLE/LOCKERS
1	148	29	60
2	194	117	
<b>Total</b>	<b>342</b>		<b>206</b>

**PROVIDED OUTDOOR BICYCLE STORAGE**

BICYCLE (OUTDOOR)	20
-------------------	----

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1	Nov 15/11	Issued for Site Plan Approval	VAG
No.	Date:	Issued/Revision:	By:

**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 LeMill Road, Toronto ON Canada M3B 3T8  
Telephone (416) 435-2322, Fax (416) 435-6777  
turnerfleischer.com



Project: **144 Park Street**  
Waterloo, Ontario

Drawing Name: **Overall Statistics**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	
Checked by:	Checker		
		Drawing No.:	

**SPA00**



**144 Park Street**

Waterloo, Ontario  
08.104

**Unit Count**

**Tower 1**

Level	Unit Type			Total Units
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			8	8
<b>Sub-Total</b>			<b>8</b>	<b>8</b>
Tower				
4	4	5	0	9
5	4	6	0	10
6	4	6	0	10
7	4	6	0	10
8	4	6	0	10
9	4	6	0	10
10	4	6	0	10
11	4	5	0	9
12	4	6	0	10
13	4	6	0	10
14	4	6	0	10
15	0	7	0	7
16	0	7	0	7
17	0	7	0	7
18	0	7	0	7
19	0	4	0	4
<b>Sub-Total</b>	<b>44</b>	<b>96</b>	<b>0</b>	<b>140</b>

<b>Total</b>	<b>44</b>	<b>96</b>	<b>8</b>	<b>148</b>
--------------	-----------	-----------	----------	------------

**Bedroom Count**

Level	# of Bedrooms			Total Bdrms
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			24	24
<b>Sub-Total</b>			<b>24</b>	<b>24</b>
Tower				
4	4	10	0	14
5	4	12	0	16
6	4	12	0	16
7	4	12	0	16
8	4	12	0	16
9	4	12	0	16
10	4	12	0	16
11	4	10	0	14
12	4	12	0	16
13	4	12	0	16
14	4	12	0	16
15	0	14	0	14
16	0	14	0	14
17	0	14	0	14
18	0	14	0	14
19	0	8	0	8
<b>Sub-Total</b>	<b>44</b>	<b>192</b>	<b>0</b>	<b>236</b>

<b>Total</b>	<b>44</b>	<b>192</b>	<b>24</b>	<b>260</b>
--------------	-----------	------------	-----------	------------

<b>Grand Total</b>	<b>170</b>	<b>320</b>	<b>36</b>	<b>526</b>
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Statistics  
N.T.S.

**144 Park Street**

Waterloo, Ontario  
08.104

**Unit Count**

**Tower 2**

Level	Unit Type			Total Units
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			4	4
<b>Sub-Total</b>			<b>4</b>	<b>4</b>
Tower				
4	6	4	0	10
5	8	4	0	12
6	8	4	0	12
7	8	4	0	12
8	8	4	0	12
9	8	4	0	12
10	8	4	0	12
11	8	4	0	12
12	8	4	0	12
13	8	4	0	12
14	8	4	0	12
15	8	4	0	12
16	8	4	0	12
17	8	4	0	12
18	8	4	0	12
19	8	4	0	12
<b>Sub-Total</b>	<b>126</b>	<b>64</b>	<b>0</b>	<b>190</b>

<b>Total</b>	<b>126</b>	<b>64</b>	<b>4</b>	<b>194</b>
--------------	------------	-----------	----------	------------

**Bedroom Count**

Level	# of Bedrooms			Total Bdrms
	1B/1B+D	2B/2B+D	3B	
Townhouse				
1-3			12	12
<b>Sub-Total</b>			<b>12</b>	<b>12</b>
Tower				
4	6	8	0	14
5	8	8	0	16
6	8	8	0	16
7	8	8	0	16
8	8	8	0	16
9	8	8	0	16
10	8	8	0	16
11	8	8	0	16
12	8	8	0	16
13	8	8	0	16
14	8	8	0	16
15	8	8	0	16
16	8	8	0	16
17	8	8	0	16
18	8	8	0	16
19	8	8	0	16
<b>Sub-Total</b>	<b>126</b>	<b>128</b>	<b>0</b>	<b>254</b>

<b>Total</b>	<b>126</b>	<b>128</b>	<b>12</b>	<b>266</b>
--------------	------------	------------	-----------	------------

Firm Name: Turner Fleischer Architects Inc.		67 Lesmill Road, Toronto, Ontario, M3B 2T8	
Address:		Kojo La-Ananya	
Contact:			
Project Name: 144 Park Street		144 Park Street	
Project Location: Waterloo/Toronto, Ontario			
ITEM		ONTARIO BUILDING CODE MATRIX	
		OBC REFERENCE	
1	Project Description: 19 Residential Floors / 4 Townhouse units 1 Underground Parking Level Change of Use <input type="checkbox"/>	<input checked="" type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> Alteration	<input type="checkbox"/> Part 11 <input checked="" type="checkbox"/> Part 3 <input type="checkbox"/> Part 9 2; 1.1
2	Major Occupancy(s): Group C (Residential)	Subsidiary Occupancy(s): Group F3 (Parking Garage) Group A2 (Amenity Areas)	3.1.2.1.(1)
3	Building Area (m <sup>2</sup> ) Existing = 0 m <sup>2</sup> New = 3455 m <sup>2</sup> Total = 3455 m <sup>2</sup>		1.4.1.2. (A)
4	Gross Area (m <sup>2</sup> ) Existing = 0 m <sup>2</sup> New = 18079 m <sup>2</sup> Total = 18079 m <sup>2</sup>		1.4.1.2. (A)
5	Number of Storeys Above Grade = 19 Below Grade = 1		1.4.1.2. (A) & 3.2.1.1.
6	Number of Streets/Fire Fighter Access: 2		3.2.2.10. & 3.2.5.
7	Building Classification: Group C, Group F3		3.2.2.20. -83
8	Sprinkler System Proposed	<input checked="" type="checkbox"/> Entire building <input type="checkbox"/> Selected compartments <input type="checkbox"/> Selected floor areas <input type="checkbox"/> Basement <input type="checkbox"/> In lieu of roof rating <input type="checkbox"/> Not required	3.2.2.20. -83 3.2.1.5. 3.2.2.17. INDEX
9	Standpipe Required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.9
10	Fire Alarm Required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.4
11	Water Service/Supply is Adequate	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.5.7.
12	High Building	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.6
13	Permitted Construction Actual Construction	<input type="checkbox"/> Combustible <input type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-combustible <input checked="" type="checkbox"/> Non-combustible	<input type="checkbox"/> Both <input type="checkbox"/> Both 3.2.2.20. -83
14	Mezzanine(s) Area : 255.49 m2 (Max 10% of Ground Level)		3.2.1.1.(3)-(8)
15	Occupant load based on: <input type="checkbox"/> m <sup>2</sup> /person	<input checked="" type="checkbox"/> Design of building	3.1.17.
	Occupancy	Occupant load	
	UG1	73 persons	
	Townhouse	24 persons	
	Floor 1	51 persons	
	Floor 2	68 persons	
	Floor 3	68 persons	
	Floor 1 and 4-Amenity	288 persons	
	Floor 4-19	508 persons	
16	Barrier-free Design	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)	3.8.
17	Hazardous Substances	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2. & 3.3.1.19.
18	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (Hours) Listed Design No. or Description (SG-2)	3.2.2.20. -83 & 3.2.1.4
	Floors	2 Hours Poured Concrete	
	Roof	0 Hours Poured Concrete	
	Mezzanine	N/A N/A	
	FRR of Supporting Members	Listed Design No. Or Description (SB-2)	3.2.2.20. -83 & 3.2.1.4
	Floors	1 Hours Poured Concrete	
	Roof	2 Hours Poured Concrete	
	Mezzanine	N/A N/A	
19	Spatial Separation - Construction of Exterior Walls		3.2.3
	Storey	Face Automatic Sprinkler Occupancy	
		Suite	
		L (m) H (m) LH A (m <sup>2</sup> )	
	1st Floor	N Y C	
		E Y C/F3	
		S Y C/F3	64.9 10.6 6.1 688
		W Y C	
		Openings A (m <sup>2</sup> )	90.3
		% Actual Openings	13.1
		Limiting Distance Required (m)	9*
		Actual (m)	14.5
		% Unprotected Openings Permitted	100
		Exterior Wall Const. Type	PC
			9*
			9.9
			6.8
			12.7
			100
			PC

OBC Matrix  
N.T.S.

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**TURNER FLEISCHER**  
TURNER FLEISCHER ARCHITECTS INC.  
67 Lesmill Road, Toronto ON, Canada, M3B 2T8  
Telephone (416) 435-2322, Facsimile (416) 435-6777  
turnerfleischer.com

ON TARIO ASSOCIATION OF ARCHITECTS  
JOHN T. CHOW  
LICENSE  
5784

Project: **144 Park Street**  
Waterloo, Ontario

Drawing Name: **Statistics & OBC Matrix**

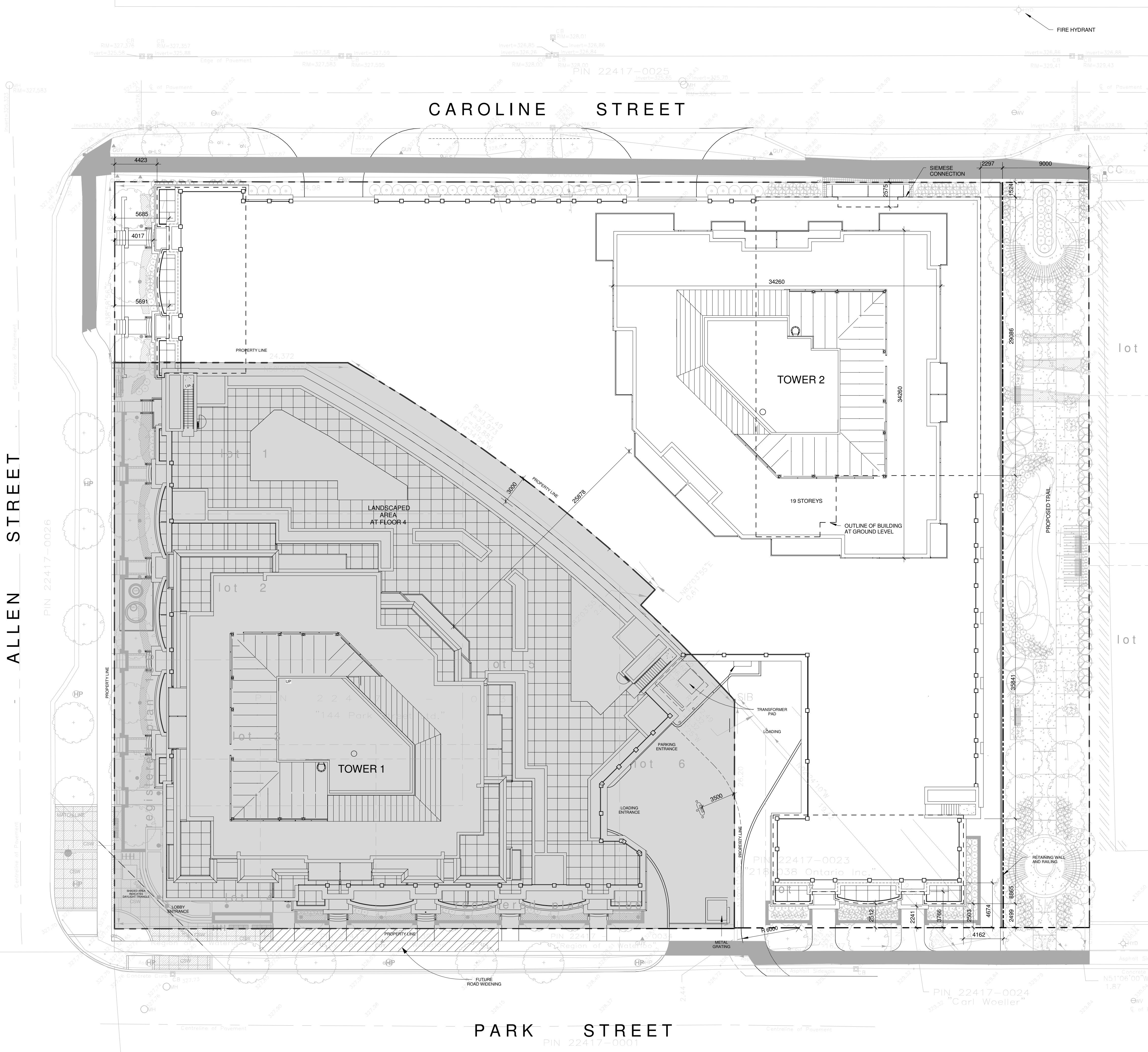
Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	1 : 1
Checked by:	Checker		

Drawing No: **SPA00a**

C:\BENTON\Bentons\Projects\144Park\144Park.dwg - Page 2 of 2



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**PART OF LOT 1  
REGISTERED PLAN 186  
AND PART OF LOTS 217, 218, 219 AND 267  
REGISTERED PLAN 385**

**NOTES:**

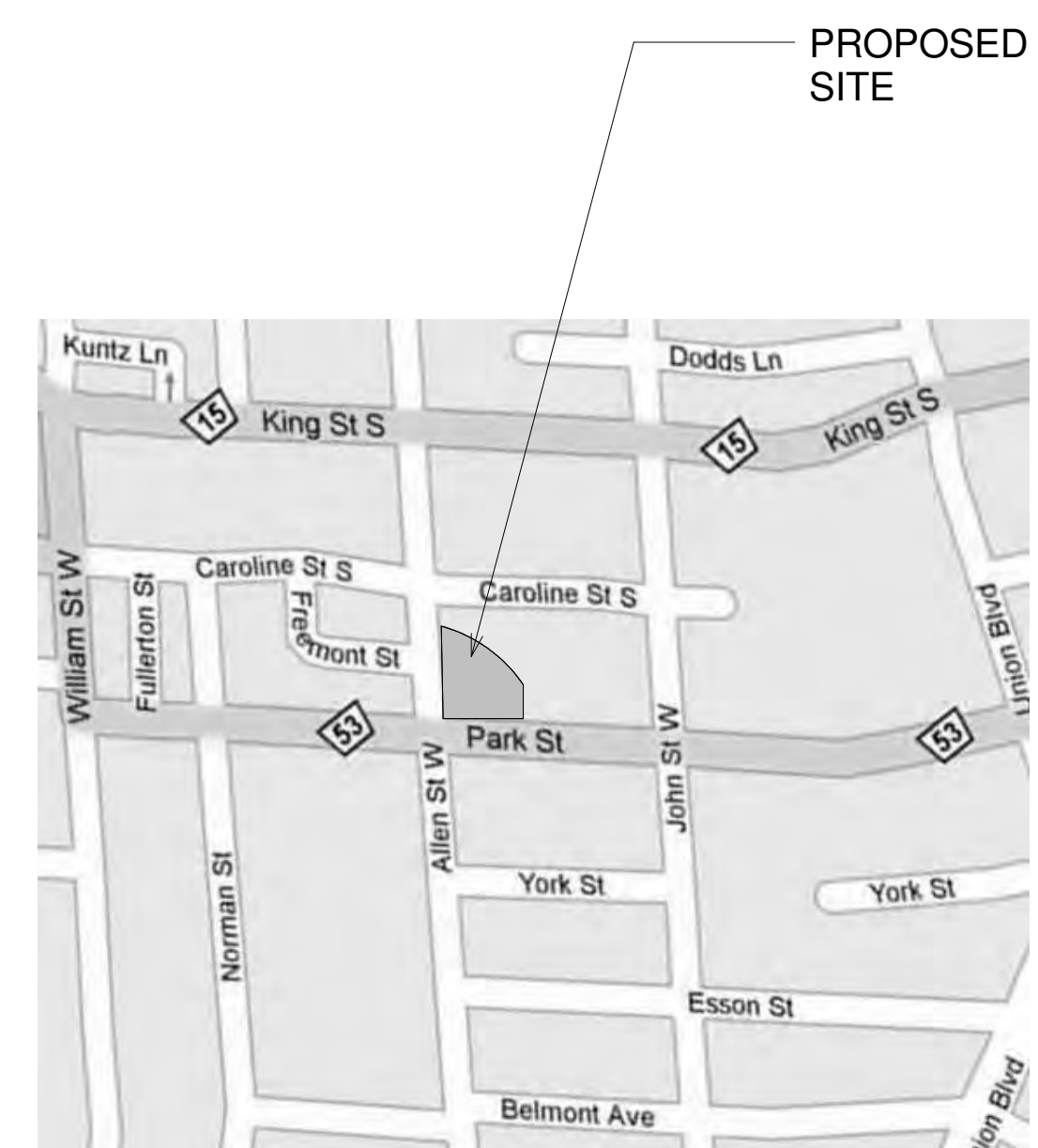
ALL OUTDOOR LIGHTING WILL BE DECORATIVE FULL CUT-OFF AND SHALL NOT PROVIDE ANY GLARE TO SURROUNDING PROPERTIES AND PUBLIC VIEW.

STREETSCAPE DETAILS PROVIDED FOR CONTEXT AND ARE SUBJECT TO SEPARATE AGREEMENT AND APPROVALS.

ALL EXCESS SNOW WILL BE REMOVED FROM SITE AT OWNER'S EXPENSE.

SITE PLAN IS COORDINATED WITH THE LANDSCAPE / VEGETATION MANAGEMENT PLAN AND ENGINEERING PLAN

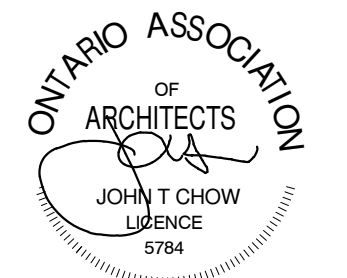
FOR LANDSCAPE DETAILS REFER TO LANDSCAPE PLANS



Key Plan  
N.T.S.

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Telephone (416) 435-2322, Fax (416) 435-6717  
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Project: **144 Park Street**

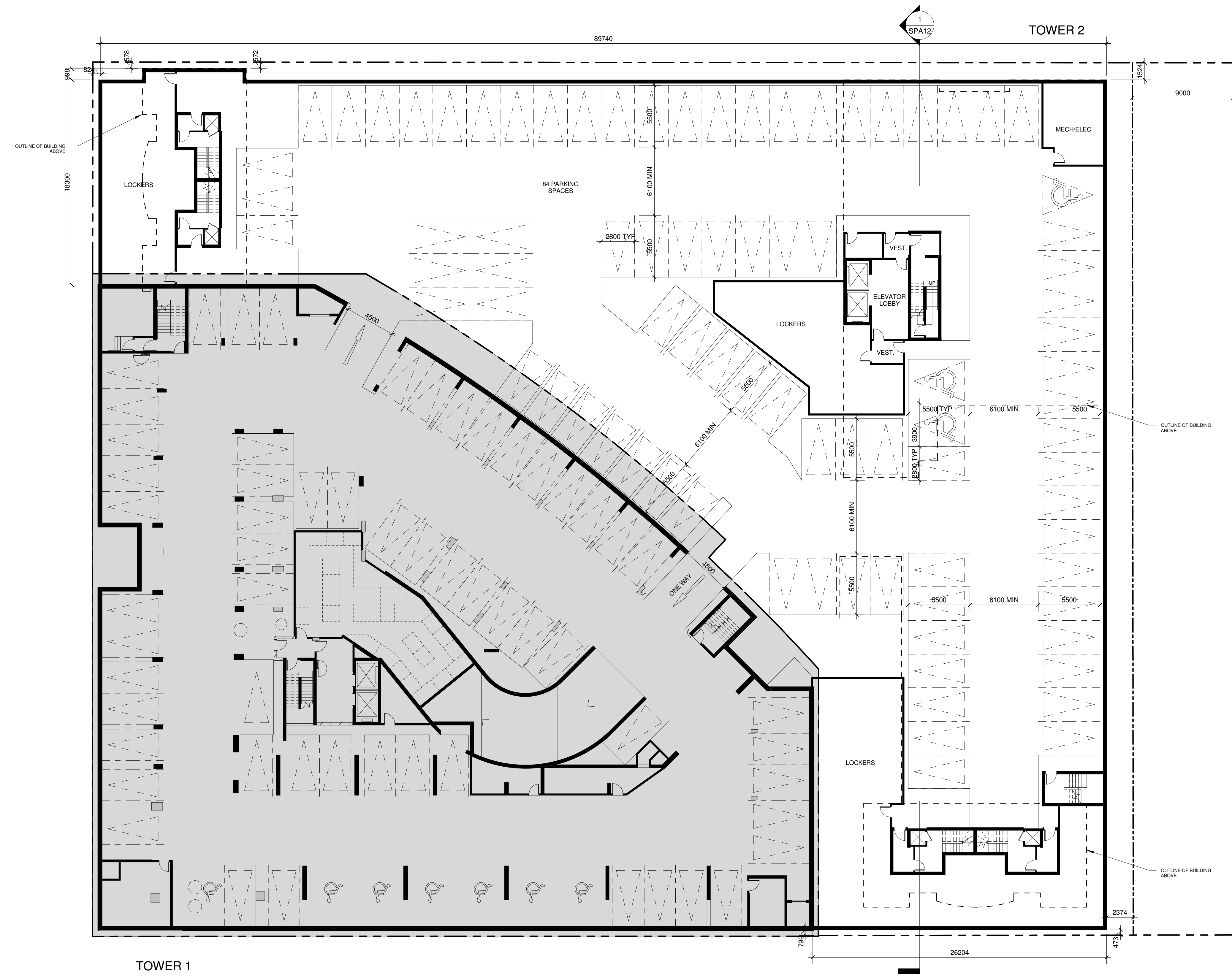
Waterloo, Ontario

Drawing Name: **Site Plan**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	As indicated
Checked by:	Checker		

Drawing No: **SPA01**

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① UG1 PARKING LEVEL  
1 : 200

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**TURNER FLEISCHER**  
 TURNER FLEISCHER ARCHITECTS INC.  
 67 LeMill Road, Toronto ON, Canada M3B 1T8  
 Telephone (416) 435-2322, Facsimile (416) 435-6717  
 turnerfleischer.com

ONTARIO ASSOCIATION  
 OF ARCHITECTS  
 JOHN T CHOW  
 LICENCE 5784

Project : **144 Park Street**  
 Waterloo, Ontario

Drawing Name : **U/G Parking 1**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

Drawing No : **SPA02**



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ALLEN STREET

CAROLINE STREET

TOWER 2

PARK STREET

ALLEN STREET

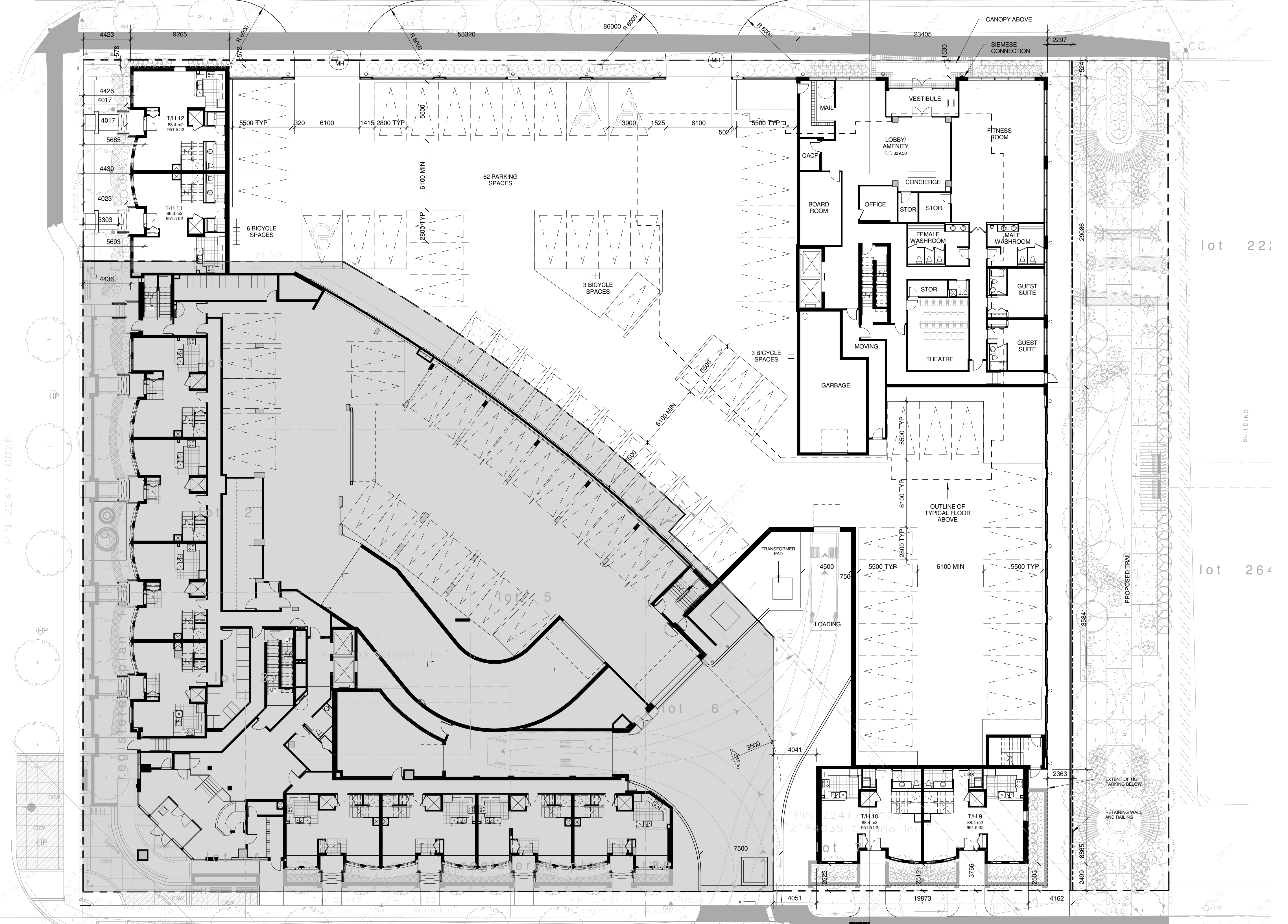
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PIN 22417-0025

PIN 22417-0024

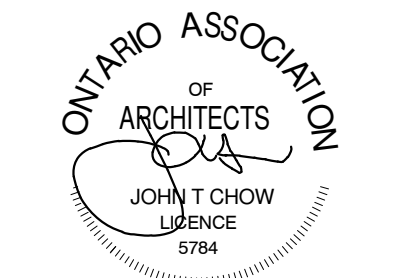
TOWER 1

GROUND LEVEL-P1  
1:200



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turnerfleischer.com



Project: **144 Park Street**  
Waterloo, Ontario

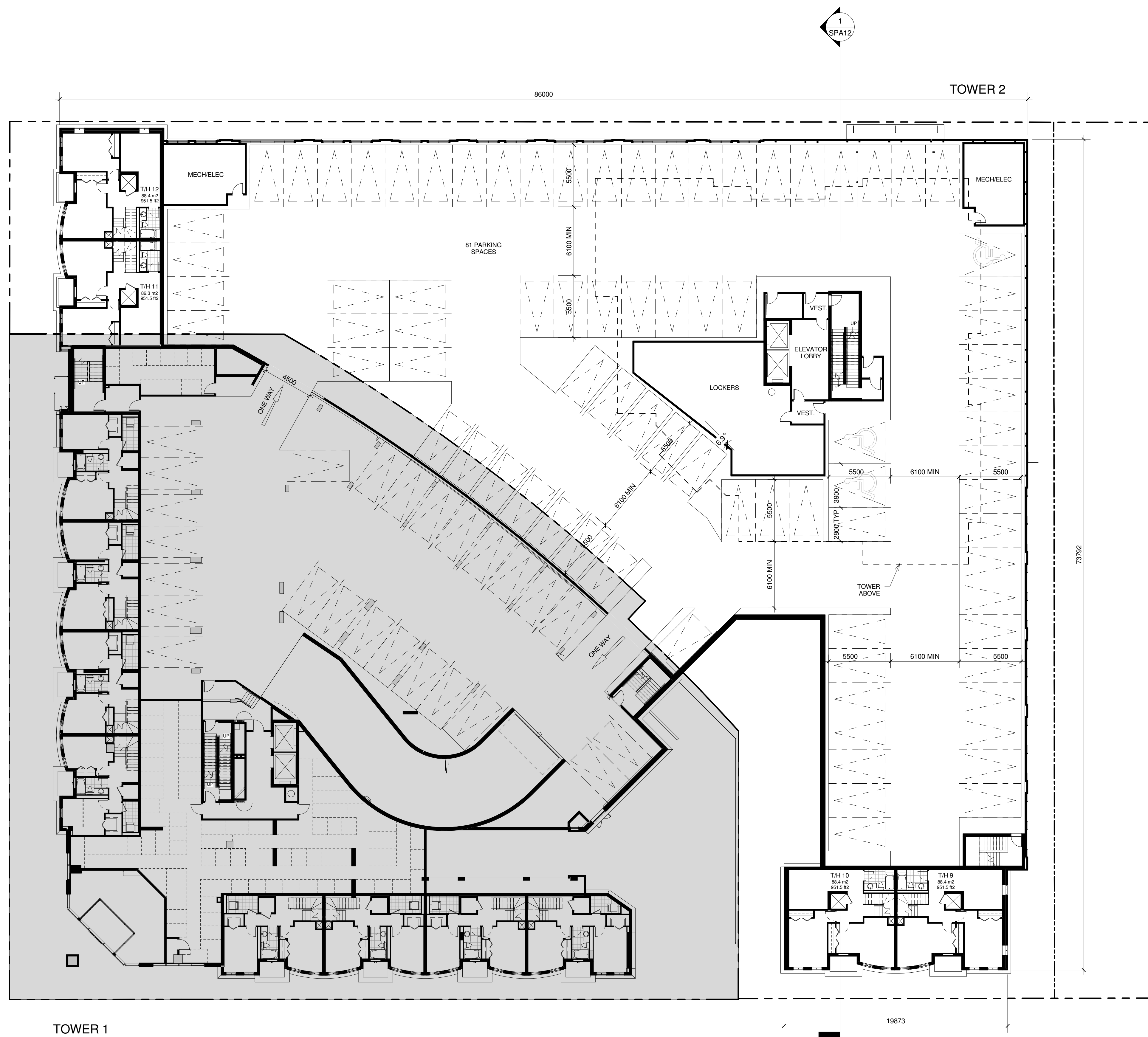
Drawing Name: **Floor 1 / P1**

Proj no.:	08-104	Date:	REVISED: Dec 22, 2009
Drawn by:	Author	Scale:	1:200
Checked by:	Checker		

Drawing No: **SPA03**

C:\BENTON\Bentley\GardensPark\Bentley\WD - Phase 2.rvt

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① 2 ND FLOOR LEVEL  
1 : 200

No.	Date	Issued for Site Plan Approval	VAG
		Issued/Revision:	By:

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TURNER FLEISCHER ARCHITECTS INC.  
67 LeMill Road, Toronto ON, Canada M3B 2T8  
Telephone (416) 435-2322, Facsimile (416) 435-6717  
turnerfleischer.com



Project : **144 Park Street**  
Waterloo, Ontario

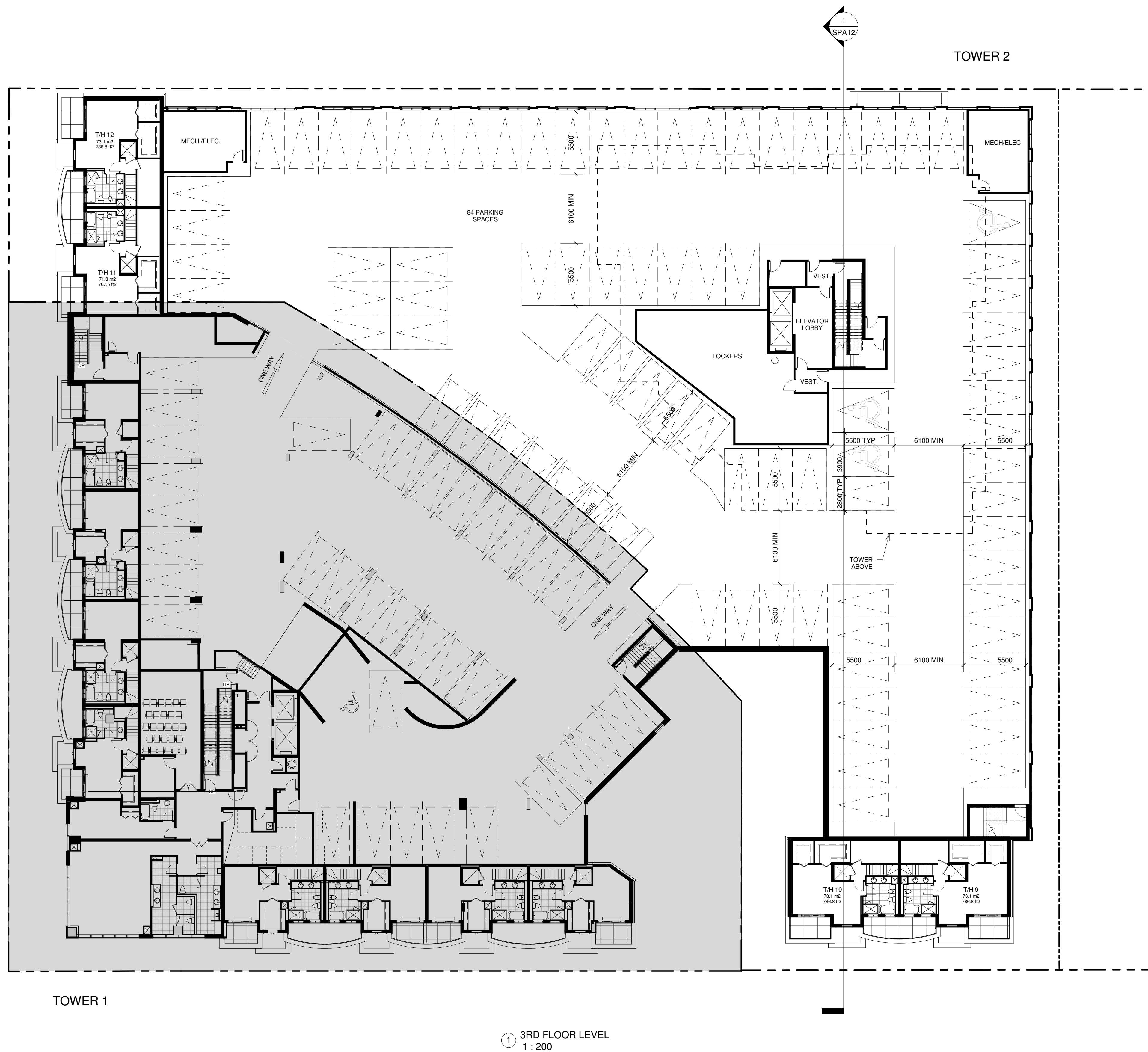
Drawing Name : **Floor 2 / P2**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

Drawing No : **SPA04**

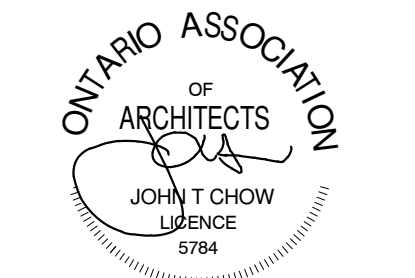
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 TURNER FLEISCHER ARCHITECTS INC.  
 67 Leavelle Road, Toronto ON, Canada M3B 2T8  
 Telephone (416) 435-2322, Facsimile (416) 435-6777  
 turnerfleischer.com



Project : **144 Park Street**  
 Waterloo, Ontario

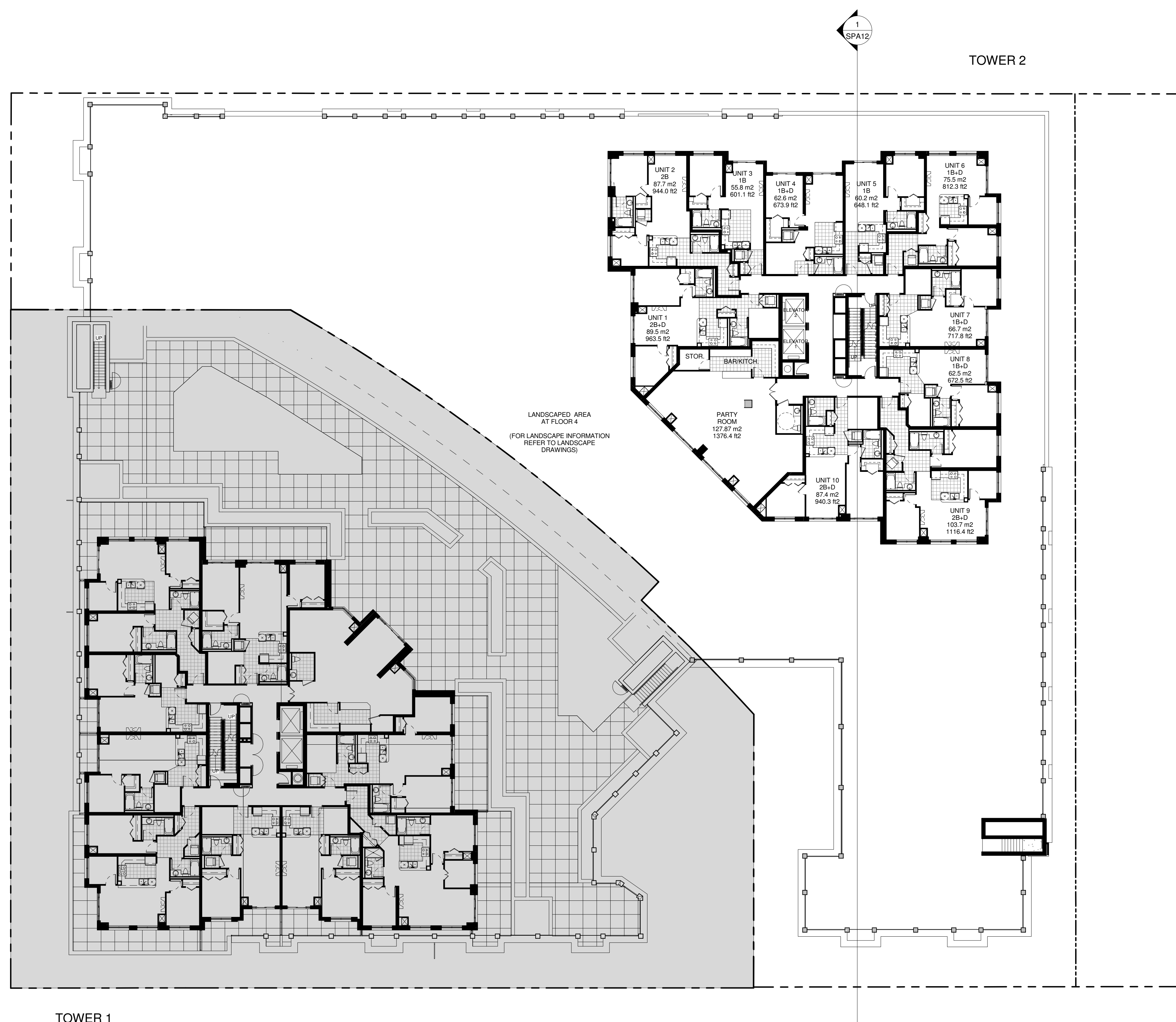
Drawing Name : **Floor 3 / P3**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

Drawing No : **SPA05**

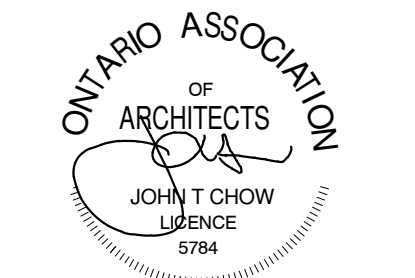
C:\BENTON\Bentons\144Park\144Park-WD - Phase 2.rvt

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 turnerfleischer.com



Project : **144 Park Street**  
 Waterloo, Ontario

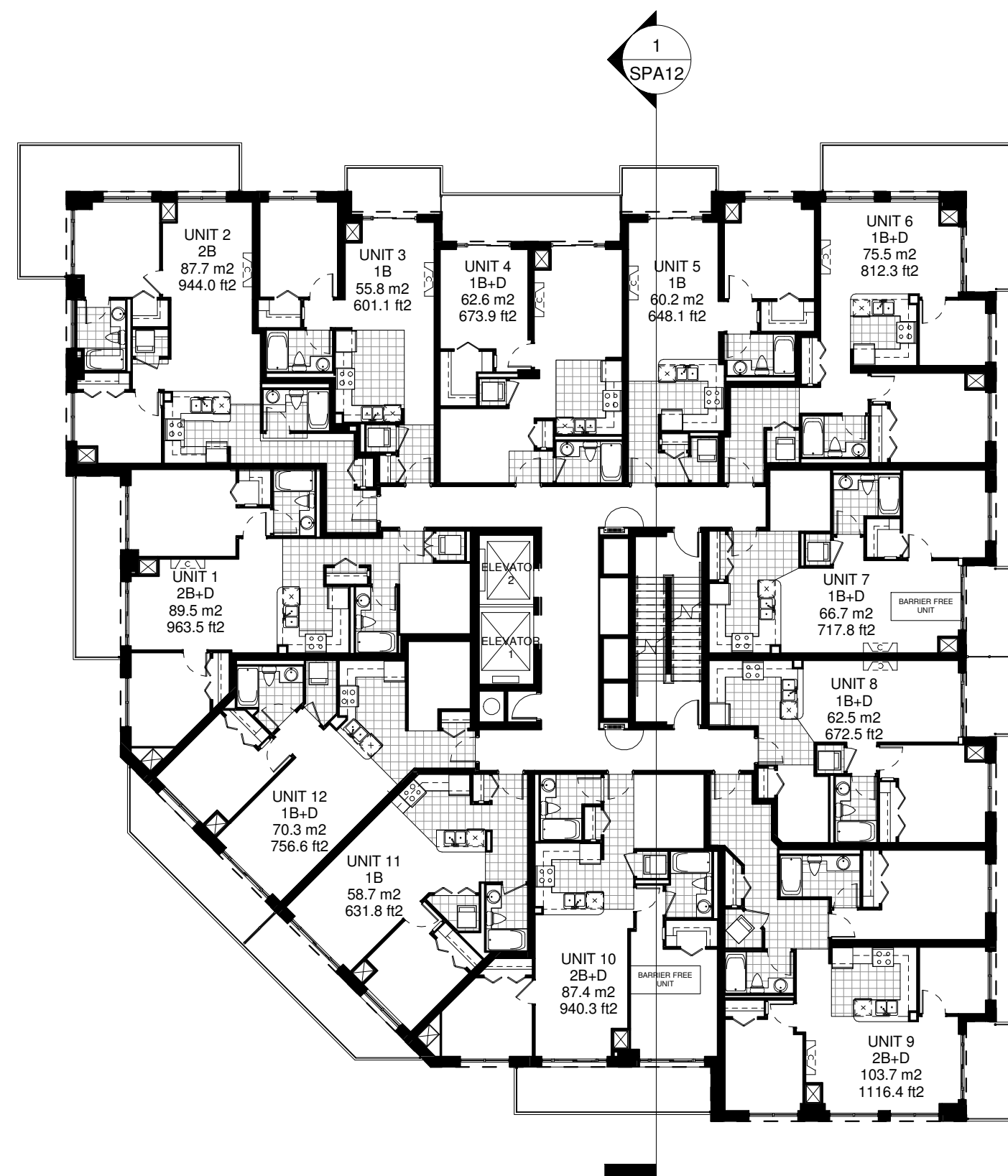
Drawing Name : **4th Floor**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

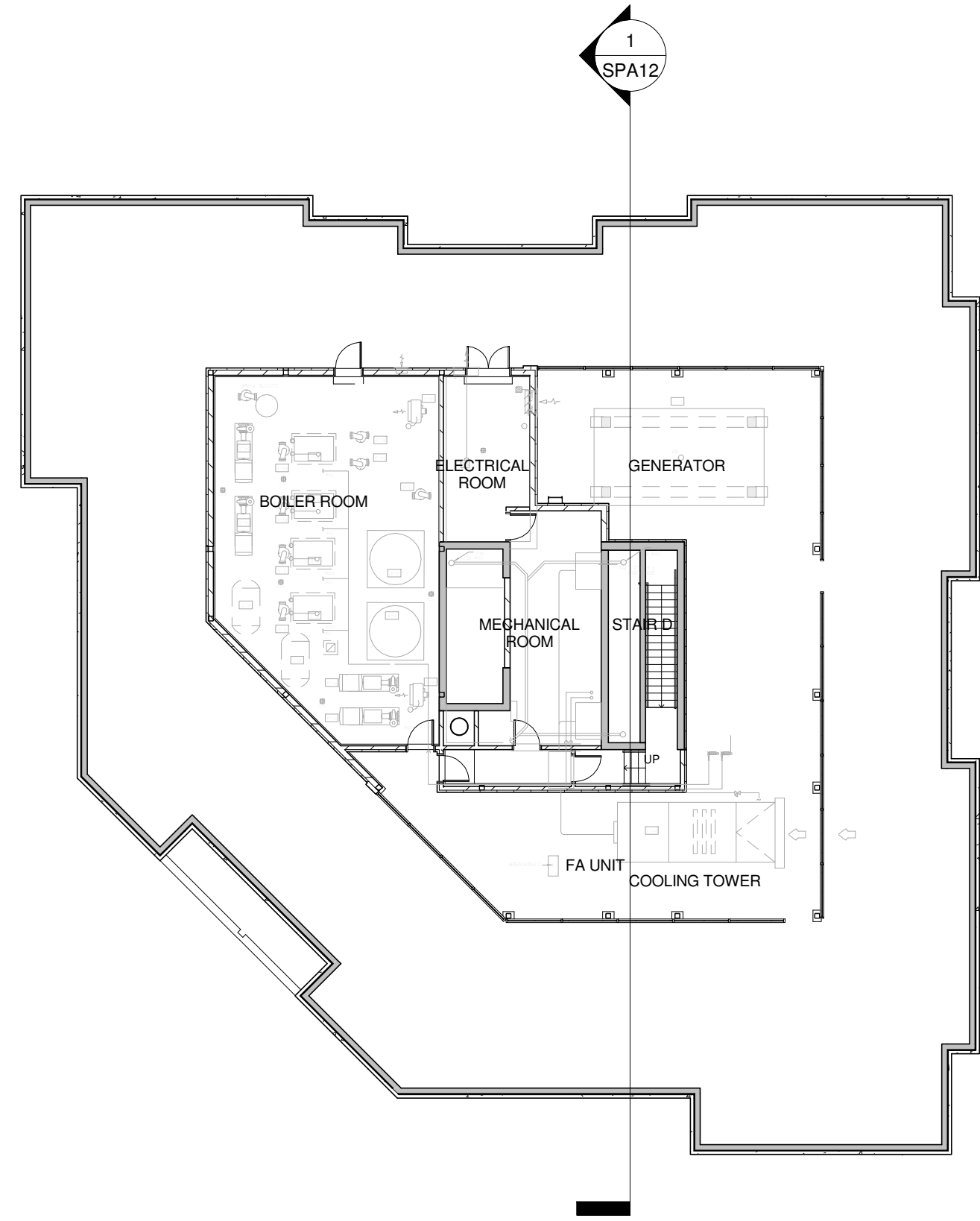
Drawing No : **SPA06**



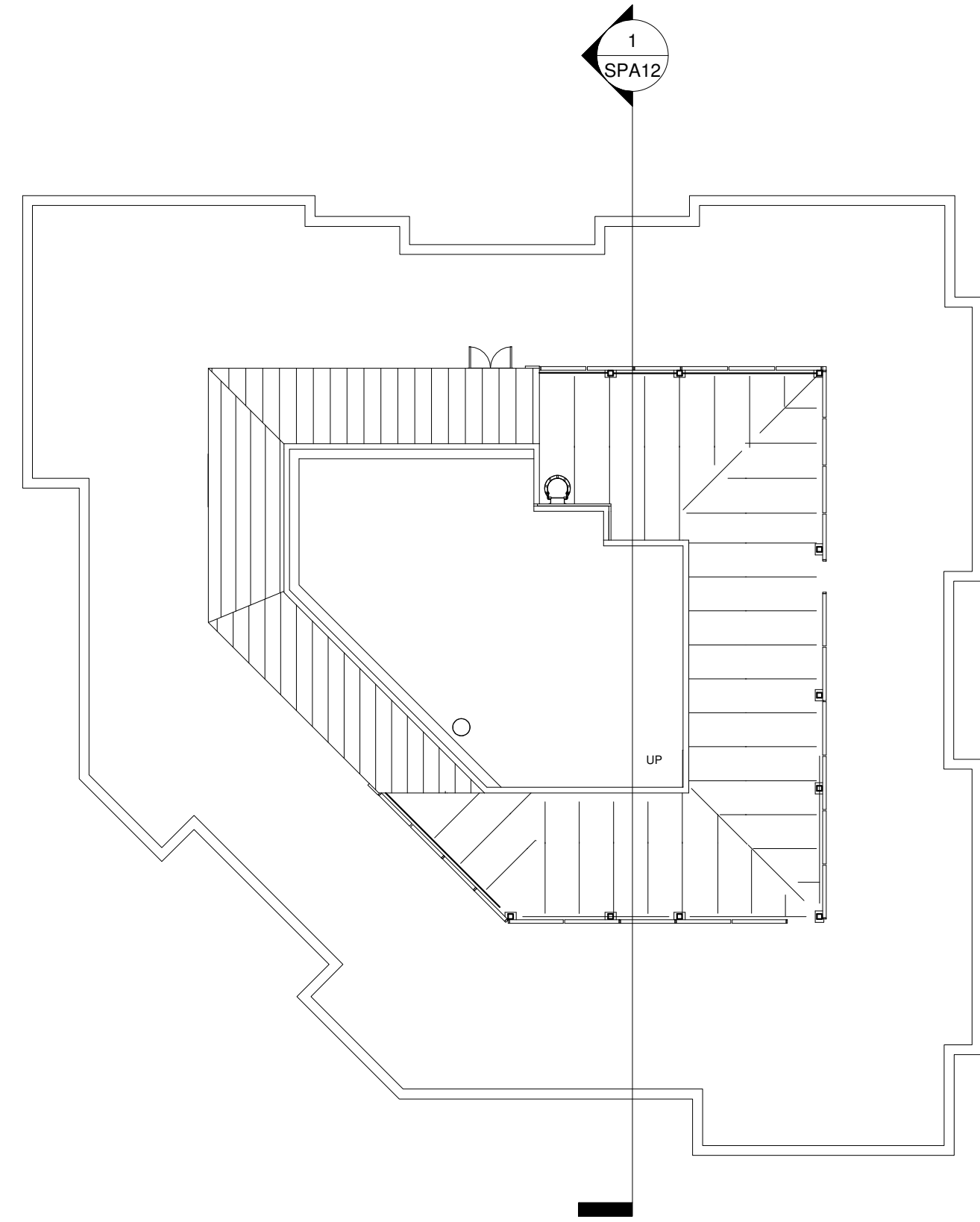
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① 5TH - 19TH FLOOR LEVEL  
1 : 200



③ MECHANICAL PENTHOUSE  
1 : 200



④ ROOF PLAN  
1 : 200

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Telephone (416) 435-2322, Fax (416) 435-6777  
turnerfleischer.com



Project : **144 Park Street**  
Waterloo, Ontario

Drawing Name : **Floor Plans**

Proj no. :	08-104	Date :	REVISED: Dec 22, 2009
Drawn by :	Author	Scale :	1 : 200
Checked by :	Checker		

Drawing No : **SPA07**

THIS IS EXHIBIT "K" TO  
THE AFFIDAVIT OF OLIVER ROMANIUK  
SWORN BEFORE ME THIS 8th  
DAY OF OCTOBER, 2015



---

A Commissioner etc.

Jonathan Blake McClung  
Barrister and Solicitor  
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## **144 Park Tower 2, Waterloo Transportation Impact Study**



**Prepared for:  
Mady Development Corp.**

**December 2011**

**Paradigm Transportation Solutions Limited  
43 Forest Road  
Cambridge ON  
N1S 3B4**

✉ [pgrubb@pts1.com](mailto:pgrubb@pts1.com)  
☎ 1.519.896.3163  
Fax: 1.866.722.5117



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## **PROJECT SUMMARY**

**PROJECT NAME:** ..... **144 PARK – TOWER 2**  
**TRANSPORTATION IMPACT STUDY**

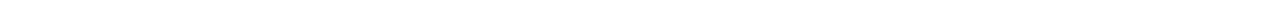
**CLIENT:** ..... **MADY DEVELOPMENT CORPORATION**  
8791 WOODBINE AVENUE, SUITE 100  
MARKHAM, ON  
L3R 0P4

**CLIENT PROJECT MANAGER:** ..... EDWARD MAK, BES

**CONSULTANT:** ..... **PARADIGM TRANSPORTATION SOLUTIONS LIMITED**  
43 FOREST ROAD  
CAMBRIDGE ON N1S 3B4  
PH: 519-896-3163  
FAX: 1-866-722-5117

**CONSULTANT PROJECT MANAGER** ..... PHIL GRUBB, P.ENG.

**REPORT DATE:** ..... DECEMBER 2011  
**PROJECT NUMBER:** ..... 111210









## **EXECUTIVE SUMMARY**

### **CONTENT**

Paradigm Transportation Solutions Ltd has prepared this Traffic Impact Study on behalf of Mady Development Corporation. This study has reviewed the traffic impacts associated with the proposed second tower of a residential development located at 144 Park Street, at the intersection of Park Street and Allen Street West in Waterloo, Ontario. The findings, conclusions and recommendations of this study are summarized below and outlined in more detail in the body of the report.

The proposed development consists of an 18-storey residential building with 4 ground-floor townhouse units and 190 upper-floor apartment units. The development will have one access on Park Street.

The report documents the net additional traffic that will occur as a result of the proposed residential development and estimates the impact of the traffic on the surrounding roadway network. The findings, conclusions and recommendations of this study are summarized below and outlined in more detail in the body of the report.

### **CONCLUSIONS**

Based on the traffic projections and analyses contained in the report, it is concluded that a southbound left-turn lane with 15 metres of storage is warranted on Park Street at the site entrance based on Ministry of Transportation criteria. This will require some widening of the road within the existing right-of-way to accommodate this geometric improvement in addition to bike lanes and the through lanes. Also, it should be noted that the westbound movements at Park Street and Allen Street West operate at LOS F under existing, background and future conditions. However, a signal is not warranted at this intersection under future conditions. Likewise, the northbound left-turn movements at William Street West and Park Street operate at LOS F under existing, background and future conditions, but a signal is also not warranted at this intersection under future conditions. All v/c ratios are below 1.0 indicating that there is still adequate capacity at the above noted intersections.

The development will have a minimal impact on changes to the above noted conditions.

### **RECOMMENDATIONS**

It is recommended that a southbound left-turn lane of 15 metres on Park Street at the development entrance be implemented. This will require some widening of the road to accommodate this geometric improvement. It is further recommended that the TDM measures that are feasible be implemented by the developer.





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## 1.0 INTRODUCTION

### 1.1 Background

A Site Plan Application has been prepared for the second tower of a proposed residential development at 144 Park Street in Waterloo, Ontario (**Figure 1.1**). Tower 1 was previously approved by the City in 2008. The development will include an 18-storey apartment building with 4 ground-floor townhouse units and 190 apartment units. The access to this site will be on Park Street.

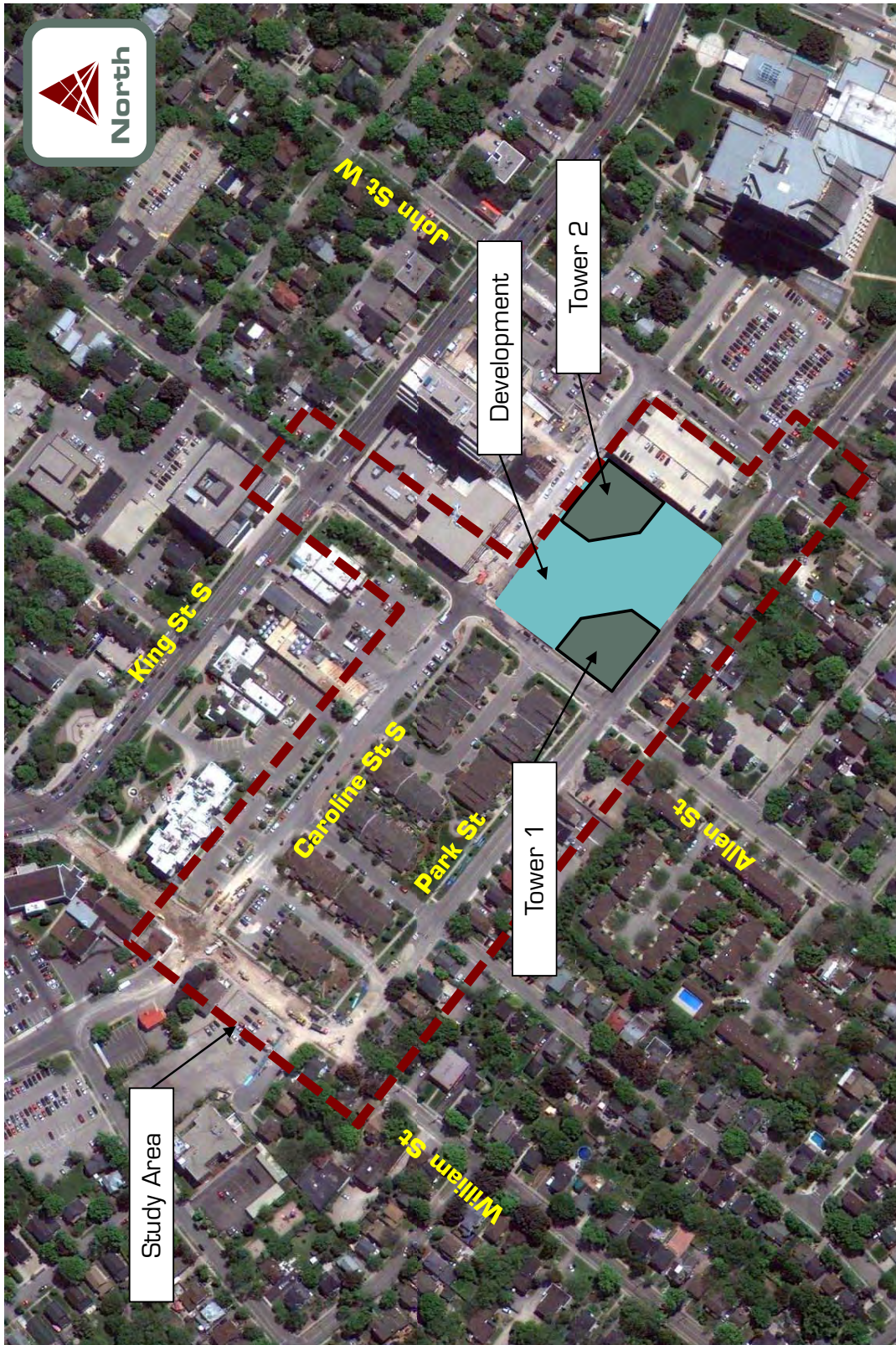
### 1.2 Purpose and Scope

Paradigm Transportation Solutions Limited was retained Mady Development Corporation to conduct a traffic impact study for the proposed development. The purpose of the study is to determine the impact of the development on the surrounding roadway network, particularly the intersections of

- ▶ William Street West and Caroline Street South,
- ▶ William Street West and Park Street,
- ▶ King Street South and Allen Street,
- ▶ Allen Street West and Caroline Street South,
- ▶ Park Street and Allen Street West,
- ▶ Park Street and John Street West, and
- ▶ The site access on Park Street.

The scope of the study includes determination of the current traffic and site conditions in the vicinity of the development, additional traffic that will be generated by the development, analyses of the impact of the traffic and development of recommendations on the measures required in order to accommodate this traffic in a satisfactory manner for a three-year planning horizon. The AM and PM peak hours were used for analysis in this report.





**Figure 1.1**

**Location of Proposed Development**

144 Park Tower 2, TIS





## 2.0 EXISTING CONDITIONS

This section documents current traffic conditions, operational deficiencies, and constraints experienced by the public traveling at the intersections within the study area.

### 2.1 Existing Roads within Study Area

The location of the proposed development is at 144 Park Street, which is at the intersection of Park Street and Allen Street West. All streets within the study area are 2-lane roads, with the exception of King Street South, which is a 4-lane Regional Road. The intersections of William Street West and Caroline Street South, King Street South and Allen Street, and Park Street and John Street West are signalized. The speed limit on all roads within the study area is 50 km/h.

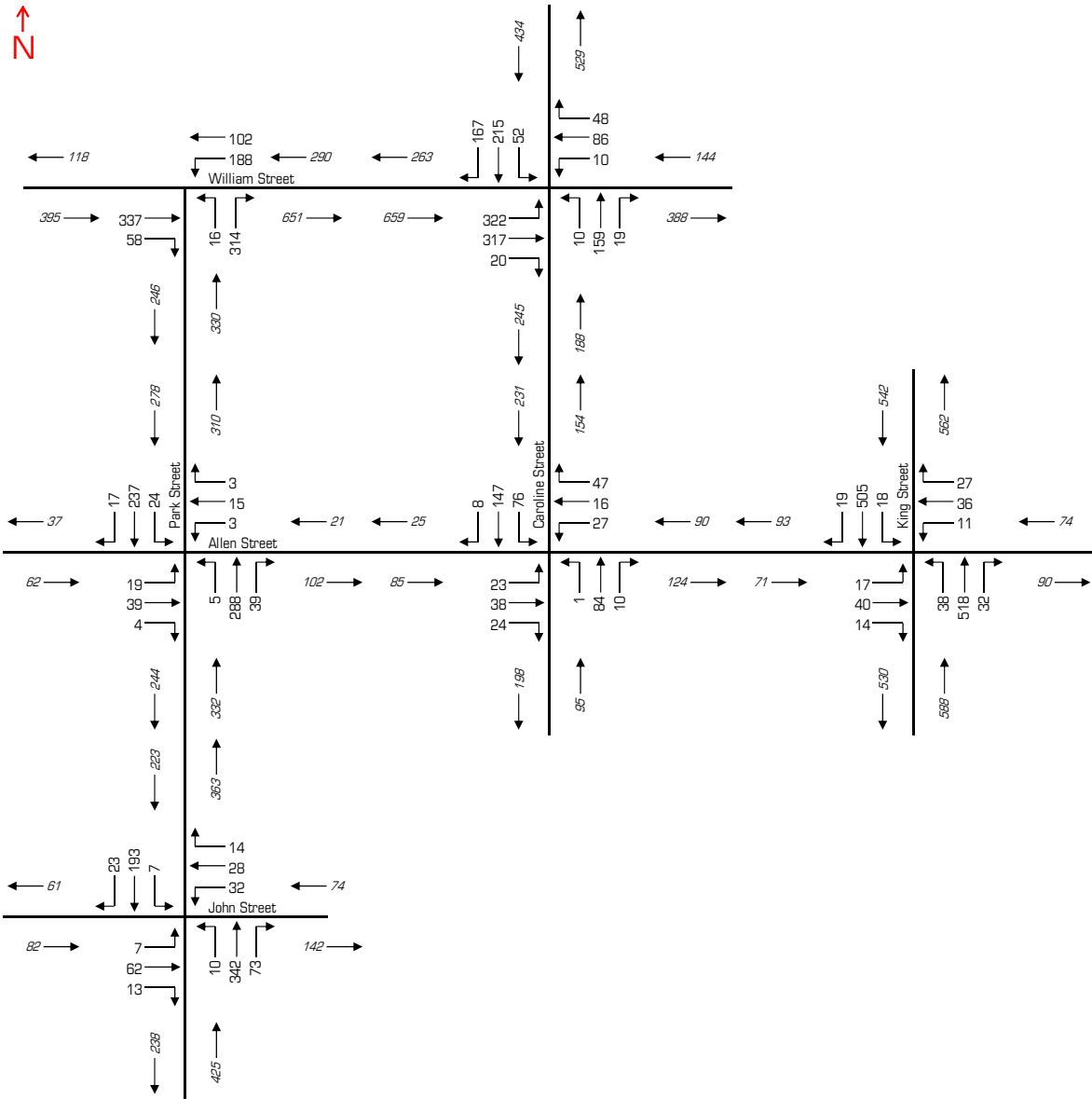
### 2.2 Existing Traffic Volumes

The turning movement counts for the intersections within the study area were updated by Paradigm on the following dates:

- ▶ William Street and Caroline Street – 5 October 2011
- ▶ Park Street and John Street – 6 October 2011
- ▶ King Street and Allen Street – 6 October 2011
- ▶ William Street and Park Street – 7 December 2011
- ▶ Park Street and Allen Street – 8 December 2011
- ▶ Caroline Street and Allen Street – 8 December 2011

The existing AM and PM peak hour traffic volumes are shown in **Figure 2.1a**, and **Figure 2.1b** respectively.



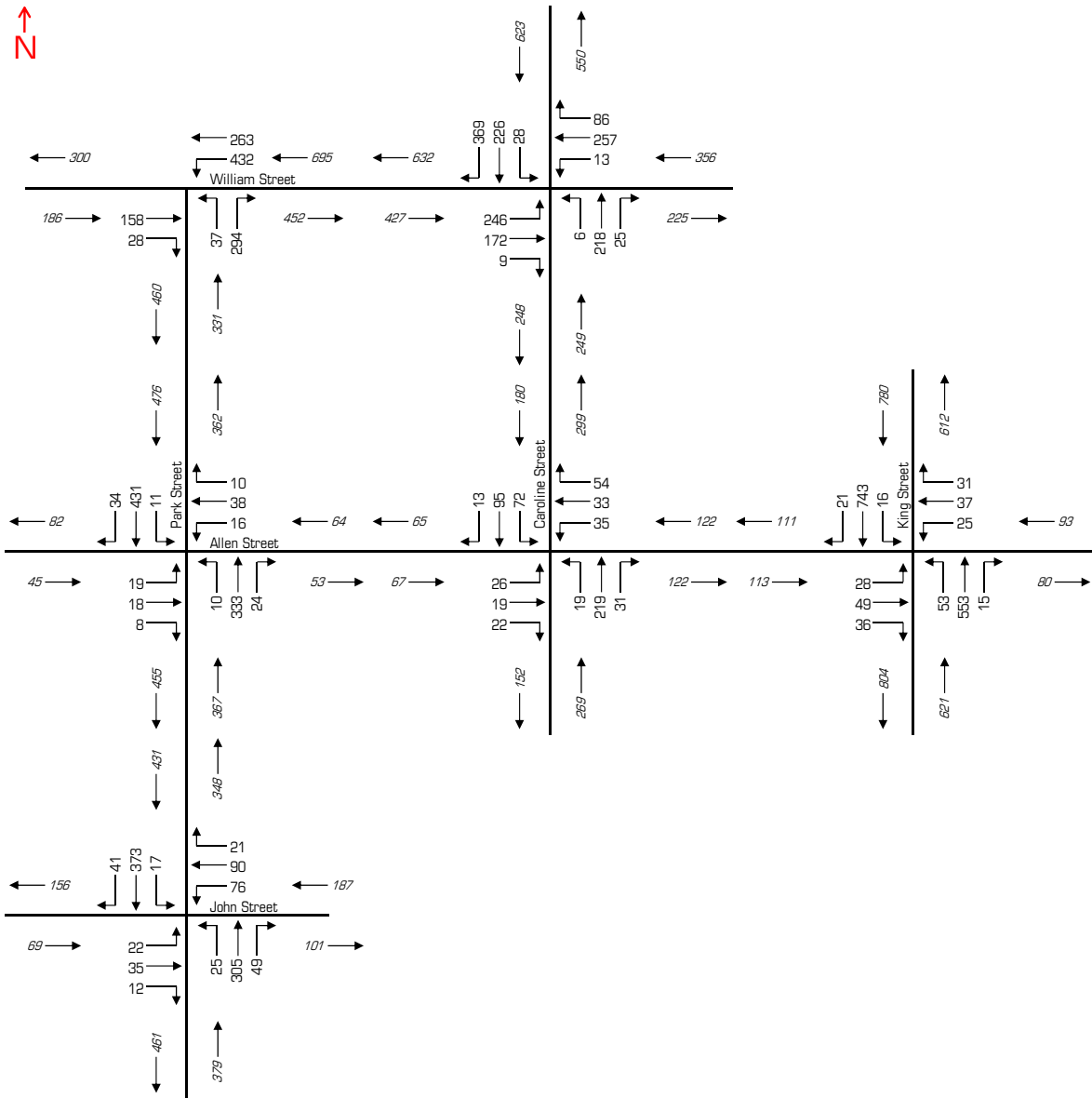


144 Park Tower 2, TIS

**Figure 2.1a**



**AM Peak Hour Existing Traffic Volumes**



144 Park Tower 2, TIS

**Figure 2.1b**



**PM Peak Hour Existing Traffic Volumes**



## 2.3 Existing Traffic Operations

Intersection level of service (LOS) is a recognized method of quantifying the average delay experienced by traffic at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles desiring to make a particular movement, compared to the estimated capacity for that movement. The capacity is based on a number of criteria related to the opposing traffic flows and intersection geometry.

The highest possible rating is LOS A, under which the average total delay is equal or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections or 50 seconds for unsignalized intersections, the movement is classed as LOS F and remedial measures are usually implemented, if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F is may be acceptable for left-turn movements at peak times, depending on delays.

The operations of intersections in the study area were evaluated using the existing turning movement volumes for the AM and PM peak hours illustrated in **Figure 2.1a** and **Figure 2.1b** respectively and existing signal timings, which were provided by the Region of Waterloo.

The intersection analysis considered two separate measures of performance:

- ▶ The volume to capacity ratio for each intersection; and
- ▶ The level of service (LOS) for each turning movement which is based on the average control delay per vehicle.

The existing intersection operations are summarized in **Table 2.1** indicating the existing levels of service and volume to capacity ratios experienced within the study area, for the AM and PM peak hours. Based on the above criteria, it was found that the northbound left-turn movement on Park Street at William Street West experiences LOS F during the PM peak hour. Detailed Synchro v7 analyses are provided in **Appendix A**.



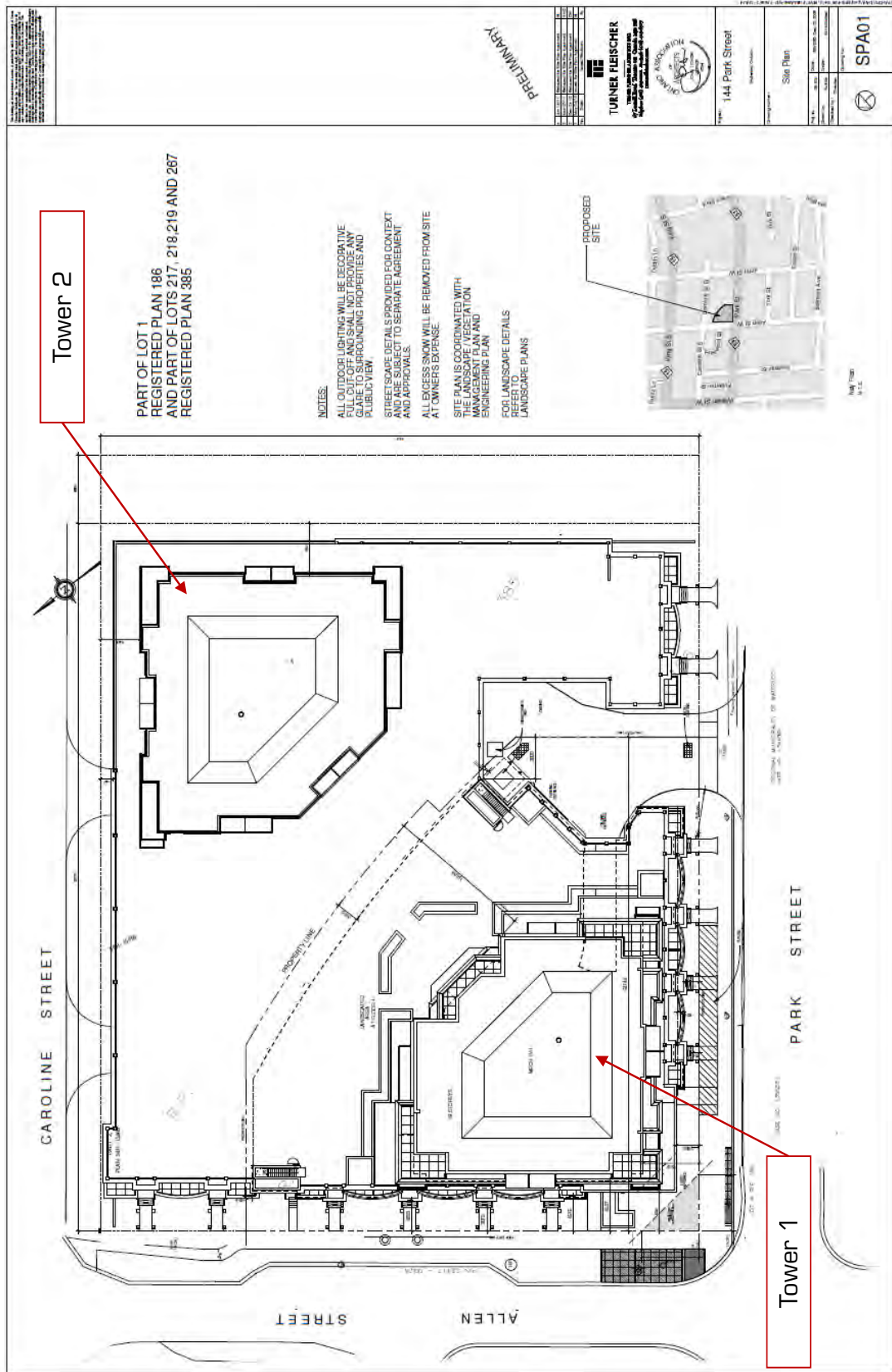
**TABLE 2.1: BASE YEAR PEAK HOUR TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																OVERALL
				Eastbound				Westbound				Northbound				Southbound				
				LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	
AM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	A	A	<b>B</b>	C	B	B	<b>B</b>	C	C	C	<b>C</b>	C	C	A	<b>C</b>	<b>B</b>
			Delay	12	10	10	<b>11</b>	20	17	17	<b>17</b>	25	25	25	<b>25</b>	32	32	5	<b>21</b>	<b>17</b>
			V/C	0.51	0.39	0.39		0.03	0.27	0.27		0.46	0.46	0.46		0.65	0.65	0.33		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	C		<b>C</b>	<b>C</b>					
			Delay		0	0	<b>0</b>	9	0		<b>6</b>	21		<b>17</b>						
			V/C		0.26	0.26		0.19	0.07		<b>0.07</b>	0.54								
	3 - Allen Street & King Street	Signal	LOS	B	B	B	<b>B</b>	B	B	A	<b>B</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>B</b>
			Delay	16	16	16	<b>16</b>	18	18	7	<b>14</b>	10	10	10	<b>10</b>	10	10	10	<b>10</b>	<b>11</b>
			V/C	0.16	0.16	0.16		0.10	0.10	0.06		0.38	0.38	0.38		0.34	0.34	0.34		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	9	9	9	<b>9</b>	8	8	8	<b>8</b>	8	8	8	<b>8</b>	10	10	10	<b>10</b>	<b>9</b>
			V/C	0.13	0.13	0.13		0.13	0.13	0.13		0.14	0.14	0.14		0.33	0.33	0.33		
	5 - Allen Street & Park Street	TWSC	LOS	C	C	C	<b>C</b>	C	C	C	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	19	19	19	<b>19</b>	17	17	17	<b>17</b>	0	0	0	<b>0</b>	1	1	1	<b>1</b>	<b>3</b>
			V/C	0.21	0.21	0.21		0.07	0.07	0.07		0.00	0.00	0.00		0.02	0.02	0.02		
	6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	20	20	20	<b>20</b>	20	15	15	<b>18</b>	4	6	6	<b>6</b>	4	4	4	<b>4</b>	<b>8</b>
			V/C	0.30	0.30	0.30		0.14	0.15	0.15		0.01	0.40	0.40		0.02	0.21	0.21		
PM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	A	A	<b>B</b>	B	C	C	<b>C</b>	C	C	C	<b>C</b>	C	C	A	<b>B</b>	<b>B</b>
			Delay	15	10	10	<b>13</b>	19	27	27	<b>26</b>	29	29	29	<b>29</b>	30	30	6	<b>19</b>	<b>19</b>
			V/C	0.57	0.21	0.21		0.03	0.61	0.61		0.55	0.55	0.55		0.55	0.55	0.55		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	<b>F</b>		<b>B</b>	<b>C</b>					
			Delay		0	0	<b>0</b>	9	0		<b>6</b>	69		<b>12</b>	<b>18</b>					
			V/C		0.12	0.12		0.35	0.17		<b>0.43</b>	0.38								
	3 - Allen Street & King Street	Signal	LOS	C	C	C	<b>C</b>	C	C	A	<b>B</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	<b>B</b>
			Delay	20	20	20	<b>20</b>	23	23	8	<b>18</b>	10	10	10	<b>10</b>	11	11	11	<b>11</b>	<b>12</b>
			V/C	0.28	0.28	0.28		0.15	0.15	0.07		0.42	0.42	0.42		0.46	0.46	0.46		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	9	9	9	<b>9</b>	9	9	9	<b>9</b>	11	11	11	<b>11</b>	10	10	10	<b>10</b>	<b>10</b>
			V/C	0.11	0.11	0.11		0.19	0.19	0.19		0.39	0.39	0.39		0.27	0.27	0.27		
	5 - Allen Street & Park Street	TWSC	LOS	D	D	D	<b>D</b>	D	D	D	<b>D</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>3</b>
			Delay	25	25	25	<b>25</b>	26	26	26	<b>26</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	<b>3</b>
			V/C	0.22	0.22	0.22		0.29	0.29	0.29		0.01	0.01	0.01		0.01	0.01	0.01		
	6 - John Street & Park Street	Signal	LOS	B	B	B	<b>B</b>	C	B	B	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	19	19	19	<b>19</b>	22	18	18	<b>20</b>	5	6	6	<b>6</b>	5	6	6	<b>6</b>	<b>9</b>
			V/C	0.26	0.26	0.26		0.30	0.33	0.33		0.05	0.34	0.34		0.03	0.40	0.40		



## **3.0 DEVELOPMENT CONCEPT**

The proposed development consists of an 18-storey residential building with 4 ground-floor townhouse units and 190 upper-floor apartment units. The development will access Park Street and will have a parking structure. There will be a section of the parking structure that will access Caroline Street that is replacing an existing parking lot at the same site and therefore will produce no net traffic. The proposed site plan is shown in **Figure 3.1**.



**Figure 3.1**

**Development Concept**

144 Park Tower 2, TIS





## 4.0 EVALUATION OF FUTURE TRAFFIC CONDITIONS

The assessment of future traffic conditions contained in this section includes estimates of future background and total traffic and analysis for a five-year planning horizon, in order to adequately identify the impacts of the development. The likely future traffic volumes in the vicinity of the development will consist of increased non-site traffic volumes (background traffic and traffic from other developments) and the traffic generated by the proposed development (site traffic).

### 4.1 Background Traffic Growth

The non-site traffic increase is generalized traffic growth in the Region of Waterloo. This is anticipated to follow the average increase in population within the area and is estimated to be 2% per annum. The increases in background traffic are forecasted for a five-year horizon and are shown in **Figure 4.1a** and **Figure 4.1b** for the AM and PM peak hour respectively.

### 4.2 Traffic from Other Planned Developments

There are 2 planned and approved developments in the vicinity of Tower 2 of the Mady Development Waterloo: the Alexandra Apartments (on Alexandra near Caroline) and Tower 1 of the Mady Development (144 Park Street). The projected traffic from these developments (as identified in their respective traffic impact studies) is taken into account in developing the background traffic. For reference, the traffic volumes from these other developments are included in **Appendix B. Figure 4.2a** and **Figure 4.2b** show the background traffic volumes after the addition of the traffic from the other two developments for the AM and PM peak hours respectively.

### 4.3 Background Traffic Operations

Based on the estimated volumes shown in **Figure 4.2a** and **Figure 4.2b**, operations analyses have been conducted using Synchro 7 for the future background traffic conditions. The detailed Synchro reports are included in **Appendix C. Table 4.1** summarizes the future background traffic operations. The signal timings were optimized using Synchro. The analysis indicates that in addition to the poorly operating movement in the existing conditions, the westbound movements on Allen Street at Park Street will operate at LOS E during the PM peak hour in the future. The v/c ratio is less than 1.0 indicating that there will be adequate future capacity.

### 4.4 Development Traffic Generation

To determine the traffic that will be generated by the development, the rates provided by the ITE Trip Generation Manual for Apartment Building (Code 220) and Residential Townhouse/Condominium (Code 230) were used. The development is expected to generate 99 and 120 total trips in the AM and PM peak hours, respectively. **Table 4.2** summarizes the estimated trip generation.

In preparing the traffic assignment, travel distribution assumptions from the Grand River Hospital and Clarica Transportation Demand Study were used, as they were for the TIS for the nearby Bauer Buildings. The traffic generated by the development in the AM and PM peak hour is shown in **Figure 4.3a** and **Figure 4.3b**



The total trips expected in the horizon year, which is the addition of the development traffic to the background traffic (including traffic from other planned developments) are shown below in **Figure 4.4a** and **Figure 4.4b** for the AM and PM peak hours respectively.

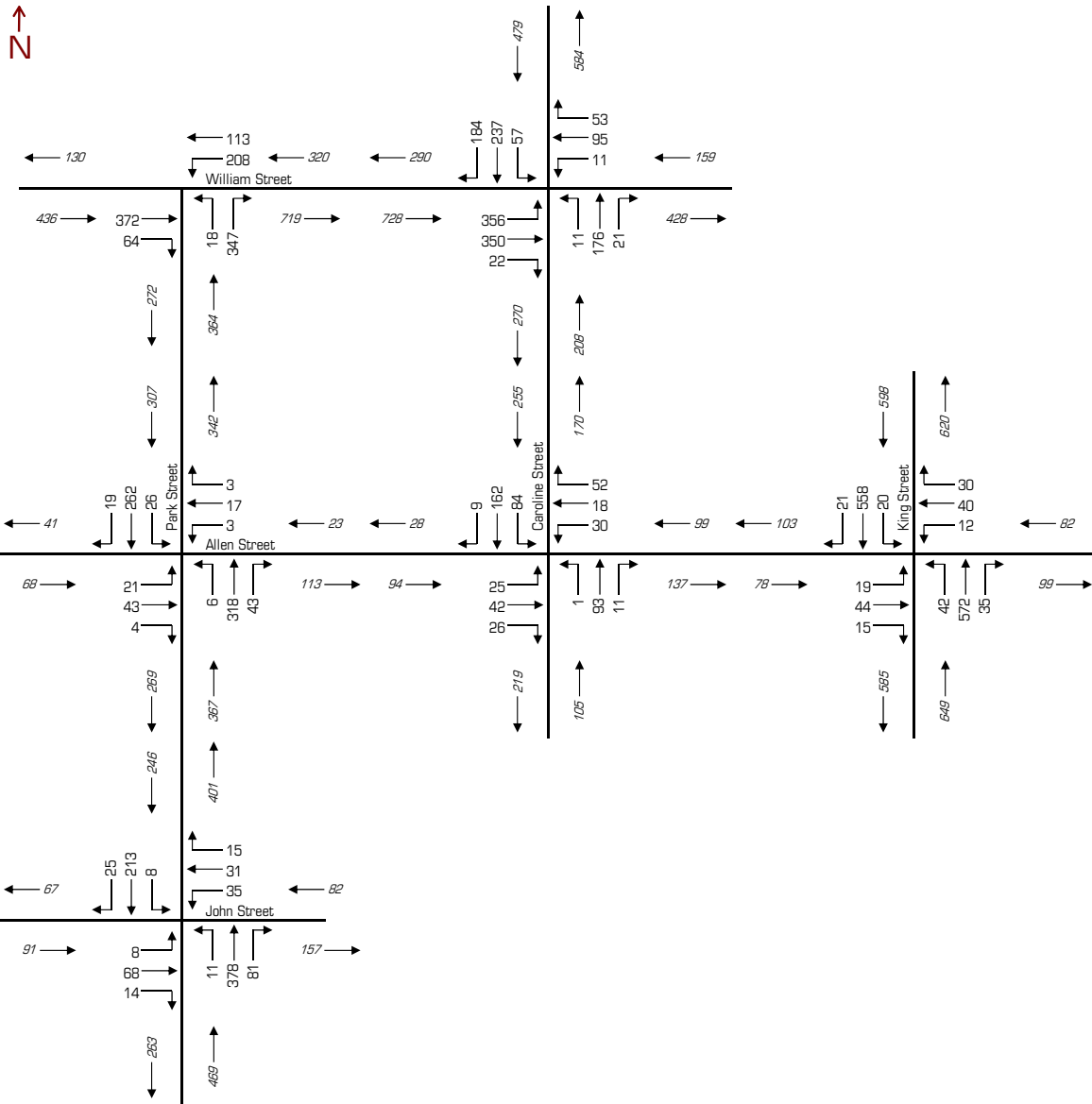
**TABLE 4.1: BACKGROUND TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MDE	Direction / Movement / Approach																OVERALL
				Eastbound				Westbound				Northbound				Southbound				
				LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	
AM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	B	B	<b>B</b>	C	B	B	<b>B</b>	C	C	C	<b>C</b>	D	D	A	<b>C</b>	<b>B</b>
			Delay	13	11	11	<b>12</b>	21	19	19	<b>19</b>	27	27	27	<b>27</b>	42	42	5	<b>28</b>	<b>19</b>
			V/C	0.58	0.44	0.44		0.04	0.33	0.33		0.51	0.51	0.51		0.80	0.80	0.38		
	2 - William Street & Park Street	TWSC	LOS	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>D</b>	<b>C</b>	<b>C</b>					
			Delay	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	9	0		<b>6</b>	27		21	<b>22</b>					<b>9</b>
			V/C		<b>0.29</b>	<b>0.29</b>		<b>0.23</b>	<b>0.07</b>			<b>0.14</b>		<b>0.65</b>						
	3 - Allen Street & King Street	Signal	LOS	B	B	B	<b>B</b>	B	B	A	<b>B</b>	B	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>B</b>
			Delay	17	17	17	<b>17</b>	18	18	7	<b>14</b>	11	11	11	<b>11</b>	10	10	10	<b>10</b>	<b>11</b>
			V/C	0.20	0.20	0.20		0.11	0.11	0.06		0.43	0.43	0.43		0.39	0.39	0.39		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	<b>A</b>
			Delay	9	9	9	<b>9</b>	9	9	9	<b>9</b>	9	9	9	<b>9</b>	11	11	11	<b>11</b>	<b>10</b>
			V/C	0.13	0.13	0.13		0.13	0.13	0.13		0.14	0.14	0.14		0.33	0.33	0.33		
	5 - Allen Street & Park Street	TWSC	LOS	C	C	C	<b>C</b>	C	C	C	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	23	23	23	<b>23</b>	21	21	21	<b>21</b>	0	0	0	<b>0</b>	1	1	1	<b>1</b>	<b>3</b>
V/C			0.28	0.28	0.28		0.11	0.11	0.11		0.01	0.01	0.01		0.03	0.03	0.03			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>	
		Delay	20	20	20	<b>20</b>	20	14	14	<b>17</b>	4	7	7	<b>7</b>	5	5	5	<b>5</b>	<b>8</b>	
		V/C	0.33	0.33	0.33		0.16	0.17	0.17		0.02	0.45	0.45		0.09	0.26	0.26			
7 - Park Street & Development Driveway	TWSC	LOS					B		B	<b>B</b>		A	A	<b>A</b>	A	A		<b>A</b>		
		Delay					14		14	<b>14</b>		0	0	<b>0</b>	0	0		<b>0</b>	<b>1</b>	
		V/C					0.15		0.15			0.25	0.25		0.01	0.01				
PM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	C	A	A	<b>B</b>	C	D	D	<b>D</b>	C	C	C	<b>C</b>	C	C	A	<b>B</b>	<b>C</b>
			Delay	20	10	10	<b>16</b>	22	36	36	<b>36</b>	31	31	31	<b>31</b>	33	33	6	<b>17</b>	<b>23</b>
			V/C	0.71	0.24	0.24		0.04	0.76	0.76		0.62	0.62	0.62		0.65	0.65	0.60		
	2 - William Street & Park Street	TWSC	LOS	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>F</b>	<b>B</b>	<b>D</b>					
			Delay	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	10	0		<b>6</b>	145		13	<b>28</b>					<b>11</b>
			V/C		<b>0.14</b>	<b>0.14</b>		0.41	0.19			0.73		0.46						
	3 - Allen Street & King Street	Signal	LOS	C	C	C	<b>C</b>	C	C	A	<b>B</b>	B	B	B	<b>B</b>	B	B	B	<b>B</b>	<b>B</b>
			Delay	21	21	21	<b>21</b>	23	23	8	<b>18</b>	13	13	13	<b>13</b>	13	13	13	<b>13</b>	<b>14</b>
			V/C	0.33	0.33	0.33		0.18	0.18	0.08		0.56	0.56	0.56		0.59	0.59	0.59		
	4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	B	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>B</b>
			Delay	9	9	9	<b>9</b>	10	10	10	<b>10</b>	12	12	12	<b>12</b>	10	10	10	<b>10</b>	<b>11</b>
			V/C	0.13	0.13	0.13		0.23	0.23	0.23		0.45	0.45	0.45		0.32	0.32	0.32		
	5 - Allen Street & Park Street	TWSC	LOS	D	D	D	<b>D</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>
			Delay	34	34	34	<b>34</b>	41	41	41	<b>41</b>	0	0	0	<b>0</b>	0	0	0	<b>0</b>	<b>5</b>
V/C			0.33	0.33	0.33		0.48	0.48	0.48		0.02	0.02	0.02		0.01	0.01	0.01			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>C</b>	A	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>	
		Delay	20	20	20	<b>20</b>	23	18	18	<b>20</b>	5	6	6	<b>6</b>	5	7	7	<b>7</b>	<b>10</b>	
		V/C	0.32	0.32	0.32		0.34	0.42	0.42		0.06	0.40	0.40		0.05	0.45	0.45			
7 - Park Street & Development Driveway	TWSC	LOS					C		C	<b>C</b>		A	A	<b>A</b>	A	A		<b>A</b>		
		Delay					18		18	<b>18</b>		0	0	<b>0</b>	0	0		<b>0</b>	<b>1</b>	
		V/C					0.12		0.12			0.30	0.30		0.03	0.03				



**TABLE 4.2: TRIP GENERATION**

Development Type	Units	AM Peak			PM Peak				
		Rate per Unit	Total	In	Out	Rate per Unit	Total	In	Out
220 - Apartment Building	190	0.51	97	19	78	0.62	118	77	41
230 - Residential Condominium/Townhouse	4	0.44	2	0	2	0.52	2	1	1
<b>Total Generation</b>			<b>99</b>	<b>19</b>	<b>80</b>		<b>120</b>	<b>78</b>	<b>42</b>

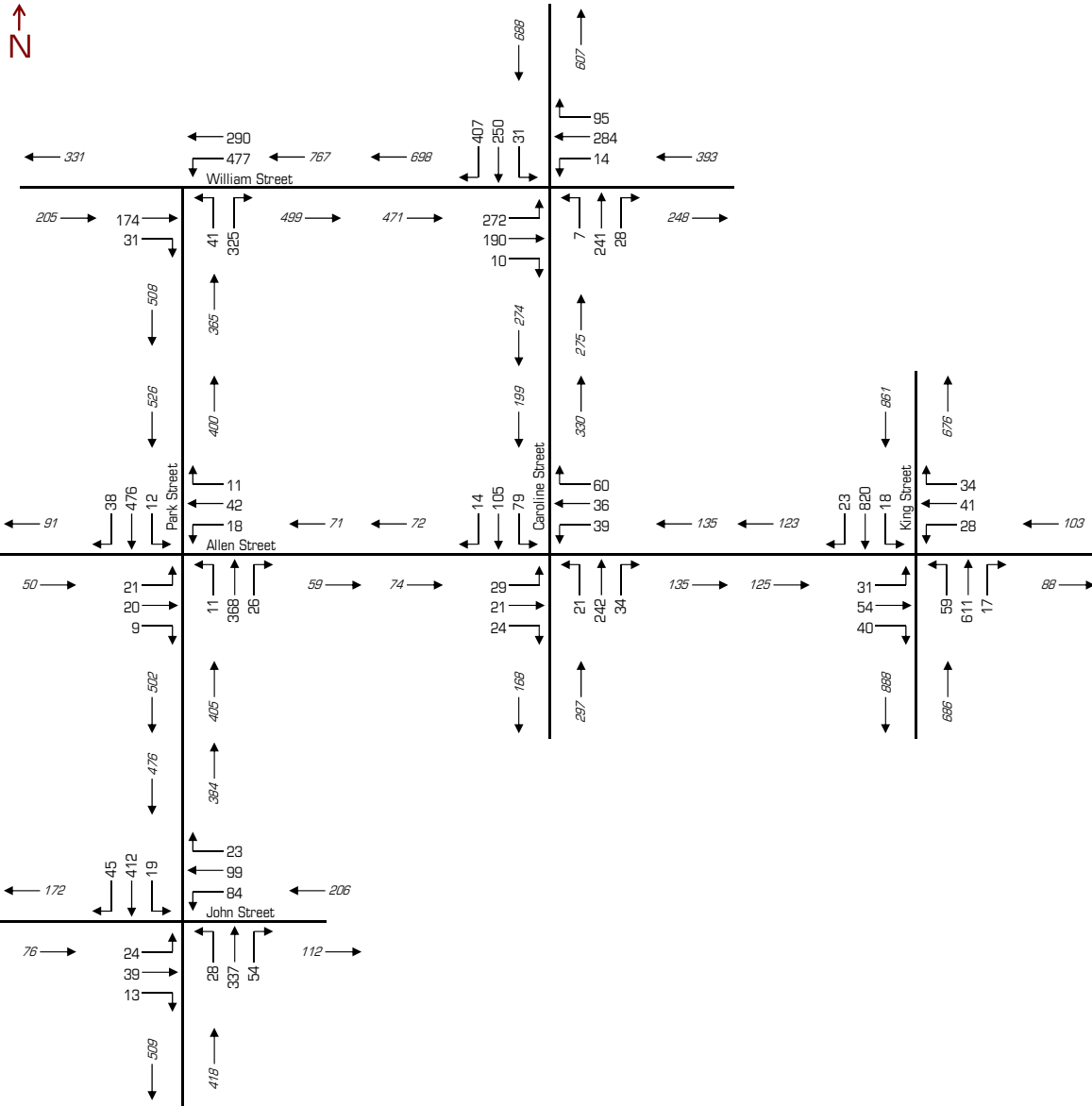


144 Park Tower 2, TIS

**Figure 4.1a**



**AM Peak Hour  
Future Background Traffic Volumes**

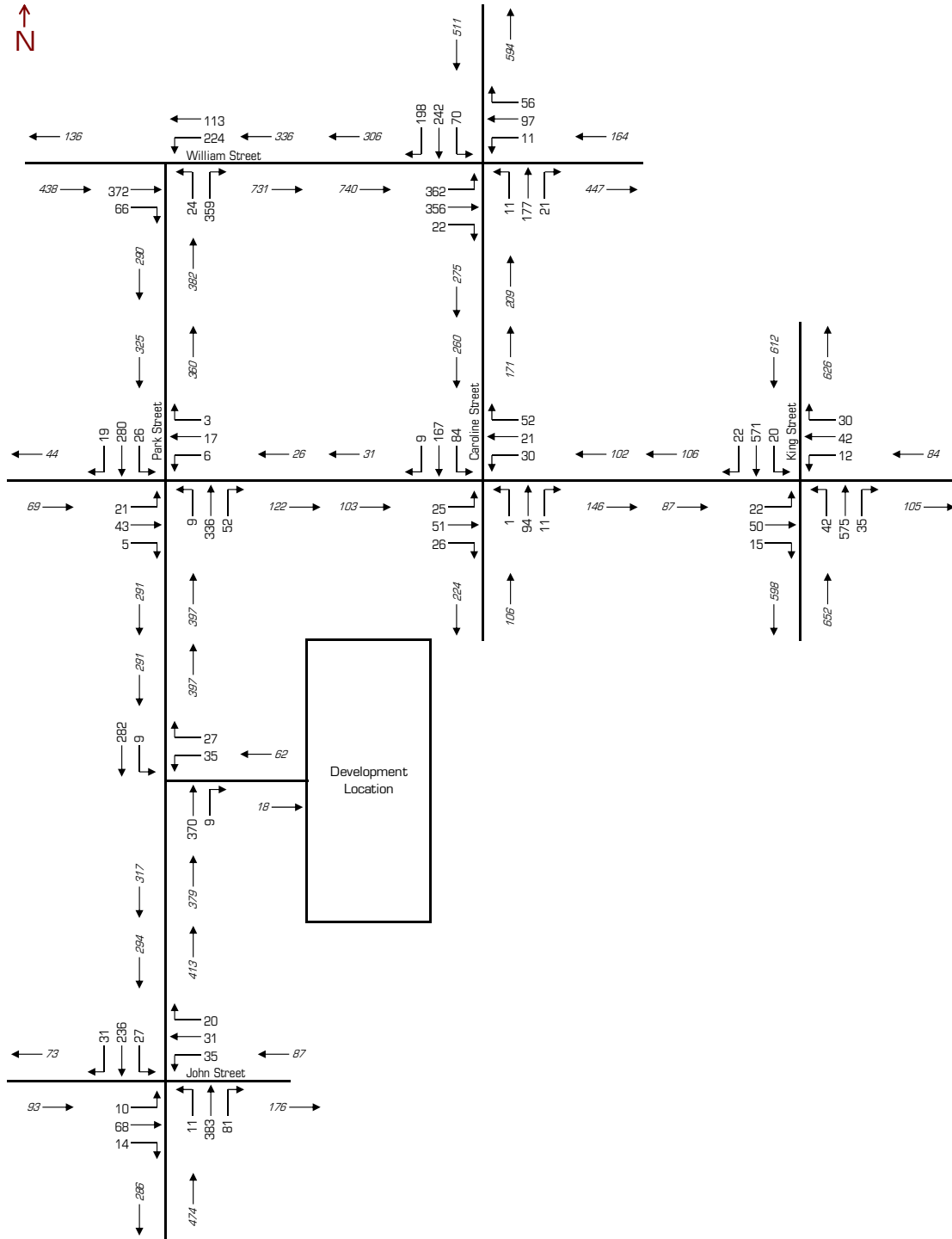


144 Park Tower 2, TIS

**Figure 4.1b**



**PM Peak Hour  
Future Background Traffic Volumes**

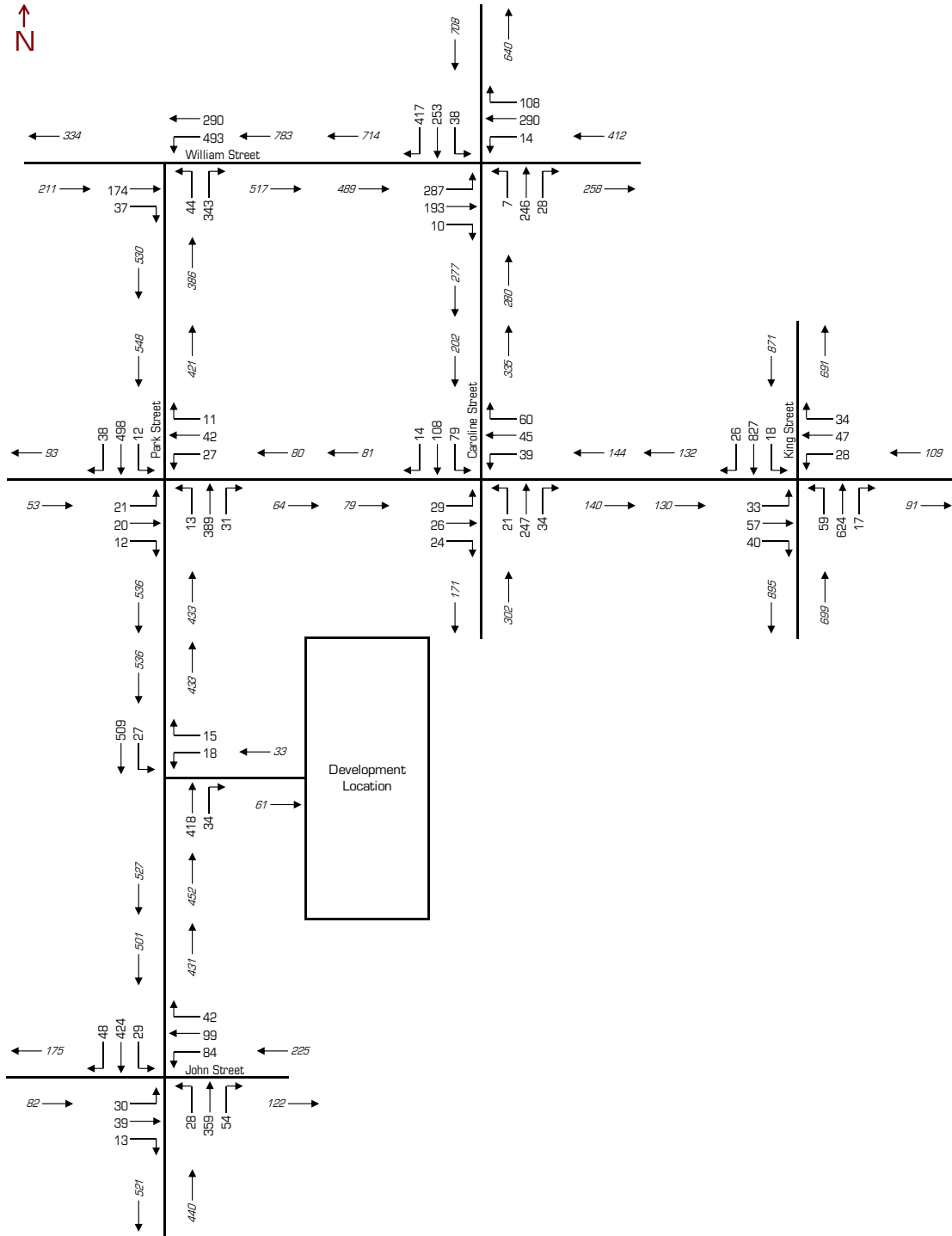


144 Park Tower 2, TIS

**Figure 4.2a**



**AM Peak Hour Future Background plus Other Development Traffic Volumes**

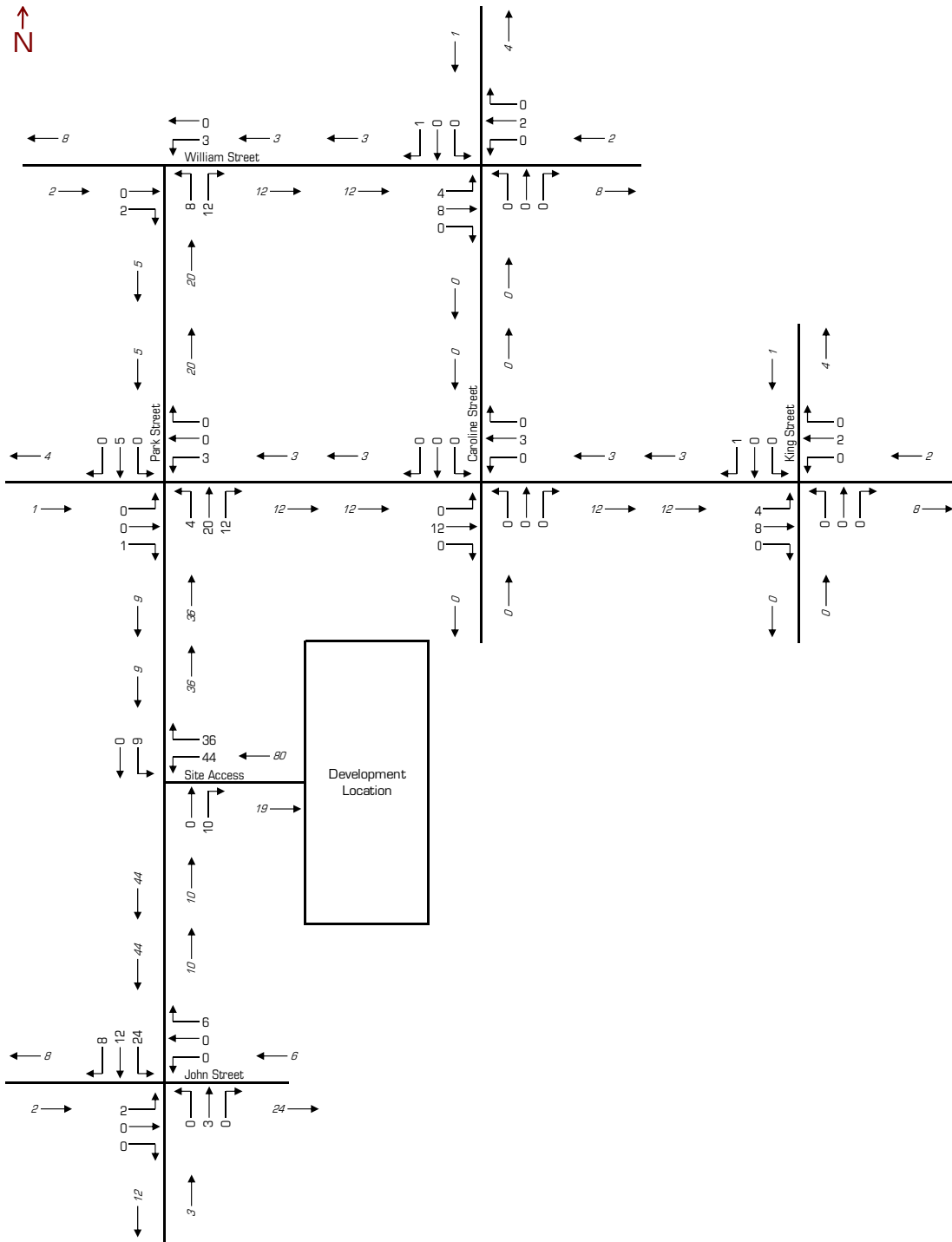


144 Park Tower 2, TIS

**Figure 4.2b**



**PM Peak Hour Future Background  
plus Other Development Traffic Volumes**

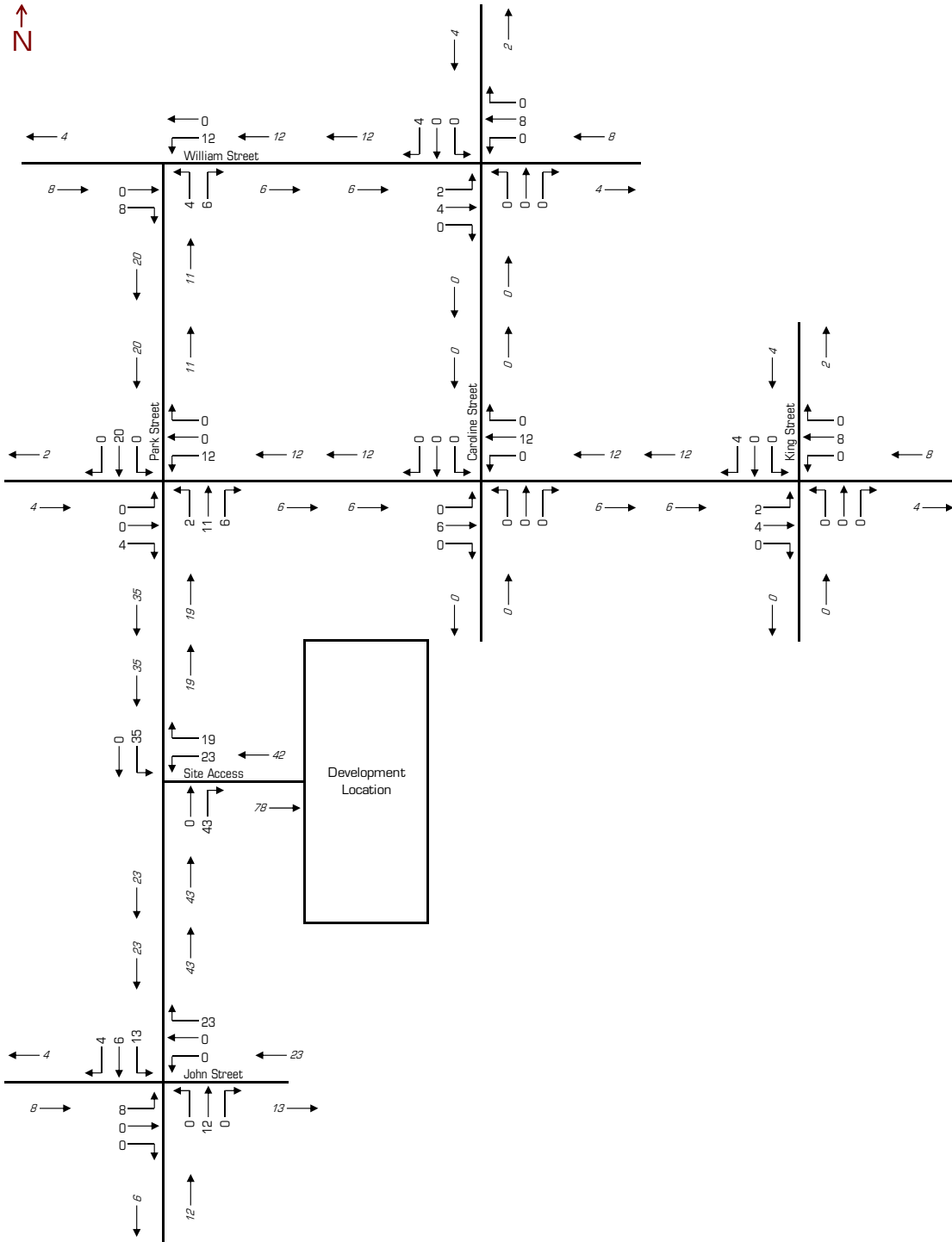


144 Park Tower 2, TIS

Figure 4.3a



AM Peak Hour Development Traffic Volumes

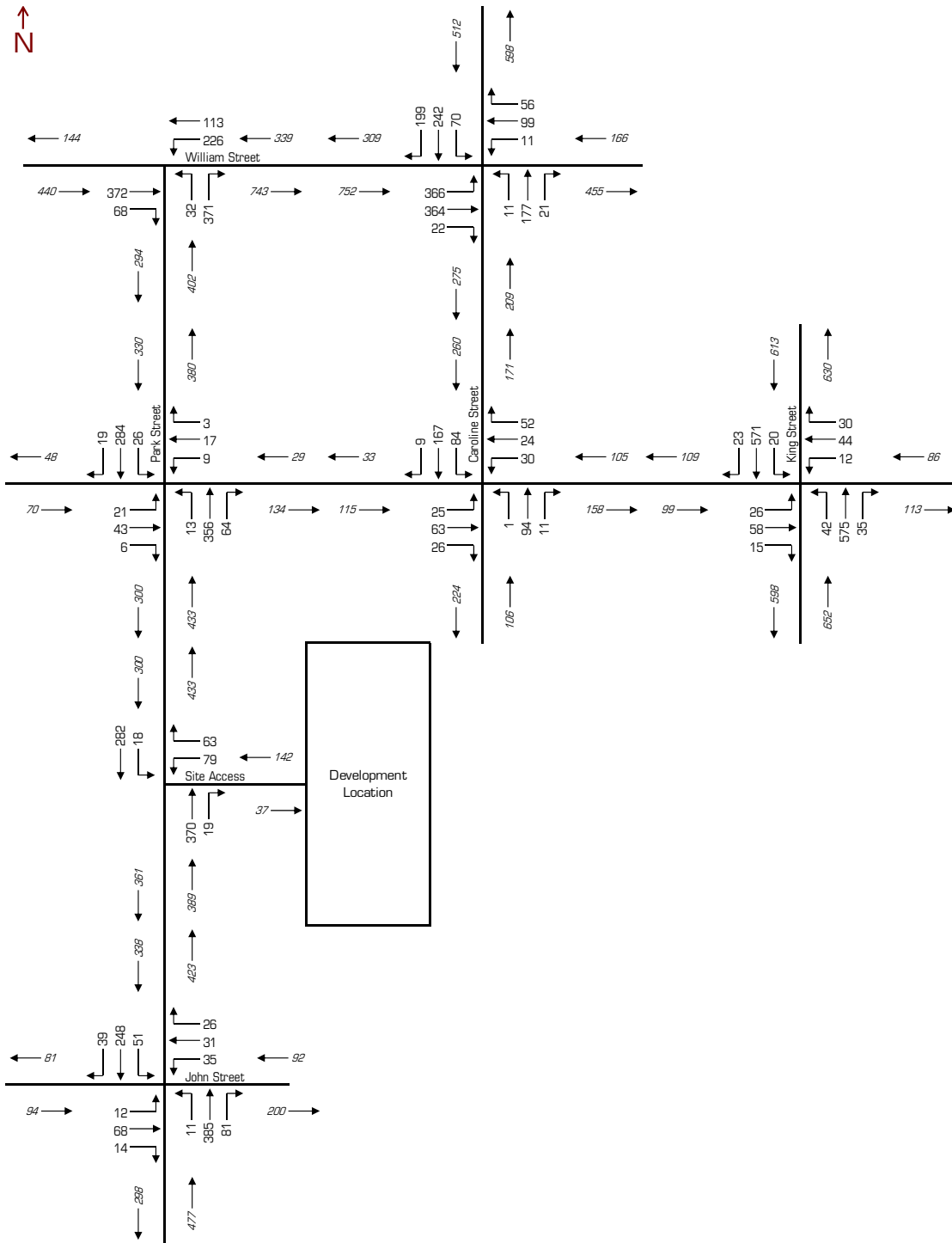


144 Park Tower 2, TIS

**Figure 4.3b**



**PM Peak Hour Development Traffic Volumes**



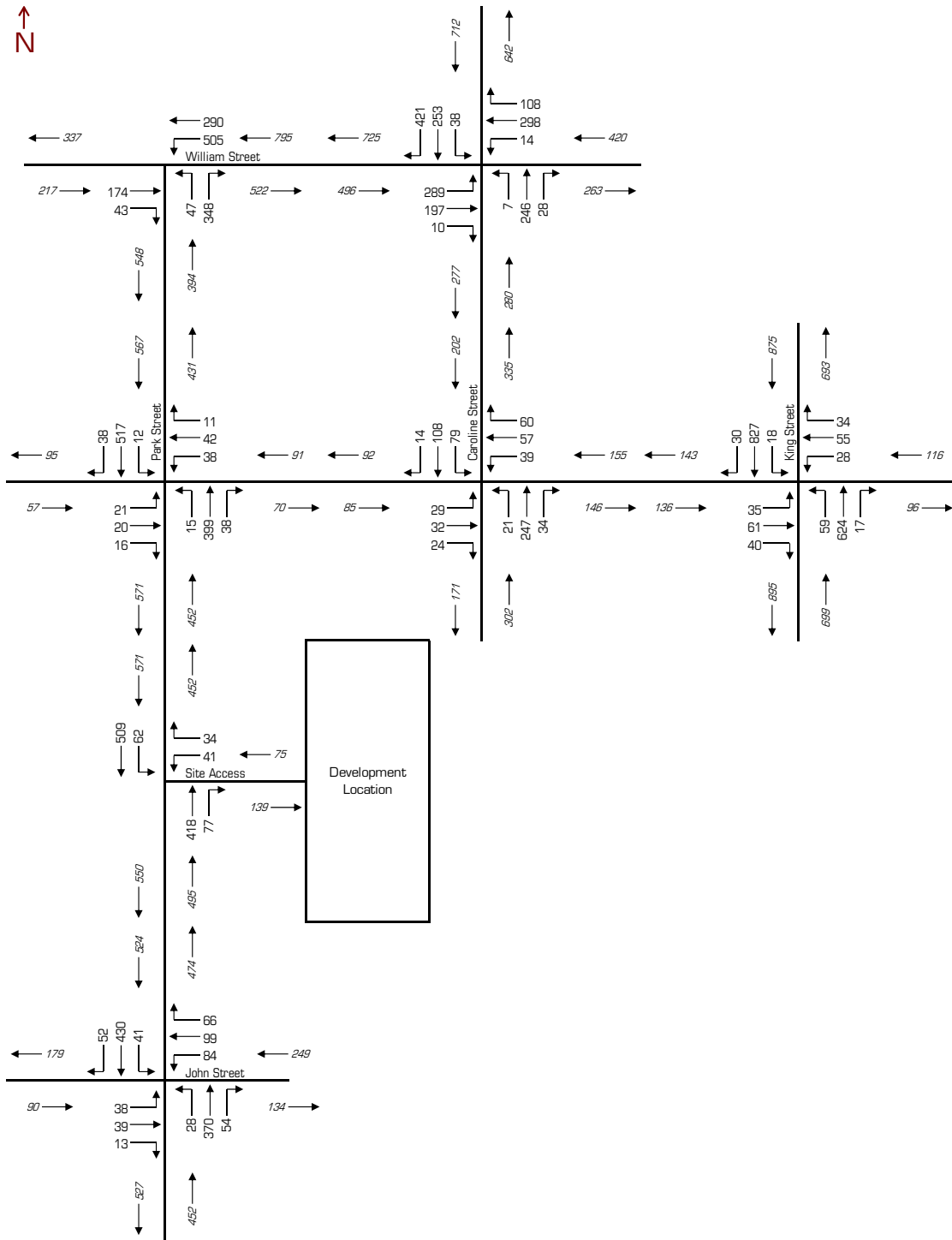
144 Park Tower 2, TIS

**Figure 4.4a**



**AM Peak Hour Future Total Traffic Volumes**





144 Park Tower 2, TIS

**Figure 4.4b**



**PM Peak Hour Future Total Traffic Volumes**



## 4.5 Future Traffic Operations

Based on the estimated volumes shown in **Figure 4.4a** and **Figure 4.4b** LOS analyses have been conducted using Synchro 7 for the AM and PM peak hour conditions for the intersections in the study area, assuming optimization of signal timings and no other improvements to the road network.

A summary of the LOS conditions is provided in **Table 4.3** and detailed Synchro reports can be found in **Appendix D**. The total future traffic will operate similarly to the background traffic conditions with the eastbound and westbound movements on Allen Street at Park Street increasing to LOS E and LOS F during the PM peak hour, respectively. V/C ratios for all movements will be less than 1.0 indicating that there is adequate capacity at the intersection.



**TABLE 4.3: TOTAL FUTURE TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction / Movement / Approach																OVERALL
				Eastbound				Westbound				Northbound				Southbound				
				LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	
AM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	B	B	B	<b>B</b>	C	C	C	<b>C</b>	C	C	C	<b>C</b>	D	D	A	<b>C</b>	<b>B</b>
			Delay	13	11	11	<b>12</b>	21	20	20	<b>20</b>	27	27	27	<b>27</b>	42	42	5	<b>28</b>	<b>19</b>
			V/C	0.59	0.45	0.45		0.04	0.33	0.33		0.51	0.51	0.51		0.80	0.80	0.38		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	D		<b>C</b>	<b>C</b>					
			Delay		0	0	<b>0</b>	9	0		<b>6</b>	29		<b>22</b>	<b>23</b>					
			V/C		0.29	0.29		0.23	0.07			0.19		<b>0.68</b>						
	3 - Allen Street & King Street	Signal	LOS	B	B	B	<b>B</b>	B	B	A	<b>B</b>	B	B	<b>B</b>	A	A	A	<b>A</b>	<b>B</b>	
Delay			18	18	18	<b>18</b>	18	18	7	<b>14</b>	11	11	11	<b>11</b>	10	10	10	<b>10</b>	<b>11</b>	
V/C			0.22	0.22	0.22		0.11	0.11	0.06		0.43	0.43	0.43		0.39	0.39	0.39			
4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	A	A	A	<b>A</b>	A	A	<b>A</b>	B	B	B	<b>B</b>	<b>A</b>		
		Delay	9	9	9	<b>9</b>	9	9	9	<b>9</b>	9	9	9	<b>9</b>	11	11	11	<b>11</b>	<b>10</b>	
		V/C	0.18	0.18	0.18		0.16	0.16	0.16		0.16	0.16	0.16		0.38	0.38	0.38			
5 - Allen Street & Park Street	TWSC	LOS	D	D	D	<b>D</b>	C	C	C	<b>C</b>	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>		
		Delay	25	25	25	<b>25</b>	23	23	23	<b>23</b>	0	0	0	<b>0</b>	1	1	1	<b>1</b>	<b>3</b>	
		V/C	0.30	0.30	0.30		0.14	0.14	0.14		0.01	0.01	0.01		0.03	0.03	0.03			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>A</b>		
		Delay	20	20	20	<b>20</b>	20	13	13	<b>16</b>	4	7	7	<b>7</b>	6	5	5	<b>5</b>	<b>8</b>	
		V/C	0.34	0.34	0.34		0.16	0.19	0.19		0.02	0.46	0.46		0.16	0.28	0.28			
7 - Park Street & Development Driveway	TWSC	LOS					C			<b>C</b>	A	A	<b>A</b>	A	A		<b>A</b>	<b>A</b>		
		Delay					16		16	<b>16</b>		0	0	<b>0</b>	0	0		<b>0</b>	<b>3</b>	
		V/C					0.31		0.31			0.25	0.25		0.02	0.02				
PM Peak Hour	1 - William Street & Caroline Street	Signal	LOS	C	A	A	<b>B</b>	C	D	D	<b>D</b>	C	C	<b>C</b>	C	C	A	<b>B</b>	<b>C</b>	
			Delay	21	10	10	<b>17</b>	22	37	37	<b>37</b>	31	31	31	<b>31</b>	33	33	6	<b>17</b>	<b>23</b>
			V/C	0.73	0.25	0.25		0.04	0.78	0.78		0.62	0.62	0.62		0.65	0.65	0.60		
	2 - William Street & Park Street	TWSC	LOS		A	A	<b>A</b>	A	A		<b>A</b>	<b>F</b>		<b>B</b>	<b>D</b>					
			Delay		0	0	<b>0</b>	10	0		<b>6</b>	177		<b>13</b>	<b>33</b>					
			V/C		0.14	0.14		0.42	0.19			0.83		<b>0.47</b>						
	3 - Allen Street & King Street	Signal	LOS	C	C	C	<b>C</b>	C	C	A	<b>B</b>	B	B	<b>B</b>	B	B	B	<b>B</b>	<b>B</b>	
Delay			22	22	22	<b>22</b>	24	24	8	<b>19</b>	13	13	13	<b>13</b>	13	13	13	<b>13</b>	<b>14</b>	
V/C			0.34	0.34	0.34		0.20	0.20	0.08		0.56	0.56	0.56		0.59	0.59	0.59			
4 - Allen Street & Caroline Street	AWSC	LOS	A	A	A	<b>A</b>	B	B	B	<b>B</b>	B	B	<b>B</b>	B	B	B	<b>B</b>	<b>B</b>		
		Delay	10	10	10	<b>10</b>	10	10	10	<b>10</b>	12	12	12	<b>12</b>	11	11	11	<b>11</b>	<b>11</b>	
		V/C	0.15	0.15	0.15		0.26	0.26	0.26		0.46	0.46	0.46		0.32	0.32	0.32			
5 - Allen Street & Park Street	TWSC	LOS	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>	A	A	<b>A</b>	A	A	A	<b>A</b>		
		Delay	36	36	36	<b>36</b>	54	54	54	<b>54</b>	1	1	1	<b>1</b>	0	0	0	<b>0</b>	<b>6</b>	
		V/C	0.36	0.36	0.36		0.60	0.60	0.60		0.02	0.02	0.02		0.01	0.01	0.01			
6 - John Street & Park Street	Signal	LOS	C	C	C	<b>C</b>	C	B	B	<b>B</b>	A	A	<b>A</b>	A	A	A	<b>A</b>	<b>B</b>		
		Delay	20	20	20	<b>20</b>	23	17	17	<b>19</b>	5	8	8	<b>7</b>	6	8	8	<b>8</b>	<b>11</b>	
		V/C	0.36	0.36	0.36		0.34	0.46	0.46		0.07	0.45	0.45		0.09	0.51	0.51			
7 - Park Street & Development Driveway	TWSC	LOS					C			<b>C</b>	A	A	<b>A</b>	A	A		<b>A</b>	<b>A</b>		
		Delay					25		25	<b>25</b>		0	0	<b>0</b>	2	2		<b>2</b>	<b>2</b>	
		V/C					0.32		0.32			0.32	0.32		0.07	0.07				



## 4.6 Signal Warrants

The intersections of William Street West and Park Street, and Park Street and Allen Street West were analyzed to determine if signals would be warranted by the future traffic conditions. The analysis used was from Book 12 of the Ontario Traffic Manual's signal warrant procedure. Region of Waterloo guidelines requires an existing intersection using forecasted volumes to meet 120% of the warrant conditions to be warranted. Signals are not warranted at either of the analyzed intersections. Summaries of the warrant analyses are included in **Appendix E**.

Therefore, although the side street delays are projected to be LOS F, there is not enough side street volume to justify signals based on Regional guidelines. Furthermore, traffic can reroute to John Street where signals are located in order to gain easier access to Park Street South and use the Caroline Street/William Street signal to gain easier access to William Street west.

## 4.7 Left-Turn Lane Warrant

The site entrance on Park Street was analyzed to determine if a southbound left-turn lane would be warranted by the future traffic conditions. Park Street is a two-lane road with a speed limit of 50 km/h. The MTO Geometric Design Manual's left-turn lane warrant nomographs for a design speed of 60 km/h (as design speed is taken to be 10 km/h over the speed limit) were used. The left-turn lane warrant nomograph is shown in **Figure 4.5**. It was found that a southbound left-turn lane with a storage length of 15 metres is warranted.

The width of Park Street at the location of the entrance of the proposed development is 10.25 metres with one traffic lane and one bicycle lane in each direction. Therefore, to accommodate the left turn lane road widening will be required.

## 4.8 Park/Allen Collision History

Concerns have been expressed by area residents regarding safety at the intersection of Allen Street and Park Street. The number of reportable collisions at this intersection between January 2005 and January 2008 (3 Years) was provided by the City of Waterloo. A total of 7 reported collisions occurred averaging about 2 collisions per year. Most (4) of these collisions occurred in 2006 under clear conditions with dry road surface and were primarily angle type collisions involving traffic entering Park Street from Allen Street causing property damage. No injuries were reported. Only two collisions occurred in 2007. Mid-block between William Street and Allen Street only one collision was reported in the three year period.

The number of reported collisions are not unusually high at this location and may be a result of the difficulty accessing Park Street although none were reported during peak traffic hours. The proposed development will increase traffic accessing Park Street from Allen Street by 4 to 15 vehicles during peak hours based on the estimates in this report representing only 1% of the total traffic at the intersection. Accordingly, the additional traffic is not expected to affect existing collision experience at this intersection.

## 4.9 Walking, Cycling and Public Transit Opportunities

The location of this development will be very near to the Region of Waterloo's planned rapid transit route and station. The latest route alignment and station location information (November 2011) shows a station for southbound trains located on Allen Street between Caroline Street and King Street and a station for northbound trains on King Street, just north of Allen Street (**Figure 4.6**). These stations will be within a 100 – 200 metre walk of the development. This will encourage residents of the development to utilize



transit more than an average residential development in the Region of Waterloo would. This will reduce the number of trips this development will generate when the rapid transit system is complete, which is projected to be in 2017, one year beyond the scope of this study. As there was no reduction of trips applied to the trip generation forecasts, this will result in the development potentially having less impact on the traffic operations than what is forecast in this study.

This development is located within walking and cycling distance of shopping, service and employment opportunities on Park Street (Clarica/Grand River Hospital), on King Street and in Uptown Waterloo. This will also result in reduced vehicle trips generated by this development.

#### 4.10 TDM Initiatives

This proposed development is high density inner-city development located within an area close to employment locations in Uptown Waterloo and other nearby shopping and employment locations within walking and cycling distances from this project. As well, the site is well served by public transit and the future LRT line. It is the location of this development that will be the most significant factor contributing to a reduction of automobile trips to/from the site. This site will be attractive to seniors and employed personnel in Uptown or nearby offices, service and retail who will either, not travel during peak hours, or will walk, cycle and take public transit. Evidence of this is shown through surveys undertaken by Paradigm in the inner city areas of Kitchener and Waterloo and previously provided to the Region<sup>1</sup>. These studies show that inner-city high density developments generate vehicle trip rates that average 0.2 and 0.24 trips per unit in the AM and PM peak hours, much less than the conservatively high rates used in this study. Due to the location along with the excellent transit service adjacent to the site, there is reason to believe that a 35% reduction in the trip rates used in this study will be exceeded simply due to the location of the site. Live/work opportunities in the adjacent area will also reduce traffic generated.

In addition to the above, the development could include other TDM measures to further assist in reducing single occupancy vehicle trips as follows:

- 4- *Secure convenient indoor/outdoor bike parking:* Bicycle parking spots can be provided on site. The development provides secure bicycle parking in storage lockers provided to tenants. The parking garage therefore provides a secure weather and theft protected enclosed area where bicycles can be parked.
2. *Unbundled Parking:* Parking for residents is necessary for the renting or sale of the units as tenants own vehicles even if they do not use them on a daily basis. The developer can sell condos or rent units with the option of purchasing a parking spot(s) at an additional cost resulting in a reduced cost if one or more parking spots are not included in the purchase. Tenants who purchase a parking space will have one assigned to them thereby ensuring that shared use of parking does not result in generating more traffic.
- 3- *Car Share Program:* There is currently a carshare location at Caroline Street and Alexandra Street within 500m walking distance of the site where carshare parking is provided and run by Grand River Carshare ([www.grandrivercarshare.ca](http://www.grandrivercarshare.ca)). Information about the car share opportunities can be posted by property management on the bulletin board and membership will allow residents to limit the number of vehicles using the site.

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<sup>1</sup> Memo to Bruce Erb/Ken Mayer- Apartment Trip Generation Studies, Arrow Loft Proposed Redevelopment, April 22, 2003.

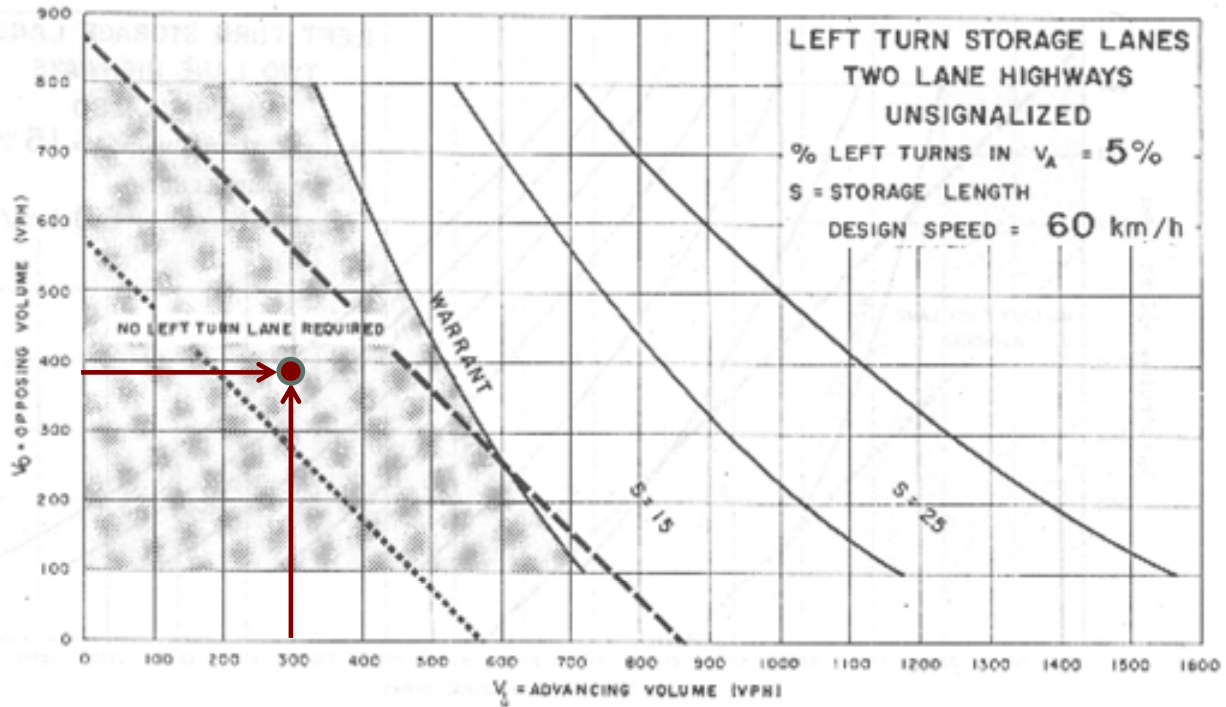


4. *Pedestrian Friendly Development:* The development provides a pedestrian friendly environment through the proposed design elements.
5. *Marketing and Promotion:* Promotion of the TDM Plan and alternative commutes could be provided in the building management and condominium corporation bulletin board as well as paper copies of information from GRT provided to tenants upon purchase or rental of residential units or office and retail space. The property manager could regularly distribute information regarding commuting alternatives on a bulletin board within the lobby. There could be a single point of contact for parking and commute alternatives by designating one of the building management staff to take on the role of TDM coordinator among other functions. The building management will hold regular Spring and Fall special events to promote the sustainability initiatives of the building including the TDM program. It is noted that GRT is able to provide promotional information for potential buyers and for marketing programs.

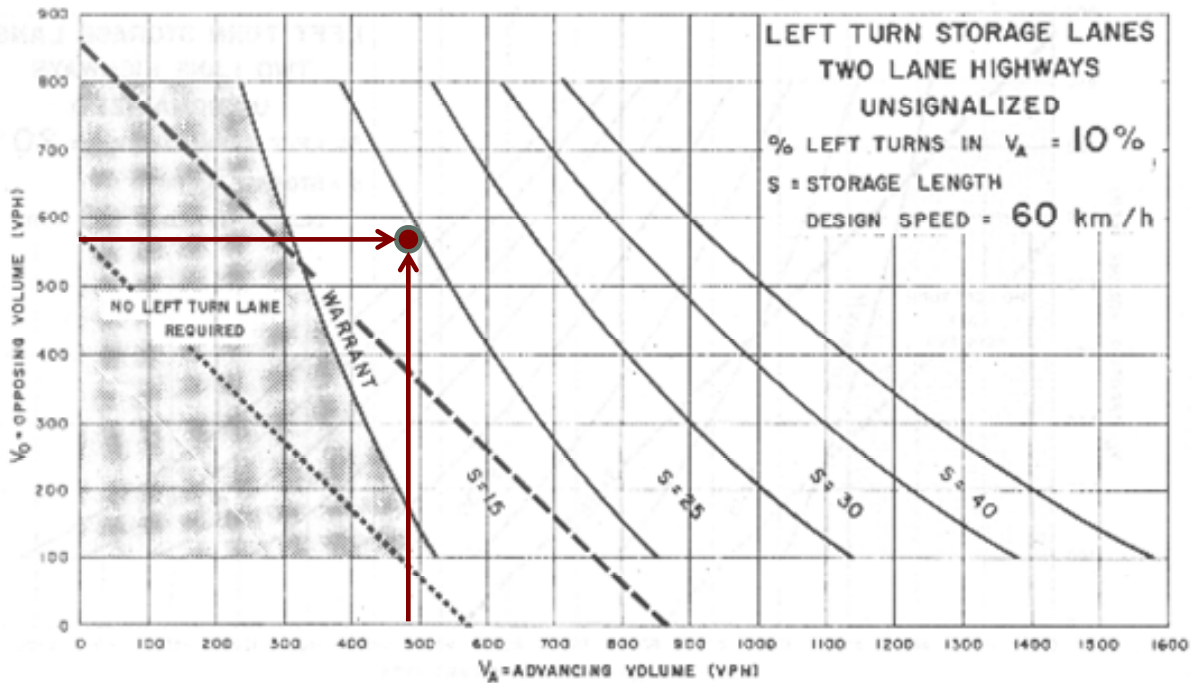
These initiatives will encourage further reduction in vehicle traffic from the site.



AM Peak Hour



PM Peak Hour



144 Park Tower 2, TIS

**Figure 4.5**



**Left-Turn Lane Warrant Nomographs**









## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

Based on the traffic projections and analyses contained in the report, it is concluded that a southbound left-turn lane with 15 metres of storage is warranted on Park Street at the site entrance based on MTO criteria. With a road width of 10.25 metres which accommodates two travel lanes and 2 bicycle lanes, widening of Park Street will be required. Also, it should be noted that the westbound movements at Park Street and Allen Street West operate at LOS F under existing, background and future conditions and the eastbound movements operate at LOS F under future conditions. However, a signal is not warranted at this intersection under future conditions. Likewise, the northbound left-turn movements at William Street West and Park Street operates at LOS F under existing, background and future conditions, but a signal is also not warranted at this intersection under future conditions. The v/c ratios for these movements are less than 1.0 indicating that there is sufficient capacity at the above noted intersections.

It is the finding of this report that the development will not significantly change the above noted existing and background conditions due to the additional traffic generated.

### **5.2 Recommendations**

It is recommended that a southbound left-turn lane of 15 metres on Park Street at the development entrance be implemented and the TDM initiatives be considered by the developer.



## **Appendix A**

### **Existing Traffic Operations**

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Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	172	9	13	257	86	6	218	25	28	226	369
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			1.00			1.00	0.95
Frnt		0.993			0.962			0.986				0.850
Flt Protected	0.950			0.950				0.999			0.995	
Satd. Flow (prot)	1686	1620	0	1686	1561	0	0	1502	0	0	1608	1473
Flt Permitted	0.321			0.632				0.991			0.946	
Satd. Flow (perm)	564	1620	0	1107	1561	0	0	1490	0	0	1528	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			19			7				410
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6			82.0	
Travel Time (s)		6.8			4.7			17.6			5.9	
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flow (vph)	273	191	10	14	286	96	7	242	28	31	251	410
Shared Lane Traffic (%)												
Lane Group Flow (vph)	273	201	0	14	382	0	0	277	0	0	282	410
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		30.0	30.0		34.0	34.0		34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.0	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)	28.9%	62.2%	0.0%	33.3%	33.3%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	37.8%
Yellow Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	1.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	52.0	52.0		35.6	35.6			30.0			30.0	30.0
Actuated g/C Ratio	0.58	0.58		0.40	0.40			0.33			0.33	0.33
v/c Ratio	0.57	0.21		0.03	0.61			0.55			0.55	0.55
Control Delay	14.6	9.6		19.2	26.7			28.9			29.6	5.6
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	14.6	9.6		19.2	26.7			28.9			29.6	5.6
LOS	B	A		B	C			C			C	A
Approach Delay		12.5			26.4			28.9			15.3	
Approach LOS		B			C			C			B	





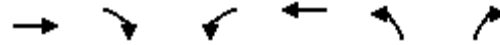
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	158	28	432	263	37	294
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.980					0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	1617	0	1670	1900	1686	1473
Fl <sub>t</sub> Permitted			0.950		0.950	
Satd. Flow (perm)	1617	0	1670	1900	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	176	31	480	292	41	327
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	480	292	41	327
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	158	28	432	263	37	294
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	176	31	480	292	41	327
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			207		1443	191
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			207		1443	191
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			65		57	62
cM capacity (veh/h)			1371		96	853

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	207	480	292	41	327
Volume Left	0	480	0	41	0
Volume Right	31	0	0	0	327
cSH	1700	1371	1700	96	853
Volume to Capacity	0.12	0.35	0.17	0.43	0.38
Queue Length 95th (m)	0.0	12.0	0.0	13.4	13.6
Control Delay (s)	0.0	9.0	0.0	68.5	11.8
Lane LOS		A		F	B
Approach Delay (s)	0.0	5.6		18.2	
Approach LOS				C	

Intersection Summary					
Average Delay			8.2		
Intersection Capacity Utilization			50.5%	ICU Level of Service	A
Analysis Period (min)			15		



Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	28	49	36	25	37	31	53	553	15	16	743	21
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.99	0.96		1.00			1.00	
Fr <sub>t</sub>		0.957				0.850		0.996			0.996	
Fl <sub>t</sub> Protected		0.988			0.980			0.996			0.999	
Satd. Flow (prot)	0	1427	0	0	1617	1488	0	2995	0	0	2994	0
Fl <sub>t</sub> Permitted		0.922			0.867			0.811			0.935	
Satd. Flow (perm)	0	1323	0	0	1422	1430	0	2438	0	0	2802	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28				34		5			5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	2%	4%	0%	6%	4%	5%
Adj. Flow (vph)	31	54	40	28	41	34	59	614	17	18	826	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	69	34	0	690	0	0	867	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0		27.0	27.0	27.0	51.0	51.0		51.0	51.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0	57.0	57.0		57.0	57.0	
Total Split (s)	33.0	33.0	0.0	33.0	33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)	36.7%	36.7%	0.0%	36.7%	36.7%	36.7%	63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		29.0			29.0	29.0		60.4			60.4	
Actuated g/C Ratio		0.32			0.32	0.32		0.67			0.67	
v/c Ratio		0.28			0.15	0.07		0.42			0.46	
Control Delay		19.5			22.9	7.9		10.3			10.6	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		19.5			22.9	7.9		10.3			10.6	
LOS		B			C	A		B			B	
Approach Delay		19.5			18.0			10.3			10.6	
Approach LOS		B			B			B			B	

Lanes, Volumes, Timings  
 3: Allen Street & King Street

144 Park Tower 2, TIS  
 Existing PM

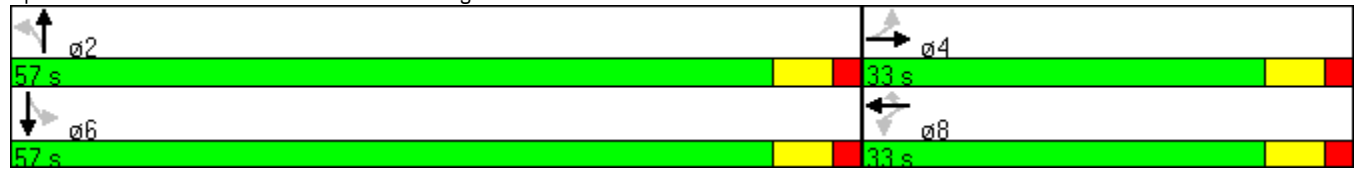


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		12.0			8.3	0.0		32.4			42.4	
Queue Length 95th (m)		25.5			17.8	6.2		45.4			57.3	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		445			458	484		1638			1882	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.28			0.15	0.07		0.42			0.46	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2.7 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	11.5
Intersection LOS:	B
Intersection Capacity Utilization	97.5%
ICU Level of Service	F
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
Existing PM



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	26	19	22	35	33	54	19	219	31	72	95	13
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.956			0.940			0.985			0.991	
Fl <sub>t</sub> Protected		0.981			0.986			0.996			0.980	
Satd. Flow (prot)	0	1454	0	0	1437	0	0	1521	0	0	1505	0
Fl <sub>t</sub> Permitted		0.981			0.986			0.996			0.980	
Satd. Flow (perm)	0	1454	0	0	1437	0	0	1521	0	0	1505	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	29	21	24	39	37	60	21	243	34	80	106	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	136	0	0	298	0	0	200	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	26	19	22	35	33	54	19	219	31	72	95	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	29	21	24	39	37	60	21	243	34	80	106	14
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	74	136	299	200								
Volume Left (vph)	29	39	21	80								
Volume Right (vph)	24	60	34	14								
Hadj (s)	-0.12	-0.21	-0.06	0.04								
Departure Headway (s)	5.2	5.0	4.7	4.9								
Degree Utilization, x	0.11	0.19	0.39	0.27								
Capacity (veh/h)	613	647	739	697								
Control Delay (s)	8.8	9.2	10.6	9.7								
Approach Delay (s)	8.8	9.2	10.6	9.7								
Approach LOS	A	A	B	A								
Intersection Summary												
Delay				9.9								
HCM Level of Service				A								
Intersection Capacity Utilization				49.8%	ICU Level of Service							A
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	19	18	8	16	38	10	10	333	24	11	431	34
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.976			0.979			0.991			0.990	
Flt Protected		0.979			0.987			0.999			0.999	
Satd. Flow (prot)	0	1433	0	0	1449	0	0	1485	0	0	1483	0
Flt Permitted		0.979			0.987			0.999			0.999	
Satd. Flow (perm)	0	1433	0	0	1449	0	0	1485	0	0	1483	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	21	20	9	18	42	11	11	370	27	12	479	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	71	0	0	408	0	0	529	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	19	18	8	16	38	10	10	333	24	11	431	34
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	21	20	9	18	42	11	11	370	27	12	479	38
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	990	985	538	983	991	409	541			417		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	986	981	538	979	987	401	541			409		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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		
pD queue free %	88	91	98	91	82	98	99			99		
cM capacity (veh/h)	179	235	529	196	233	634	1017			1117		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	71	408	529
Volume Left	21	18	11	12
Volume Right	9	11	27	38
cSH	228	246	1017	1117
Volume to Capacity	0.22	0.29	0.01	0.01
Queue Length 95th (m)	6.1	8.7	0.2	0.2
Control Delay (s)	25.2	25.5	0.4	0.3
Lane LOS	D	D	A	A
Approach Delay (s)	25.2	25.5	0.4	0.3
Approach LOS	D	D		

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization		53.3%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗		↖	↗	
Volume (vph)	22	35	12	76	90	21	25	305	49	17	373	41
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	1.00		0.99	1.00	
Fr <sub>t</sub>		0.977			0.972			0.979			0.985	
Fl <sub>t</sub> Protected		0.984		0.950			0.950			0.950		
Satd. Flow (prot)	0	1416	0	1637	1593	0	1686	1609	0	1686	1622	0
Fl <sub>t</sub> Permitted		0.871		0.819			0.466			0.512		
Satd. Flow (perm)	0	1248	0	1282	1593	0	826	1609	0	904	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			22			19			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	24	39	13	84	100	23	28	339	54	19	414	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	84	123	0	28	393	0	19	460	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.3		13.3	13.3		42.7	42.7		42.7	42.7	
Actuated g/C Ratio		0.22		0.22	0.22		0.71	0.71		0.71	0.71	
v/c Ratio		0.26		0.30	0.33		0.05	0.34		0.03	0.40	
Control Delay		18.6		21.8	18.4		4.9	5.8		4.8	6.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		18.6		21.8	18.4		4.9	5.8		4.8	6.4	
LOS		B		C	B		A	A		A	A	
Approach Delay		18.6			19.8			5.8			6.4	
Approach LOS		B			B			A			A	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		5.8		7.9	9.4		0.9	14.2		0.6	18.0	
Queue Length 95th (m)		13.8		16.4	19.5		3.7	33.9		2.9	42.3	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		466		470	598		588	1150		644	1158	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.16		0.18	0.21		0.05	0.34		0.03	0.40	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization	44.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street



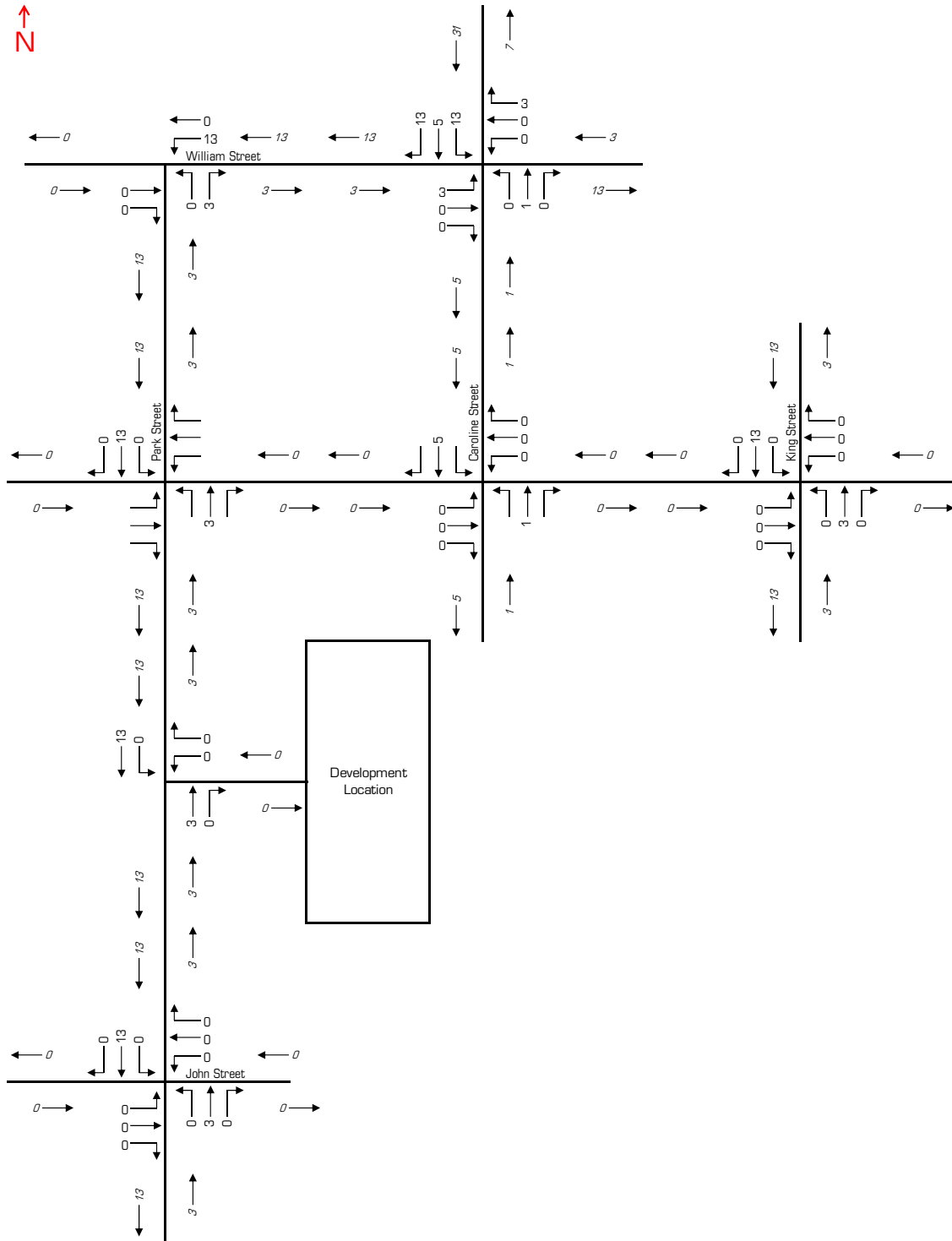


## **Appendix B**

### **Traffic Volumes from Other Developments**

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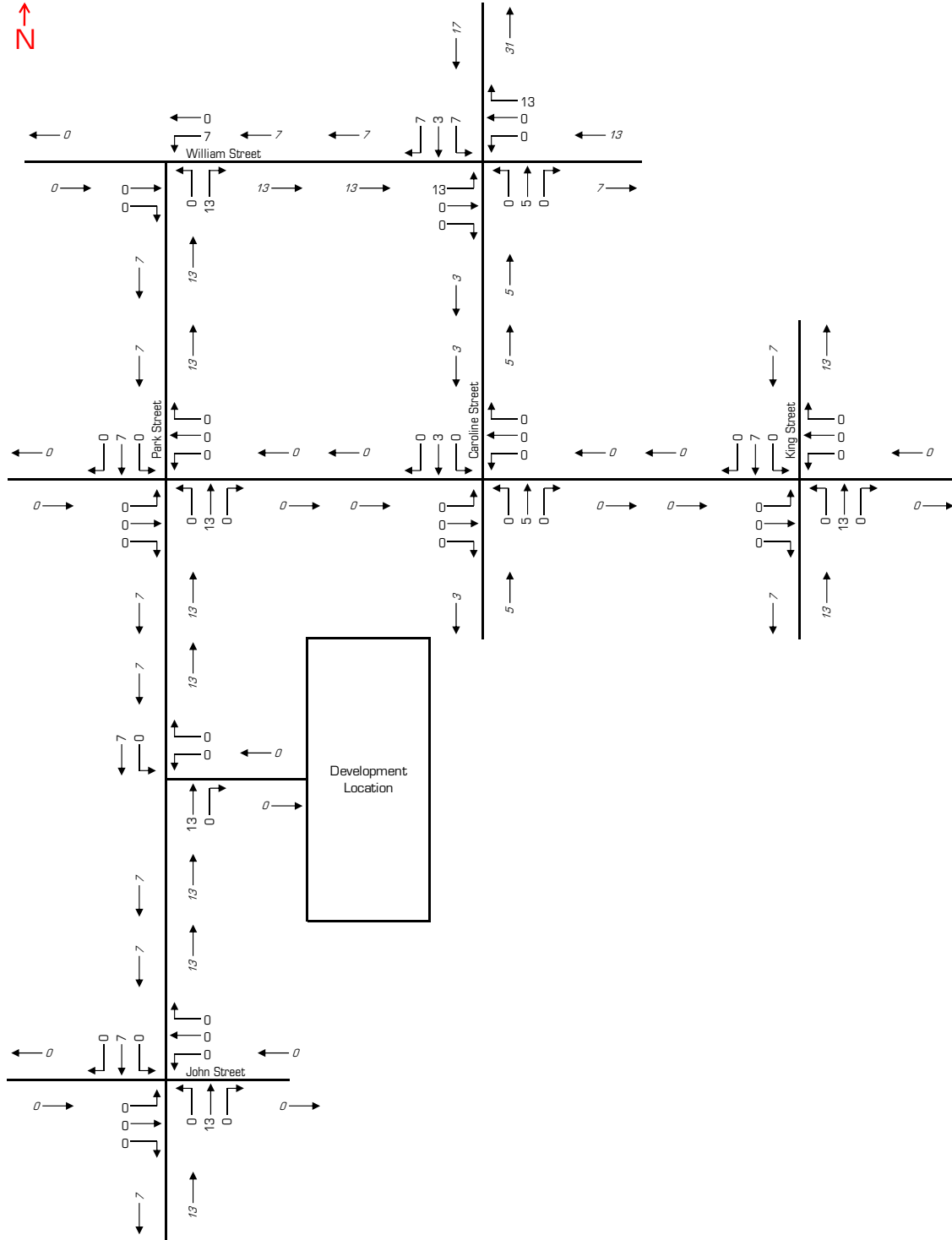


144 Park Tower 2, TIS

## Appendix B1a



**AM Peak Hour Alexandria Building Traffic**

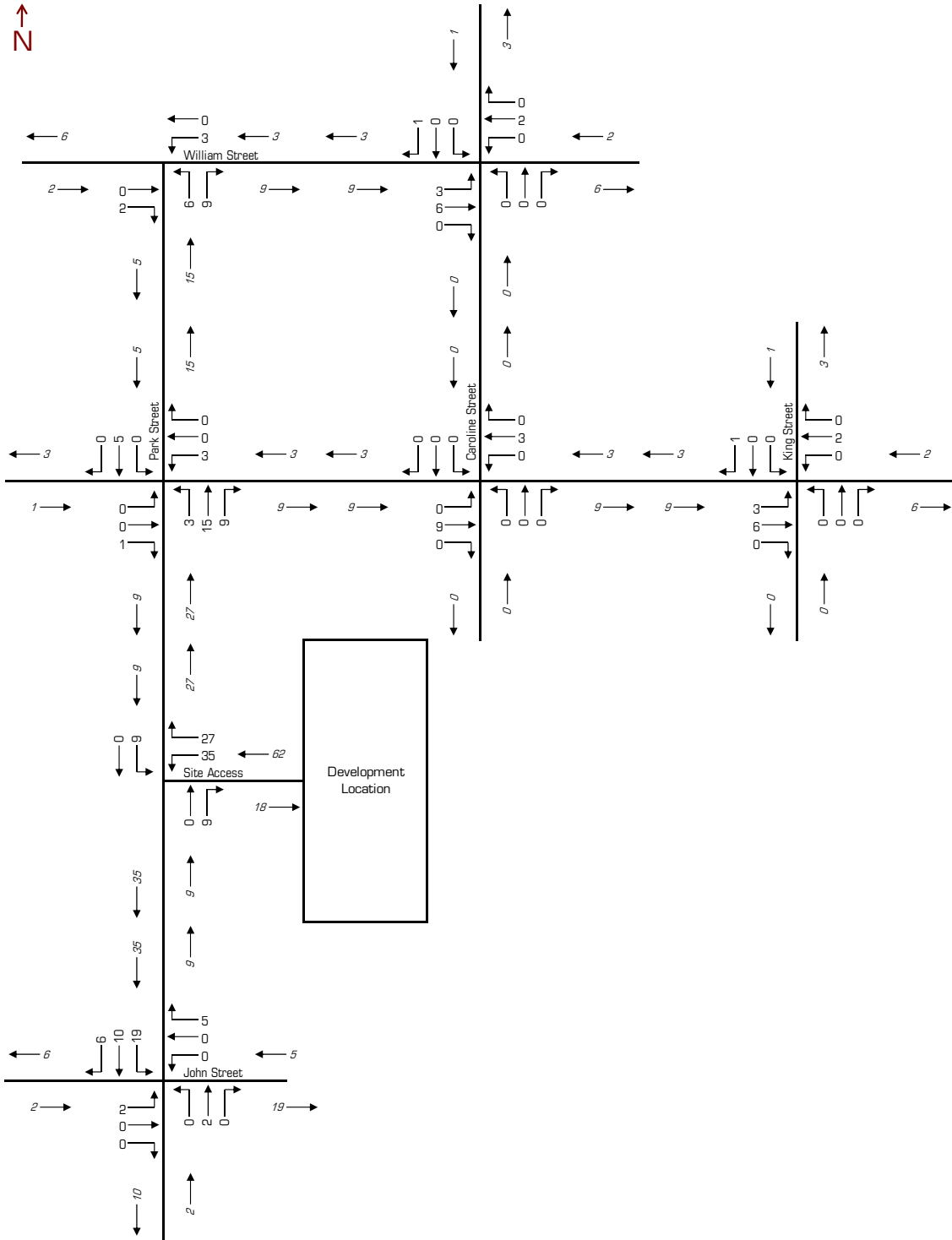


144 Park Tower 2, TIS

# Appendix B1b



## PM Peak Hour Alexandria Building Traffic

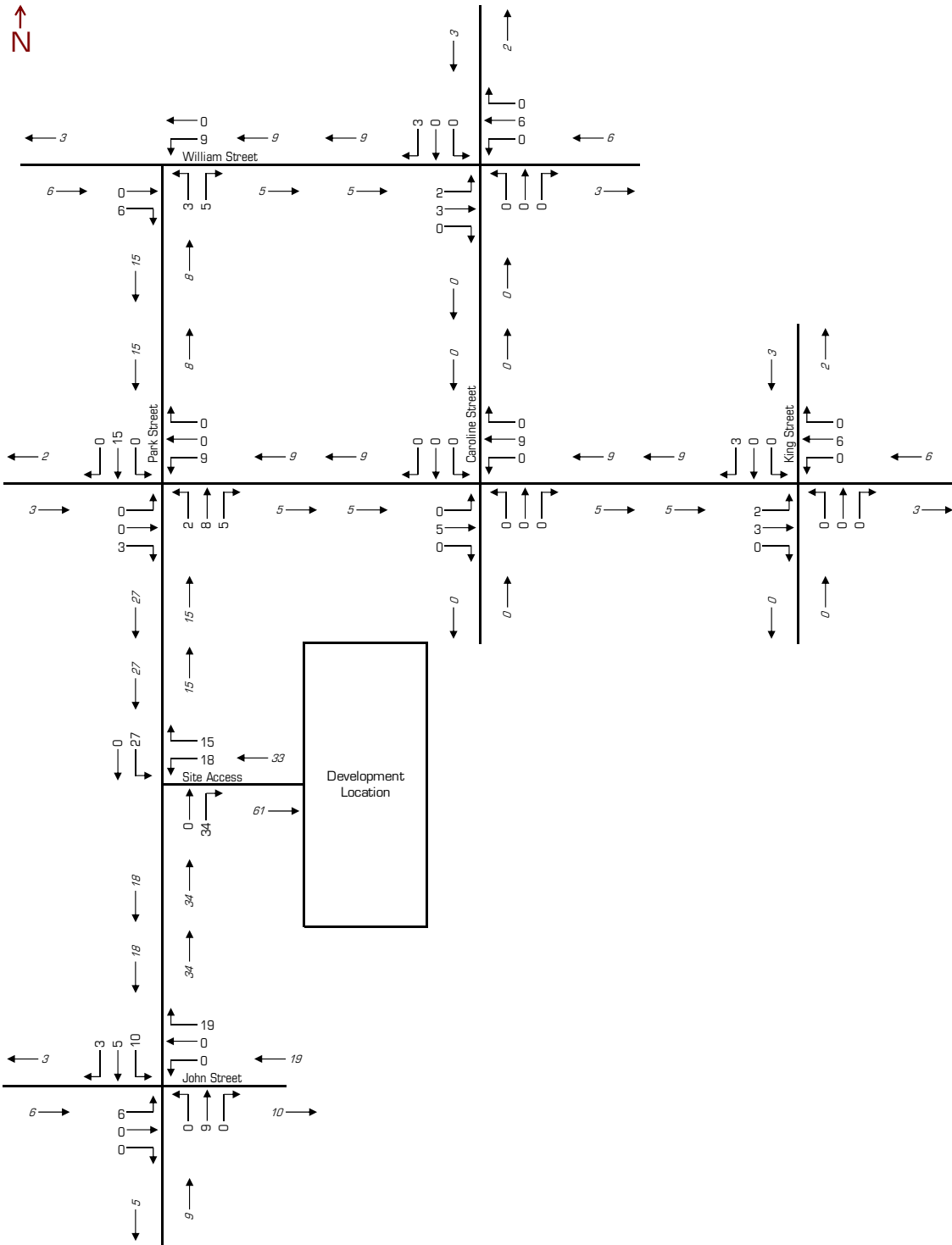


144 Park Tower 2, TIS

## Appendix B2a



**AM Peak Hour 21 Allen Street Traffic**



144 Park Tower 2, TIS

## Appendix B2b



**PM Peak Hour 21 Allen Street Traffic**

## **Appendix C**

### **Background Traffic Operations**

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Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	362	356	22	11	97	56	11	177	21	70	242	198
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00		0.99	0.98			1.00			1.00	0.95
Frnt		0.991			0.945			0.987				0.850
Flt Protected	0.950			0.950				0.997			0.989	
Satd. Flow (prot)	1686	1612	0	1686	1482	0	0	1470	0	0	1598	1458
Flt Permitted	0.525			0.517				0.975			0.856	
Satd. Flow (perm)	914	1612	0	908	1482	0	0	1437	0	0	1381	1389
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			35			7				220
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	5%	0%	3%	4%	0%	4%	0%	6%	1%	2%
Adj. Flow (vph)	402	396	24	12	108	62	12	197	23	78	269	220
Shared Lane Traffic (%)												
Lane Group Flow (vph)	402	420	0	12	170	0	0	232	0	0	347	220
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	19.0		19.0	19.0		23.0	23.0		23.0	23.0	23.0
Minimum Split (s)	9.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	26.0	51.0	0.0	25.0	25.0	0.0	29.0	29.0	0.0	29.0	29.0	29.0
Total Split (%)	32.5%	63.8%	0.0%	31.3%	31.3%	0.0%	36.3%	36.3%	0.0%	36.3%	36.3%	36.3%
Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	47.0	47.0		26.9	26.9			25.0			25.0	25.0
Actuated g/C Ratio	0.59	0.59		0.34	0.34			0.31			0.31	0.31
v/c Ratio	0.58	0.44		0.04	0.33			0.51			0.80	0.38
Control Delay	12.8	10.9		21.3	19.1			26.6			41.7	5.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	12.8	10.9		21.3	19.1			26.6			41.7	5.2
LOS	B	B		C	B			C			D	A
Approach Delay		11.8			19.3			26.6			27.6	
Approach LOS		B			B			C			C	





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	372	66	224	113	24	359
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.980					0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	1617	0	1637	1845	1686	1473
Fl <sub>t</sub> Permitted			0.950		0.950	
Satd. Flow (perm)	1617	0	1637	1845	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	3%	3%	0%	1%
Adj. Flow (vph)	413	73	249	126	27	399
Shared Lane Traffic (%)						
Lane Group Flow (vph)	486	0	249	126	27	399
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.0%
	ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	372	66	224	113	24	359
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	413	73	249	126	27	399
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			487		1073	450
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			487		1073	450
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			77		86	35
cM capacity (veh/h)			1071		189	611

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	487	249	126	27	399
Volume Left	0	249	0	27	0
Volume Right	73	0	0	0	399
cSH	1700	1071	1700	189	611
Volume to Capacity	0.29	0.23	0.07	0.14	0.65
Queue Length 95th (m)	0.0	6.8	0.0	3.6	35.8
Control Delay (s)	0.0	9.4	0.0	27.2	21.3
Lane LOS		A		D	C
Approach Delay (s)	0.0	6.2		21.6	
Approach LOS				C	

Intersection Summary					
Average Delay			9.0		
Intersection Capacity Utilization			58.0%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	22	50	15	12	42	30	42	575	35	20	571	22
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.96		1.00			1.00	
Frnt		0.976				0.850		0.992			0.995	
Flt Protected		0.988			0.989			0.997			0.998	
Satd. Flow (prot)	0	1469	0	0	1632	1488	0	3009	0	0	2987	0
Flt Permitted		0.931			0.943			0.873			0.921	
Satd. Flow (perm)	0	1377	0	0	1551	1435	0	2634	0	0	2755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				33		11			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	3%	3%	11%	4%	0%
Adj. Flow (vph)	24	56	17	13	47	33	47	639	39	22	634	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	0	60	33	0	725	0	0	680	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0	26.0	42.0	42.0		42.0	42.0	
Minimum Split (s)	32.0	32.0		32.0	32.0	32.0	48.0	48.0		48.0	48.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	32.0	48.0	48.0	0.0	48.0	48.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		28.0			28.0	28.0		51.2			51.2	
Actuated g/C Ratio		0.35			0.35	0.35		0.64			0.64	
v/c Ratio		0.20			0.11	0.06		0.43			0.39	
Control Delay		16.7			18.4	6.9		10.7			10.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		16.7			18.4	6.9		10.7			10.2	
LOS		B			B	A		B			B	
Approach Delay		16.7			14.3			10.7			10.2	
Approach LOS		B			B			B			B	

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others AM

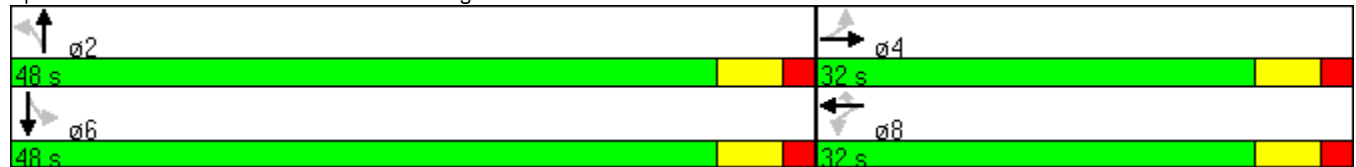


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.4			6.0	0.0		32.2			29.3	
Queue Length 95th (m)		18.6			13.7	5.3		45.8			41.5	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		492			543	524		1690			1765	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.20			0.11	0.06		0.43			0.39	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	40.8 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	11.1
Intersection Capacity Utilization	88.3%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	E

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	25	51	26	30	21	52	1	94	11	84	167	9
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.966			0.931			0.986			0.995	
Fl <sub>t</sub> Protected		0.988			0.986						0.984	
Satd. Flow (prot)	0	1479	0	0	1364	0	0	1502	0	0	1494	0
Fl <sub>t</sub> Permitted		0.988			0.986						0.984	
Satd. Flow (perm)	0	1479	0	0	1364	0	0	1502	0	0	1494	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	15%	0%	0%	100%	1%	0%	5%	0%	0%
Adj. Flow (vph)	28	57	29	33	23	58	1	104	12	93	186	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	114	0	0	117	0	0	289	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.9%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Background + Others AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	51	26	30	21	52	1	94	11	84	167	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	57	29	33	23	58	1	104	12	93	186	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	114	118	289
Volume Left (vph)	28	33	1	93
Volume Right (vph)	29	58	12	10
Hadj (s)	-0.10	-0.17	-0.03	0.07
Departure Headway (s)	5.0	4.9	4.8	4.7
Degree Utilization, x	0.16	0.16	0.16	0.38
Capacity (veh/h)	660	668	697	728
Control Delay (s)	8.9	8.8	8.7	10.5
Approach Delay (s)	8.9	8.8	8.7	10.5
Approach LOS	A	A	A	B

Intersection Summary			
Delay		9.6	
HCM Level of Service		A	
Intersection Capacity Utilization	40.9%		ICU Level of Service A
Analysis Period (min)		15	



Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	43	5	6	17	3	9	336	52	26	280	19
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.989			0.986			0.982			0.992	
Flt Protected		0.985			0.988			0.999			0.996	
Satd. Flow (prot)	0	1440	0	0	1298	0	0	1459	0	0	1477	0
Flt Permitted		0.985			0.988			0.999			0.996	
Satd. Flow (perm)	0	1440	0	0	1298	0	0	1459	0	0	1477	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	0%	0%	33%	7%	0%	0%	1%	0%	0%	0%	6%
Adj. Flow (vph)	23	48	6	7	19	3	10	373	58	29	311	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	29	0	0	441	0	0	361	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	43	5	6	17	3	9	336	52	26	280	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	48	6	7	19	3	10	373	58	29	311	21
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked												
vC, conflicting volume	844	875	362	867	856	428	356			451		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	844	875	362	867	856	428	356			451		
tC, single (s)	7.1	6.5	6.2	7.4	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.8	4.1	3.3	2.2			2.2		
pD queue free %	90	82	99	97	93	99	99			97		
cM capacity (veh/h)	243	270	665	191	270	617	1189			1101		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	77	29	441	361								
Volume Left	23	7	10	29								
Volume Right	6	3	58	21								
cSH	272	262	1189	1101								
Volume to Capacity	0.28	0.11	0.01	0.03								
Queue Length 95th (m)	8.4	2.8	0.2	0.6								
Control Delay (s)	23.3	20.5	0.3	0.9								
Lane LOS	C	C	A	A								
Approach Delay (s)	23.3	20.5	0.3	0.9								
Approach LOS	C	C										
<b>Intersection Summary</b>												
Average Delay			3.1									
Intersection Capacity Utilization			53.5%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔		↕	↔		↕	↔		↕	↔	
Volume (vph)	10	68	14	35	31	20	11	383	81	27	236	31
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	0.99		1.00	1.00	
Frnt		0.979			0.941			0.974			0.983	
Flt Protected		0.995		0.950			0.950			0.950		
Satd. Flow (prot)	0	1442	0	1637	1436	0	1686	1572	0	1074	1604	0
Flt Permitted		0.964		0.745			0.579			0.432		
Satd. Flow (perm)	0	1395	0	1174	1436	0	1026	1572	0	486	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			22			25			16	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	0%	8%	3%	11%	0%	0%	1%	5%	57%	1%	0%
Adj. Flow (vph)	11	76	16	39	34	22	12	426	90	30	262	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	39	56	0	12	516	0	30	296	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		12.8		12.8	12.8		43.2	43.2		43.2	43.2	
Actuated g/C Ratio		0.21		0.21	0.21		0.72	0.72		0.72	0.72	
v/c Ratio		0.33		0.16	0.17		0.02	0.45		0.09	0.26	
Control Delay		20.2		20.3	14.4		4.3	6.6		5.1	4.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		20.2		20.3	14.4		4.3	6.6		5.1	4.8	
LOS		C		C	B		A	A		A	A	
Approach Delay		20.2			16.8			6.5			4.9	
Approach LOS		C			B			A			A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.1		3.6	3.1		0.4	20.8		0.9	9.9	
Queue Length 95th (m)		18.1		9.5	10.0		1.9	46.3		4.0	22.5	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		522		430	540		739	1139		350	1159	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.20		0.09	0.10		0.02	0.45		0.09	0.26	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay:	8.3
Intersection LOS:	A
Intersection Capacity Utilization	49.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street



Lanes, Volumes, Timings  
 7: Development Driveway & Park Street

144 Park Tower 2, TIS  
 2016 Background + Others AM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	35	27	370	9	9	282
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941		0.997			
Flt Protected	0.973					0.998
Satd. Flow (prot)	1616	0	1629	0	0	1647
Flt Permitted	0.973					0.998
Satd. Flow (perm)	1616	0	1629	0	0	1647
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Adj. Flow (vph)	39	30	411	10	10	313
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	0	421	0	0	323
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.0% ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
7: Development Driveway & Park Street

144 Park Tower 2, TIS  
2016 Background + Others AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	35	27	370	9	9	282
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	30	411	10	10	313
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.93	0.93			0.93	
vC, conflicting volume	749	416			421	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	696	339			345	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	90	95			99	
cM capacity (veh/h)	380	661			1144	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	69	421	323
Volume Left	39	0	10
Volume Right	30	10	0
cSH	466	1700	1144
Volume to Capacity	0.15	0.25	0.01
Queue Length 95th (m)	3.9	0.0	0.2
Control Delay (s)	14.1	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	14.1	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization		36.0%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	193	10	14	290	108	7	246	28	38	253	417
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			1.00			1.00	0.95
Frts		0.993			0.959			0.987				0.850
Flt Protected	0.950			0.950				0.999			0.994	
Satd. Flow (prot)	1686	1620	0	1686	1554	0	0	1504	0	0	1603	1473
Flt Permitted	0.229			0.618				0.990			0.921	
Satd. Flow (perm)	403	1620	0	1083	1554	0	0	1490	0	0	1484	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			21			7				463
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flow (vph)	316	214	11	16	322	120	8	273	31	42	281	463
Shared Lane Traffic (%)												
Lane Group Flow (vph)	316	225	0	16	442	0	0	312	0	0	323	463
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		30.0	30.0		34.0	34.0		34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.0	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)	28.9%	62.2%	0.0%	33.3%	33.3%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	37.8%
Yellow Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	1.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	52.0	52.0		32.9	32.9			30.0			30.0	30.0
Actuated g/C Ratio	0.58	0.58		0.37	0.37			0.33			0.33	0.33
v/c Ratio	0.71	0.24		0.04	0.76			0.62			0.65	0.60
Control Delay	20.0	9.9		21.9	36.0			31.2			33.0	5.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	20.0	9.9		21.9	36.0			31.2			33.0	5.9
LOS	C	A		C	D			C			C	A
Approach Delay		15.8			35.5			31.2			17.0	
Approach LOS		B			D			C			B	

Lanes, Volumes, Timings  
 1: William Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Background + Others PM

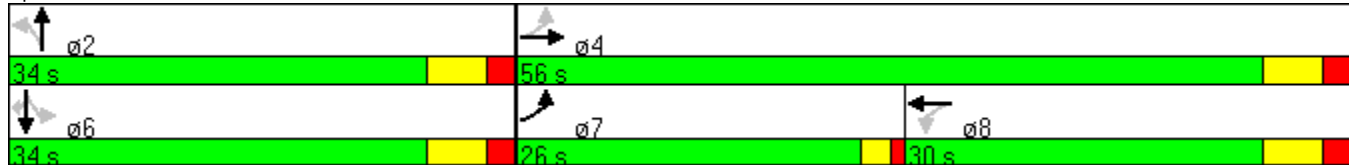


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	25.9	17.0		1.7	62.0			43.3			46.5	0.0
Queue Length 95th (m)	45.2	28.5		6.6 #	128.5			70.5			74.7	20.9
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	546	938		397	582			501			495	777
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.58	0.24		0.04	0.76			0.62			0.65	0.60

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 48 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 22.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 90.0%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street







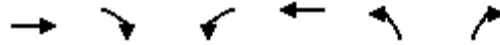
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	174	37	493	290	44	343
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.976					0.850
Fl <sub>t</sub> Protected			0.950		0.950	
Satd. Flow (prot)	1610	0	1670	1900	1686	1473
Fl <sub>t</sub> Permitted			0.950		0.950	
Satd. Flow (perm)	1610	0	1670	1900	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	193	41	548	322	49	381
Shared Lane Traffic (%)						
Lane Group Flow (vph)	234	0	548	322	49	381
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.7%
	ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Volume (veh/h)	174	37	493	290	44	343
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	193	41	548	322	49	381
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			234		1632	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			234		1632	214
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			59		27	54
cM capacity (veh/h)			1339		67	829

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	234	548	322	49	381
Volume Left	0	548	0	49	0
Volume Right	41	0	0	0	381
cSH	1700	1339	1700	67	829
Volume to Capacity	0.14	0.41	0.19	0.73	0.46
Queue Length 95th (m)	0.0	15.3	0.0	24.8	18.4
Control Delay (s)	0.0	9.5	0.0	145.4	13.0
Lane LOS		A		F	B
Approach Delay (s)	0.0	6.0		28.0	
Approach LOS				D	

Intersection Summary					
Average Delay			11.3		
Intersection Capacity Utilization			55.7%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	33	57	40	28	47	34	59	624	17	18	827	26
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.98			0.99	0.96		1.00			1.00	
Frnt		0.959				0.850		0.996			0.996	
Flt Protected		0.987			0.982			0.996			0.999	
Satd. Flow (prot)	0	1428	0	0	1620	1488	0	2995	0	0	2994	0
Flt Permitted		0.917			0.873			0.785			0.931	
Satd. Flow (perm)	0	1318	0	0	1433	1430	0	2360	0	0	2790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				38		5			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	2%	4%	0%	6%	4%	5%
Adj. Flow (vph)	37	63	44	31	52	38	66	693	19	20	919	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	0	0	83	38	0	778	0	0	968	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0		27.0	27.0	27.0	51.0	51.0		51.0	51.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0	57.0	57.0		57.0	57.0	
Total Split (s)	33.0	33.0	0.0	33.0	33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)	36.7%	36.7%	0.0%	36.7%	36.7%	36.7%	63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		29.0			29.0	29.0		53.0			53.0	
Actuated g/C Ratio		0.32			0.32	0.32		0.59			0.59	
v/c Ratio		0.33			0.18	0.08		0.56			0.59	
Control Delay		21.2			23.3	7.7		13.2			13.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		21.2			23.3	7.7		13.2			13.4	
LOS		C			C	A		B			B	
Approach Delay		21.2			18.4			13.2			13.4	
Approach LOS		C			B			B			B	

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		14.9			10.1	0.0		39.1			50.0	
Queue Length 95th (m)		30.0			20.7	6.4		54.7			67.5	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		442			462	487		1392			1645	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.33			0.18	0.08		0.56			0.59	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2.7 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	14.2
Intersection LOS:	B
Intersection Capacity Utilization	102.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	29	26	24	39	45	60	21	247	34	79	108	14
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.959			0.943			0.985			0.990	
Fl <sub>t</sub> Protected		0.982			0.987			0.997			0.981	
Satd. Flow (prot)	0	1460	0	0	1443	0	0	1522	0	0	1505	0
Fl <sub>t</sub> Permitted		0.982			0.987			0.997			0.981	
Satd. Flow (perm)	0	1460	0	0	1443	0	0	1522	0	0	1505	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	32	29	27	43	50	67	23	274	38	88	120	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	0	0	160	0	0	335	0	0	224	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.2%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Background + Others PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	29	26	24	39	45	60	21	247	34	79	108	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	32	29	27	43	50	67	23	274	38	88	120	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	160	336	223
Volume Left (vph)	32	43	23	88
Volume Right (vph)	27	67	38	16
Hadj (s)	-0.11	-0.20	-0.05	0.04
Departure Headway (s)	5.5	5.3	4.9	5.1
Degree Utilization, x	0.13	0.23	0.45	0.32
Capacity (veh/h)	575	615	710	664
Control Delay (s)	9.3	9.9	11.8	10.4
Approach Delay (s)	9.3	9.9	11.8	10.4
Approach LOS	A	A	B	B

Intersection Summary			
Delay		10.8	
HCM Level of Service		B	
Intersection Capacity Utilization	55.2%		ICU Level of Service B
Analysis Period (min)		15	

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	20	12	27	42	11	13	389	31	12	498	38
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.970			0.982			0.990			0.991	
Flt Protected		0.981			0.983			0.999			0.999	
Satd. Flow (prot)	0	1427	0	0	1448	0	0	1484	0	0	1484	0
Flt Permitted		0.981			0.983			0.999			0.999	
Satd. Flow (perm)	0	1427	0	0	1448	0	0	1484	0	0	1484	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	23	22	13	30	47	12	14	432	34	13	553	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	89	0	0	480	0	0	608	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.3%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	20	12	27	42	11	13	389	31	12	498	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	22	13	30	47	12	14	432	34	13	553	42
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked	0.98	0.98		0.98	0.98	0.98				0.98		
vC, conflicting volume	1145	1141	614	1140	1145	475	620			487		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1139	1134	614	1133	1138	457	620			469		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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		
pO queue free %	82	88	97	79	75	98	98			99		
cM capacity (veh/h)	130	188	479	146	187	584	951			1051		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	59	89	481	609
Volume Left	23	30	14	13
Volume Right	13	12	34	42
cSH	181	187	951	1051
Volume to Capacity	0.33	0.48	0.02	0.01
Queue Length 95th (m)	10.0	17.2	0.3	0.3
Control Delay (s)	34.2	40.7	0.4	0.3
Lane LOS	D	E	A	A
Approach Delay (s)	34.2	40.7	0.4	0.3
Approach LOS	D	E		

Intersection Summary			
Average Delay		4.9	
Intersection Capacity Utilization		58.3%	ICU Level of Service B
Analysis Period (min)		15	



Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔		↖↗	↖↗		↖↗	↖↗		↖↗	↖↗	
Volume (vph)	30	39	13	84	99	42	28	359	54	29	424	48
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	1.00		0.99	1.00	
Frnt		0.979			0.955			0.980			0.985	
Flt Protected		0.982		0.950			0.950			0.950		
Satd. Flow (prot)	0	1422	0	1637	1559	0	1686	1611	0	1686	1622	0
Flt Permitted		0.833		0.778			0.424			0.467		
Satd. Flow (perm)	0	1201	0	1221	1559	0	752	1611	0	825	1622	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			40			18			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	33	43	14	93	110	47	31	399	60	32	471	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	93	157	0	31	459	0	32	524	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.3		13.3	13.3		42.7	42.7		42.7	42.7	
Actuated g/C Ratio		0.22		0.22	0.22		0.71	0.71		0.71	0.71	
v/c Ratio		0.32		0.34	0.42		0.06	0.40		0.05	0.45	
Control Delay		19.9		22.9	18.1		5.0	6.4		4.9	7.1	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		19.9		22.9	18.1		5.0	6.4		4.9	7.1	
LOS		B		C	B		A	A		A	A	
Approach Delay		19.9			19.9			6.3			6.9	
Approach LOS		B			B			A			A	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		7.1		8.8	11.1		0.9	17.8		1.0	21.8	
Queue Length 95th (m)		16.1		17.9	22.7		4.1	42.0		4.2	51.0	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		449		448	597		535	1151		587	1158	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.20		0.21	0.26		0.06	0.40		0.05	0.45	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay:	9.9
Intersection LOS:	A
Intersection Capacity Utilization	56.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street



Lanes, Volumes, Timings  
 7: Development Entrance & Park Street

144 Park Tower 2, TIS  
 2016 Background + Others PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	18	15	418	34	27	509
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938		0.990			
Flt Protected	0.974					0.997
Satd. Flow (prot)	1613	0	1634	0	0	1630
Flt Permitted	0.974					0.997
Satd. Flow (perm)	1613	0	1634	0	0	1630
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	20	17	464	38	30	566
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	502	0	0	596
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.2%
ICU Level of Service	C
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
7: Development Entrance & Park Street

144 Park Tower 2, TIS  
2016 Background + Others PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	18	15	418	34	27	509
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	20	17	464	38	30	566
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)	106					
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1109	483			502	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1074	393			413	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	91	97			97	
cM capacity (veh/h)	219	607			1062	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	37	502	596
Volume Left	20	0	30
Volume Right	17	38	0
cSH	309	1700	1062
Volume to Capacity	0.12	0.30	0.03
Queue Length 95th (m)	3.0	0.0	0.7
Control Delay (s)	18.2	0.0	0.8
Lane LOS	C		A
Approach Delay (s)	18.2	0.0	0.8
Approach LOS	C		

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization		66.2%	ICU Level of Service C
Analysis Period (min)		15	

## **Appendix D**

### **Future Total Traffic Operations**

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Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	366	364	22	11	99	56	11	177	21	70	242	199
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	1.00		0.99	0.98			1.00			1.00	0.95
Frnt		0.992			0.946			0.987				0.850
Flt Protected	0.950			0.950				0.997			0.989	
Satd. Flow (prot)	1686	1614	0	1686	1484	0	0	1470	0	0	1598	1458
Flt Permitted	0.522			0.513				0.975			0.856	
Satd. Flow (perm)	909	1614	0	901	1484	0	0	1437	0	0	1381	1389
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			34			7				221
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	5%	0%	3%	4%	0%	4%	0%	6%	1%	2%
Adj. Flow (vph)	407	404	24	12	110	62	12	197	23	78	269	221
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	428	0	12	172	0	0	232	0	0	347	221
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	19.0		19.0	19.0		23.0	23.0		23.0	23.0	23.0
Minimum Split (s)	9.0	25.0		25.0	25.0		29.0	29.0		29.0	29.0	29.0
Total Split (s)	26.0	51.0	0.0	25.0	25.0	0.0	29.0	29.0	0.0	29.0	29.0	29.0
Total Split (%)	32.5%	63.8%	0.0%	31.3%	31.3%	0.0%	36.3%	36.3%	0.0%	36.3%	36.3%	36.3%
Yellow Time (s)	3.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	47.0	47.0		26.8	26.8			25.0			25.0	25.0
Actuated g/C Ratio	0.59	0.59		0.34	0.34			0.31			0.31	0.31
v/c Ratio	0.59	0.45		0.04	0.33			0.51			0.80	0.38
Control Delay	12.9	11.0		21.4	19.5			26.6			41.7	5.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	12.9	11.0		21.4	19.5			26.6			41.7	5.2
LOS	B	B		C	B			C			D	A
Approach Delay		11.9			19.6			26.6			27.5	
Approach LOS		B			B			C			C	

Lanes, Volumes, Timings  
 1: William Street & Caroline Street

144 Park Tower 2, TIS  
 2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	30.2	32.3		1.2	14.9			27.3			47.3	0.0
Queue Length 95th (m)	48.1	51.8		5.2	33.8			48.0		#89.4	14.2	
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	748	951		302	520			454			432	586
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.54	0.45		0.04	0.33			0.51			0.80	0.38

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 8 (10%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 19.4 Intersection LOS: B  
 Intersection Capacity Utilization 91.1% ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street







Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↖	↑	↖	↖
Volume (vph)	372	68	226	113	32	371
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.979					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1615	0	1637	1845	1686	1473
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1615	0	1637	1845	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	3%	3%	0%	1%
Adj. Flow (vph)	413	76	251	126	36	412
Shared Lane Traffic (%)						
Lane Group Flow (vph)	489	0	251	126	36	412
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.9%
	ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩		↩	↩	↩	↩
Volume (veh/h)	372	68	226	113	32	371
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	413	76	251	126	36	412
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (m)				94		
pX, platoon unblocked						
vC, conflicting volume			489		1079	451
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			489		1079	451
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			77		81	32
cM capacity (veh/h)			1069		187	610

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	489	251	126	36	412
Volume Left	0	251	0	36	0
Volume Right	76	0	0	0	412
cSH	1700	1069	1700	187	610
Volume to Capacity	0.29	0.23	0.07	0.19	0.68
Queue Length 95th (m)	0.0	6.8	0.0	5.1	38.7
Control Delay (s)	0.0	9.4	0.0	28.8	22.3
Lane LOS		A		D	C
Approach Delay (s)	0.0	6.3		22.8	
Approach LOS				C	

Intersection Summary					
Average Delay			9.6		
Intersection Capacity Utilization			58.9%	ICU Level of Service	B
Analysis Period (min)			15		

Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕↔			↕↔	
Volume (vph)	26	58	15	12	44	30	42	575	35	20	571	23
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.96		1.00			1.00	
Fr't		0.979				0.850		0.992			0.994	
Flt Protected		0.987			0.990			0.997			0.998	
Satd. Flow (prot)	0	1475	0	0	1634	1488	0	3009	0	0	2984	0
Flt Permitted		0.923			0.942			0.873			0.922	
Satd. Flow (perm)	0	1372	0	0	1550	1435	0	2634	0	0	2756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				33		11			8	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	7%	0%	0%	0%	0%	3%	3%	11%	4%	0%
Adj. Flow (vph)	29	64	17	13	49	33	47	639	39	22	634	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	62	33	0	725	0	0	682	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	26.0	26.0		26.0	26.0	26.0	42.0	42.0		42.0	42.0	
Minimum Split (s)	32.0	32.0		32.0	32.0	32.0	48.0	48.0		48.0	48.0	
Total Split (s)	32.0	32.0	0.0	32.0	32.0	32.0	48.0	48.0	0.0	48.0	48.0	0.0
Total Split (%)	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%	60.0%	60.0%	0.0%	60.0%	60.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		28.0			28.0	28.0		51.2			51.2	
Actuated g/C Ratio		0.35			0.35	0.35		0.64			0.64	
v/c Ratio		0.22			0.11	0.06		0.43			0.39	
Control Delay		17.6			18.4	6.9		10.7			10.2	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		17.6			18.4	6.9		10.7			10.2	
LOS		B			B	A		B			B	
Approach Delay		17.6			14.4			10.7			10.2	
Approach LOS		B			B			B			B	

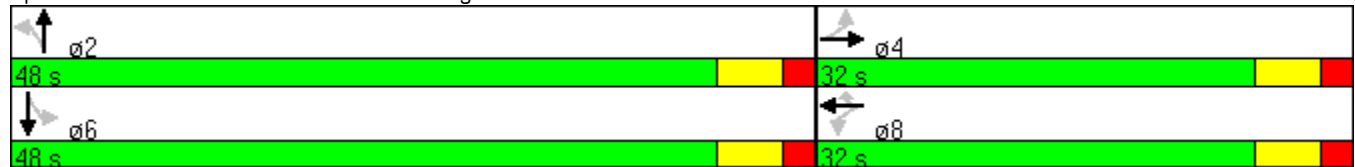


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		10.0			6.2	0.0		32.2			29.4	
Queue Length 95th (m)		21.2			14.1	5.3		45.8			41.5	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		489			543	524		1690			1766	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.22			0.11	0.06		0.43			0.39	

**Intersection Summary**

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	40.8 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	11.2
Intersection LOS:	B
Intersection Capacity Utilization	88.3%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total AM



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	25	63	26	30	24	52	1	94	11	84	167	9
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.969			0.934			0.986			0.995	
Fl <sub>t</sub> Protected		0.989			0.986						0.984	
Satd. Flow (prot)	0	1485	0	0	1370	0	0	1502	0	0	1494	0
Fl <sub>t</sub> Permitted		0.989			0.986						0.984	
Satd. Flow (perm)	0	1485	0	0	1370	0	0	1502	0	0	1494	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	15%	0%	0%	100%	1%	0%	5%	0%	0%
Adj. Flow (vph)	28	70	29	33	27	58	1	104	12	93	186	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	118	0	0	117	0	0	289	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	63	26	30	24	52	1	94	11	84	167	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	70	29	33	27	58	1	104	12	93	186	10
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	127	118	118	289								
Volume Left (vph)	28	33	1	93								
Volume Right (vph)	29	58	12	10								
Hadj (s)	-0.09	-0.17	-0.03	0.07								
Departure Headway (s)	5.0	4.9	4.9	4.8								
Degree Utilization, x	0.18	0.16	0.16	0.38								
Capacity (veh/h)	657	662	685	719								
Control Delay (s)	9.0	8.9	8.8	10.7								
Approach Delay (s)	9.0	8.9	8.8	10.7								
Approach LOS	A	A	A	B								
Intersection Summary												
Delay				9.7								
HCM Level of Service				A								
Intersection Capacity Utilization				41.5%	ICU Level of Service							A
Analysis Period (min)				15								

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	43	6	9	17	3	13	356	64	26	284	19
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.988			0.987			0.980			0.992	
Flt Protected		0.985			0.985			0.999			0.996	
Satd. Flow (prot)	0	1439	0	0	1274	0	0	1457	0	0	1477	0
Flt Permitted		0.985			0.985			0.999			0.996	
Satd. Flow (perm)	0	1439	0	0	1274	0	0	1457	0	0	1477	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	0%	0%	33%	7%	0%	0%	1%	0%	0%	0%	6%
Adj. Flow (vph)	23	48	7	10	19	3	14	396	71	29	316	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	32	0	0	481	0	0	366	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	43	6	9	17	3	13	356	64	26	284	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	48	7	10	19	3	14	396	71	29	316	21
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked												
vC, conflicting volume	887	923	366	910	898	457	361			487		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	887	923	366	910	898	457	361			487		
tC, single (s)	7.1	6.5	6.2	7.4	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.8	4.1	3.3	2.2			2.2		
pD queue free %	90	81	99	94	93	99	99			97		
cM capacity (veh/h)	226	252	661	175	253	595	1185			1069		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	78	32	481	366
Volume Left	23	10	14	29
Volume Right	7	3	71	21
cSH	256	235	1185	1069
Volume to Capacity	0.30	0.14	0.01	0.03
Queue Length 95th (m)	9.3	3.5	0.3	0.6
Control Delay (s)	25.0	22.8	0.4	0.9
Lane LOS	D	C	A	A
Approach Delay (s)	25.0	22.8	0.4	0.9
Approach LOS	D	C		

Intersection Summary			
Average Delay		3.3	
Intersection Capacity Utilization	51.5%		ICU Level of Service A
Analysis Period (min)		15	



Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Total AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↖	↗		↖	↗		↖	↗	
Volume (vph)	12	68	14	35	31	26	11	385	81	51	248	39
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.98		1.00	0.99		1.00	1.00	
Frnt		0.979			0.931			0.974			0.980	
Flt Protected		0.994		0.950			0.950			0.950		
Satd. Flow (prot)	0	1438	0	1637	1427	0	1686	1572	0	1074	1598	0
Flt Permitted		0.957		0.739			0.566			0.430		
Satd. Flow (perm)	0	1382	0	1165	1427	0	1003	1572	0	484	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			29			25			19	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	0%	8%	3%	11%	0%	0%	1%	5%	57%	1%	0%
Adj. Flow (vph)	13	76	16	39	34	29	12	428	90	57	276	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	39	63	0	12	518	0	57	319	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		12.9		12.9	12.9		43.1	43.1		43.1	43.1	
Actuated g/C Ratio		0.22		0.22	0.22		0.72	0.72		0.72	0.72	
v/c Ratio		0.34		0.16	0.19		0.02	0.46		0.16	0.28	
Control Delay		20.3		20.2	13.4		4.3	6.7		6.1	5.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		20.3		20.2	13.4		4.3	6.7		6.1	5.0	
LOS		C		C	B		A	A		A	A	
Approach Delay		20.3			16.0			6.6			5.2	
Approach LOS		C			B			A			A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.4		3.6	3.0		0.4	21.0		1.9	10.8	
Queue Length 95th (m)		18.3		9.5	10.4		1.9	47.2		7.0	24.6	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		517		427	542		721	1137		348	1154	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.20		0.09	0.12		0.02	0.46		0.16	0.28	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	8.3
Intersection LOS:	A
Intersection Capacity Utilization	65.4%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	54	370	18	18	282
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941		0.994			
Flt Protected	0.973					0.997
Satd. Flow (prot)	1616	0	1625	0	0	1645
Flt Permitted	0.973					0.997
Satd. Flow (perm)	1616	0	1625	0	0	1645
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Adj. Flow (vph)	78	60	411	20	20	313
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	0	431	0	0	333
Sign Control	Stop		Free			Free

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.5%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 7: Development Driveway & Park Street

144 Park Tower 2, TIS  
 2016 Total AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	54	370	18	18	282
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	78	60	411	20	20	313
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.93	0.93			0.93	
vC, conflicting volume	774	421			431	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	721	342			353	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	79	91			98	
cM capacity (veh/h)	363	657			1134	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	138	431	333
Volume Left	78	0	20
Volume Right	60	20	0
cSH	451	1700	1134
Volume to Capacity	0.31	0.25	0.02
Queue Length 95th (m)	9.6	0.0	0.4
Control Delay (s)	16.4	0.0	0.7
Lane LOS	C		A
Approach Delay (s)	16.4	0.0	0.7
Approach LOS	C		

Intersection Summary			
Average Delay		2.8	
Intersection Capacity Utilization		48.5%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
1: William Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	289	197	10	14	298	108	7	246	28	38	253	421
Ideal Flow (vphpl)	1775	1650	1000	1775	1650	1000	1000	1550	1000	1000	1650	1750
Storage Length (m)	45.0		0.0	25.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		0.99	0.99			1.00			1.00	0.95
Frts		0.993			0.960			0.987				0.850
Flt Protected	0.950			0.950				0.999			0.994	
Satd. Flow (prot)	1686	1620	0	1686	1556	0	0	1504	0	0	1603	1473
Flt Permitted	0.218			0.615				0.990			0.921	
Satd. Flow (perm)	384	1620	0	1078	1556	0	0	1490	0	0	1484	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			20			7				468
Link Speed (k/h)		50			50			50				50
Link Distance (m)		94.2			64.7			244.6				82.0
Travel Time (s)		6.8			4.7			17.6				5.9
Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flow (vph)	321	219	11	16	331	120	8	273	31	42	281	468
Shared Lane Traffic (%)												
Lane Group Flow (vph)	321	230	0	16	451	0	0	312	0	0	323	468
Turn Type	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0		28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		30.0	30.0		34.0	34.0		34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.0	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)	28.9%	62.2%	0.0%	33.3%	33.3%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	37.8%
Yellow Time (s)	2.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	1.0	-2.0	0.0	-2.0	-2.0	0.0	0.0	-2.0	0.0	0.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Max		C-Max	C-Max		Max	Max		Max	Max	Max
Act Effct Green (s)	52.0	52.0		32.8	32.8			30.0			30.0	30.0
Actuated g/C Ratio	0.58	0.58		0.36	0.36			0.33			0.33	0.33
v/c Ratio	0.73	0.25		0.04	0.78			0.62			0.65	0.60
Control Delay	21.3	10.0		22.0	37.4			31.2			33.0	5.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	21.3	10.0		22.0	37.4			31.2			33.0	5.9
LOS	C	A		C	D			C			C	A
Approach Delay		16.6			36.8			31.2			17.0	
Approach LOS		B			D			C			B	

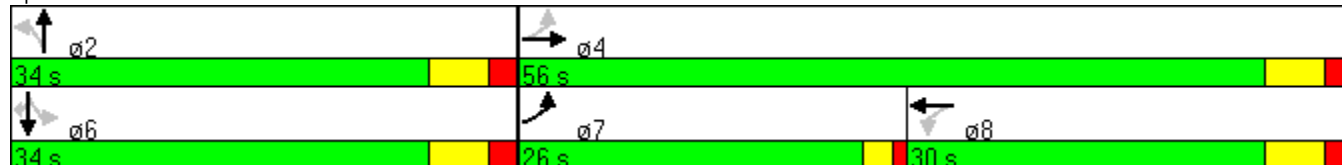


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)	26.5	17.4		1.7	64.3			43.3			46.5	0.0
Queue Length 95th (m)	47.9	29.2		6.6 #	132.3			70.5			74.7	21.1
Internal Link Dist (m)		70.2			40.7			220.6			58.0	
Turn Bay Length (m)	45.0			25.0								
Base Capacity (vph)	540	938		392	579			501			495	781
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.59	0.25		0.04	0.78			0.62			0.65	0.60

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 48 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 23.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 90.8%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	↑
Volume (vph)	174	43	505	290	47	348
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	1		1	1
Taper Length (m)		7.5	7.5		7.5	7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.973					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1605	0	1670	1900	1686	1473
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1605	0	1670	1900	1686	1473
Link Speed (k/h)	50			50	50	
Link Distance (m)	66.4			94.2	244.8	
Travel Time (s)	4.8			6.8	17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	193	48	561	322	52	387
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	0	561	322	52	387
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.8%
	ICU Level of Service B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
2: William Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔	↔	↔
Volume (veh/h)	174	43	505	290	47	348
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	193	48	561	322	52	387
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)	94					
pX, platoon unblocked						
vC, conflicting volume			241		1662	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			241		1662	217
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
pD queue free %			58		17	53
cM capacity (veh/h)			1331		63	825

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	241	561	322	52	387
Volume Left	0	561	0	52	0
Volume Right	48	0	0	0	387
cSH	1700	1331	1700	63	825
Volume to Capacity	0.14	0.42	0.19	0.83	0.47
Queue Length 95th (m)	0.0	16.0	0.0	28.7	19.0
Control Delay (s)	0.0	9.7	0.0	177.1	13.2
Lane LOS		A		F	B
Approach Delay (s)	0.0	6.1		32.7	
Approach LOS				D	

Intersection Summary					
Average Delay			12.6		
Intersection Capacity Utilization			56.8%	ICU Level of Service	B
Analysis Period (min)			15		



Lanes, Volumes, Timings  
3: Allen Street & King Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (vph)	35	61	40	28	55	34	59	624	17	18	827	30
Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Storage Length (m)	0.0		0.0	0.0		10.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.96		1.00			1.00	
Frnt		0.961				0.850		0.996			0.995	
Flt Protected		0.987			0.983			0.996			0.999	
Satd. Flow (prot)	0	1431	0	0	1622	1488	0	2995	0	0	2990	0
Flt Permitted		0.913			0.882			0.784			0.931	
Satd. Flow (perm)	0	1316	0	0	1449	1430	0	2357	0	0	2786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				38		5			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		106.8			77.9			90.8			81.8	
Travel Time (s)		7.7			5.6			6.5			5.9	
Confl. Peds. (#/hr)	23		16	16		23	24		23	24		23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	2%	4%	0%	6%	4%	5%
Adj. Flow (vph)	39	68	44	31	61	38	66	693	19	20	919	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	92	38	0	778	0	0	972	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	27.0	27.0		27.0	27.0	27.0	51.0	51.0		51.0	51.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0	57.0	57.0		57.0	57.0	
Total Split (s)	33.0	33.0	0.0	33.0	33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)	36.7%	36.7%	0.0%	36.7%	36.7%	36.7%	63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	2.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		29.0			29.0	29.0		53.0			53.0	
Actuated g/C Ratio		0.32			0.32	0.32		0.59			0.59	
v/c Ratio		0.34			0.20	0.08		0.56			0.59	
Control Delay		22.1			23.6	7.7		13.2			13.4	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		22.1			23.6	7.7		13.2			13.4	
LOS		C			C	A		B			B	
Approach Delay		22.1			18.9			13.2			13.4	
Approach LOS		C			B			B			B	

Lanes, Volumes, Timings  
 3: Allen Street & King Street

144 Park Tower 2, TIS  
 2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		16.1			11.3	0.0		39.2			50.4	
Queue Length 95th (m)		31.8			22.5	6.4		54.8			67.7	
Internal Link Dist (m)		82.8			53.9			66.8			57.8	
Turn Bay Length (m)						10.0						
Base Capacity (vph)		440			467	487		1390			1644	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.34			0.20	0.08		0.56			0.59	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	2.7 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	14.3
Intersection LOS:	B
Intersection Capacity Utilization	102.3%
ICU Level of Service	G
Analysis Period (min)	15

Splits and Phases: 3: Allen Street & King Street



Lanes, Volumes, Timings  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total PM



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	29	32	24	39	57	60	21	247	34	79	108	14
Ideal Flow (vphpl)	1000	1550	1000	1000	1550	1000	1000	1550	1000	1000	1550	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.962			0.948			0.985			0.990	
Fl <sub>t</sub> Protected		0.983			0.988			0.997			0.981	
Satd. Flow (prot)	0	1466	0	0	1452	0	0	1522	0	0	1505	0
Fl <sub>t</sub> Permitted		0.983			0.988			0.997			0.981	
Satd. Flow (perm)	0	1466	0	0	1452	0	0	1522	0	0	1505	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0			7.7			4.3			17.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	32	36	27	43	63	67	23	274	38	88	120	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	173	0	0	335	0	0	224	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.2%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
4: Allen Street & Caroline Street

144 Park Tower 2, TIS  
2016 Total PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	29	32	24	39	57	60	21	247	34	79	108	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	32	36	27	43	63	67	23	274	38	88	120	16
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	94	173	336	223								
Volume Left (vph)	32	43	23	88								
Volume Right (vph)	27	67	38	16								
Hadj (s)	-0.10	-0.18	-0.05	0.04								
Departure Headway (s)	5.5	5.3	4.9	5.2								
Degree Utilization, x	0.15	0.26	0.46	0.32								
Capacity (veh/h)	568	610	688	652								
Control Delay (s)	9.5	10.1	12.0	10.6								
Approach Delay (s)	9.5	10.1	12.0	10.6								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay			10.9									
HCM Level of Service			B									
Intersection Capacity Utilization			56.2%	ICU Level of Service	B							
Analysis Period (min)			15									

Lanes, Volumes, Timings  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	20	16	38	42	11	15	399	38	12	517	38
Ideal Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	1000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.961			0.984			0.989			0.991	
Flt Protected		0.982			0.980			0.998			0.999	
Satd. Flow (prot)	0	1416	0	0	1446	0	0	1481	0	0	1484	0
Flt Permitted		0.982			0.980			0.998			0.999	
Satd. Flow (perm)	0	1416	0	0	1446	0	0	1481	0	0	1484	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0			97.9			58.8			244.8	
Travel Time (s)		6.0			7.0			4.2			17.6	
Confl. Peds. (#/hr)	6		16	16		6	24		20	20		24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	23	22	18	42	47	12	17	443	42	13	574	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	101	0	0	502	0	0	629	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.0%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
5: Allen Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	21	20	16	38	42	11	15	399	38	12	517	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	22	18	42	47	12	17	443	42	13	574	42
Pedestrians		24			20			16			6	
Lane Width (m)		3.6			3.6			3.6			3.6	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			2			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (m)								165				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	1186	1185	636	1185	1185	490	641			506		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1183	1183	636	1183	1183	483	641			499		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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		
pD queue free %	81	87	96	68	74	98	98			99		
cM capacity (veh/h)	121	177	466	134	177	571	934			1035		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	63	101	502	630
Volume Left	23	42	17	13
Volume Right	18	12	42	42
cSH	177	168	934	1035
Volume to Capacity	0.36	0.60	0.02	0.01
Queue Length 95th (m)	11.3	24.4	0.4	0.3
Control Delay (s)	36.1	54.2	0.5	0.3
Lane LOS	E	F	A	A
Approach Delay (s)	36.1	54.2	0.5	0.3
Approach LOS	E	F		

Intersection Summary			
Average Delay		6.4	
Intersection Capacity Utilization		60.0%	ICU Level of Service B
Analysis Period (min)		15	

Lanes, Volumes, Timings  
6: John Street & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗		↖	↗	
Volume (vph)	38	39	13	84	99	66	28	370	54	41	430	52
Ideal Flow (vphpl)	1000	1550	1000	1775	1650	1000	1775	1650	1000	1775	1650	1000
Storage Length (m)	0.0		0.0	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (m)	7.5		7.5	7.5		7.5	7.5		7.5	7.5		7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.91	0.99		1.00	1.00		1.00	1.00	
Frnt		0.981			0.940			0.981			0.984	
Flt Protected		0.979		0.950			0.950			0.950		
Satd. Flow (prot)	0	1426	0	1637	1530	0	1686	1612	0	1686	1620	0
Flt Permitted		0.809		0.754			0.401			0.446		
Satd. Flow (perm)	0	1173	0	1187	1530	0	711	1612	0	788	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			63			18			15	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3			5.5			3.0			7.6	
Confl. Peds. (#/hr)	5		34	34		5	2		10	10		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	6%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	42	43	14	93	110	73	31	411	60	46	478	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	0	93	183	0	31	471	0	46	536	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	43.3%	43.3%	0.0%	43.3%	43.3%	0.0%	56.7%	56.7%	0.0%	56.7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0
Total Lost Time (s)	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)		13.7		13.7	13.7		38.3	38.3		38.3	38.3	
Actuated g/C Ratio		0.23		0.23	0.23		0.64	0.64		0.64	0.64	
v/c Ratio		0.36		0.34	0.46		0.07	0.45		0.09	0.51	
Control Delay		20.4		22.5	16.7		5.4	7.5		5.5	8.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		20.4		22.5	16.7		5.4	7.5		5.5	8.4	
LOS		C		C	B		A	A		A	A	
Approach Delay		20.4			18.7			7.4			8.2	
Approach LOS		C			B			A			A	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (m)		8.0		8.8	11.3		1.0	18.7		1.4	22.9	
Queue Length 95th (m)		17.1		17.6	23.7		4.3	45.7		5.8	55.4	
Internal Link Dist (m)		35.1			51.8			17.2			81.9	
Turn Bay Length (m)				25.0			10.0			35.0		
Base Capacity (vph)		439		435	601		454	1037		504	1041	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.23		0.21	0.30		0.07	0.45		0.09	0.51	

**Intersection Summary**

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	10.7
Intersection LOS:	B
Intersection Capacity Utilization	65.7%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 6: John Street & Park Street





Lanes, Volumes, Timings  
 7: Development Entrance & Park Street

144 Park Tower 2, TIS  
 2016 Total PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	41	34	418	77	62	509
Ideal Flow (vphpl)	1765	1900	1650	1900	1900	1650
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939		0.979			
Flt Protected	0.973					0.995
Satd. Flow (prot)	1613	0	1615	0	0	1627
Flt Permitted	0.973					0.995
Satd. Flow (perm)	1613	0	1615	0	0	1627
Link Speed (k/h)	50		50			50
Link Distance (m)	38.0		105.9			58.8
Travel Time (s)	2.7		7.6			4.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%
Adj. Flow (vph)	46	38	464	86	69	566
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	0	550	0	0	635
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.2%
Analysis Period (min)	15
	ICU Level of Service D

HCM Unsignalized Intersection Capacity Analysis  
7: Development Entrance & Park Street

144 Park Tower 2, TIS  
2016 Total PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	R
Volume (veh/h)	41	34	418	77	62	509
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	46	38	464	86	69	566
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)			106			
pX, platoon unblocked	0.89	0.89			0.89	
vC, conflicting volume	1211	507			550	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1176	388			436	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	74	94			93	
cM capacity (veh/h)	178	593			1013	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	83	550	634
Volume Left	46	0	69
Volume Right	38	86	0
cSH	260	1700	1013
Volume to Capacity	0.32	0.32	0.07
Queue Length 95th (m)	10.0	0.0	1.6
Control Delay (s)	25.2	0.0	1.8
Lane LOS	D		A
Approach Delay (s)	25.2	0.0	1.8
Approach LOS	D		

Intersection Summary			
Average Delay		2.5	
Intersection Capacity Utilization		80.2%	ICU Level of Service D
Analysis Period (min)		15	

## **Appendix E**

### **Signal Warrant Analyses**

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## Signal Warrant Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)



Horizon Year: Future Total  
 Region/City/Township: Waterloo

Major Street: William Street  
 Minor Street: Park Street

North/South?: N

Number of Approach Lanes: 1  
 Tee Intersection?: Y  
 Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	No	Warrant for new intersections with forecast traffic
120% Satisfied	No	Warrant for existing intersections with forecast traffic

Time Period	Major Street William Street						Minor Street Park Street					
	Eastbound			Westbound			Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
	AM Peak Hour		372	68	226	113		32			371	
PM Peak Hour		174	43	505	290		47			348		

Average Hourly Volumes			
Volume	AM	PM	AHV
1A - All	1182	1407	647
1B - Minor	403	395	200
2A - Major	779	1012	448
2B - Cross	32	47	20

### Warrant 1 - Minimum Vehicular Volume

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	647
		% Fulfilled				89.9%

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	180	255	180	255	200
		% Fulfilled				78.2%

### Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	448
		% Fulfilled				62.2%

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	20
		% Fulfilled				26.3%

## Signal Warrant Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)



Horizon Year: Future Total  
 Region/City/Township: Waterloo

Major Street: Park Street  
 Minor Street: Allen Street

North/South?: Y

Number of Approach Lanes: 1  
 Tee Intersection?: N  
 Flow Conditions: Restricted

PM Forecast Only? N

Warrant Results		
150% Satisfied	No	Warrant for new intersections with forecast traffic
120% Satisfied	No	Warrant for existing intersections with forecast traffic

Time Period	Major Street Park Street						Minor Street Allen Street					
	Northbound			Southbound			Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
	AM Peak Hour	13	356	64	26	284	19	21	43	6	9	17
PM Peak Hour	15	399	38	12	517	38	21	20	16	38	42	11

Average Hourly Volumes			
Volume	AM	PM	AHV
1A - All	861	1167	507
1B - Minor	99	148	62
2A - Major	762	1019	445
2B - Cross	73	101	44

### Warrant 1 - Minimum Vehicular Volume

1A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	All Approaches	480	720	600	900	507
		% Fulfilled				70.4%

1B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Minor Street Approaches	120	170	120	170	62
		% Fulfilled				36.3%

### Warrant 2 - Delay To Cross Traffic

2A	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Major Street Approaches	480	720	600	900	445
		% Fulfilled				61.8%

2B	Approach Lanes	1		2 or more		Average Hourly Volume
	Flow Conditions	Free	Restricted	Free	Restricted	
			X			
	Traffic Crossing Major Street	50	75	50	75	44
		% Fulfilled				58.0%

**IN THE MATTER OF *THE CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED  
AND IN THE MATTER OF AN APPLICATION MADE BY 144 PARK LTD. FOR THE APPOINTMENT OF A TRUSTEE  
UNDER SECTION 68(1) OF *THE CONSTRUCTION LIEN ACT*, R.S.O. 1990, c. C.30, AS AMENDED**

Court File No. CV15-10843-00CL

***ONTARIO***  
**SUPERIOR COURT OF JUSTICE**  
**(COMMERCIAL LIST)**

Proceedings commenced at Toronto

**AFFIDAVIT OF OLIVER ROMANIUK**

(sworn October 8, 2015)

**Oliver Romaniuk**

182 Westwood Ave.

Toronto, ON, M4K 2B1

Tel: (416) 909-0521

E-mail: oliver.romaniuk@gmail.com

**Self-Represented**

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**RESPONSE RECORD**  
(returnable October 5, 2015, hearing  
rescheduled to October 16, 2015)

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**Oliver Romaniuk**  
182 Westwood Ave.  
Toronto, ON, M4K 2B1  
Tel: (416) 909-0521  
E-mail: oliver.romaniuk@gmail.com

**Self-Represented**