Court File No. CV15-10843-00CL

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

RESPONDING MOTION RECORD OF WILLIAM SEEGMILLER

October 14, 2015

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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

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ONTARIO SUPERIOR COURT OF JUSTICE COMMERCIAL LIST

PROCEEDING COMMENCED AT TORONTO

NOTICE OF APPEARANCE

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TAB 2

Court File No. CV15-10843-00CL

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 WILLIAM SEEGMILLER

I, William Seegmiller, of the City of Kitchener in the Province of Ontario, MAKE OATH AND SAY:

1. I am the Purchaser of Townhouse Unit 105 and two parking spot units at the development known as 144 Park Street in Waterloo which is the subject of these proceedings. As such, I have knowledge of the matters to which I have hereinafter deposed. Where I have included information on the basis of information and belief, I have stated the source of that information or belief and verily believe it to be true.

2. I have sworn this Affidavit in response to a motion of the court-appointed Trustee for 144 Park Ltd. ("144 Park") for directions with respect to purchasers of two parking sports and for no other or improper purpose.

BACKGROUND

The Agreement of Purchase and Sale

3. On May 28, 2009, I entered into an agreement of purchase and sale (the "APS") with 144 Park to purchase Townhouse Unit 105 (the "Townhouse") together with two parking units and two locker units for \$616,000. I paid a total deposit of \$123,200, being 20% of the purchase price. A copy of the APS and an addendum is attached as **Exhibit "A"**.

4. I purchased the Townhouse in order to provide a residence for my parents. I did not intend to personally occupy the Townhouse myself.

5. The Townhouse is a 3 bedroom unit of approximately 2,000 sq. ft.

6. At the time I purchased the Townhouse, I was offered the option of purchasing one or two parking units with it. I negotiated with the purchasers over the price. I do not recall the exact price that was agreed for the two parking units, but the final APS only reflected a global price of \$616,000 for the Townhouse and the parking.

7. The inclusion of two parking units was critical to my decision to purchase the Townhouse. It was not for my personal use, but instead for use by my parents and I would not have considered purchasing the Townhouse with fewer parking units under any circumstances.

Collins Barrow is appointed as Trustee over 144 Park

8. I understand from my review of documents in this case that 144 Park acquired the property at 144 Park Street, Waterloo (the "Property") in September 2011 for the purpose of constructing a residential condominium project containing approximately 149 total residential

units and that the project was at some point planned to have a total of 132 permanent parking units, plus 17 visitor units.

9. After the construction was completed, but prior to registration of the condominium declaration and the closing of pre-sale agreements, 144 Park commenced this proceeding under the *Construction Lien Act* for the appointment of a Trustee. I understand that this appointment was supported (or at least not opposed) by 144 Park's secured creditors.

10. On January 22, 2015, the Superior Court Commercial List appointed Collins Barrow Toronto Ltd. ("Collins Barrow") as Trustee over 144 Park. The Trustee was authorized, *inter alia*, to act as receiver and manager over the property and to close the existing agreements of purchase and sale for the 129 pre-sold units, including my Townhouse.

The Parking Spot Allocation

11. I understand that the condominium Declaration in respect of 144 Park was registered on May 25, 2015 with 149 permanent parking units and 10 temporary parking spaces.

12. On June 5, 2015, I received a letter from Collins Barrow offering to "buy back" one of my parking spots for \$20,000.00 or an alternative parking arrangement at a nearby development until parking at an adjacent development, One 55 Uptown ("155 Uptown"), became available. Neither of these were acceptable to me. Attached as **Exhibit "B"** is a copy of Collins Barrow's letter to me of June 5, 2015.

- 4 -

13. On June 15, 2015, I received a letter from Harris, Sheffer LLP advising for the first time that unless I consented to give up one of my parking spots for \$33,900.00 that the Trustee would seek court approval to terminate my APS.¹

14. On July 21, 2015, my lawyers received a fax from Karen McNeill of Harris, Sheaffer LLP advising that due to the "current shortage of parking in 144 Park," one of my parking spot units was being unilaterally reallocated from the location directly adjacent to the Townhouse on Level 1 to Level 3. A copy of the fax from Ms. McNeill is attached as **Exhibit "C"**.

15. I have refused to accept the Trustee's offer to give up one parking spot for only \$33,900 because the inclusion of two parking spots was critical to my purchase of the Townhouse and I believed that the proposed price reduction did not adequately reflect the market value of the parking spot.

Opposition to Trustee's Motion

16. On September 25, 2015, my lawyers received notice of this motion from the Trustee requesting, *inter alia*, that the Court empower the Trustee to terminate agreements of purchase and sale if the purchasers of two parking spot units would not agree to return one of their units in exchange for a price reduction of \$33,900.

17. I have considered the Trustee's stated goal of improving the saleability of 20 "Unsold Units" at 144 Park Street. I have reviewed the report of Mint Realty appended to the Fourth Report of the Trustee and understand that Mint Realty believes that the 20 unsold units would be "extremely difficult to sell" without the inclusion of one parking unit. I also understand that one

¹ Harris Sheaffer redacted letter dated June 15, 2015, Trustee Motion Record returnable October 5, 2015, Tab 2L

or more of the secured creditors of 144 Park oppose the sale of the Unsold Units without the inclusion of one parking spot.

18. Between September 30, 2015 and October 9, 2015, several of the purchasers of two parking space units, including myself, wrote to the Trustee through our lawyers to make further inquiries about the Trustee's position that the 20 unsold units must include one parking spot. We only received the Trustee's final responses to our various questions along with the Trustee's Supplementary Fourth Report, delivered to the Service List via email on October 13, 2015. This correspondence is attached to the Trustee's Supplementary Fourth Report.

19. I understand that Mint Realty, the real estate broker who advised the Trustee to demand the return of one parking spot from each of the two parking spot purchasers, is also responsible for the marketing and sale of the 20 Unsold Units. Based on the Trustee's responses to date, Mint Realty will receive an undisclosed fixed percentage of the purchase price from the 20 Unsold Units. Increased parking spaces for these units will no doubt increase the price at which they could sell, thereby increasing Mint Realty's commission on those sales.

20. I understand that the Trustee will also retain Mint Realty to broker the sale of any units which are not sold pursuant to the termination of agreements of purchase and sale if the Trustee's relief is granted on this motion. Accordingly, Mint Realty will also benefit if the Trustee terminates existing agreements of purchase and sale for units at 144 Park by earning brokerage fees in respect of those units.

21. The Trustee has not provided any valuation of the impact of the taking away of one parking spot on my Townhouse or the other units being threatened with termination. The Trustee has only provided a valuation by Mint Realty with respect to the 20 unsold units.²

22. Mint Realty's own analysis reveals that the market value of a parking spot is worth far in excess of the \$33,900 that the Trustee now proposes as a credit to purchasers who give up one parking spot. For instance, according to Mint Realty, the addition of one parking spot to Unit 106, a townhouse unit that is similar to and located directly beside my Townhouse, increases its market value by an additional \$238,900. On Mint Realty's own analysis, presumably the taking away of one parking spot from my Townhouse would have a similarly negative impact on its value, and at least one far in excess of the \$33,900 currently being offered by the Trustee.

23. Moreover, Mint Realty suggests that, Unit 106 with one parking spot will be marketed at \$634,990. Presumably, if the Trustee is allowed to cancel my APS for Unit 105, it will re-market my unit for a similar price. This price is \$18,990 more than the \$616,000 which I agreed to pay for Unit 105 with two parking spots. This will be a significant windfall to secured creditors who will simply be allowed to profit from the appreciation in value of the individual units since the time of my pre-construction purchase in 2009.

24. Further, I note that \$100,746 is the smallest value that Mint Realty attributes to any single parking spot in its analysis, for a small 690 sq ft. unit (Suite 503).

² Trustee's Charter re Answer to Written Interrogatories and related documents, Supplement to the Fourth Report of the Trustee, Tab 1C

25. Finally, the Mint Realty valuation also assumes that the units will be sold in a finished state. However, I understand that the Trustee has not proceeded with the finishing of each of the units to prepare them for closing.

26. As late as August 2015, I had a number of discussions with David Marshall, President of MarshallZehr, one of 144 Park's secured creditors, about possibly purchasing my unit and/or others in an unfinished state, i.e. without any fixtures. Representatives of Mint Realty and the Trustee were involved in these discussions. While I understand that those discussions were without prejudice, and we could not reach an agreement for various reasons, I did learn from those discussions that my unit and others remain unfinished. Mint Realty's valuation does not take this into account.

Prejudice Upon Termination

27. If the order sought by the Trustee is granted, I will not give up my one of my two parking spots for only \$33,900.00 when their value is clearly far in excess of this.

28. If my agreement is terminated, I am not certain if I will retain my deposit. According to the information provided by the Trustee, half of the deposit advanced by me for my Townhouse is being held by counsel to 144 Park, but the other half is secured by a performance bond issued by Aviva Canada. I do not know if this is accurate or whether Aviva would honour any such claim.

29. However, even if I do get my entire deposit back, the Trustee's proposal does not make me whole.

30. I borrowed the deposit of \$123,200 from a company that I control. While no formal agreement for the repayment of the loan has been executed, I will have to repay it with interest. At an estimated 7% market rate, the interest costs from July 2009 (the month in which I entered into the APS) are approximately \$54,619.

31. Further I have incurred legal expenses of approximately \$5,500.00 in connection with my purchase of the Townhouse and various legal advice I have sought with respect to it since 2009. This amount does not include any legal fees for responding to the Trustee's current motion.

32. In anticipation of occupancy, I also retained the services of an interior designer at Gardy Interiors Ltd. to consider different options for the design of the Townhouse. This cost me approximately \$3,470.

SWORN before me at the City of Kit Toronto, in the Province of Ontario, this/ 4 day of October, 2015. [Name] William Seegoniller A Commissioner for taking affidavits.

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

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TAB 2A

This is Exhibit "A" referred to in the affidavit of William Seegmiller, sworn before me this 14^{th} day

of October, 2015

A COMMISSIONER FOR TAKING AFFIDAVITS



1023

Residential Unit No. 3 __ Lovel No. __ Sulle No. 105

Model Type Townhoise

AGREEMENT OF PURCHASE AND SALE

The undersigned, <u>William Seegmiller</u> (collectively, the "Purchaser"), hereby spress with 144 PARK LTD. (the "Verder") to purchase the above-noted unit, as outlined for Kentification purposes only on the sketch attached hereic as Schedule "A", together with two (2) Parking Unit(s) and two (2) Locker Unit(s), all of which shall be allocated by the Verder in its sole discretion being (a) proposed unit(s) in the Condominhum, to be registered against those lands and puenties signate on the north est corner of Alike Street and Park Street in the City of Waterloo, and which is proposed to be municipally known as 144 Park Street. Waterloo, Ontario (hereinsfler called the "Property"), together with en undivided interest in the common character applications to such which and the exclusive use of these parts of the common character statisching 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 _Six Hundred Stateen Thousand and Zern Cents ______ (S616,000,00) DOLLARS in lawful money of Canada, ٤. payable as follows:

- to Harris, Sheaffer LLP, in Trust, (the "Vendor's Solicitors" or "Escroir Agent" or "Trustee") in the following amounts at the following times, by cheque or bank draft, as deposite pending completion or other termination of this Agreement and to be eredited on secourt of the Purchase Price on the Occupancy Date: (8)
 - (i)the sum of FIVE THOUSAND (\$5,000.00) Dollars submitted with this Agreement:
 - (ii)
 - (6) bo sum of ______ Dollars submitted with this Agreement and post-dated forty-five (45) days following the date of execution of this Agreement by the Purchaser, being 5% of the Purchaser Price:
 - (iv)) Dollars submitted with this Agreement and
 - (y)
- (b) the sum of ______ (S_____0,0) bank draft to the Vender's Soficitors on the Occupancy Date, being 5% of the Purchase Price; _) Doltars by contified cheque or
- the balance of the Putchase Price by certified cheque on the Title Transfer Date to the Vendor or as the Vendor may direct, subject to the adjustments hereinafter set (0) forth.
- the Purchaser agrees to pay the sum at hereinfectore set out in peragraph 1 (a) as a deposit by choque payable to the Escrew Agent with such last-mentioned party to hold such funds in trust as the escrew agent acting for and on behalf of TWC index the providence in 0 Deposit Trust Agreement (CDTA') with respect to this proposed condominism to the express understanding and agreement that as soon as presented security for the sold deposit memory has been provident in accordance with Seculoa § of the Act, the Biscrow Agent shall be emitted to release and distance sold ments to the Verder for to wheneseever and her distance the Verder term of the Verder for the sold deposit memory has been provided and the Verder for the Secure Agent shall be emitted to release and distances sold finds to the Verder for to wheneseever and her distances the Verder for the Secure Agent shall be emitted to release and distances sold finds to the Verder for the verder for the Verder for the Secure Agent shall be emitted to release and distances sold finds to the Verder for the verder term of the Verder for th (d) direct).

2.

- The Purchaser shall occupy the Unit on the First Tentative Occupancy Date (as defined in the Statement of Critical Dates being part of the Parion Addendum as hereinafter defined), or such extended or accolerated deto that the Unit is substantially completed by the Vordor for occupancy by the Purchaser in accordance with the terms of this Agreentent including, without limitation, the Tarion Addendum (the "Occupancy Date"); (a)
- The basisfer of file to the Unit dual be completed on the later of the Occupancy Date of a date established by the Vendor in accordance with Paragraph 14 hereof (the "Title Transfer Date"); (b)
- (\$) The Purchaser's address for delivery of any notices pursuant to this Agreement or the Act is the eddress set out in the Tarion Addendum;
- Notwithstanding anything contained in this Agreement (or in any schooless encoded encode) to the contrary, it is expressly understood and agreed that if the Purchasser has not excoured and delivered to the Vendor's disclosure statement and a copy of this Agreement duty executed by both parties hereio, within fifteen (15) days from the date of the Purchasser's exocution of his Agreement as not below, then the Purchasser hall be denoted to be in default herearder and due Verdor shall be verbe understated the purchasser's exocution of his Agreement as not below, then the Purchasser hall be denoted to be in default herearder and due Verdor shall be verb understate the Agreement and a copy of the purchasser's exocution of his Agreement as not below, then the Purchasser hall be denoted to be in default herearder and due Verdor shall be verb understate the Agreement at any time thereafter and purchasser, wherearen the transfer the Agreement at any time thereafter and the Verdor's time thereafter and the Verdor's time thereafter and the verb default be denoted to be in default becauted as the Verdor shall be verb understated herearder and the Verdor's time thereafter and the verb default be denoted to be in default becauted as the Verdor shall be verb verb thereafter and the Verdor's time thereafter and therea (d) behalf of the Vender.

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

Schedulo "A" - Unit Plan/Stetch Schedulo "B" - Features & Finishes Schedulo "C" - Occupancy Licenze Schedulo "C" - Varning Provisions Schedulo "C" - Receipt Confirmation Schedulo being the Tarion Warnaty Corporation Statement of Critical Dates and Addendem to Agreement of Purchase and Sale (collectively the "Tarion Addendom") and such other Schedulose annexed hereto and specified as Schedulo "...".

	•				
DATED, signed, sealed and delivered this	28:h	day of	Моу		. 2009.
SIGNED, SEALED AND) DELIVERED) In the presence of)	Willion FURCHASER:	n Seegmiller	Peb.16, 1959 D.O.8,		
WITNESS: (as to all Purchasor's signatures, if more than one purchasor))			D.O.B.		
			Faesimila:		
The undersigned accepts the above offer and	agrees to complete thi	strangaction in occord	ance with the terms thereof.		
DATED, elgned, sealed and delivered, this_	28()	day of		. 2009.	
Vendor's Solfekon: HARRS, SHEAFPER LLP Suite 610 - 4100 Yonge Street Torente, Ontario, M2P 3B3 Atta; Mark L. KAROLY Telephoner (416) 2350-3600 Fas: (416) 230	-5300		Per: Authorited Steads Office I have the authority to bind the Corporation		

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- The meaning of words and phrases used in this Agreement and its Schedules shall have the meaning assoribed to them in the Condominium Act. 1998, S.O. 1998, C.19, the regulations thereunder end any amoudments thereto (the "Act") and other terms used herein shall have escribed to them the definitions in the Condominium Documents unless otherwise provided for as follows:
 - "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 araended from flore to time;
 - (d) "CRA" means the Canada Rovenue Agency or its successors:
 - (e) "Creating Documents" means the declaration and description which are inlended 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 Ocenpancy" 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 Occupacoy 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" bereof;
 - (1) "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 Tarlon Warranty Corporation or its successors.
- Finishes

4.

3.

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 suile/vingnetic furnishings and appliances, decor, upgrades, artist's renderings, scale model(s), improvement, mirrors, drayes, 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 failshes 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 sgents, 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 intrevocably choose the colours and finishes for the Purchaser agrees to accept the Vendor vers selections.

<u>Deposits</u>

(a)

5.

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 avidence, in the form prescribed by the Act, of payment of monites 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 ovidence to the address of the Purchaser noted in the Tarion Addendum. The Purchaser further acknowledges and agrees that any eleques provided to the vector on account of the Purchaser further acknowledges and accordingly interest as prescribed by the Act will not account of the Purchaser further acknowledges and accordingly interest as provided to its action 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 'TTA''). If the Purchases not a resident of Canada afor the purposes of the ITA the Vendor shall be entilled to withhold and remit to CRA the appropriate amount of Interest payable to the Purchaser on account of the deposits paid hermunder, under the ITA.

All deposits peld by the Purchaser shall be held by the Estrow Ageol 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 monites frozenived from the Purchaser the Estrow Agent shall be entitled to withdraw such deposit monites 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 (insurance duby insuring the deposit monies so withdrawn (or intended to be withdrawn), and delivers the said excess condominium deposit insurance not be to solve the said excess condominium deposit insurance the Vendor) to the Escrow Agent holding the deposits for which said policies have been provided as security, in accordance with the provisions of section 21 of O. Reg. 48/01.

Adjustments

(a)

6.

Commoncing 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:

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(b)

- all utility costs including electricity, gas and water (unless included as part of the common expenses); and
- 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 Trile Transfer Date, with that day itself appertioned 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 pald 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 saries 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 Furchaser on account of the Furchase Price, shall be adjusted and credited to the Furchaser 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:
 - (f) 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 remlited 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 second of chattels in Schedule "B";
 - (ii) Any new taxes imposed on or payable in respective 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) Any new taxes imposed on the Unit by the federal, provincial, or municipal government or any increases to existing taxes currently imposed on the Unit by such government. Without limiting the generality of any provision of this Agreement, the Purchase Price excludes provincial sales tax which may be payable on the Unit, on its own or as part of a hermonized sales tax and accordingly, if same is payable in respect of the transaction contemplated by this Agreement, it shall be paid by the Purchaser on the Unit Transfer Date in addition to the Purchase Price as an adjustment on closing or as otherwise directed by the Vender, Without limiting the garplicable, shall be paid by the Purchase Price excludes Provincial Sales Tax which may be payable on the Unit which, if applicable, shall be paid by the Purchaser in addition to the Purchase Price;
 - (iv) 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;
 - (v) The cost of the TWC concliment fee for the Unit (together with any provincial or federal texes exigible with respect thereto);
 - (vi) The cost of utility meters, water meter installations, hydro and gas meter or check meter installations, water and sower 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 enorgization 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;
 - (vii) The cost of any earbon monoxide delector installed in the Unit (if applicable);
 - (viii) The charge imposed upon the Vendor or its solicitors by the Law Society of Upper Cauada upon registration of a Transfer/Deed of Land or Charge/Mortgage of Land or any other instrument;
 - (ix) 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 tondered 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;
 - (x) The Purchaser agrees to pay Three Hundred (\$360.00) Dollars towards the cost of obtaining (partial) discharges of morigages not intended to be assumed by the Purchaser;

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- (c) In the event that the Purchaset desires to increase the amount to be paid to the Vendor's patienters, 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 tills 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 another to implementate network of the Vendor's Solicitor's the legal fees and another to implement any of the foregoing changes to pay the Vendor's Solicitor's the legal fees the implementation 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 elosing documents so requested by the Purchaser and agreed to by the Vendor's Solicitors' legal fees for an another solicitor and agreed to by the Vendor's Solicitors' legal fees for any of the foregoing changes to any of the interim (Solicitors' Legal fees for any other solicitors' legal fees for of, or to implement, any of the foregoing changes so requested.
- It is further understood and agreed that the Unit may include a tental or leased furnace or hot water tenk or HVAC equipment and associated components which would tentain 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 Condominum, the Purchaser shall pay the monthly retailedeac charges assessed with respect thereto from and after the Occupancy Date, and in any event shall execute all requisite rental or security transmitted to construct the monthly detailed to be appreciated on the security transmitted to be provided to be and the security transmitted to be provided to be and the security transmitted to be provided to be and the security transmitted to be provided to be and the security transmitted to be appreciated to (f) documents in connection therewith.
- The Purchaser acknowledges that it may be required to entor into an agreement with the supplier of hydro services to the Condominium (the "Hydro Supplier") on or before the Closing Date. Furthermore, the Purchaser selonowledges that such agreement may require the Purchaser to deliver a security doposit 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. (g)
- (h) It is acknowledged and agreed by the parties hereto that the Purchase Price already includes a component It is acknowledged and agreed by the parties hereto that the Purchase Price alcady includes a component equivalent to the federal goods and services tax exlgble with respect to this purchase and sale transaction less the new bouing rebute, if applicable (hereinafter referred to as the "GST"), and that the Vendor shall remit the GST 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, in those elevanstances where the Purchase Price (exclusive of the GST component thereof) is less than ASO,000,00the Purchaser qualifies for the new housing rebate applicable pursuant to section 254 of the Excles Tax Act (Canada), as amended (the "Robate"), and further warrants and confirms that the Purchaser is a natural person who is requiring the Property with the intention of being the sole beneficial owner thereof on the Title Transfer Date (and not as the sgent 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 Excite Tax Act) shall personally occupy the Unit as his, her or their pinnary place of residence, for such period of time as shall be required by the Excles Tax Act, and any other applicable legislation, in order to entitle the Purchaser's capalisition of the Unit. The Purchaser for and in favour of the Vendor) in the Excite Tax Act hereaset is a capalitable legislation, in order to entitle the Purchaser's capalisition of the Durates thereof to and in favour of the Vendor) in the respect of the Purchaser's capalitable of the Unitax assignment thereof to and in favour of the Vendor) in respect of the Purchaser's capalisition of the Unit. The Purchaser further warrants and represent Vendor) to respect of the Furchaser's acquisition of the Unit. The Furchaser further warrants and represents that he or she has not claimed (and hereby covenants that the Furchaser shall not hereafter claim), for the Furchaser's own account, any part of the Robate in connection with the Furchaser's acquisition of the Unit, Purchaser's own account, any part of the Rebate in connection with the Purchaser's acquisition of the Unit, save as otherwise hereinafter expressly provided or contemplated. The Purchaser hereby invocably assigns to the Vendor all of the Purchaser's rights, interests and entitlements to the Rebate (and concomitantly releases all of the Purchaser's olding or interests in and to the Rebate, to and in favour of the Vendor), and hereby irrevocably authorizes and directs CRA to pay or credit the Rebate directly to the Vendor. In addition, the Purchaser shall execute and deliver to the Vendor, forthwith upon the Vendor's request for same (and in any event on or before the Title Transfer Date), all requisite documents and acsurances that the Vendor 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 (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 Form"). The Purchaser covenants and agrees to indemnify and save the Vendor hine to the disk to be and against any loss, cost, damage and/or liability (including an amount equivalent to the Rebate, plus penaltics and interest theroon) 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 discritized to the Rebate, or as a result of the inability in assign the benefit of the Rebate to the Vendor (or the ineffectiveness of the documents purporting to assign the benefit of the Rebate to the Vendor). As security for the payment of such amount, the Purchasor does hereby charge and pledge his/her 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:
 - if the Purchaser does not qualify for the Rebate, or fails to deliver to the Vendor or the Vendor's (1)Solicitors forthwith upon the Vendor's request for same (and in any event on or boftre the Title Transfer Date) the Robate Form duly executed by the Purchaser, together with all other requisite documents and assurances that the Vendor may reasonably require from the Purchaser's purchaser's solicitor in order to confirm the Purchaser's elligibility for the Robate and/or to ensure that the Vendor unimately acquires (or is otherwise assigned) the benefit of the Rebate; or
 - if the Vendor believes, for whatever reason, that the Purchaser does not qualify for the Rebate, (ii) regardless of any documentation provided by or on behalf of the Purchaser (including any statutory declaration swom 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 sollcitor on or before the Title Transfer

then notwithstanding anything hereinbofore or hereinafter provided to the contrary, the Purchasor shall be obliged to pay to the Vendor (or to whomsoever the Vendor may in writing direct), by certified cheque debvered on the Title Transfer Date, an amount equivalent to the Rebate, in addition to the Purchaso Price and in those circumstances where the Purchaser maintains that he or she is eligible for the Robate 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 file the Rebate Form directly with (and 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 the Title Transfer Date with the express written approval of the Vendor before or after the Title Transfer Date, the Purchaser shall not be colided to the Rebate, but may povertheless be entitled to

pursue, on his or her own after the Title Transfer Date, the new residential rental property rebate directly with CRA, pursuant to section 256.2 of the Exclose Tax Act.

- (i) Notwithstanding any other provision herein contained in this Agreement, the Purchaser acknowledges and agrees that the Purchase Price does not include any C.S.T. exigible with respect to any of the adjustments payable by the Purchaser provisant to this Agreement, or any extrus or upgrades purchased, ordered or chosen by the Purchaser from the Veador which are not specifically set forth in this Agreement, and the Purchaser covenants and agrees to pay such C.S.T. 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 Purchaser frie methade, or discusser the state of excitation of extras, changea, 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 boing hereinafter referred to as the "Reduction"), then the Purchaser shall pay to the Vendor on the Title Transfer Date (as determined by the Vendor in its sole and absolute discretion) the Reduction.
- (i) An administration fee of TWO HUNDRED AND FIFTY (\$250.00) DOLLARS shall be charged to the Purchaser for any cheque payable hereunder doilvered to the Vendor or to the Vendor's Solicitors and not accepted by the Vendor's or the Vendor's Solicitor's back 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.
- <u>Tiile</u> 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 oxpanse and shall not call for the production of any surveys, title deeds, abstrats of title, grading certificates, occupancy permits or certificates, nor any other production of any surveys, title deeds, abstrats of title, grading certificates, occupancy permits or certificates, nor any other proof or evidence of the title or occupiability of the Unit at the Purchaser's 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 walve, 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 trutined to the Purchaser and the Vendor shall be and after deducting any availed objections so made within the Examination Period, the Purchaser shall be related to the specification to some or all of the required by the Act to be paid after deducting the vaceosted the title of the Vendor to the Unit. The Purchaser as the any valid objections to made within the Examination Period, the Purchaser shall be continued by the available and egrees that the Vendor's Solicitors, and that some shall constitute a satisfactory manner of responding to the Furchaser's requisitions, th

Direction Re: Title

8.

9.

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 tille 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 entiled 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

- (a) The Purchaser agrees to accept fills subject to the following:
 - (1) 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 encrosechment agreement(s) with any governmental suborities or adjacent land owner(s), provided that same are compiled with as at the Thile Transfer Date;
 - (lii) easements, rights-of-way and/or llcences now registered (or to be registered hereafter) for the supply and installation of utility services, dreinage, telephone services, electricity, gas, storm and/or senitary sowers, weter, cable television/internet, recreational and shared faeillties, 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, repeating the vendor (or by the avenent(s) or scattered agreement(s) or neighbouring properties, that any services, feets, support and/or servicing purposes, and/or pertaining to the sharing of any services, feets, support and/or servicing purposes, and/or pertaining to the sharing that any such easement and cost-sharing agreements or redprocal agreements are (insofar ss the obligations theraunder pertaining to the Property, or any portion thereof, are concerned) compiled with as at the Title Transfer Date;
 - (iv) registered municipal agreements and registered agreements with publicly regulated utilities and/or with local ratepayer associations, beduding without limitation, any development, site plan, condominium, subdivision, Section 37, colleteral, 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

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complied with as at the Thile 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 utilifies in rospect of which no formal bill, account or invoice has been issued by the relevant utility autority (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 areadment to) any of the aforementioned easements, Development Agreements, proproad 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 hereiff 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 tille. The Purchaser functioned that the relation 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, of security (e.g. to their government all, for the purposes of the purchases and sate 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 techsion system serving the Condontinium 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 egroes 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 Tate 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 liou of the Vendor's.
- (e) The Vendor shall be eatilied to insert in the Transfer/Deed of Land, specific covenants by the Purchaser pertaining to any or all of the restrictions, easemants, 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 transferce 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 encombered 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 purchaser agrees to accept the Vendor's Solicitors' undertaking to obtain and register (partial) discharges of such mortgages in scher 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 Transfer Date subject to the Vendor or its solicitors providing to 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 Tille Transfer Date and to advise the Purchaser or the Puschaser'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 acither the Occupancy Date nor the Title Transfer Date shall be delayed on that accound.

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 Daty.

Title Transfer Date

14.

- (a) The provisions of the Tarion Addendum reflect the TWC's polleles, regulations and/or guidelines on extensions of the First Tentailve 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 Tentaitve Occupancy Date, Subsequent Tentaitve 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 Vondor up to a maximum of \$7,500.00, as more particularly set forth in the Regulations to the Orkerto Norme Warranties Plan Act, R.S.O. 1990, as amended (the "ONHWTA"), and under no circumstances shall the Purchaser be entilled to template this transaction or otherwise testing 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 Furchaser or his or her solicitor of the registration of the Creating Desenants as the Title Transfer Date. The Title Transfer Date once designated may be extended from time to time by the Vendor's Solicitors provide that it shall not be more that 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 theseunder from time to time, and to any easement, license or other agreement concerning the Condomitolium and the Condomitolium Documents. The Purchaser further agrees to consonit to and execute all documentation as may be required by the Vendor in this regard and the Purchaser hereby intervocably appoints the Vendor as the Purchaser's altomety 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 constanter'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 tea (10) days of written denand fram 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 Purchaser functions of the purposes of the source of the purposes of the purposes in accordance with this Agreement. Without limiting the generality of the foregoing and notwithstanding any other provision in this Agreement to the contrary, which the foregoing and notwithstanding any other provision in this Agreement to the source or acceptable mortgage will be advancing funds to the Purchaser sufficient to pay the balance due on the Tild Transfer Date. If the Purchaser fails to provide the mortgage sceptable to be vendor confirming that the sald trading institution or other mortgage sceptable to the Vendor confirming that the sald trading institution or acceptable mortgage will be advancing funds to the Purchaser sufficient to pay the balance due on the Tild Transfer Date. If the Purchaser fails to provide the morigage sporoval as aforesaid, then the Purchaser fails to provide the
- 16. The Purchaser acknowledges that notwithstanding any rule of law to the contrary, that by executing this Agreement, it has not acquired any equilable 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 List, or any other document providing evidence of this Agreement against tills to the Property. Unit or the Condominium and further agrees not to give, register, or pendit to be registered any enumbrance against the Property. Unit or the Condominium Should the Purchaser he in default of his or her obligations hereunder, the Vendor may, as agent and atterney of the Purchaser, cause the removal of notice of this Agreement, caution or other document providing evidence of this Agreement, caution or other document providing evidence of this Agreement, caution or other document providing evidence of this Agreement, caution or other document providing evidence of this Agreement, caution or other document providing evidence of the Agreement, caution or other document providing evidence of the Agreement, caution or other document providing evidence of paragraph 26 hereof. The Purchaser hereby increasely consents to a court order removing such notice of this Agreement, whatsoever from tilt 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 Solicilor's fees on a full lademative Sol.
- 17. The Purchaser covenants not to list for sale or lease, advertise for sale or lease, soil or kase, nor in any way assign his or hor intensit 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 advortise the Unit for sale or lease, at any time uniti after the Title Transfer Date, without the prior written consent of the Vendor, which consent may be arbitrarily withheld. The Purchaser seknowledges and agrees that once a breach of the preceding covenant occurs, such breach is or shall be incapable of rectification, and accordingly the Purchaser asknowledges, and agrees that in the event of such breach, the Vendor shall bave the unitateral right and option of torminating this Agreement and the Occupancy License , effective upon delivery of notice of termination to the Purchaser's solitior, whereupon the provisions of this Agreement dealing with the consequence of termination by reason of the Stot her spouse, or a member of his or her immediate family only, and shall not be permitted to direct the 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 the in the name of his or her third partice.
- 18. The Purchaser acknowledges that the Vendor is (or may in the future be) processing and/or complating out or more reconing or minor variance applications with respect to the Lands (and/or the lands edjacent thereto or in the neighbouring vienity thereof), as a well as a site plan approval/development application/faith plan of condominium approval with respect to the Lands (and/or the lands replication/faith plan of condominium approval with respect to the Lands (and/or the lands replication/faith plan of condominium approval with respect to the Lands (and/or the construction of the Condominium approval process, the footprint or stilling of the condominium building may shift from thet originally proposed or intended, the everall 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 amendius may likewise be altered, without adversely affecting the foot 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 abstement in the Purchaser Pirche, and without any envilopment to a claim for damages or other compensation whatsoever. The Purchaser further covenants and agrees that it shall not oppose the abernentioned zoning, minor variance and site plan/development applications, and such expression variance and site plan/development applications, or any other applications andilary thereto, including without variance and site plance procession of the response and site plance.

limitation, any application submitted or pursued by or on behalf of the Vendor to lawfully permit the development and registration of the Conforminium, or to obtain an increase in the density coverage or the dwolling 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 Vender. Until the Condominium is completed and all units sold and transferred the Vender may make such use of the Condominium as may facilitate the completion of the Condominium and sale of all the units, including, but not Ilmulet 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 bowever, 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 is 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 fimited to only those warranties deened to be given by the Vendor under the ONNHWPA and shall extend only for the time period and in respect of those items as stated in the ONNHWPA. It being understood and sgreed 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 increosebly 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 upplicable, 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 essements 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 consents is required and the Occupancy Date shall be postponed until such required constnit 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 complete the common elements before the Occupancy Date shall not be deemed to be failure to complete the Complete the Company and the Municipality of the Tarion Addendum, the Purchaser acknowledges that the failure to complete the Company 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 shall pay to for any pro-rated portion of the Occupancy Pate described and calculated in Schedule "C", and the Purchaser shall better on Schedule "C".

Inspection

24. (a)

The Purchaser or the Purchaser's designate as hereinafter provided agrees to meet the Vendor's regresentative at the data and time designated by the Vendor, prior to the Ocoupany Date, to conduct a predelivery inspection of the Unit (the "PDI") and to list all items remaining incomplete at the time of such inspectina together with all mutually agreed deficiencies with respect to the Unit, on the TWC Certificato 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 "Wendor's representative at the PDI and shall constitute the Vendor's only undertaking with respect to insomplete or deflectnt work and the Purchaser's shall not require any further undertaking of the Vendor to complete ar oblicantly in the spectrum set of the Vendor shall not be deemed to have waived the provision of this paragraph or otherwise enlarged its obligations hereurder.

- (b) The Purchaser acknowledges that the Homeowner Information Package as defined in TWC Bulletin 42 (the "HIP") is available from TWC and that the Vender 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 Vender the Confirmation of Receipt of the HIP forthwith upon recolpt 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 Porms 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 and its 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's addor the Purchaser's attorney and/or designate to complete the CCP and PDI Forms on the Purchaser's behalf and the Purchaser's addor designate to complete the CCP and PDI Forms on the Purchaser's behalf and the Purchaser's statice shall be bound as if the Purchaser's designate had executed the CCP and PDI Forms.
- (c) 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.

- In the event that the Purchaser is in default with respect to any of his or her ohligations contained in this (a) Agreement (other then paragraph 2(d) hereof) or in the Occupancy License on or bofore the Tille 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 other non-monetary default, then the Vendor, in addition to (and without prejudice to) any other rights or remedics available to the Vendor (at law or in equity) may, at its sole option, unitaterally 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 hereinstefore provided or contemplated), and/or unitaterally 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 forficited 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 eatitled to claim damages from the Purchaser In addition to any monies forfbited to the Vendor. The aforesaid retortion 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 cosmotio 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 sload, and in accordance with the provisions of the Powers of Attorney Aci, R.S.O. 1990, as anyended, the Purchaser hereby declares that this power of atomey may be exercised by the Vendor during any subsequent legal incapacity on the part of the Purcheser. In the event the Vendor's Solicitors or an Becrow 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 whatsnever 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 thus to time, cheage, 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

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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 edjustment and/or land division committee decisions, municipal site plan approval or architectural control. Such charges 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, lucluding without limitation, brochures, models or otherwise. With respect to any substitute construction, finishing or equipment, the Vendor shall have the right, without the Purchaser's consent, to substitute naterials, 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 norwithstanding 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 he and remain at the risk of the Vendor until the Title Transfer Date, subject to the terms of the Occupancy Licence attached heteto 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 Tarion Adduadum;
 - (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/Teranet

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, Sherffer, LLP at 12:00 noon on the Title Transfer Date or the Occupancy Date as the case may be and remaining three until 5:00 pn.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 ovent the Purchaser or his of the release the Vendor's Solicitors) shall be deemed satisfactory evidence that the Vendor's representative (which includes the Vendor's Solicitors) shall be deemed satisfactory evidence that the Vendor's acady, willing and able to complete the sale as used to complete the sale as the construction 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 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 escrew closing agreement with the Vendor's Solicitor on the standard form recommended by the Law Society of Upper Canada (hereinafter referred to as the "Escrew 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 Escrew 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 secrow, and will not be entitled to release same except in striot accordance with the provisions of the Escrow Document Registration Agreement.
 - (o) If the Purchaser's solicitor is unwilling or unable to complete this transaction via TERS, in accordance with the provisions contemplated under the Bserow 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

the on the Title Transfer Date as may be directed by the Vendor's solleitor or as mutually agreed upon, in order to complete this transaction via TERS utilizing the computer facilities in the Vendor's solleitor'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 eatilied 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/Oped for registration.
- (c) 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 Interest, provided that all documents so transmitted have been duy and properly executed by the appropriate partles/signatories thereto which may be by electronic signature. The party transmitting any such document shall also deliver the original of same (anless the document is an electronically signed document pursuant to the *Electronic Commerce Acl*) to the recipient party by overnight courier sent the day of closing or within 7 business days of closing, if same has been to 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 mede 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 sleps required by TBRS in order to complete this transaction that can be performed or undertaken by the Vendor's solicilor without the cooperation or participation of the Purchasor's solicitor, and specifically when the "completeness signstory" 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 slatutory 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 Furchaser 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, cortifor and starwell valls, and to the centre line of all perty 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 Builetin 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 flootage 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 more floor space. Accordingly, the Purchaser method configure shall 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, whicher based upon the ultimate square flootages of the Unit, and/or where dropped ceilings are required, then the confires of the concrete floor shall or stals (or subfloor) to the underside of the Unit or therewise. The Purchaser Fire shall not be subject to any adjustment or claim for compensation whatsoever, where exilts or the unitates of the confirmed configures the ultimate square flootages of the Unit, and/or where dropped ceilings are required, then the ceiling height of the Unit will be less than that represented, and the rurchaser shall correspondingly be obliged to accept the same or whether at the same installed within the Unit, and/or where dropped ceilings are required, then the ceiling height of the Unit will be less
- 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 invelidity 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 scal.

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- (3) 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 (logether with a statutory declaration swom by the Purchaser's solicitor unequivocally confirming, without any qualification whatsoever, that said power of attorney has not been reveked) shall be delivered to the Vender atong with such documents.
 - (b) Where the Purchaser is a corporation, or where the Purchaser is buying in trust for enother person or corporation for a disclosed or undisclosed boundiciary 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 executions of persons are by the disclosed or persons are such as the purchaser is such as the purchaser is such as the purchaser is the set of the disclosed of the Agreement by the principal or principal is descended and construed to constitute the personal indemnity of such person or persons as 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, tost relationship or any other relationships as a defence to such liability.

Notice

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- (a) Any notice required to be delivered under the provisions of the Tarion Addendum shall be delivered in the manner required by paragraph 14 of the Tarion 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, faccinite transmission or electronic mail to the attention of the Purchaser or to the Purchaser's solicitor to their respective addresses indicated berein or to the address of the Unit after the Occupancy Date and to the Vendor at 5791 Woodbine Avenue, Suite 100, Markham, Ontario, L3R 0F4, or to the Vendor's Solicitors at the address indicated in this Agreement or such other address as may from line to time be given by nolice in accordance with the foregoing. Such nolice shall be deemed to have been rescrived on the day II was delivered by hand, by electronic nuit or by fassimily 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 H it delivered by facesimile transmission or if a copy of same is computer scanned and forwarded by electronio mail to the other party.

Material Change

- 41. The Purchaser acknowledges and agrees that the Vendor may, from time to tune in its sole discretion, due to site conditions or constraints, or for marketing considerations, or for any other tegitimete 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 of 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 Condomialum, or any portion thereof (including architectural, structural, engineering, leadscaping, grading, mechanical, site servicing and/or other plans and specifications) from the plans and specifications from the plans and specifications for the project, or existing at the time that the Purchaser has ontered 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, looker 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 is 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 intpact thereof), as well as the removal of any window(s), column(s) and/or bulkhead(s) from any location(s) previously shown or llustrated 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 olaim or cause of action whetsoever 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 abstraneat 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 sale plans and specifications is material in nature (as defined by the Act) and significantly affects the fundamental channeter, 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 specificationy so therwise becomes aware of such strails possible after the reuting the Act) and specification of the said of the same 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 specificationy becames aware of such material change), and the return of the Purchaser's deposit monies, together with interest accured due on a store of such material change).

> 144 PARK -- UPTOWN WATERLOO May 20, 2009

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(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 whatsoaver as a result of any matter or thing arising under or in connection with this Agreement (whether based or founded in contract law, fort law or in equity, and whether for innocent misropresentation, negligent misrepresentation, heave of contract, heach of fiduciary duy, breach of constructive trust or otherwise), against any person, firm, corporation or legal entity specifically named or defined as the Vendor herein, even though the Vendor may be (or may ullimately be found or adjudged to be) a nomineer or agent of another person, firm, corporation or legal entity, or a trustee for and on behalf of another person, firm, corporation or or a trustee for and on behalf of another person, firm, corporation or or berse form and agreement may be pleaded as an estoppei and bar zgainst the Purchaser in sny action, suit, application or proceeding brought by or on behalf of the Purchaser to assert any of such rights, dains or causes of action zgainst any settion third parties. Furthermore, the Purchaser and the Vendor asknowledge that this Agreement shall be deemed to be a contract.

- 13 -

(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 ONHWPA and upon any such assigned 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 assignce 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 Furchaser 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 rolate to warning provisions to be given to Furchasers in connection with onvironmental 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 metters). 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 lacorporate 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, uso and disclosure of the Purchaser's personal information for the purpose of coabling the Vendot 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, telefavitelephone number, ego, date of birth, marital and residency status, sooial insurance number (only with respect to subparagraph (b) below), financial information, desired suite design(s), and colour/finits aclections. 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 Thies 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 Rowano 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 of business registration number (as the case may be), as required by Regulation 201(1)(b)(ii) of the ITA, as antisided;
 - (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 colleviton 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 parentholding company) and are developing one or more other condominium grojects or communities that may be of interest to the Purchaser or members of the Purchaser's family, for the limited purposes of marketing, adventising 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 Tarlon 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;

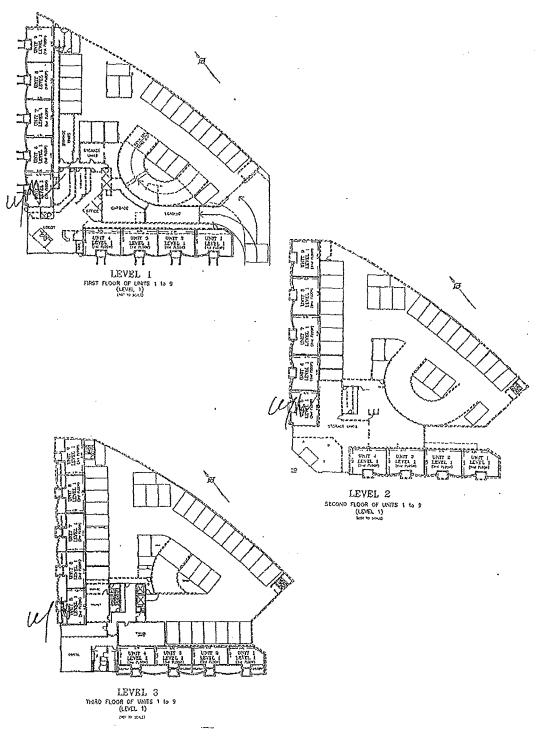
- (f) any insurance companies of the Vender providing (or wishing to provide) insurance coverage with respect to the Property (or any portion thereof) and/or the common elements of the Condominum, and any title insurance companies providing (or wishing to provide) title insurance to the Purchaser or 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 oxtras or upgrades ordered or requested by the Purchaser;
- (b) one or more providers of cable television, telephone, telecommunication, security alarm systems, hydro-electricity, chilled water/hoi 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 utilized with the Vendor, and who may send (by e-mail or other means) promotional literature/brochures about new condominiums and/or related sorvices to the Purchaser and/or mombers 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 Teravlew Electronic Registration System, and which may (in turn) involve the disclosure of such personal information to an intermet 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

144 PARK – UPTO\YN WATERLOO April 27, 2009

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SCHEDULE "B" TO THE AGREEMENT OF PURCHASE AND SALE

FEATURES AND FINISHES - TOWNHOUSE UNITS

The following are included in the Purchase Price:

- Engineered hardwood flooring in living, dising and dan arcas
- 40oz carpet with foam under pad in bedroom(s) Ceramic life in kitchen, laundry, bathroom(s), and entrance areas
- Bi-fold doors for all closel/storage areas, painted white Digital Thermostat(s) for individual climate control of
- suite Smooth finished coilings
- Contemporary trim package including nominal 4" painted base, lover passage and privacy sets Interior walls are primed and then painted with two
- costs of off-white, latex paint (bathroom(s), and all woodwork and trim palated with durable white semigloss paint). Paints have low levels of volatile organic compounds (VOCs).
- 5'8" 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 town houses 1 - 9.
- Balcony and Terrace access via sliding path 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.

Individual elevator as per suite design.

KITCHENS

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34-755

STREEL

Bread name Energy Star @ refrigerator end dishwasher

- Brand name electric range, combination microwave/hood vent,
- Kitchen cabinetry with one bank of drawers, pantry per suite design. Cabinets complete with

- 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' acrylio soaker tub with single lever fauce).
- Ceramic tiles in tub area to colling height
- Temperature controlled shower faucat
- Low-flow shower head(s).
- Ceramic tile flooring
- Low consumption toilet(s).

LAUNDRY

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- 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 pavel.
- Hard wired smoke alarm(s).

ELECTRICAL SERVICE and FIXTURES

- Individual electrical power service, separately metered Decora series recoptacles 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), don and kitchen
- Pre-wired telephone outlet in living room, bedroom(s), den and kitchen.
- N.8.
- Subject to paragraph 4 of the Agreement of Purchase and Sale staal-bod bernts, the Yondra shall have the right to mbulwise other products and materials for hops lined in this Schedule or provided for in the plana and specifications provided that this schedule product and baterials are of a quality equal to, or batter than, the products and reactive to lined as a possible of the schedule product and baterials are of a quality equal Mathle and word are stelled to control variations in color and agent. Creation is the schedule product and baterials are of a quality equal that he and word are stelled to control variations in color and agent. Creation is the schedule product and material bailers from the Vendor's traded as including, then the Purchaser shall have word that words's a color and material product and anarchic lobiers from the Vendor's traded as including, then the Purchaser shall have word that words's a color and material product and schedule by the Vendor's product as including, then the Purchaser shall have word that words's a color and material products by the other shall have be byten at least Vendor any introcoldy exterible all of the Purchaser's software or material products to extered by the Vendor of software shall be blending upon the Vendor may introcoldy exterible all of the Purchaser's software or material products to extered by the Vendor contexp that the Vendor's accounts or material to extern the the Vendor's to all able blending upon the Purchaser. No changes what have breached as the Schedule provided that such reactions are also be that by vendor to be the star-stater that materials and items for theorem. 9. 10.
- tobulishe know memory and news so were service a supervised and the price or credit for any reached feature listed bereis which is emitted at the The Purchaser acknowledges that thus shall be no reduction in the price or credit for any reached feature listed bereis which is emitted at the 11.
- 12,
- 13, 14, 15,
- The Purchaser extensivileges that there shall be no reduction in the price or exceld for any reachard feature bled berein which is emitted at the macharer's request. References to model types or model numbers refer to current naturiteturer's models. If these types ar models shall change, the Venter shall provide an equivalent model. All disorialized in an anticular per subject to change without notice. Pressums to this Agreement or the Schedule or persent to a supplementary agreement or purchase order the Purchase may have requested the Vendor to economic an additional feature within the Unit which is in the network of an optical erm (such as the year of security end), within additional feature within the Unit which is in the network of an optical erm (such as the year) of security end, a fingulary life as a terral of building, construction or size academic within the Unit which the Building. Construct the construct two structs the schedule of the structure of the schedule of the schedu
- Floor and specific features will depend on the Vender's parkage as selected. 15.

144 PARK - UPTOWN WATERLOO May 20, 2009

contemporary handles.

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 Furchaser shall pay or have paid to the Vendor, on or before the Occupancy Date, by certified cheque drawn on a Canadian obstrated bank the amount sof 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 Vender 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;
 - an amount reasonably estimated by the Vendor on a monthly basis for municipal realty taxos attributable by the Vendor to the Unit; and
- (o) the projected monthly common expense contribution for the Unit;

(b)

as an occupancy charge on the first day of each month in advance during Interim Occupancy, no part of which shall be eredited as payments on account of the Purchase Price, bit 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-rate 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 Pee. The Occupancy Ree 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 Ree following notice from the Vendor. With respect to taxes, the Purchaser egrees 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 shall be subject to accessment or reassessment is issued. The Occupancy Fee shall the municipal tax mill rate in effect as at the date such assessment or reassessment is issued. The Occupancy Fee shall there and the municipal tax mill rate in offect as at the date such assessment or neassessment is issued. The Occupancy Fee shall dupon demand.

- C.3 The Purchaser shall be allowed to remain in occupancy of the Unit during laterim 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 remodies provided for in this Agreement or at have nay 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 if 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, schowledgments, 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 Pee cheques on or shortly after the Title Transfer Date.
- C.6 The Purchasor agrees to realistain the Unit is 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 Purchasor shall be responsible for all utility, telephone expanses, cable television service, or other charges and expenses billed directly to the occupant of the Suppler of such services and not the responsibility of 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 so other purpose.
- C.8 The Vandar covenants to proceed with all due diligence and dispatch to register the Creating Documents, If the Vendar for any reason whistoever is unable to register the Creating Documents and therefore is unable to the Purchaser the Creating Documents and therefore is unable to the Purchaser of Vendar State (24) months after the Corupancy Date, the Purchaser or Vendar shall have the right after such twenty-four (24) months after the Corupancy Date, the Purchaser constnit or termination, the Purchaser hall give up vacant possession and pay the Occupancy Face south after, the Automation, the Purchaser hall give up vacant possession and pay the Occupancy Face south after, and Purchaser together with interest required by the Act, subject however, to any repair and redeconting experises of the Vendar each agree to provide a release of this Agreement in the Vendar's standard form. If the Vendar and Purchaser and Vendar each agree to provide a release of this Agreement in the Vendar's standard form. If the Vendar and Purchaser and Vendar's standard form. If the Vendar and Purchaser does not consent to termination, the provisions of subsection 79(3) of the Act may be invoked by the Vendar.
- C.9 The Vendor and the Purchaser covenant and agree, notwithstanding the taking of possession, that all terms beteunder confinue to be binding upon them and that the Vendor may eafere 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 nade 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, liqured 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 Purchases agrees to indemnify the Vendor for all losses, costs and expenses incurred as a result of the Purchases'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, remeters of his immediate family, servants, agents, invittees, tenants, contractors and licensees. The Purchaser's 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 relimburse 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 (c) 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, subject of 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 achievedges that an administrative fee will be payable to the Vendor each time the Purchaser wishes to assign, subject 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 Condornlalum, the Occupancy Licence shell terminate forthwith upon notice from the Vendor to be Purchaser. If the Unit and/or the Condornlalum, the Occupancy Licence shell terminate forthwith upon notice from the Vendor to be Purchaser. If the Unit and/or the Condominium can be repaired within a reasonable time following damages as determined by the Vendor that and/or the Condornialum, the Avendor shell 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 unthabitable; otherwise, the Purchaser shall vareate the Unit and deliver up vactuit 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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May 20, 2009

MOOBIGEOP17 Masters Agreement of Punchase and Sale (May 10 09). DOC

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 plokup, solicol transportation, and similar matters). Accordingly, the Purchaser covenants and agrees that (1) on ellber the Closing Date or Unit Transfer Date, (as set out in the Agreement of Purchase and Sale executed by the Purchaser) at determined by the Declarant, the Purchaser shall execute any and all documents required by the Declarant acknowledging, later alls, that the Purchaser is a ware 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 the 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 formishings 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 onter 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.
- The Purchaser acknowledges being advised of the following notices:

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5.

- Prospective purchasers are advised that pupils may be accommodated to 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 accompodated 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 reads presently in axistence or other pick up access 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 indeer sound levels are within the Municipality's and the Ministry of the Environment's noise criteria.
- Without limbing 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 cluttes, nucchanical equipment, chilfer/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 dobts are possible, and same may accordingly temporarily cause noise and inconventioned 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, wibraton, 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 Weterioo proposes to construct light rail operations along King Street and/or Carroline Street in the future.
- 7. It is further acknowledged that one or more of the Development Agreements may require the Develarant to provide the Purchaser with cortain 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 relivary 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 coitered into, or at any time thereafter up to the Title Transfer Dale, 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 anelliary unit count will not affect, in any material or substantial way, the percentages of common expenses and common interest allocated and attribute 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 expeases 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 Decharant cannot guarantee (and will not be responsible for) the arrangement of a suitable move-in lime 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 zolsily responsible for directly contacting the Declarant's customer sortice office in order to make suitable booking arrangements with respect to the Condominium's zervice 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 ohairo, refund, credit, reduction/abatement or sate-off whatsoever against any portion of the common expenses or other adjustments with respect thereto (nor with respect to any portion of the sorting elevator at being available to accommodate the Purchaser be paid or payable, if applicable) as a result of the service elevator at 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 aforeside).
- 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 lo any way be considered or construct as a material change to the disclosure statement prepared and delivered by the Declarant to the Purchaser in connection with this transaction.
- H. 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 uses of the zmenity space and Parking Facility may occasionally interfere with some activities within the Unit. Purchasers acknowledge that they have reviewed the draft condominium pix 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 scknowledge being adviced that it is the Declarant's current intention to incorporate the Condominium's parking facility and amonity space, and to locate certain mechanical facilities, loading area and refuse holding norm within areas adjacent to said Units, and accordingly, Purchasers are advised that typical noise associated with the use of foregoing may occasionally interface with same activities within the Unit. Purchasers are 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, amenifies, mechanical facilities, loading area and refuse holding room, are satisfied with the respect to their proximity to same.
- 13. Purchasers of Residential Units I to 9 on Level 1 are advised that they may be required to bring their refuse from their respective units 10 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 tirze 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.

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:

- 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 montgages, governmental authority, examiner of Legai Surveys, the Land Registry Office or any other competent authority having jurisdiction to permit registration thereof.

The Purchasor 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 Purchasor further solvowledges having been advised that the Purchasor shall be entitled to rescind or terminate the Agreement to which this Schedule is attached and obtain a refund of all deposit mobiles paid thereunder (together with all interest accrued thereon at the rate prescribed by the Act, if applicable), provided written police of the Purchasor'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 , this_ day of_ _, 200__.

WITNESS:

043

Purchaser

MAG840500179MontersMagneenment of Purchased and Sale (May 20 09), DOC

	ARION CTING ONTARIO'S NEW HOME BUYERS		Tentative, Oc	rupancy	APPIC)
		Property .	144 Park - Uptown Wal	erloo	
			Waterloo, Ontario		
·	Statement Delayed Oc	Of Critical			
and sole between the NOTE TO HOME BI the Delayed Occupa. of the Homeowner I	itical Dates forms part of the Addendum to Vendor and the Purchaser relating to the Pr UYERS: Please visit Tarion's website www.th ney Warranty, the Pre-Delivery Duspection a information. Package which is strongly recon Il assist you in confirming the various Gritic	which it is ottached, which in operty. The Vendor must com arion.com for important infor und other matters of interest t munded as essential reading,	turn forws part of the a plete all blanks set out mation about all Tario o new kome buyers. Yo for all home buyers. Th	below. 11's warrantje. 11 can also ob. 11 website fea	s including tain a copy
VENDOR	144 Park Ltd. Full Hame(s)				
PURCHASER	WILLIAM S	EECMILLAN	./		
1. Critical Dates					
The First Tentation the condominium	ve Occupancy Date, which is the date that the i home will be completed and ready to move	Vendor anticipates in, is:	the <u>30</u> day of	April	, 20 12 .
Tentative Occupation	leley Occupanty on one or more occurions by ney Date, in accordance with section 3 of the A lice as set out in section 3.				
sheathing, as the	10 days after completion of the roof stab or o case may be, with 90 days prior written notic tal Tentative Occupancy Date; or (ii) a Firm (e, the Vendor shall			
by the Final Tenta Date that is no la	a Final Tentative Occupancy Date but canno tive Occupancy Date, then the Vendor shall s ter then 120 days after the Final Tentative Oc stice as set out in section 3 below.	set a Firm Occupancy			
entitled to delayed	ot provide Occupancy by the Firm Occupancy D: occupancy compensation (see section 9 of the Ads Occupancy Date which comnot be later than the	lendum) and the Vendor			
The Outside Occe agrees to provide	upancy Date, which is the latest date by which Occupancy, is:	the Vendor	the <u>31</u> day of	October	, 20 13.
2. Notice Period	for an Occupancy Delay				
the Purchaser's co	upancy date requires proper written notice. T nsent, may delay occupancy one or more thn ddendum and no later than the Outside Occu	es in accordance with			
(i.c., 90 days befo	beyond the First Tentative Occupancy Date m re the First Tentative Occupancy Date), or els antomatically becomes the Firm Occupancy E	e the Pirst Tentative	the <u>31</u> day of	January ,	, 20 <u>12</u> .
3. Purchaser's Te	rmination Period		and and an	ىرەرچىت تۇتتىتىتىر بىر يېرىك	
Vendor and the P the transaction du	nu home is not complete by the Outside Occ urchaser have not otherwise agreed, then the 1 tring a period of 30 days thereafter (the "Pure eriod could end as late as	Purchoser can terminate	the <u>30</u> day of	November	.20_13
then the Purchase	erminates the transaction during the Purchas r Is entitled to delayed occupative compensati plus interest (see sections 9, 11 and 12 of the s	ion and to a full refund			
parties must refer to 1	Heal Date is set or changed as permitted in 1 the most recent agreement or veritien notice 1 lendum. Critical Dates can also change if th	hat sets a Oritical Date, and ca	lailate reviseftCritical	Dates using t	ren time the he formulas
Acknowledged this <u>)</u>	8" day of MAN 2009.	VENDOF	CAT		
		PURCHA	SID RICC	N	

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Generalite Discussion Subscription	TARIO PROTECTIRIS ONTARIO'S NEW HOM		Condom (Tentative)	inium F Occupancy Da
А		Agreement of F yed Occupancy V		and Sale
agreement of It contains it with the Or Addepdum PURCHASI LAWYER W AND THE J	of purchase and sale (the "Pu mportant provisions that ar- utario New Home Warrantie; and the Purchase Agreemen & AGREEMENT OR ANY A VITH RESPECT TO THE P DELAYED OCCUPANCY V		ndor and the Purchas rranty provided by the ny differences between hall prevail. PRIOR (HASER SHOULD SE	er relating to the Pro- ne Vendor in accord- in the provisions in 1 TO SIGNING THE EK ADVICE FROM
The Vend	or shall complete all	blanks set out below.		
VENDOR	144 Park Ltd. Fvil Name(s)			·····
	39278 Tarion Registration Number	8791 Woodbine Avenue, Suite	100	· · ·
	905-944-0907	Markham	Ontarla	L3R 0
	fivone 905-944-0916	City]bollon@madycorp.com	Province	Postal Co
	F01	Email		
PURCHASE	R MILLIAWA	SEEGMILLER.		
	5 HELL	STREET		
	Address	KITCHENER	ÓN	N26 31
	Phone	Gly	Province	Postal Cod
	fax	Erreli		
PROPERTY	DESCRIPTION	ng yan demonstration de la binne de la déclarada sej de construit de la déclarada sej de construit de la déclar		
1	21 Alien Street West (current) MonkipsTAddress	144 Park Slieel (proposod)		
	Walerioo		Onlario	N2L 10
	Öv .		Picvicco	Postel Cod
		A server would be a set of a set of the set	UCOD: YYSIEROO DBING BI	OF PHN NO. 22417-0127
		8, save and except Parts 1 and 2 on 66R-1		
	Lois 1-6, inclusive, on Plan 18	8. save and except Parts 1 and 2 on 66R-1		
INFORMA	Lots 1-6, inclusive, on Plan 18 Short Legal Description		and the providence of the second s	
	Lois 1-6, inclusive, on Plan 18 Short Legal Description			
The Vendor co	Lots 1-6, inclusive, on Plan 18 Short Legal Description TION REGARDING THE PRO	PERTY		⊖ Yes Ø
The Vendor co (a) The Vend If no, the	Lots 1-6, inclusive, on Plan 18 Short Legal Description TION REGARDING THE PRO onlines that: or has obtained Formal Zoning Appro- Vendor shall give written notice to d	PERTY wal for the Bulkling. ne Purchaser within 10 days after the date		O Yes Ø
The Vendor co (a) The Vend If no, the that Form	Lots 1-6, inclusive, on Plan 18 Short Lead Description TION REGARDING THE PRO unfirms that: or has obtained Formal Zoning Appro- Vendor shall give written notice to d sal Zoning Approval for the Building i	PERTY wal for the Bulkling. ne Purchaser within 10 days after the date	day of An	

III TARION

Condominium Form (Tentative Occupancy Date)

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; Gond Friday; Easter Monday; Victoria Day; Canada Day; Civic Holday: Labour Day: Thenkeyiving Day: Remembrance Day: Cultures Day: Boilty Day; and any precilibility processing Day: Culture Day: We Holday: Labour Day: Thenkeyiving Day: Remembrance Day: Cultures Day: Remembrance Da

"Commencement of Construction" means the commencement of construction of foundation components or elements (auch as footings, refus or piles) for the Building.

"Critical Dates" means the First Tentative Occupancy Date, any subsequent Tentative Occupancy Date, the First Tentative Occupancy Date, the Firm Occupancy Date, the Delayed Occupancy Date, the Outside Occupancy Date and the kst day of the Furchasee's Termination Period. "Delayed Occupancy Date" means the date, set in eccordance 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 ogrees to provide Occupancy as set in accordance with this Addendum. "First Tentative Occupancy Date" intens the date on which the Vencor, at the time of signing the Parchase 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 soning by-low required in order to construct the Building has been approved by all relevant governmental authwrites having jurisdiction, and the period for appealing the approvals has depiced 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 Purchose Agreement. "Outside Occupancy Date" means the latest date that the Vendoragrees, 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 Verdor, and its apportement interest in the common dements.

"Purchaser's Termination Period" means the 30-day period during which the Furchaser may terminate the Purchase Agreement for delay, in accordance with paragraph 11(b).

"Statement of Oritical 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 Gritleal 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 Ontarlo New Home Warmities Plan Actincluding regulations, as an ended 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 Univoidable 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 (i) 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 rad 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 Conditi (or waived, if applicable), will result in the automatic termination	of the Purchase Agreement. If Yes O No
(ii) If yes, the Early Termination Conditions are as follows. The ol and sale transaction is subject to satisfaction (or waiver, if app)	bligation of each of the Purcheser and Vendor to complete this purchase iarble) of the following conditions:
Condition #) (if applicable)	
Description of the Early Termination Condition: see appendix	
The Approving Authority (as that term is defined in Schedule A) Is:	see oppendix
The date by which Condition #1 is to be satisfied is the <u>see append</u> Condition #2 (if applicable)	×. day of
Description of the Early Termination Condition:	
The Approving Authority (as that term is defined in Schedule A) is	ຣຄອ ລວກອຍານມູ່
The date by which Condition \$2 is to be satisfied is the	day of
deemed to be 90 days before the First Tentative Occupency Date if m Tentulive Occupancy Date. This time limitation does not apply to the waived by the Vendor within 60 days following signing of the Purcha	
Note: The parties must add additional pages as an appendix to this A	Idendum if there are additional Early Termination Conditions.
(d) There are no Early Termination Conditions applicable to this Parchase Ages listing additional Early Termination Conditions.	rment other thao those identified in subparagraph 2(c)(ii) and any appendix
(e) The Vendor agrees to take all commercially reasonable steps within its prive	r 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 wahed by either j	set)]

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Condominium Form (Tentative Occupancy Date)

2. Early Termination Condutors (continued)

- (ii) the Vendor shall provide written noice 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 subportgraph (ii) above then the condition is deemed not suffield and the Purchese Agreement is terminated. (g) For conditions under paragraph 1(b) of Schedule A the following applies
 - (1) conditions in paragraph 1(b) of Schedule A may be walved 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 deened salisfied or writed and the Parchase Agreement will continue to be binding on both partics,
- (b) The Purchase Agreement new be conditioned until drains (transfer to the Purchaser of the title to the condeminium 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.
- (1) The Porchaser is cautioned that there may be other conditions in the Porchase Agreement that allow the Vendor to terminate the Porchase Agreeovent due to the fault of the Purchaser.
- (j) The Purchase Agreement may include any condition that is for the sole basefit of the Purchaser and that is not set to by the Vendor (i.e., the set of an existing dwelling, Purchaser linear interaction of a basement wolkout). The Purchase Agreement may specify that the Purchaser linear 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 Delays 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 Boildine.
- (b) First Tentative Occupancy Date: The Vendor shall identify the First Tentative Occupancy Date in the Statement of Critical Dates attached to this Addendorn 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 Dates on one or more occusions, by setting a subsequent Tentative Occupancy Date. The Vendor shall give written notice of any subsequent Tentative Occupancy Date to the Purchaser na later than 90 days before the existing Tentative Occupancy Date (which in this Addendom may include the First Tentative Occupancy Date can be any Business Day on or before the Outside Occupancy Date in the First Date State 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 slob or of the roof trusses and dreathing of the Buiking, (d) Final Trottative Occupancy Date By no later than 30 days after completion of the roof is bor 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 dots not do so, the existing Tentative Occupancy Date, as the case may be, to the Purchaser no later than 90 days before the existing Tentative Occupancy Date, and the roof trusses and sheathing of the Building.
 (d) 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, as the case may be, to the Purchaser no later than 90 days before the existing Tentative Occupancy Date, as the case may be, to the Purchaser no later than 90 days before the existing Tentative Occupancy Date, as the case may be, to use Purchaser no later than 90 days before the existing Tentative Occupancy Date, as the case may be, to use a sub case public outife Occupancy Date. The Final Tentative Occupancy Date or Firm Occupancy Date, as the case may be, to use a sub case public outife 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 Outife Occupancy Date. The Vendor thas set a Final Tentative Occupancy Date that the Vendor shall est 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 clear the Final Tentative Occupancy Date to the Purchaser no later than 90 days before the Final Tentative Occupancy Date, or clear the Final Tentative Occupancy Date to the Purchaser no later than 90 days before the Final Tentative Occupancy Date, or clear the final Tentative Occupancy Date. The Vendor shall give written notice of the Firm Occupancy Date to t
- Occupancy Date.
- (f) Notice Any notice given by the Vendor under participation (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 Finn Occupancy Date, once set or deemed to be set in accordance with socilon 3, can be changed only: (i) by the mutual written agreement of the Vendo r and Purchaser in accordance with section 5;
- (ii) by the Vandor setting a Delayed Occupancy Date in accordance with section 6; or
- (iii) as the result of an Unavoldable Doby of which proper written notice is given in accordance with section 7.
- (b) If a new Pirm 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

the Purchaser.

(a) This Addendum sets out a structure for souring, 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 sheady been given to the Purchaser.

(b) The Vendor and Purchaser may at any time, after signing the Purchase Agreement, motivally agree in writing to accelerate or extend a Firm Occupancy Date or a Delayed Occupancy Date in and, case in a new specified calandar date. The supersonment must comply with the requirements of section 10.

- (c) The Vendor and Porcheser may at any time after signing the Purchase Agreement nutually agree in writing to accelerate the First Tentative Occupancy Date and correspondingly reset all the Critical Dates provided that
 - (1) the mutual amendment is signed at loss 180 days prior to the First Teutative Occupancy Date:
 - (ii) all the Crifical Dates including the Outside Occupancy Date are moved forward by the some 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 Prochaser, and (iv) the Porchaser is given a three (3) Business Day period in which to review the suncidential 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 nutual agreement and, for greater certainty, neither party has any obligation to enter into such an amendment, (d) A Vendor is pennitted to include a provision in the Purchese Agreement allowing the Vendor a one-time unilateral right to encode 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 complete the transaction on the Firm Occupancy Date or Delayed Occupancy Date, as the case may be. Delayed occupancy compensation will not be psyche for such period and the Vendor may not impose any penalty or interest charge upon the Purchases with respect to such extension. (c) The Vindor and Putchaser may agree in the Putchase Agreement to any unilateral extension or acceleration rights that are for the benefit of
- 6. Changing the Firm Occupancy Date By Setting a Delayed Occupancy Date

(a) Hillse 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 Purchast of a Delayed Occupancy Date in accordance with this section, and delayed occupancy compensation is payable in accordance with section 9. TARN-ADDCT-01.02 4 OF 7

III TARION

Condominium Form (Tentative Occupancy Date)

6. Changing the Firm Occuprency Date - By Sening a Delayed Occupanty Date (continued)

- (b) The Delayed Occupancy Date may be any Beriness Day ofter the date the Purchaser receives written notice of the Delayed Occupancy Date but not biter than the Outside Occupancy Date.
- (c) The Vindor shall give written notice to the Purchaser of the Delayed Occupancy Date as soon as the Vendor knows that it will be unable to pravide 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 psyable from the date that is 10 days before the Firm Occupancy Date, in accordance with parsgraph 9(c).
- (d) If a Debyed Occupancy Date is set and the Vendor cannot provide Occupancy on the Debyed Occupancy Date, the Vendor shall select and give written protection for the Purchaser of a new Debyed Occupancy Date, unless the deby prizes due to Unavoidable Deby under section 7 or is moturally served upon under section 5, in which case the requirements of those excitons must be next. Paragmpise 5(b) and 6(c) above apply with respect to the setting of the new Debyed 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 1).

7. Extending Dates - Due to Unavoidable Delay

- (a) If Unavoidable Delay occurs, the Vendur 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 conjucction with the Unavoidable Delay, provided the requirements of this section are nect.
- (b) If the Vendor whites to extend Critical Dates on account of Unavoidable Delay, the Vendor shall provide written notice to the Purchaser setting out a birlef description of the Unavoidable Delay, and an estimate of the duration of the delay. Once the Vendor knows or ought teatonably 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 seen as reasonably possible, and no later than 10 days after the Vendor knows or ought reasonably to know that on Unavoidable Delay has concluded, the Vendor shall provide written notice to the Purchaser setting out a brief description of the Unavoidable Delay, identifying the dete of its conclusion, out setting new Critical Dates are eakerlated by adding to the tipm exercited Date the number of days of the Unavoidable Delay in exercised with the number of days of the Unavoidable Delay in exercised or the number of days of the Unavoidable Delay in the tipm of the Unavoidable Delay is a set of the Unavoidable Delay in the tipm of the Unavoidable Delay in the tipm of the Unavoidable Delay in the tipm of the Unavoidable Delay is a set of the Unavoidable Delay in the tipm of the Unavoidable Delay in the tipm of the Unavoidable Delay is a set of the tipm of the part of the tipm of the part of the tipm of the
- (d) If the Verdor fails to give written notice of the conclusion of the Unavidable Delay in the number required by porsersiph 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.
- (c) Any notice setting new Critical Dates given by the Vendor under this tection 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 Porchasert
 - (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 ou 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) Nonvithstanding the requirements of paragraph (a), to the extent this the Purchaser and the Vendor agree that the Purchaser shell be responsible for cretain Conditions of Occupancy (the "Purchaser Obligations");
 - (i) the Pordisser 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 hulfilling the Conditions of Occupancy (other than the Purchaser Obligations), a signed written confirmation that the Vendor has fulfilled and i Conditions of Occupancy and
 - (iii) if the Parcheser 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 subperagraph (ii) on or before the date of Occupancy.
- (c) If the Vendor compotes the requirements of paragraph (a) or subparagraph (a) (b)(iii), then the Vendor shell set a Delayed Occupancy Date) on a date that the Vendor resonable experts to law 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 shell comply with the requirements of section 6, and datayed occupancy compensation shall be parable in accordance with section 9. Despite the foregoing, delayed occupancy compensation shall be parable in accordance with section 9. Despite the foregoing, delayed occupancy compensation shall not be parable for a delay under this paragraph (c) if the inability in satisfy the requirements of subparagraph (b)(iii) is because the Purchaser Obligation.
- (d) For the purposes of this section, an "Occupancy Permit" means any written document, however styled, whether final, provisional as temporary, provided by the drief building official (as defined in the Building Code Act) or a person designated by the drief building official, that evidences the fact that authority to occupy the condominium house has been granted.

9. Delayed Occupancy Compensation

- (a) The Vender warrants to the Purchaser that, if Occupancy is delayed beyond the Firm Occupancy Date (other than by matuel agreement or as a result of Unavoldable Delay as permitted under sections 5 or 7), then the Vendor shall compensate the Purchaser for all creat 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 (or living express 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 comprosation is payable only if the Purchase's daim is made to Tarino 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 Jess than 10 days before the Firm Occupancy Date, contrary to the requirements of pursgraph 6(c), then delayed occupancy compensation is psyable from the date that is 10 days before the Firm Occupancy Date.
- (d) Living expenses are direct hving costs such as for accommodation and meak. Receipts are not required in support of a claim for living expenses, as a set defly 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 disentities the Purchaser to any delayed occupancy compensation with a claim.
- (e) If delayed occupancy compression is payable, the Purchaser may make a chain to the Vendor for that compension within 180 days effect occupancy and shall include all receipts (apart from living expanse) which evidence any part of the Purchaser's claim. The Vendor shall assess the Purchaser's claim by determining the anount of delayed occupancy compensation payable based on the nucles 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 sattle the claim and when the claim is stilled, the Vendor shall proper to an acknowledgement signed by both parties which; (i) Includes the Vendor's assessment of the delayed occupancy compensation payable;

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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.

Condominium Form (Tentative Occupancy Date)

- A true copy of the adaptive determined the number of the number of the adaptive of the condominium home on the first page) shall be provided to Tarion by the Vendor within 30 days after execution of the acknowledgement 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 setes transaction is terminated under paragraphs 11(b), (c) or (c) 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 applits.
 (b) If the change involves acceleration of either the Firm Occupancy Date or the Delayed Occupancy Date, then the aurending agreement must set out each of the Critical Dates (as changed or confirmed).
- (c) If the drange hardware extending either the Finn Occupanty Data or the Delayed Occupancy Date, then the antending agreement shall;
 (i) disclose to the Purchaser that the signing of the amendment may result in the loss of object 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 Yondor for the period up to the new Firm Occupancy Date or Delayed Occupancy Date.

(d) If the Purchaser for his other own purposes requests a change of due or dates, then paragraph 10(c) shall not apply.

11. Termination of the Purchase Agreement

- (a) The Vendor and the Purchaser may remainste the Purchase Agreement by nurtual 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 sizen to the Purchaser by the Outside Occupancy Date, then the Purchaser has 30 days to termineate the Purchase Agreement by written notice to the Vendon. 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(u), regardless of whether such date is beyond the Outside Occupancy Date.
- (c) If calendar dotes for the opplicable Critical Dates are not inserted in into Statement of Critical Dates; or if any date for Cocopancy is expressed in the Purchase Agreement or in any other document to be subject to change depending upon the hosperaing of an event (other than as permitted in this Addendum), then the Purchaser may terminate the Purchase Agreement by written notice to the Verdor.
- (d) The Purchase Agreement may be terminated in accordance with the requirements of section 2.
- (c) 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 dday 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 depasit(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 avid/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 monics shall be calculated in accordance with the Condominium Act.
- (c) Nonvithetanding paragraphs 12(n) and 12(b). If either party initiates legal proceedings to contest termination of the Purchess Agreement or the return of movies paid by the Purchess quantum data alogal determination, such amounts and intenss shall be payable as determined in those proceedings.

13. Addendum Prevails

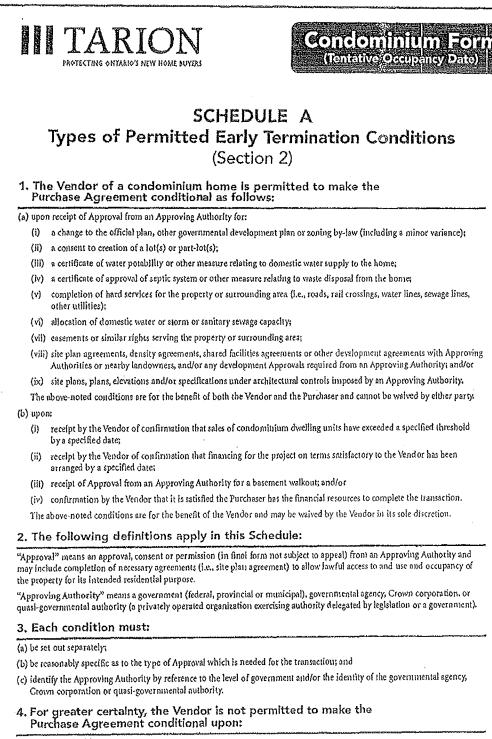
The Addendum forms part of the Purchase Agreement. The Vendur and Puechaser agree that they shall not include any provision in the Purchase Agreement or any an endowent to the Purchase Agreement or any other document (or indirectly do su through replacement of the Purchase Agreement) that derogates from, 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 tills Addendum may be given personally or sent by conall, fax, courter or registered mail to the Purchaser or the Vendor at the address/contect numbers identified on page 2 or replacement address/contect numbers as provided to pargraph (c) below. Notices may elso be sent to the solicities for each party if necessary contact information is provided, but notices in sill events must be sent to the Purchaser and Vendor, as applicable.
- (b) Written volte given by one of the means identified in prograph (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 fite 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. If sent by registered mail, if a posed stoppage or interruption occurs, notices shall not be sent by registered mail, and any unitee sent by registered mail within 5 Business Days prior in the commentenment of fite 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 fulls on a day other than 5 Business Day index to the following.
- (c) If either party wither to receive written thetics 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 set is to be done shall be excludeed by excluding the day of delivery octransmission and including the day on which the period calds.
- (c) 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 Acidendum expires on a day thet 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 carrier Business Day, except that notice may be sent and/or
- received on Remembrance Day, if (1 fulls on a day other than Saturday or Sunday, or Easter Monday. (11) 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.

For more information please visit www.tarion.com

TARN-ADDCT-01.02



(a) receipt of a building permit;

(b) receipt of an occupancy permit; and/or

(c) completion of the home.

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7 OF 7

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 TARION ADDENDUM

1. Description of Early Termination Condition:

051

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 15th day of December, 2009.

2. <u>Description of Early Termination Condition:</u>

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^{th} day of December, 2009.

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 regulsite 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 mortgage 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 15th day of December, 2009.

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AMENDMENT TO THE AGREEMENT OF PURCHASE AND SALE

BETWEEN: 144 PARK LTD. (the "Vendor") and

William Seegmiller (the "Purchaser")

Unit_05___Level_01__(the "Unit")

It is hereby understood and agreed between the Vendor and the Purchaser that the following change(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

- (a) to Harris, Sheaffer LLP, In Trust, (the "Yeador's Solicitors" or "Escrow Agent" or "Trustee") in the following amounts at the following direct, by choque or bank draft, as deposite panding 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 _____ (\$5,000.09) Dollars submitted with this Agreement;
 - (ii) the sum of <u>Twenty Five Theorem Eight Hundred</u> (3 25.800.00) Dollars submined with this Agreement and post-deled filters (15) days following the date of execution of this Agreement by the Purchaser, and together with I(a)(i) above represents 5% of the Purchaser Price;
 - (iii) the sum of _______Thing Thousand Electi Hundred ______ (\$_____30.80.00 ______) Dollars solution with this Agreement and post-dated forty-five (45) days following the date of execution of this Agreement by the Purchaser, being 5% of the Purchaser Price;

INSERT

(a)

- to Harris, Sheaffer LLP, in Trutt, (the "Vendor's Solicitors" of "Ererow Agent" or "Frustee") in the following tanoants at the following tanoants at the following tanoants at the following tanoant of the Purchase by cheque or bank dealt, as deposits peeding completion or other termination of this Agreement and to be credited on account of the Purchase Price on the Occupancy Dates
 - (i) the sum of ______ thre_____ (\$0.00) Dothers submitted with this Agreement;
 - (ii) the sum of ______ One <u>Hundred Twenty Theore Theorems Two Hundred</u> (5_123.200.00) Dollars rubmitted with this Agreement and post-dated to Favoary 15, 2010, and together with 1(a)(i) above represents 2024 of the Purchaster Price;
 - (iii) the sum of ______ zero ______(\$ _0.00.) Dollars submitted with this Agreement and post-dated forty-five (45) days following the date of execution of itis Agreement by the Purchaser, bring \$% of the Purchaser Price:
- (b) Use sum of ______ Thirty Theorytop Eight Hundred _____ (\$_____30,800,00 ______) Dotlars by certified choose or bank draft to the Vendor's Solleilors on the Overspanoy Data being 5% of the Purebase Price;

DATED at Waterloo , this 28th day of May , 2009,

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

SIGNED, SEALED AND DELIVERED In the presence of

Purchaser

144 PARK LTD.

Per: Authorized Signing Officer

I have the authority to bind the Corporation.

M:1081080917V/Aasters/Amendment (deposit).DOC



AMENDMENT TO THE AGREEMENT OF PURCHASE AND SALE

BETWEEN: 144 PARK LTD. (the "Vendor") and <u>William Seegniller</u> (the "Purchaser")

Unit 01 Level 05 (the "Unit")

It is hereby understood and agreed between the Vendor and the Purchaser that the following change(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

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 Tarlon Addendum are as follows:

CONDITIONS PERMITTED IN PARAGRAPH 1 (b) OF SCHEDULE *A* TO THE TARION 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 15th day of December, 2009.

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 15th day of December, 2009.

INSERT (copy attached)

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 (6) OF SCHEDULE *A" TO THE TARION 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 15th 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 15th day of December, 2010.

DATED at <u>Waterloo</u>, this <u>10th</u> day of <u>December</u>, 2009.

IN WITNESS whereof the partles hereto have affixed their hands and seals,

)

SIGNED, SEALED AND DELIVERED In the presence of

(70.0	\mathcal{O}
Purchaser	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Purchaser	and and a state of the state of	

144 PARK LTD.

Per: Authorized Stening Officer I have the adhority to bind the Corporation.

TAB 2B

This is Exhibit "B" referred to in the affidavit of William Seegmiller, sworn before me this 14th day of October, 2015

A COMMISSIONER FOR TAKING AFFIDAVITS



Collins Barrow Toronto Limited Collins Barrow Place 11 King Street West Suite 700, PO Box 27 Toronto, Ontario M5H 4C7 Canada

T. 416.480.0160 F. 416.480.2648

www.collinsbarrow.com

June 5, 2015

Via Email Only

TO CERTAIN RESIDENTS OF 144 PARK, WATERLOO, ON

Dear Resident:

Re: In the Matter of the Construction Lien Proceeding of 144 Park

On January 22, 2015, Collins Barrow Toronto Limited was appointed trustee (the "Trustee") of the project commonly known as 144 Park (the "Condominium") by the Ontario Superior Court of Justice.

The Trustee has registered, as of May 25, 2015, the Condominium and is now in a position to start closing units. You are receiving this letter as your purchase and sale Agreement with 144 Park Ltd. ("144") included the purchase of more than one parking spot.

The Condominium's architecture was always designed to be connected to the adjacent One 55 Uptown development ("155 Uptown") with a shared parking facility. The Trustee has reviewed 144's parking allocations and it has become apparent that the number of parking spots has been over allocated within the Condominium. As a result, the Trustee is prepared to make the offers set out below to facilitate the closing of your transaction and meet your parking needs for an interim period until 155 Uptown is complete.

Option A – Buyback One of the Parking Spots

The Trustee will reduce your purchase price by \$20,000 on closing for the release to 144 of your additional parking space.

Option B - Provision of Temporary Parking in Bauer Lofts

If you choose to retain an additional parking we have made arrangements for the vendor to pay for temporary parking in the project known as Bauer Lofts until the 155 Uptown parking structure is open, at which time you will be granted parking privileges permanently within 155 Uptown. The vendor agrees to reduce your purchase price by \$7,000 on closing in addition to covering the cost of parking at Bauer Lofts for up to two years. Once the One 55 Uptown complex is built, you will receive a licensed parking spot within this newly built complex.

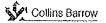
Please email the writer at andhanani@collinsbarrow.com to notify the Trustee of your preference. We would be pleased to arrange a meeting at 144 Park to discuss the options available to you. In order to book this meeting please email Karla Roelofsz or attend at the customer care office on site.

Yours truly,

COLLINS BARROW TORONTO LIMITED in its capacity as Trustee under the Construction Lien Act of 144 Park and not in its personal or corporate capacity

(ABHANDRUV) Per:

Arif Dhanani, CPA, CA, CIRP



TAB 2C

This is Exhibit "C" referred to in the affidavit of William Seegmiller, sworn before me this 14^{th} day of October, 2015

A COMMISSIONER FOR TAKING AFFIDAVITS

NO. 2953 P. 1

JUL 21. 2015 11:53AM HARRIS SHEAFFER LLP HARRIS, SHEAFFER LLP BARRISTERS & SOLICITORS

Yonge Corporate Centry 4100 Yonge Street, Suite 610, Toronto, Ontario Mif 205 Trlephone (416) 256-5800 / Pacshare (416) 250-5300

July 21, 2015

FAX COVER SHEET:

To: David Ralph Fedy	From: Karon McNelli
McCarter, Orespan, Beynom, Weir Professional Corporation Barristers and Solioitors	Direct Line: 416-250-2695
Fax: 1-519-742-1841	

Number of pages including cover sheet: 1

RB:	•	144 Park Ltd. s/t William Seegmiller Unit 5, Level 1, Unit 14, Level 1, Unit 21, Level 3, Unit 22, Level 1, Unit 23, Level 1, Closing Date:	WSCP 591
		Our File No: 090328	

Please be advised that Collins Barrow Toronto Limited was appointed by court order as trustee (the "Trustee") of the property owned by 144 Park Ltd., including the units in the condominium. The court order was registered on title to the property on January 23, 2015 as Instrument No. WR863820.

The Trustee has been working with lenders and other stakeholders in this project, including certain embers of the Ad Hao Purchasers' Committee and the potential developer of 155 Uptown Waterloo, to find a meaningful parking solution to the current shortage of parking in 144 Park. In connection therewish, the Trustee has reached a potential solution that balances the many stakeholder interests. The allocation of some of the Parking Units in this project are now being reallocated in order to achieve this solution.

In this regard, your client has now been allocated a new Parking Unit and this allocation will take effect at noon on July 24, 2015. Your client's new Parking Unit allocation is Unit 21, Level 3. Please advise your client that arrangements must be made to move vehicles from the previously allocated Parking Unit at noon on July 24, 2015 because the previously allocated Parking Unit has been reallocated for someone else's use commencing at noon on July 24, 2015. Please be further advised that if your client agreed to purchase more than one Parking Unit, you must check the re line of this fax to verify which Parking Unit has been reallocated.

In the event your client requires any assistance in locating their new Parking Unit, kindly speak to the Trustee's site representative. Ms. Karla Roelofsz. The Trustee is most grateful for your cooperation and assistance in effecting this allocation. The Trustee intends to schedule a Title Transfer Date as soon as possible.

Warning: The information contained in this fax is confidential, and may be subject to solicitor-client privilege. It is intended solely for the use of the party to whom it is addressed. Any distribution, copying or disclosure of this fax, other than by its intended recipient, is strictly prohibited. If you received this fax in error, please advise us immediately by telephone, and return the original transmission to us by mail without making a copy.

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Stephen M. Kara	MARTIN P HOLISSE	Mark L. Karny	Міснаес), Васм	ARI M. Kate	RAZMAR NIGOLAR	Róbent Shone

TAB 3

Court File No. CV15-10843-00CL

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 CHRISTOPHER PIDGEON

I, CHRISTOPHER PIDGEON, of the City of Kitchener in the Province of Ontario, MAKE OATH AND SAY:

1. I am the Principal Planner and President of GSP Group, a planning, urban design and landscape architecture firm in Kitchener, Ontario. As such, I have knowledge of the matters to which I have hereinafter deposed. Where I have included information on the basis of information and belief, I have stated the source of that information or belief and verily believe it to be true.

2. Attached and marked as **Exhibit "A"** to this Affidavit is a copy of my *curriculum vitae*. I am a Registered Professional Planner ("RPP") and a full member of the Canadian Institute of Planners ("MCIP") with over 29 years of experience. I have a B.A. in Urban Planning from the University of Windsor and an M.A. from the University of Waterloo in Regional Planning and Resource Development. I have extensive experience in land development approvals in southwestern Ontario and particularly in the Cities of Kitchener and Waterloo. On behalf of private land developer clients I have secured approvals for many in-fill redevelopment projects totalling over 2,500 units in high density residential projects. I have been qualified to give independent opinion evidence on land use planning matters before the Courts and the Ontario Municipal Board on numerous occasions.

3. I have sworn this Affidavit in response to a motion of the court-appointed Trustee for 144 Park Ltd. ("144 Park") to be heard on October 16, 2015 and for no other or improper purpose. I have reviewed certain material in the Trustee's motion record dated September 25, 2015 and the Responding Record of Oliver Romaniuk.

144 Park Street is located in a high-density, high-transit urban centre

4. The 144 Park Street development is zoned MR-25 ("Multiple Residences – 25") by the City of Waterloo. It is located in a designated "High Density" zone. The property is centrally located within the "Primary Node" for transportation and forms part of the "Uptown Complementary Transition Area" in the urban growth centre of Waterloo. A copy of relevant excerpts of the Official Plan are attached as **Exhibit "B**".

5. Essentially, the 144 Park Street development is located in what is known locally as the "King Street Corridor", a high density area subject to a Special Policy of the City of Waterloo to increase density and reduce automobile reliance in major transit station areas. Although the City's Zoning By-law 1108 sets out a minimum requirement of 1.0 parking space per unit in MR-25 residential developments at section 18A, the Special Policy at section 12.3.1 of the Official Plan allows the City to grant exemptions under section 40 of the *Planning Act* to allow for higher maximum densities and reduced parking requirements than permitted under the existing zoning by-law.

6. In the case of 144 Park Street specifically, this project received "density bonusing...as a development incentive to promote transit oriented development." This initiative is part of the Waterloo Region's "Big Shift" towards increased focus on density, development and transit in anticipation of expanding transit infrastructure in the region, including the Kitchener-Waterloo Light Rapid Transit ("LRT") line. A copy of the Region of Waterloo Planning, Housing and Community Services recommendation dated May 28, 2013, "The Big Shift Toolbox" is attached as **Exhibit "C"**. A copy of the Kitchener-Waterloo LRT station map is attached as **Exhibit "D"**.

7. The City's Official Plan designates 144 Park Street as "Specific Provision Area 29" and permits density increases beyond what is otherwise permitted in the zoning by-law. This policy specifies that the number of units is not to exceed 149 and that further appropriate increases in density shall be considered in order to , *inter alia*:

- (a) [S]upport the provision of underground parking; and
- (b) [E]ncourage the provision of units which are affordable to low and moderate income ... households within the City of Waterloo.

Demand for Condominium Units Without Parking

8. It is my understanding that there are currently twenty (20) residential units left to be sold at 144 Park ("Unsold Units") and nine (9) parking spaces available to accompany them. Assuming nine (9) of the units are sold with a parking space, there would be a total of eleven (11) units left to be sold without the options of purchasing a parking space. This appears to reflect a sales strategy on the part of the developer of 144 Park Street to have "unbundled" parking, i.e. one in which not all unit buyers also purchase a permanent parking space. 9. I understand that Mint Realty, the broker that the Trustee has retained to market the Unsold Units, has advised the Trustee that it would be "extremely difficult to sell" the Unsold Units without a parking spot allotment.

10. It appears that the prospect of unbundled parking had been previously considered for 144 Park Street. Paradigm Transportation Solutions Ltd. completed a Transportation Impact Study for 144 Park – Tower 2 in December 2011, a copy of which I attach as **Exhibit "E"**. This Report encourages the use of Transportation Demand Management (TDM) Initiatives including:

- (a) secure and convenient indoor/outdoor bicycle parking;
- (b) unbundled parking; and
- (c) car share program.

11. As I note above, unbundling appears to have been implemented at 144 Park Street. In addition, significant bicycle parking spaces were put in place at the development. I obtained a copy of an extract of the approved "Site Data Chart" from the Planning Department at the City of Waterloo, which summarizes the amount of bicycle storage available at 144 Park Street. It appears below.

REQUIRED LOCKER	BIBICYCLE STORAGE	
	LOCKERS	BICYCLE
[0.6 SPACE PER UNIT =
I	1 PER UNIT = 148	89

PROVIDED LOCKERS/BICYCLE STORAGE

	LOCKERS	BICYCLE	BICYC	CLEALOC	KERS
P3	9	1		9	
P2	92			26	
P1	13	29		13	
U/G1	34	I		12	
Total	A	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	10.000	1 (n. 189)	al secondary is

PROVIDED OUTDOOR BICYCLE STORAGE

BICYCLE (OUTDOOR)

12. As the chart reveals, a total of 89 indoor bicycle parking spaces and 8 outdoor bicycle parking spaces are available at 144 Park. This would provide approximately one parking space for 60% of the units in the development.

13. I also know from my work on other nearby condominium developments that they have incorporated similar transportation alternatives into their design plans. "One Victoria" and "One Hundred" are two high-density urban condominium developments in nearby downtown Kitchener. They feature bicycle parking and an on-site car share program. The "City Centre" condominium, also nearby 144 Park, includes on-site bicycle parking and ride-share, encouraging residents to "Leave the Car at Home" and take advantage of amenities within walking distance. Screen shots from the promotional websites for "One Hundred" and "City Centre" are attached as **Exhibit "F**".

14. In its initial marketing plan, Mint Realty suggested that its target market for 144 Park would be:

[A] mix of empty nesters and young urban professionals attracted to a luxury urban lifestyle who appreciate the convenience and prestige of the projects location...

Our goal will be to reinforce the 144 Park project as a luxury high-end building with a premium location and unsurpassed amenity mix.¹

15. In my experience in planning developments, the two buying groups identified by Mint Realty typically have different needs when it comes to transportation amenities. "Empty nesters" will typically require nearby parking. However, younger buyers are increasingly reliant on transit and alternative transportation, including bicycles and ride-shares. As a result, mixed resident

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¹ Executive Summary of the Mint Realty marketing plan for 144 Park, Exhibit "D" to the Third Report of the Trustee

condominium developments are increasingly offering "unbundled parking" to permit purchasers to buy as much or as little parking space as they require. It appears that this is exactly the strategy that was employed at 144 Park Street to date. A "one-size fits all" strategy of bundling one parking space with each unit is not consistent with other developments in the central Kitchener-Waterloo location of 144 Park.

16. I know from my work on One Victoria and One Hundred that approximately 15 units in each development have been sold without a parking space, representing approximately 7.5% of total sales. The purchasers of these units are generally young professionals who are accustomed to using public transit and car share programs as their primary means of transportation.

17. Whatever marketing strategy is employed, the fact is that many developments in the King Street Corridor are being developed, marketed and sold without parking available for any unit. A plan to market and sell the 11 of the 20 unsold units at 144 Park without parking would be consistent with this trend towards unbundled parking.

SWORN before me at the City of 16 Toronto, in the Province of Ontario, this 14 day of October, 2015.

A Commissioner for taking affidavits. David R. Fedy

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CHRISTOPHER PIDGEON

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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

067

ONTARIO SUPERIOR COURT OF JUSTICE

PROCEEDING COMMENCED AT TORONTO

AFFIDAVIT OF CHRISTOPHER PIDGEON

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Lawyers for William Seegmiller

TAB 3A

This is Exhibit "A" referred to in the Affidavit of

Christopher Pidgeon sworn before me, this

14 day of October, 2015 Illu A COMMISSIONER FOR TAKING AFFIDAVITS Vaid P. Fedy



SHAPING GREAT COMMUNITIES



Areas of Practice Development Approvals Master Plans Subdivision Approvals Condominium Approvals Mixed Use Development Approvals Rural Planning Policy Analysis Community Plans Secondary Plans Site Planning Project Management Public Consultation Expert Testimony

Chris Pidgeon MCIP, RPP

Chris is a founding partner with GSP Group and is currently President of the firm. He has over 28 years of planning experience involving many large and complex development projects. Chris moved into private land use planning practice with specialization in coordinating complex greenfield and infill development, and providing professional opinion evidence at the Ontario Municipal Board.

He has an engaging, collaborative style and attention to detail for resolution of issues in the full range of development approvals and public planning processes.

Education

University of Waterloo 1986 Masters in Regional Planning and Resource Development

University of Windsor 1984 Honours Bachelor in Urban Planning

Credentials

Full Member of the Canadian Institute of Planners Full Member of the Ontario Professional Planners Institute Registered Professional Planner (Ontario)

Professional Experience

GSP Group, Kitchener 1995 - Present

Senior Planner 1990-1995: Cumming Cockburn Ltd. (Waterloo)

Senior Planner 1989 - 1990 City of Cambridge

Development Planner 1988 – 1989 City of Waterloo

Planner

1987 - 1988 MacNaughton Hermsen Planning (Kitchener)

Representative Project Experience

Municipal Projects	West Community Plan and Environmental Assessments, McCarthy Road & Sanitary Pump Station (Stratford) Transportation Master Plan, Public Consultation (Stratford) New Business Park Design Study, Community Plan (Woodstock) Ayr Community Plan (North Dumfries) Northeast Secondary Plan and Environmental Assessment for C.H. Meier Boulevard/McCarthy Road (Stratford) Court & McNamara Drains – Master Drainage Plan (Stratford) Roadhouse Drain – Master Drainage Plan (Stratford) Garden Avenue/Johnson Road Secondary Plan (Brantford) Pelee Island, West Dock Community Plan Blair Area Special Study (Cambridge) Blair Heritage Conservation District Plan (Cambridge) Official Plan Review, Co-Chairperson (Cambridge) Dickson Hill Heritage Conservation District Plan (Waterloo) Expropriation, Civic Square (Cambridge) Bannister Drain Watershed Plan (Amabel) Mayor's Environmental Review Committee (Waterloo) Annexation Opinion Report (Hay) University Avenue Class Environmental Assessment (Waterloo) Cedar Creek Subwatershed Study (North Dumfries)
Residential Communities	Hunt Club/Arriscraft Residential Complete Community (Cambridge) The BarrelYards Project, High Density Residential and Mixed-Use Urban Development (Waterloo) Huron Heritage Estates / Huron Village Community (Kitchener) Williamsburg South Residential Community (Kitchener) The 42 Condominium (Waterloo) The Arrow Lofts Adaptive Re-use Condominium (Kitchener) Meadows of Bear Creek Subdivision, Ardagh West Community (Barrle) Waterscape Condominium (Cambridge) Sifton Properties, Hardy Road Subdivision (Brantford) Tuscany Estates Subdivisions, Moffat Community (Milton) Big Bay Housing Developments Inc., Innis Shore Community (Barrie) Lyndale Estates & Lyndale South Subdivisions, Grand River South Community (Kitchener) Valleyview Heights Subdivision, Grand River South Community (Kitchener) Townline Estates Subdivision, Hespeler East Community (Cambridge) Jamieson Estates Subdivision, Hespeler East Community (Cambridge) Grand Ridge Estates Subdivision, West Galt (Cambridge) Activa Holdings, Southeast Galt (Cambridge) Riverglade Estates Estate Residential Subdivision (Milton) Aberfoyle Creek Estates Estate Residential Subdivision (Puslinch) MennoHomes Affordable Housing Project, Village Road (Kitchener) Blair Crossings Condominiums (Cambridge West) The Promontory Condominiums, Grand River Community (Kitchener) Riverstone Condominiums (Waterloo)

Chris Pidgeon | 2

Retirement and Multiple Residential Developments	Momentum Developments, 1 Victoria (Kitchener) Momentum Developments, 100 Victoria (Kitchener) Fisher Developments, King Street (Waterloo) Auburn Developments, Student Purpose-Built Housing, Ewen Road (Hamilton) Skyward Development Corp., Student Apartments (Waterloo) Momentum Developments, Red Condominium (Waterloo) Abode Developments Inc., Student Purpose-Built Housing (Guelph) Auburn Developments Inc., Student Purpose-Built Housing (Guelph) Auburn Developments, Maple Avenue Condominiums (Barrie) Trinity Care Centre, Long-Term Care, Retirement Home & Townhouses (Kitchener) Sandhills Christian Seniors Community (Kitchener) Emmanuel Village Homes, Retirement Home & Townhouses (Kitchener) Vesper Village Retirement Homes (Baden) Arrow Lofts, former Arrow Shirt Factory (Kitchener) Auburn Developments, Varsity Commons Student Housing, Ann Street (London) Pondvlew Retirement Community (Wellesley) Auburn Developments, Ridout Street (London)
Industrial, Commercial and Institutional Developments	Waterloo Innovation Network (W.I.N.) Technology Village (Waterloo) Huether Hotel Brew Pub (Waterloo) NovaCore Communities Mixed Use/Brownfield Redevelopment (Kitchener) Marathon International Mixed Use/Brownfield Redevelopment (Cambridge) CIGI - Balsillie School of International Affairs, Campus Master Plan and Development Approvals (Waterloo) Conestoga College Cambridge Campus, Master Plan and Development Approvals IMS Business Park Master Plan (Waterloo) CIGI - Woerner Estate, Master Plan and Development Approvals (North Dumfries)
	Starbank, Neighbourhood Shopping Centres (Cambridge, Woodstock) ATS-Automation Tooling Systems, Industrial Campus (Cambridge) Jamieson Estates Commercial Shopping Centre (Cambridge) Camrock Development Corporation, Industrial Subdivision (Cambridge) Millgate Holdings Industrial Subdivision (Cambridge) Earth to Table Farm Agricultural Promotion Centre (Hamilton) Picard Farm - Ramblin' Road Brewery (Delhi)
Ontario Municipal Board and Courts	Provided expert opinion evidence, mediation and arbitration evidence on a full range of land use planning matters before the Ontario Municipal Board and the Courts, including land compatibility, land need/Justification, conformity to Provincial and Municipal policies, zoning regulations, housing affordability and matters of Provincial interest. In all cases, responsible for hearing coordination with solicitor, including evidence preparation, strategy, witness preparation and analysis of other opinions of expert witnesses to assist client/solicitor.

Publications

Plan Canada, Spring 2005, "Stratford Leads the Way for a New Model for Suburban Development"

CMHC Research Highlight, Socio-economic Series 07-013, "A Plan for Rainy Days: Water Runoff and Site Planning," October 2007

CMHC Research Highlight, Series 04-038, "Applying Fused-Grid Planning in Stratford, Ontario," July 2007

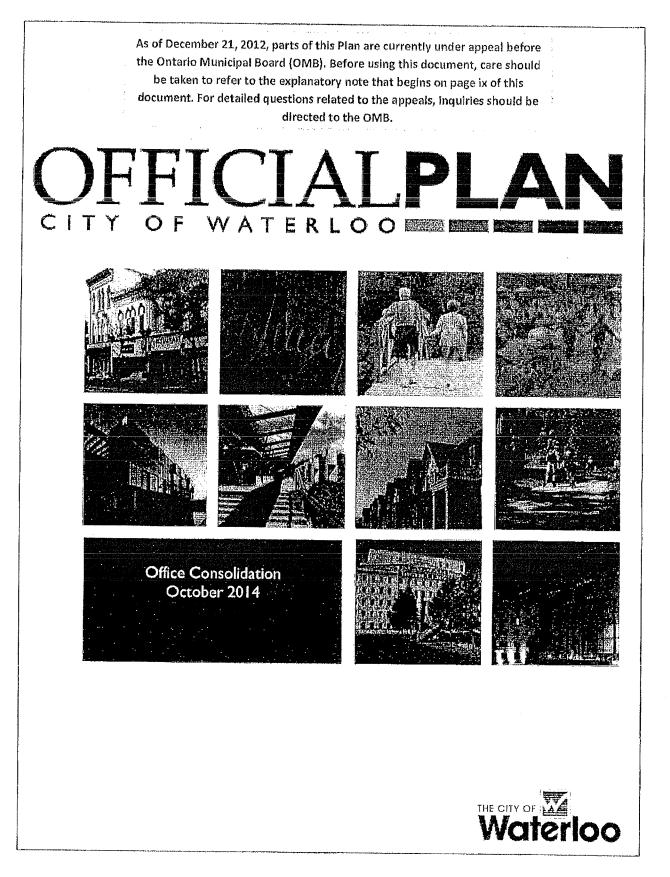
Wharton Real Estate Review, 2005, "Planning in a Canadian City," U. of Pennsylvania

TAB 3B

This is Exhibit "B" referred to in the Affidavit of

Christopher Pidgeon sworn before me, this

14 day of October, 2015 A COMMISSIONER FOR TAKING AFFIDAVITS



Uptown Waterloo Urban Growth Centre from the parking requirements of the Zoning By-Law in exchange for money. Implementation of any cash-in-lieu of parking provisions will be at the City's discretion and will give consideration to existing or planned facilities within the City's *Municipal Parking System*. Additional policies related to cash-in-lieu of parking are included in policy 6.6.2 of the Transportation Chapter.

3.8 MAJOR TRANSIT STATION AREAS

Major Transit Station Areas are the areas including and around planned rapid transit stations within the City of Waterloo. Station Area Plans will further define the limits of each station area. Lands within Major Transit Station Areas may be located within Nodes and/or Corridors and/or outside of a designated Node or Corridor, depending on the local context of each station. Major Transit Station Areas will be planned to accommodate a mlx of transit supportive land uses that create both origins and destinations for transit users. Major Transit Station Areas will also be planned to be focal points for active transportation networks, with reliable connections to other destinations.

After the Region has designated *Major Transit Station* Areas conceptually on Map 3a of the Regional Official Plan, the City will initiate an amendment to this Plan to designate *Major Transit Station* Areas on **Schedule** 'B' – **City Structure**, and to establish additional policies for these areas, as required. Planned land uses for *Major Transit Station Areas* are intended to be shown on **Schedule** 'A' – **Land Use Plan**, pending future Amendments to this Plan in order to fully implement the policies set out in this Section.

- (1) Transit supportive uses such as medium to high density residential, commercial and employment uses shall be encouraged to locate within *Major Transit Station Areas*, to generate significant transit ridership, provide for good *pedestrian* and cycling access and a variety of services and amenities that foster a vibrant station area community.
- (2) Non-transit supportive uses such as lower density office uses or commercial uses oriented to vehicular travel shall be discouraged from locating within *Major Transit Station Areas*.
- (3) In addition to planning for uses that support *rapid transit, active transportation* will also be strongly encouraged within *Major Transit Station Areas*.
- (4) Development applications and site plan applications within Major Transit Station Areas shall:
 - (a) demonstrate compatibility and integration with surrounding planned land uses;
 - (b) contribute to an animated streetscape through the utilization of



appropriate height, mixing of uses, massing, architectural design, setbacks, siting and landscaping, parking, public spaces and the *conservation* of *cultural heritage resources*; and,

- (c) demonstrate strong linkages to *active transportation* networks that abut property boundaries. The City shall also encourage landowners within *Major Transit Station Areas* to work collaboratively to create linkages to *active transportation* networks that allow movement across property boundaries, where feasible.
- (5) Any portions of *Major Transit Station Areas* located within the boundaries of the Uptown Waterloo Urban Growth Centre will be planned as part of the Urban Growth Centre. Policies in Section 3.7 of this chapter shall apply to any *Major Transit Station Areas* located within the Uptown Waterloo Urban Growth Centre.
- (6) For clarity, Section 3.11.2 and policy 6.5.2 (1) of this Plan shall apply when reviewing *development* applications that are located within a *Major Transit Station Area*. Section 3.6 shall also apply to any *development* application that is within a *Major Transit Station Area* and a designated Node or Corridor.

3.8.1 Parking in Major Transit Station Areas

The City will plan for, and require appropriate, well designed bicycle and vehicle parking facilities in *Major Transit Station Areas*, balancing the desire to accommodate a range of transportation modes with the desire to implement *transportation demand management* and reduce reliance on the automobile in favour of *rapid transit* and *active transportation*.

- (1) The City will, where appropriate, collaborate with the Region, landowners and other stakeholders on the development of parking strategies for *Major Transit Station Areas.* Such strategies may include reduced parking requirements, shared parking, development of structured or underground parking facilities, parking pricing and other appropriate strategies.
- (2) The Zoning By-Law will require, in addition to automobile parking, bicycle parking in an effort to encourage active transportation.

3.8.2 Station Area Plans

- (1) The City will, in consultation with the Region, undertake Station Area Plans for all *Major Transit Station Areas* located outside the Uptown Waterloo Urban Growth Centre. Such Plans will include, but not be limited to:
 - (a) A comprehensive land use plan that defines *Major Transit Station Area* boundaries, the planned debelopment concept, unique



characteristics and any associated minimum density requirements to support the desired form and function of the *Major Transit Station Area*; 0.77

- (b) Design guidelines and development standards, as necessary, to implement Transit Oriented Development;
- (c) A parking management strategy that seeks to maximize *intensification* and infill opportunities; and
- (d) Identification of Implementation requirements to achieve desired goals for *Major Transit Station Areas*.
- (2) Station Area Plans will be implemented by way of an Official Plan Amendment and/or District Plan Amendment and will include, but not be limited to the following:
 - (a) Appropriate minimum density and/or minimum height requirements;
 - (b) Appropriate requirements for *mixed-use* development on a sitespecific, or area-specific basis;
 - (c) Appropriate policies that seek to implement studies identified in policy 3.8.2 of this Plan; and,
 - (d) Other policies that are appropriate in order to implement the planned function of *Major Transit Station Areas.*

3.8.3 Transitional Policies for Major Transit Station Areas

(1) Until such time as this Plan includes policies for *Major Transit Station Areas* in accordance with policy 3.8.2(2), any *development* application submitted within a *Major Station Transit Station Area* will be reviewed in accordance with the transit-oriented policies of this Plan and in Section 2.D.2 of the Regional Official Plan. Any such applications that do not fully meet the transit-oriented development policies may be permitted, provided the owner/applicant demonstrates, to the satisfaction of the City and the Region, that the proposed development is designed in such a way that subsequent phases or infilling would meet the transit-oriented development policies.

3.9 WATERLOO AS A COMPLETE COMMUNITY

A complete community is one that includes a broad range of housing, a mix of jobs, a broad range of commercial establishments and services, community infrastructure including schools, parks and recreation sites, cultural and social facilities/services that are well connected by a system of networks. Planning for a complete community can mean different things to different people and can occur at a variety of levels – Regional, City, Planning District and neighbourhood. The City will collaborate with the Region, Area Municipalities and other groups on initiatives that support the complete community concept at the Regional level and will also plan for the City of Waterloo to be a complete community at the City and Planning District level.

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> and where appropriate, amend existing by-laws or pass new by-laws to ensure uses of land are regulated and controlled in accordance with the policies of this Plan.

12.3 MUNICIPAL INCENTIVES

12.3.1 Height/Density Bonusing

- (1) Zoning By-Laws, pursuant to Section 37 of the <u>Planning Act</u>, may be enacted to authorize increases in height and/or density that would not otherwise be permitted in the Zoning By-Law in return for facilities, services or matters that would comply with the general intent of this Plan.
- (2) Authorized increases in height and/or density will be used as a tool to support the City's policy objectives within the Official Plan. The potential for authorized increases in height and/or density will apply to lands which, at the time of application, satisfy the following criteria:
 - (a) Is located within a designated Node or Corridor; and,
 - (b) Is well served by existing or planned transit.
- (3) Any facilities, services or matters for density bonusing will be secured through the use of agreements that are registered on title to the lands. The City will require the property owner to enter into one or more agreements with the City, which may be registered against the title of the affected property, specifying the terms under which the density bonus will be granted.
- (4) With regard to facilities, height and/or density bonusing will not relate to the ongoing maintenance costs of facilities, but may relate to capital facilities or cash-in-lieu toward planned or actual capital facilities, above and beyond any contributions provided under the provisions of the <u>Planning Act</u> or <u>Development Charges Act</u> or other applicable statute(s).
- (5) The City may, at its sole discretion, authorize increases in height and/or density in return for any of the following facilities, services or matters:
 (a) Underground parking that provides at least 50% of supplied parking;
 - (b) Significantly enhanced off-site *pedestrian* connections, including *pedestrian* connections to transit facilities, and streetscape improvements on public boulevards;
 - (c) Significantly enhanced off-site bicycle facilities;
 - (d) Building design that is capable of achieving certification under a recognized environmental design certification system;
 - (e) Public art, representing 1% of the value of construction for the development, pursuant to the City's Percent for Public Art Policy;
 - (f) Superior outdoor amenity area design that functions as public space for the community at large;

- (g) Improvements to City parks or public spaces;
- (h) Preservation/enhancement of the natural environment, above and beyond the existing requirements in this Plan;
- (i) Remediation of a contaminated site;
- (j) Adaptive re-use of a *cultural heritage resource*, where a *Heritage Impact Assessment* find that the heritage attributes and integrity of the *cultural heritage resource* will be *conserved* through the proposed development;
- (k) Developments which receive senior government funding for the provision of special needs, assisted or other subsidized housing;
- Provision of community facilities, such as arts or cultural facilities, community centres or recreation facilities, or child care centres; and,
- (m)Other local improvements identified in a City Community Improvement Plan, capital budget, district plans, environmental strategies, and/or other implementation plans or strategies.
- (6) In all cases, appropriate development review processes will be utilized to ensure:
 - (a) The site is suitable for the proposed density and/or height in terms of parking, landscaping, and other site-specific requirements;
 - (b) Any Increase in density and/or height is compatible with the planned scale and character of the surrounding neighbourhood and has a minimal impact on neighbouring land uses; and
 - (c) That community services, *infrastructure* and transportation impact issues are adequately addressed, if applicable. A Transportation Impact Study, Servicing Report, and any other relevant supporting information may also be required. All relevant supporting information may require, at the City's request, examination of off-site impacts.
- (7) The positive impacts of the exchange should benefit the surrounding areas experiencing the increased density.
- (8) Applications to exceed the maximum height limits of the Zoning By-Law must demonstrate how the impact of the increased height will be minimized on adjacent low or medium density areas. Consideration will be given to the extent to which a proposal meets the urban design objectives and policies of this Plan as well as provisions of the City's Urban Design Manual related to compatible development, human scale development, character, building design, landscape design and buffer standards. With the goal of incorporating appropriate building massing to minimize shadow impacts, retain views and complement the planned scale and densities of adjacent properties, appropriate mitigation measures would include, but are not limited to:
 - (a) Increasing the setback from abutting low or medium density residential area;
 - (b) Incorporating terraced massing on any side of the building that abuts a

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low or medium density residential area;

- (c) Recognition of existing or planned grade changes between existing abutting low or medium density residential properties and the proposed development that would reduce the impact of the requested additional storeys to a similar impact as would occur if the building were built at the maximum limit in the Zoning By-Law and there was no grade change between it and abutting low or medium density residential uses; and,
- (d) Recognition of existing features that provide a buffer between the property and adjacent low or medium density residential areas. Such features may include parks, greenspaces, environmental areas, hydro corridors, properties within non residential designations, and properties with height and density limits that serve to buffer low and medium density residential areas from higher density uses.

12.3.2 Community Improvement Plans

Under Section 28 of the <u>Planning Act</u>, Council may by By-Law designate part of, or the entire City, as a Community Improvement Project Area. It is the intent of Council to utilize Community Improvement Plans to promote and focus public and private sector investment into maintenance, rehabilitation, and redevelopment activities that Improve the living and working conditions in the City.

- (1) The goals of community improvement are to:
 - (a) Preserve, redevelop and rehabilitate the built environment, including residential, commercial, industrial, and *mixed-use* areas;
 - (b) To make efficient use of existing community uses and other amenities;
 - (c) To ensure private and public community Improvement activities are coordinated;
 - (d) To address existing land use conflicts, and minimize or mitigate future land use conflicts;
 - (e) To assist the City in identifying priorities for municipal expenditure regarding community improvement projects; and,
 - (f) To participate, wherever possible, in Federal and/or Provincial programs that facilitate community improvement.
- (2) Community Improvement Plans may be prepared and adopted to achieve one or more of the following objectives:
 - (a) Encouraging private sector renovation, repair, rehabilitation, redevelopment or other improvement of lands and/or building, including environmental remediation, development, redevelopment, construction and reconstruction of lands and buildings for rehabilitation purposes, or for the provision of energy efficient uses, buildings, structures, works, improvements or facilities;
 - (b) Improving or upgrading community uses;

for *ancillary uses* above will be set out in the implementing Zoning By-Law.

11.1.29 Specific Provision Area 29 (144 Park Street)

- (1) The policies of this Specific Provision Area apply to lands at 144 Park Street (formerly 21 Allen St W, 142, 144 and 148 Park St), shown as SPA 29 on Schedule 'A6' – Specific Provision Areas.
- (2) Lands within Specific Provision Area 30 shall be subject to the following site specific policies:
 - (a) Under the provisions of section 37 of the <u>Planning Act</u>, Zoning By-Laws may be enacted to permit height and density increases than are otherwise permitted, in return for the provision of such facilities, services or matters, as are set out in the by-law.
 - (b) The development must constitute good planning and conform to the objectives and policies of this Plan. The increase in density should not result in a scale of development that is incompatible with adjacent uses or exceeds the capacity of available municipal services. No increases in height shall be granted.
 - (c) The facilities, services or matters to be secured shall support the City's urban design policies, as contained in the City Form Chapter, and other objectives and policies within the Official Plan and must satisfy all of the following criteria:
 - (i) The site shall be located within a Major Node or Major Corridor;
 - (ii) The site shall be located on a Regional, City Arterlal or Major Collector *road*;
 - (iii) The site shall be well-served by existing transit and within close proximity to proposed higher-order transit; and
 - (iv) The site shall contain underground parking.
- (3) The determination of appropriate increases in density for the subject lands shall be considered based on the ability of the project to meet the following objectives which shall be specified in the implementing Zoning By-Law:
 - (a) To support the provision of common open space on and adjacent to the site that is functional for passive recreational use by both residents of the development and the general public;
 - (b) To support the provision of underground parking;
 - (c) To encourage aesthetically attractive residential developments, achieved through the enhancement of building façades, the use of podiums and entrance features which augment the streetscape and provide a *pedestrian* scale and building design which reduces the shadow Impact on surrounding properties;
 - (d) To support the provision of, and public access to, art that reflects

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the historical nature of the site and which represents 1% of the value of the construction of the proposed building;

- (e) To encourage off site improvements and/or cash-in-lieu of such improvements to existing parks, trails and other public amenities;
 (f) To encourage off site improvements to existing parks, trails and other public amenities;
- (f) To encourage the redevelopment of this *brownfield* site; and
- (g) To encourage the provision of units which are *affordable* to low and moderate income (as defined in the Provincial Policy Statement) households within the City of Waterloo.
- (4) The cumulative impact of applying the bonus provisions in accordance with the objectives in policy 11(30) (b) above shall not result in a density of more than 465 units per hectare, provided that the maximum number of units shall not exceed 149; the maximum number of *bedrooms* shall not exceed 278; and that only 1, 2 and 3-*bedroom* units shall be permitted, all of which shall be set out in the implementing Zoning By-Law.
- (5) Under the provisions of section 41 of the <u>Planning Act</u>, the City is able to control exterior design, including the character, scale, appearance and design features of buildings as well as the sustainable elements on any adjoining highway, including requiring permeable paving materials, street furniture, waste and recycling containers and bicycle parking facilities.
- (6) In this regard, the development of 144 Park Street (formerly 21 Allen St W, 142, 144 and 148 Park St) shall be subject to the following design requirements:
 - (a) that the first 3 storeys of the multi-storey building shall be composed of:
 - (i) a prominent entrance to the building oriented to the corner of Park and Allen Streets;
 - (ii) townhouse units facing Park and Allen Streets, designed with brick and concrete exteriors and covered front door entrances raised from grade and visible from the public sidewalk; and
 - (iii) a 3 storey parking garage with the same exterior brick and concrete façade.
 - (b) that the townhouse units shall be located in front of the parking garage structure, to minimize the visibility of the parking structure from Park and Allen Streets;
 - (c) that the rear façade of the parking garage shall contain ivy or similar vegetation to soften its appearance for users of the Iron Horse Trail;
 - (d) that the roof top railing above the townhouse units and the parking garage be constructed of black wrought iron;
 - (e) that the remainder of the multi-storey building shall be constructed of materials and colours satisfactory to the City of Waterloo and

reflective of the elevations included in the Development Agreement;

- (f) that the corner of Allen and Park Streets shall function as a public space blending the public and private realm, with decorative hard surfacing and soft landscaping, including the provision of seating areas for residents of the building and *pedestrians* on either street and bicycle parking facilities for visitors to the site;
- (g) that in the absence of or in addition to street trees within the front or flankage yard, the applicant shall provide enhanced street trees within the boulevard with appropriate measures to ensure their long term health. Should the location of overhead power lines and hydro poles not permit the planting of street trees, the applicant shall provide other landscaping measures to the satisfaction of the City of Waterloo; and
- (h) that the amenity space on top of the parking garage shall contain both hard and soft landscaping treatments, benches and other seating areas, and other amenities appropriate to the proposed use.

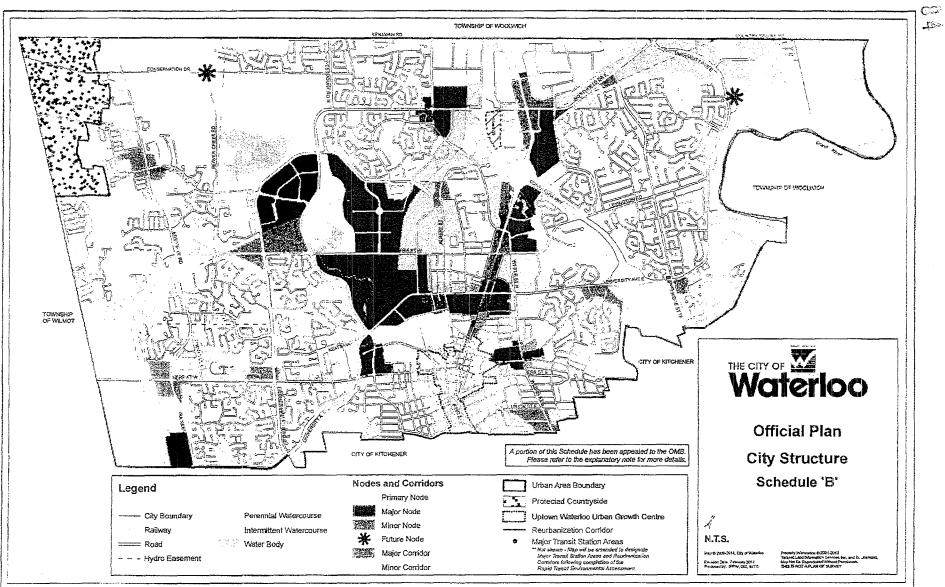
(7) In addition to the regular requirements of a complete *site plan* application submission, the following shall also be required:

- (a) a Construction Staging and Impact Mitigation Plan that identifies anticipated site access needs, expected duration of construction, vibration, noise and dust impacts, as well as truck traffic routes (intended to avoid low density residential areas);
- (b) a Construction Dewatering Plan satisfactory to the Region of Waterloo to facilitate underground parking;
- (c) a Geotechnical Study to support all construction;
- (d) a pre-condition assessment identifying any deficiencies with existing drainage and stormwater management at and adjacent to the site that could affect construction and the existing conditions of adjacent foundations and structures; and
- (e) that an analysis by a qualified professional shall be completed to determine the impact on *pedestrian* comfort levels due to wind conditions (if any) created by the proposed development.
- (8) A holding provision shall be placed on the subject lands through the Implementing Zoning By-Law to ensure the completion and registration of a Section 37 Development Agreement satisfactory to the City of Waterloo.

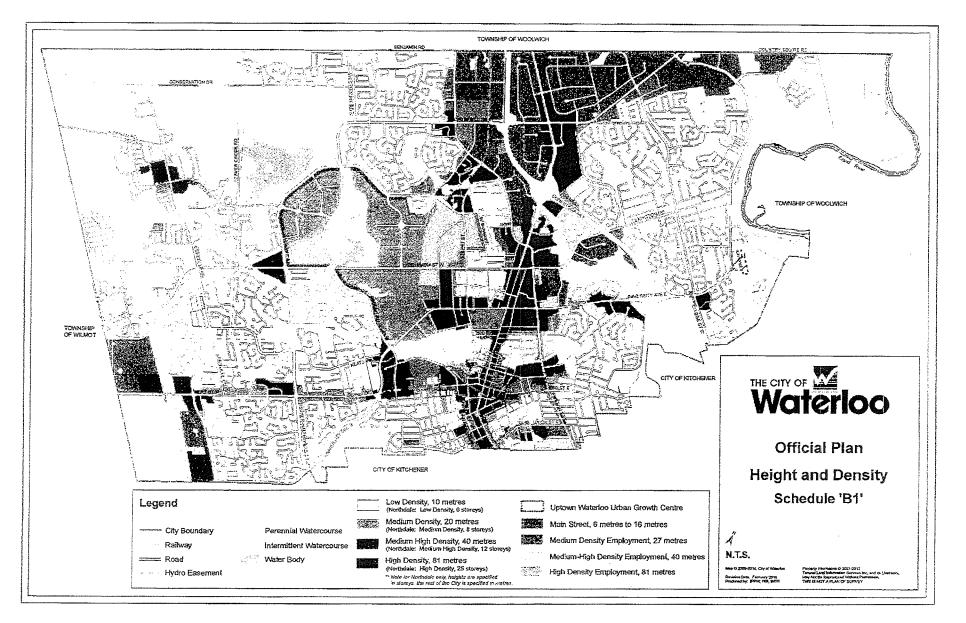
11.1.30 Specific Provision Area 30 (31 Union Street East)

(1) The policies of this Specific Provision Area apply to lands at 31 Union Street East, shown as SPA 30 on Schedule 'A6' - Specific Provision Areas.

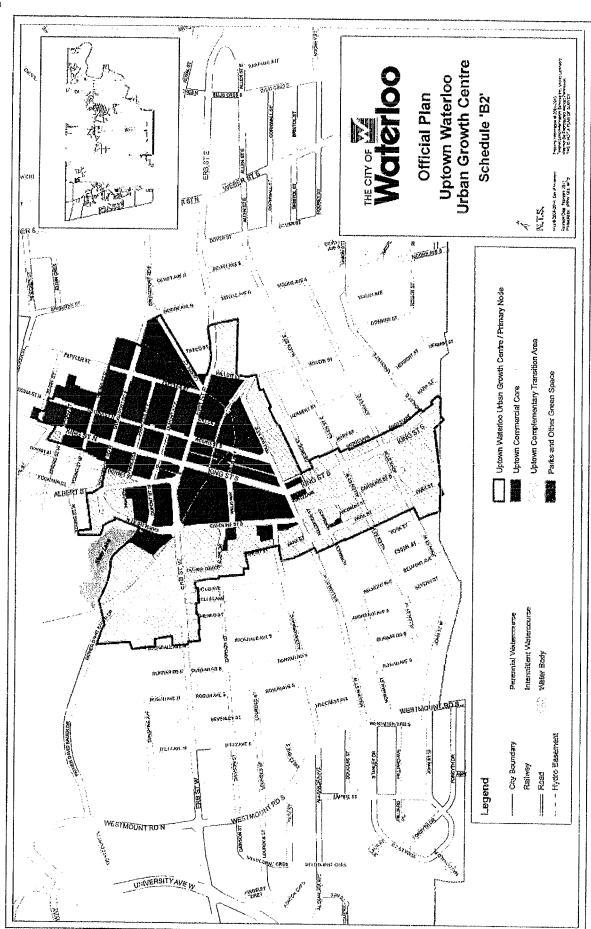
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TAB 3C

This is Exhibit "C" referred to in the Affidavit of

Christopher Pidgeon sworn before me, this

14 day of October, 2015 A COMMISSIONER FOR TAKING AFFIDAVITS David R. Fedy

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Report: P-13-057



REGION OF WATERLOO

PLANNING, HOUSING AND COMMUNITY SERVICES Community Planning

TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: May 28, 2013 **FILE CODE:** D16-05

SUBJECT: "THE BIG SHIFT TOOLBOX" – PLANNING, INFRASTRUCTURE AND FINANCIAL ASSISTANCE TOOLS TO SHAPE OUR COMMUNITY

RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve the following recommendations that support "The Big Shift Toolbox", as described in Report No. P-13-057, dated May 28, 2013:

- a) Endorse "The Big Shift Toolbox" to communicate the many initiatives offered by the Region of Waterloo to shape our community;
- b) Invite the Area Municipalities to be linked to the Big Shift Toolbox and to explore potential new tools; and
- c) Request the Province of Ontario to collaboratively examine regulatory changes that would provide the opportunity for the Region of Waterloo and the Area Municipalities to implement additional tools.

SUMMARY:

"The Big Shift" is a series of economic, environmental and social changes which are occurring in our community and are fundamentally "shifting" how we need to plan and manage growth to maintain Waterloo Region's prosperity and accommodate a growing population. Specifically, "The Big Shift" is a move toward:

- More compact and higher densities of development to accommodate growth, while respecting the need to maintain a high quality of life;
- Limits to outward growth and the protection of valuable rural farmland;
- Protection of environmental systems instead of "islands of green";
- New employment areas and places, including larger lots and re-purposed buildings;
- Increased focus on transit, walking and cycling, while still supporting our road system through strategic investment;
- Increased focus on design excellence, ranging from infrastructure to architectural building design, and including heritage conservation;
- Encouraging development, including affordable housing, adjacent to the forthcoming rapid transit system in the Central Transit Corridor and along the redesigned conventional bus system;
- A greater range and mix of housing types in traditional neighbourhoods; and
- Increased focus on a knowledge-based economy.

Staff is recommending that "The Big Shift" be used as a foundation to showcase a new consolidated communication initiative that provides information about the various tools that the Region of Waterloo (and potentially the Area Municipalities) has to offer. This initiative is intended

to make it much easier for the community and prospective Investors to find these tools. "The Big Shift Toolbox" is similar to communication initiatives being used in other communities that are planning for rapid transit. Examples include Hamilton's "*Rapid Ready*" initiative and the Metrolinx Regional Transportation Plan's "*The Big Move*".

A focus for the communication initiative would be the development of a new web page on the Region's website and in related Regional social media. The web page will provide information about key tools in the BIg Shift Toolbox and a contact for further details, and can be readily expanded.

In addition, staff is proposing to explore potential new tools with the Province and the Area Municipalities which could enhance the suite of opportunities offered by the Region as part of the "The Big Shift Toolbox".

It should be noted that most of these initiatives are focused within the Central Transit Corridor.

Staff proposes to report back to Regional Council later in 2013.

REPORT:

What is "The Blg Shift and Why Create a "Blg Shift Toolbox"?

"The Big Shift" is a series of economic, environmental and social changes which are occurring in our community and are fundamentally "shifting" how we need to plan and manage growth to maintain Waterloo Region's prosperity and accommodate a growing population. These changes include: an older and more diverse population; a more diversified economy with a greater emphasis on technology, education, medicine, finance, arts and culture, and a growing transit system, particularly rapid transit. Specifically, "The Big Shift" is a move toward:

- More compact and higher densities of development to accommodate growth, while respecting the need to maintain a high quality of life;
- Limits to outward growth and the protection of valuable rural farmland;
- Protection of environmental systems instead of "islands of green";
- New employment areas and places, including larger lots and re-purposed buildings;
- Increased focus on transit, walking and cycling, while still supporting our road system through strategic investment;
- Increased focus on design excellence, ranging from infrastructure to architectural building design, and including heritage conservation;
- Encouraging development, including affordable housing, adjacent to the forthcoming rapid transit system in the Central Transit Corridor and along the redesigned conventional bus system;
- A greater range and mix of housing types in traditional neighbourhoods; and
- Increased focus on a knowledge-based economy.

Staff is also recommending that "The Big Shift" be the foundation of a new consolidated communication initiative that provides information about the various tools that the Region of Waterloo has to offer. This step is intended to make it much easier for the community and prospective investors to find these tools as well. "The Big Shift Toolbox" is similar to initiative being used in other communities that are planning for rapid transit. Examples include Hamilton's "*Rapid Ready*" initiative and the Metrolinx Regional Transportation Plan's "*The Big Move*". Legal staff has also completed a search of existing trademarks and copyrights and determined that the intended use of the phrase "The Big Shift" by the Region of Waterloo will not infringe on any existing intellectual property rights of other parties.

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The focus for communication would be the development of a new web page and in related Regional social media. The new web page would be hosted on the Region of Waterloo's website and provide promotional material about each of the tools offered by the Region. New tools can be easily added as well. In addition, the web page could provide links to information about the tools offered through the Area Municipalities. This matter will be further discussed with the Area Municipalities.

This report provides details on the tools that are currently available or are being explored. In addition, this report describes some of the tools which may be implemented by the Area Municipalities. Specifically, the report identifies Regional staff's Interest in exploring with Area Municipalities a pilot Development Permit System (DPS) and to determine if there is any potential to increase the use of density bonusing to realize additional community benefits.

Current Regional Planning/Infrastructure and Financial Tools

Planning/InfrastructureTools

The following are the key planning and infrastructure tools currently being offered or being developed by the Region of Waterloo.

a) Regional Community Improvement Plan

The Region's Reurbanization Community Improvement Plan (RRCIP) has been in place since 2007. The RRCIP is an important document and includes the Regional Reurbanization Facilitation Program which enables the acquisition of lands for strategic Regional infrastructure projects such as the Multi-Modal Transit Hub at King and Victoria Streets. Additional incentive programs (discussed below) could be created within the RRCIP in accordance with Regulation 550/06 of the *Planning Act*, which grants upper-tier municipalities, such as the Region of Waterloo, a specific mandate to address the following matters under an upper-tier Community Improvement Plan:

- 1. Infrastructure that is within the upper-tier municipalities' jurisdiction;
- 2. Land and buildings within and adjacent to existing or planned transit corridors that have the potential to provide a focus for higher density mixed-use development and redevelopment; and
- 3. Affordable housing.

b) Draft Central Transit Corridor Community Building Strategy

The draft Community Building Strategy (CBS) provides developers and investors a flexible framework that identifies new development opportunities In Major Transit Station Areas. An initial draft of the CBS was presented to Council in Report P-13-007. Staff Is currently undertaking public consultation on the draft CBS. Over the coming six months, the Region and the Area Municipalities will review this input and further investigate and prioritize the key actions that should be undertaken in the short and medium terms, and where possible, link them to applicable regulatory and financial tools and/or development applications.

c) The Multi-Modal Transit Hub

in 2008, the Region embarked on the development of a Multi-Modal Transit Hub at the intersection of King and Victoria Streets in downtown Kitchener. The Region has assembled properties to develop new transportation infrastructure that is expected to incorporate GO and VIA Train platforms, local bus and LRT connections and inter-city bus services. The Hub will be an integral step toward helping to retain existing Waterloo Region businesses and attracting

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new investment by providing more seamless connections between inter-city and local transit systems.

d) Alternative Transportation Demand Management in New Development

Regional Council recently adopted recommendations to modify the Region's Transportation Impact Study (TIS) guidelines to include a Transportation Demand Management (TDM) Checklist. The TDM Checklist can be used to encourage non-residential developers in the Urban Growth Centres, Major Transit Station Areas and reurbanization corridors of Cambridge, Kitchener and Waterloo to incorporate TDM measures into their proposed developments. Including TDM measures such as bicycle facilities, showers and reduced bus passes for building occupants in the design and/or operation of proposed developments provides Area Municipalities with a basis for considering reduced parking rates or density bonusing as part of proposed zoning bylaw amendments (Report P-13-031). TDM measures can also be used by developers as a means of promoting their developments to the community.

e) Regional Implementation Guidelines for Road Allowance Dedications

In 2011, Regional staff identified opportunities for incorporating flexibility into Regional Guidelines for the acceptance of Regional Road Allowances (Report P-11-069). As a result, the Region can now accept road allowances, in some circumstances, which are contaminated. This practice better reflects the need for flexibility in existing built-up areas, where contamination is frequently encountered.

Financial Tools

The following are the financial tools currently offered by the Region of Waterloo.

a) Regional Development Charges: Core Area Exemptions

The Region provides exemptions on Regional Development Charges (RDC) for developments, including affordable housing, occurring within the core area of Kitchener and the three core areas of Cambridge (Galt, Hespeler, Preston). The exemption is provided through the Regional Development Charge Bylaw for areas where an Area Municipality offers an exemption under its own DC Bylaw. In 2010, the City of Waterloo ceased Development Charge exemptions for the core area and consequently the Region ceased its exemption for Regional Development Charges for that same area, as the by-law is structured accordingly.

b) Regional Development Charges: Demolition Credit

In order to promote redevelopment, the Regional Development Charge Bylaw calculates Regional Development Charges owed for a new development based on the net assessable floor area. As a result, redevelopments that require demolition of a pre-existing structure are able to deduct the equivalent floor area demolished from the total floor area being redeveloped, essentially resulting in a financial credit which is valid for up to 5 years.

c) Brownfield Financial Incentive Program

The Brownfield Financial Incentives Program (BFIP) assists in the investigation, clean up and redevelopment of Brownfield sites located throughout the Region. The program has three components:

1. Phase Two Environmental Site Assessment (ESA) Grants – a cost sharing program which funds up to 50% of eligible costs associated with the completion of environmental site

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investigation, in the form of a Phase Two ESA report, to a maximum of \$40,000;

- 2. Regional Development Charge (RDC) Exemptions are provided through the RDC By-law and provide DC exemptions up to a maximum of the total eligible remediation costs incurred for the remediation of environmentally impacted sites in areas where RDCs would otherwise be due; and
- 3. Tax Increment Grants (TIG) a joint municipal program that further offsets remediation costs by providing grants to developers who remediate and redevelop a specific brownfield site. The TIG program is currently operated jointly with the Cities of Cambridge and Kitchener. The Tax Increment Grant program is offered under the authority granted to upper-tier municipalities to provide financial assistance to support community improvements plans implemented by area municipalities under s.28 of the Planning Act. On March 18, 2013, the City of Waterloo approved the development of a Tax Increment Grant program for brownfields, with program details to be determined by City and Regional staff.

Both Cambridge and Kitchener have existing brownfield tax increment programs. Regional Council approved revisions to the BFIP In Report P-13-004/F-13-007 that provided additional funding for the Phase Two ESA program and implemented a sustainable, long term funding model for TIGs that aligns with the funding models used by Cambridge and Kitchener. To date the BFIP programs have contributed to the creation of approximately 285 new residential units and approximately 60,000 sq m (646,000 sq ft) of non-residential floor area that together have resulted in building permits valued at approximately \$57.1 million.

d) Property Tax Class for Multi-Residential (Rental) Developments

In 2001, the Region adopted the optional property tax class for new multi-residential (rental) developments (7 or more self-contained rental units). As a result, this rental housing is taxed at a lower rate than multi-residential property developed prior to 2001 and now has a tax rate equal to that for low density residential, including single detached dwellings. In addition to facilitating affordable housing funding from senior level governments, the tax class encourages the development of new multi-residential (rental) developments and supports the provision of affordable housing throughout Waterloo Region. Detailed information regarding this tax class was recently provided to Regional Council as part of the 2013 Tax Ratios and Subclass Rate Reductions Report (F-13-023).

e) Community Environmental Fund

In 2011, Regional Council established the Community Environmental Fund, with the goal of promoting community-based sustainability and stewardship initiatives. To date, the Community Environmental Fund has allocated a total of \$430,767 for projects having a total value of \$1,965,361 resulting in \$4.56 from proponents for every dollar provided by the Region. Examples of projects within the Central Transit Corridor that have received funds include:

- Ryerson Public School in Cambridge, which received \$2,100 to create adequate shade for students and improve screening from adjoining industrial facilities through tree planting, and other landscaping; and
- Eastwood Collegiate Institute in Kitchener, which received \$1,100 to purchase compost, lumber and garden tools to establish a community garden at the school.

f) Waterloo Regional Heritage Foundation

The Waterloo Regional Heritage Foundation (WRHF) was established by Regional Council in 1973 to promote and encourage interest in the heritage and culture of Waterloo Region. The Foundation was the first heritage organization set up and funded by a regional government, and set a precedent in Canada as the first heritage organization that was allocated a substantial 1383048 Page 6 of 11

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amount of public money by any level of government. Since 1973, the Foundation has distributed over \$1,000,000 to a wide variety of projects, including those within the Central Transit Corridor (e.g. Waterloo Post Office, Cambridge City Hall, Industrial Artifacts Project). WRHF grants are an important financial tool that can be used to encourage the adaptive reuse of significant cultural heritage resources during reurbanization.

Other Tools Being Examined

Staff is continuing to identify new opportunities to potentially enhance the suite of tools that could also be promoted under "The Big Shift Toolbox". This section describes several opportunities.

a) Regional Development Charge Bylaw Review.

The Regional Development Charge (RDC) By-law review is required as the RDC By-law expires after five years (July 31, 2014). The Region is required to complete a Background Study which reviews growth forecasts and capital project requirements to support anticipated growth and determine the RDC rates to be imposed in the new RDC By-law. The Region will be reviewing all of the provisions of the By-law, including current exemptions for the costs of brownfield remediation and the downtown core area DC exemptions, to determine if these exemptions are still meeting the needs of the Region and should be continued in the new RDC By-law.

b) Potential Pilot Tax Increment Grant (TIG) Program for Uncontaminated Properties

As part of the continued development of the draft Community Building Strategy (CBS), staff has identified the opportunity to further explore the use of a new Tax Increment Grant (TIG) program as a means of promoting new redevelopment and investment in Waterloo Region.

Currently, the Region participates in a Joint TIG program for Brownfields through the Community Improvement Plans (CIPs) of Cambridge and Kitchener. However under the authority granted the Region through the *Planning Act* (s.28 and Reg. 550/06), there exists the opportunity to establish a new program for uncontaminated sites that would focus on providing grants to developers of new catalytic development on specific sites that would support the Region's investment in rapid transit.

Such a program could reimburse developers for specific eligible expenses associated with larger scale redevelopments. The reimbursement would be in the form of an annual grant to the developer in an amount not to exceed the realized annual tax increment provided to the Region upon development completion. This grant would be provided annually until such time as all eligible costs incurred have been reimbursed to the developer or until a maximum period for annual payments has been reached. The eligible costs which form the basis of the grant could include a wide variety of expenses incurred by a developer for large developments in Waterloo Region, such as:

- Underground/structured parking;
- Applicable Regional planning fees;
- Costs assoclated with development of sites with high water tables;
- Heritage preservation; and
- Development of affordable housing.

The ability to implement this program in specific, strategic areas, such as the Central Transit Corridor or Major Transit Station Areas means that a new TIG program for uncontaminated sites could be implemented, consistent with the objectives and priorities of the Community Bullding Strategy.

A new TIG program could be operated jointly with the consent of Area Municipalities or implemented solely by the Region under the Region's Reurbanization Community Improvement Plan (RRCIP). The implementation of a new TIG program within the current RRCIP would require additional consultation with both the Province of Ontario and members of the public.

Staff propose to consult with the Area Municipalities and identify the necessary amendments that would be required to the RRCIP to Implement this program. In addition staff would determine the potential structure of a new pilot program, including identifying eligible costs for reimbursement, proposed site/development criteria for program eligibility and a recommended duration for the pilot program. This would provide Regional Council an opportunity to gauge the program's performance. Conclusions regarding the merits of such a new program will be brought before Regional Council for consideration later in 2013.

c) Exploring Tax Increment Financing (TIF)

Tax Increment Financing (TIF) is a financial tool that can be used to encourage development in underdeveloped areas (TIF Districts) of a municipality. A tax Increment is defined as the difference between the property taxes within a defined TIF District for a base year when the TIF tool is first used and the property taxes in that District in any future year when some level of new development has occurred.

The idea behind TIFs is that strategic investments in infrastructure (e.g. new roads and bridges, utility and sewer upgrades, and sidewalks) and/or related projects (e.g. affordable housing, heritage preservation, tree planting and trail enhancements) will stimulate private investment within a defined TIF District. Higher property tax revenues will then accrue to the municipality as a result of the new development and from existing properties, whose assessed values have increased due to the enhanced desirability of the area. It is assumed that, over time, these higher property tax revenues will exceed the property tax revenues that the municipality would otherwise have received from the vacant and underdeveloped properties located within the TIF District.

TIFs are designed to be self-financing and have no impact on the collection of Development Charges. TIFs are usually financed in one of two ways – Issuing upfront debentures and recovering the related debenture costs over time, or foregoing a portion of the tax increment from new development for a period of time as a means to attract investment, and then using the increased property tax revenue from the new investment to fund projects within the TIF District.

The first financing approach is typically used to fund infrastructure projects which municipalities believe are necessary to attract new investment to a TIF District. The expectation is that the debenture principal and interest costs will be recovered through increases in property tax revenue over a specified period (typically 20-30 years). Alternatively, when addressing non-infrastructure projects such as affordable housing and heritage preservation, municipalities often adopt by-laws which specify that new development within a TIF District will not be required to pay the full tax increment for a period that typically ranges from 3 to 10 years. The by-laws further specify that a certain percentage of the property tax revenue generated by each new development will be pooled and applied to fund projects that will make the District even more attractive to future investment.

TIFs have been used extensively in the United States and a few Canadian cities (e.g. the East Village community in downtown Calgary and the Downtown Winnipeg Sports, Hospitality and Entertainment District). However, as with any financial incentive program, TIFs do carry financial risks to a municipality. There are examples of TIFs in the United States where the

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expected tax increments were not realized because either the anticipated amount of new development did not occur, or because much of the new retail and office development became vacant after a period of time due to competition. Regardless of the reasons for the lack of success, municipalities are responsible for dealing with the consequences of the lower than anticipated property tax revenue.

Staff believe that TIFs have the potential to provide Regional Council with an additional tool for financing public improvements that have been identified and prioritized through the draft Community Building Strategy. In particular, TIFs may be helpful to facilitate redevelopment and investment opportunities in Major Transit Station Areas. However, TIFs are not currently permitted by the Ontarlo *Planning Act*. Regional staff is optimistic that there is potential to amend the *Planning Act* because the Province has recently allowed TIFs to be used for two pilot projects in Toronto: the West Don Lands redevelopment and the Toronto subway extension. This is being done by way of implementation of a project specific regulation to *Tax Increment Financing Act*, which is recent legislation enabling municipalities to obtain project specific approval to apply the education portion of a tax Increment within a defined district to finance an eligible project.

It is imperative that staff explore TIFs strategically and with a solid understanding of the lessons learned from other municipalities, to limit any potential liabilities to the Region. Therefore, as an initial step, staff propose to further examine the potential use of TIFs only as a pilot TIF program and that Regional Council endorse staff's recommendation to begin discussions with the Province to explore regulatory changes to enable such other tools to be used.

d) Regional Noise Guideline From Stationary Sources

Historically, development and condominium applications have been approved by staff where noise studies show results that do not exceed Provincial Guidelines by more than 1 dBA for stationary noise. Stationary noise sources include heating, ventilation and air conditioning units. Those standards are now shifting due to Provincial and Regional growth policies that have resulted in a greater number and concentration of multi-residential developments in our urban areas. The City of Ottawa, for example, has been approving applications with 1-5 dBA above the Noise Level Objectives for stationary noise as permitted by the Guidelines in order to provide greater flexibility and facilitate new developments. However, "livability" and potential impacts on adjacent properties must also be carefully assessed.

Staff is currently reviewing stationary noise issues and will recommend any refinements to the existing Regional Transportation Noise Guidelines at a future Planning and Works Committee meeting.

While the current Regional guidelines (described earlier in this report) pertain to non-residential development, Regional staff will also be examining the establishment of a TDM checklist for new residential development. This would permit Area Municipalities to consider additional parking reductions using a TDM checklist to inform their decisions.

f) Area Municipal Opportunities

As part of "The Big Shift", staff has discussed the potential for complementary regulatory and financial tools with the Area Municipalities. Specifically, staff would like to explore opportunities available under the *Planning Act* for Area Municipalities, including the following:

1. A Pilot Development Permit System (DPS): DPS is a development application process, whereby the land use planning approval process for zoning, site plan and minor variances are consolidated as part of a single application and approval process.

A DPS process has the potential to provide benefits including:

- A faster and more streamlined approval process for applicants;
- Greater flexibility for use approvals through the provision of permitted and discretionary uses under a Development Permit/Land Use Control Bylaw; and
- Site specific development variations or "relaxations" from the standard zoning requirements.

Such a system could be explored with interested Area Municipalities in the form of a pilot program, whereby staff would review applications processed under the traditional (current) planning process over a specific period and evaluate if a DPS process could have provided additional benefits to the municipalities and applicants. This pilot could be applied in specific areas such as the Central Transit Corridor or in specific Major Transit Stations Areas. A Pilot DPS review could also be applied to other strategic areas such as business parks similar to Niagara Region's plans to apply a DPS process as part of the development of the Niagara Economic Gateway Employment Lands.

2. Density Bonusing Provisions: Density Bonusing is a provision under the *Planning Act* that permits Area Municipalities to grant higher maximum densities then allowed under the existing zoning. In exchange for density increases, the developer incorporates additional public interests into the project (which are publically accessible) and are intended to benefit the immediate neighbourhood or community. Public amenities may include the provision of green spaces, public squares, public art, community spaces, affordable housing or enhanced public realm improvements.

Density bonusing has been used by Cambridge, Kitchener and Waterloo as a development Incentive to promote transit oriented development. Examples Include the Black Forest condominiums (Cambridge), the City Centre condominiums and the 1 Victoria Condominiums (Kitchener) and the 144 Park condominiums (Waterloo). Regional staff would like to discuss whether there is opportunity for further use of density bonusing to promote higher density residential, mixed-use or non-residential development within Major Transit Station Areas.

Proposed Next Steps

Staff proposes to immediately undertake implementation of "The Big Shift" communication initiative and to explore new regulatory tools and financial incentives which may be beneficial to the Region and Area Municipalities. More specifically, staff propose:

- Spring/Summer 2013 Develop a new web page on the Region's website and in Regional social media that will serve as a central point for communicating "The Big Shift Toolbox" to the public, including prospective investors and developers, and provide information about the tools that the Region has to offer, and potentially the Area Municipalities as well;
- Summer 2013 Identify amendments to the Region's Reurbanization Community Improvement Plan (RRCIP) to enable the use of other tools;
- Summer/Fall 2013 Consult with the Province to identify opportunities for Provincial regulatory changes which may be required to enable the use of new tools;
- Summer 2013 Begin detailed discussions with the Area Municipalities to explore interest in additional tools to promote strategic development; and
- Fall 2013 Report to Regional Council on findings.

Area Municipal Consultation/Coordination

Staff has had preliminary discussions about the potential to expand the range of tools with the Area Municipalities. Regional staff will meet with the Area Municipalities to further explore their interests. A copy of this report has been distributed to all Area Municipalities.

CORPORATE STRATEGIC PLAN:

The Report supports Focus Area 1.1. - Develop and implement an integrated funding program to support community-based environmental initiative, Focus Area 2.1.1 – Implement a sustainable Brownfield Program to promote the redevelopment of previously contaminated sites, and Focus Area 2.1.2 - Work with area municipalities to develop and implement a comprehensive strategy to promote Intensification and reurbanization within existing urban areas.

FINANCIAL IMPLICATIONS:

Each of the proposed programs recommended in this report must be explored by staff strategically and with lessons learned from other municipalities to understand both the benefits and the potential financial liabilities to the Region. Accordingly, staff propose to explore these potential new initiatives in the context of pilot programs only. In addition, staff will identify the necessary amendments required to the Regional Reurbanization Community Improvement Program and determine the potential structure of any new programs. This will include identifying potential eligible costs for reimbursement, proposed site/development criteria for program eligibility and a recommended duration for any new pilot program.

These findings will form part of the report to be brought before Regional Council for consideration later in 2013.

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from Legal Services has been involved in the development of this report and will continue to be involved. This report has also been reviewed by Finance and Transportation and Environmental Services staff.

ATTACHMENTS:

NIL

PREPARED BY: Phillip Caldwell, Principal Planner/Brownfield Coordinator Kevin Curtis, Manager, Reurbanization Planning Rob Horne, Commissioner, Planning, Housing and Community Services

APPROVED BY: Rob Horne, Commissioner, Planning, Housing and Community Services

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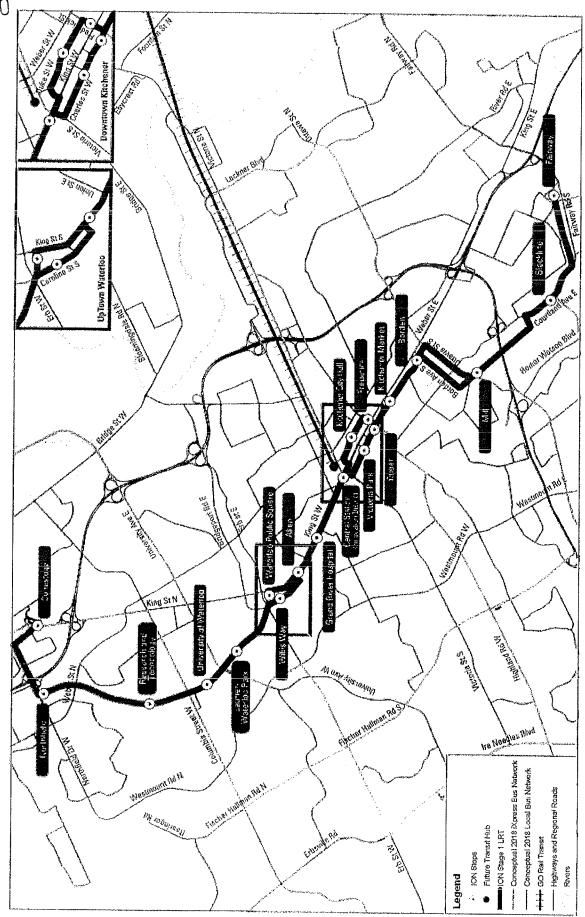
Page 11 of 11

TAB 3D

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Christopher Pidgeon sworn before me, this

14 day of October, 2015 ille A COMMISSIONER FOR TAKING AFFIDAVITS



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TAB 3E

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Christopher Pidgeon sworn before me, this

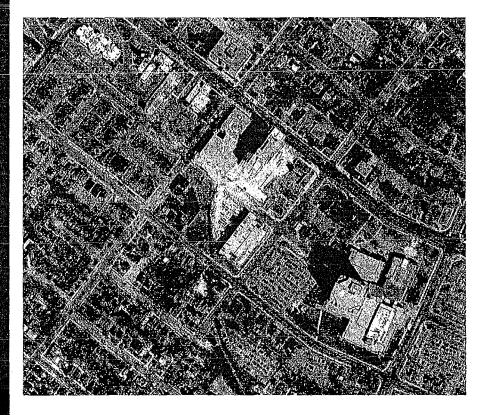
14 day of October, 2015

MU A COMMISSIONER FOR TAKING AFFIDAVITS David R. Pedy



144 Park Tower 2, Waterloo Transportation Impact Study

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Prepared for: Mady Development Corp.

December 2011

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PROJECT SUMMARY

PROJECT NAME:	
	TRANSPORTATION IMPACT STUDY

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REPORT DATE:	DECEMBER 2011
PROJECT NUMBER:	

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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 leftturn 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. 106

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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.

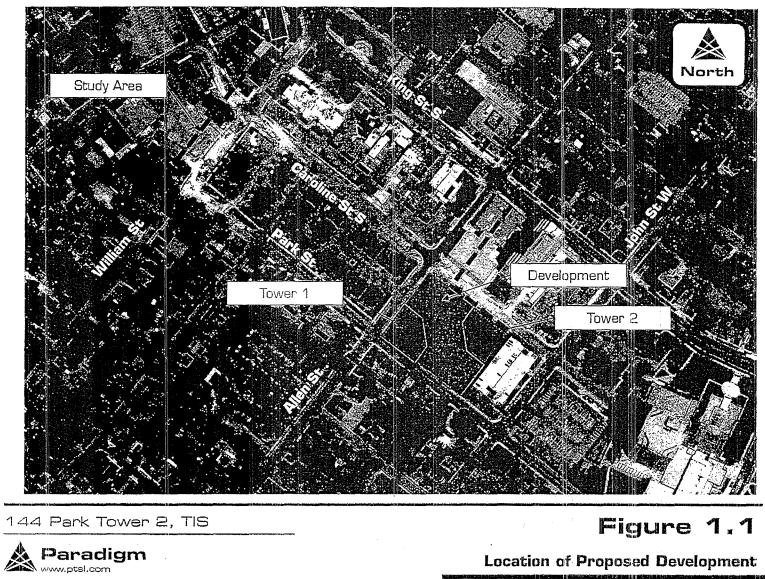
1.2 Purpose and Scope

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.

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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.

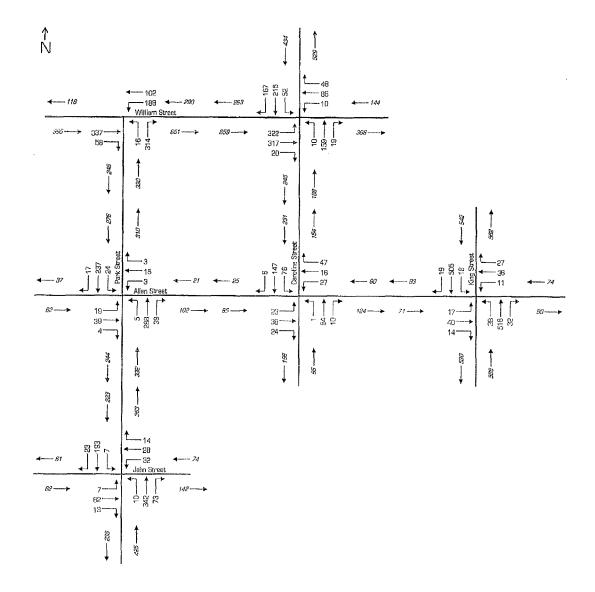
2.2 Existing Traffic Volumes

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.

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144 Park Tower 2, TIS

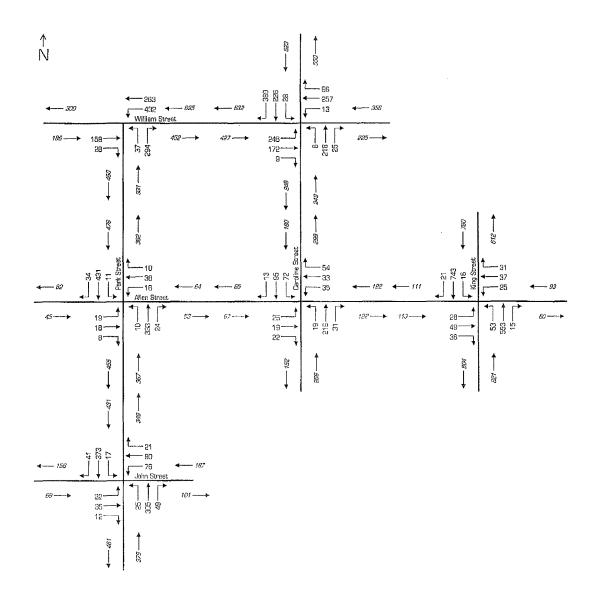
Figure 2.1a



AM Peak Hour Existing Traffic Volumes

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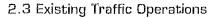


144 Park Tower 2, TIS

Figure 2.1b



PM Peak Hour Existing Traffic Volumes



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.

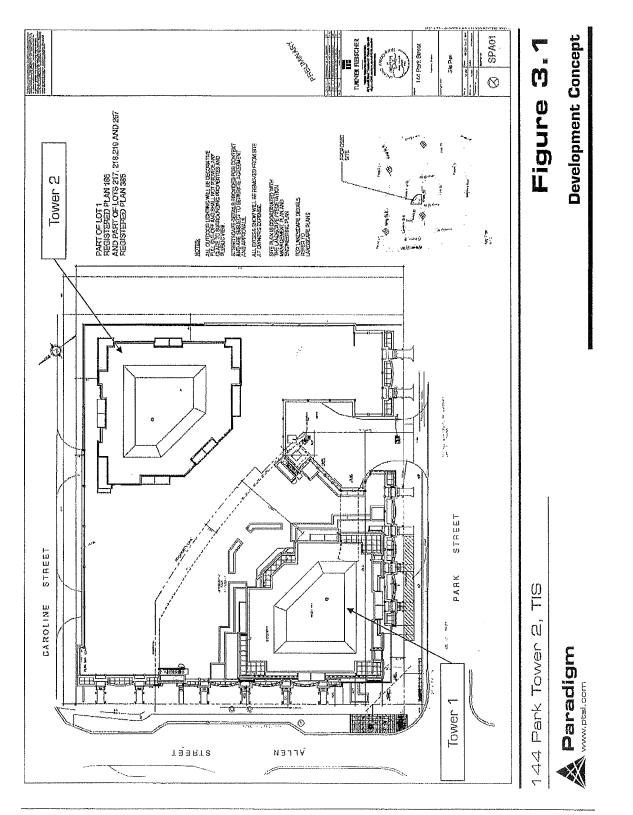
The existing intersection operations are summarized in **Table 2.1** indicating the existing levels of service and volume to capacity ratios experienced within the study area, for the AM and PM peak hours. Based on the above criteria, it was found that the northbound left-turn movement on Park Street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

				<u> </u>					Dire	ectio	n / N	loven	nent	/ Ap	proa	ch				
bg		Φ			East	baun	d		West	tboun	d		Norti	ibour	d		South	nboun	d	
Analysis Perřod	Intersection	Control Type	MOE	LEFT	тнвоисн	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	ЦIJ	THROUGH	RIGHT	APPROACH	LEFT	THRDUGH	RJGHT	APPRDACH	OVERALL
	4 Million Charles D		LOS	В	A	A	В	С	В	В	в	С	С	С	ିପ	C	С	A	С	в
	1 - William Street & Caroline Street	Signal	Delay	12	10	10	11	50	17	17	17	25	25	25	25	32	32	5	21	17
	Caloning on set		V/C	0.51	0,39	0.39	23. A. A.	0.03	0.27	0.27	n na sta Linne i	0.46	0.46	0.46		0.65	0.65	0.33		
	2 - William Street & Park		LOS		A	A	Α	A	A		Α	C		С	C					
	Street	TWSC	Deley		D	0	0	9	D	100	6	21		17	17					7
			V/C	9433	0.26			0.19	0.07	1990		0.07	5. S.S.	0.54	3543	493K) -	Sec. S.	-990 g	1997 - E. 1997 - E.	
AM Peak Hour	3 - Allen Street & King		LOS	8	В	8	В	В	8	A	В	A	A	A	Α,	A	A	Α	- A	В
Ĩ	Street	Bignal	Delay	16	16	16	16	18	18	7	14	10	10	10	10	10	10	10	10	11
- Ă			V/C	0.16	0.16		ubalena Haranna Haranna	0.10		0,06		0.3B	0.38	0.38		0.34	0.34	0.34		
ے ا	4 - Allen Street &		LOS	A	A	A	A.	A	A	<u>A</u>	A	A	A	A	Α	A	Α	A	A	A
Σ	Caroline Street	AWSC	Delay	9	9	9	9	8	8	8	8	8	8	8	8	10	10	10	ា០	9
⊲			V/C	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	TD 1/0/0		C	C	0	<u>С</u>	C	C	C	C	A	<u>A</u>	A	A	A	A	A	Α	
	Street	TWSC	Delay V/C	19 0.21	19	19	. 19	17	17	17	17	0	0	0	D	1	1	1	े	3
				0.21	0.21 C	0.21 C	C	0.07 C	0.07 B	0.07	в	0.00	0.00	0.00	0	0.02	0.02	0.02		
	6 - John Street & Park	Signal	Delay	20	20	20	20	20	в 15	8 15	18	A 4	 	A 5	А 6	A 4	<u>A</u>	A	A 4	B
	Street	aignai	V/C	0.30	20 D.30		20	0.14	0.15	0.15		0.01	0.40	5 0.40	6	4 0.02	4 0.21	4	4	В
			LOS	8	A	0.30 A	в	B	0.15 C	0.15 C	Ć	0.01 C	0.40 C	0.40 C	Ç.	C	0.21 C		В	В
	1 - William Streat &	Signal	Delay	15	10	10	13	19	27	27	26	29	29	59	29	30	30	A B	 19	19
	Caroline Street	Silling		0.57		0.21	ind.	0.03	0.61	0.61	EQ			0.55	- E O (-		0.55	0.55	(13)	13
ļ	······································		LOS	0.07	A	A	A	A	A	0.01	A		0.55	B	. G .,	0.00	0.00	0.00		1. 1993 - 1. 1993 - 1993 - 1993 1995 - 1995 - 1995
	2 - William Street & Park	TWSC	Delev		<u></u>	0	0	9	- ô		6	69		12	18					8
	Street		V/C		0.12		1-1-1-1-1 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	0.35	0.17			0.43		0.38						
5			LOS	С	C	C	С	C	C	A	в	A	А	A	A	В	В	В	В	В
루	3 - Allen Street & King	Signal	Delay	20	50	50	20	23	23	8	18	10	10	10	10	11	11	11	11	12
PM Peak Hour	Street	v	V/C	0.28				0.15	0.15			0.42	0.42	0.42	18.44	0.46		0.46		
ea			LDS	A	A	A	A	A	A	A	A	B	8	8	8	A	A	A	A	Α
5	4 - Allen Street &	AWSC	Delay	9	9	9	9	9	9	9	9	11	11	11	11	10	10	10	10	1D
6	Caroline Street		V/C	0.11	0.11	0,11		0.19	0.19	0.19		0.39	0.39	0.39	1.00	0.27	0.27	0.27		199
	C. Aller Discust D. C. J.		LOS	D	D	D	D	D	D	D	D	A	A	A	A	A	A	A	Α.	
	5 - Allen Street & Park Street	TWSC	Delay	25	25	25	25	26	26	28	26	D	D	0	0	D	0	0	۵	3
	21.661		V/C	0.22	0.22	0.22		0.29	0.29	0.29		D.01	0.01	0.01	i de la composición de la comp	0.01	0.01	D.01		
	C John Churat C Dark		LOS	8	В	8	В	C	В	B	C	A	А	A	A	A	A	A	A	A
	6 - John Street & Park Street	Signal	Delay	19	19	19	19	55	18	18	20	5	6	6	6	5	6	6	G	9
	oureet		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		

TABLE 2.1: BASE YEAR PEAK HOUR TRAFFIC OPERATIONS

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**.



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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 Perk 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.

									Dire	ectio	n / N	lover	nent	/ Ap	proa	ch				
bog		g			East	boun	d	[West	tbour	ıd		Nort	hbour	ıd		Souti	houn	d	
Analysis Period	Intersection	Cartrol Type	MOE	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	OVERALL
	1 - William Street &	• • •• •• ••	LOS	В	В	В	В	С	в	В	В	С	С	С	C	D	D	A	C	.
	Caroline Street	Signal	Delay V/C	13 0.58	11 0.44	11 0.44	12	21 0.04	19 0.33	19 0.33	- 19	27 0.51	27 0,51	27 0.51	27,	42 0.80	42 0.80	5 0.38	2B	19
	2 - William Street & Park		LOS	0.00	A	A	Α.	А	A	0.33	A	D	0.01	0.51 C	C	0.80	10.80	0.38		<u>Nerra da</u> Katika
	Street	TWSC	Deley V/C		0 0.29	0 0,29	D	9 0.23	D 0.07		6	27 0.14		21 0.65	22					9
	3 - Allen Street & King	·	LOS	8	B	B	В	0.2.3 B	B	A	В	B	8	0.00 B	В	A	A	А	A	В
5	Street	Signal	Delay	17	17	17	17	18	18	7	14	11	11	11	11	10	10	10	10	<u>11</u>
AM Peak Hour			LOS	0.20 A	0.20 A	0.20 A	A	0.11 A	0.11 A	0.06 A	Α	0.43 A	0.43 A	0.43 A	A	0.39 B	0.39 B	0.39 8	B	A
eak	4 - Allen Street & Caroline Street	AWSC	Oelay	9	9	9	9	9	9	9	9	9	9	9	9	11	11	11	11	10
۵ ۶				D.13	D.13	0.13	C.	0.13	0.13	0.13		0.14		0.14		0,33	0.33	0.33		
A	5 - Allen Street & Park	TW/SC	LOS Delay	C 23	<u> </u>	C 23	23	_C 21	C 21	0 21	C 21	A	A D	A	A	A 1	A	A 1	<u>A</u> 1	3
	Street		V/C	0.28	0.28	0.28	1000	D.11	0.11	D.11	(-) (-) (-), ()	0.01	0.01	0.01		0,03	0.03	0.03		<u>inger</u> es
	6 - John Street & Park	Signal	LOS Delav	0 20	C 20	C 20	20 20	C 20	В 14	8 14	В 17	A	A 7	A 7	A 7	A	A	A	A	A
	Street	aynai	V/C	0.33		0.33	eu S	0.16	0.17	0,17	17 4 X	4	0.45	/ D.45	<u>.</u>	5 0.09	5 0.26	5 0.26	5	8
	7 - Park Street &		LOS					В		8	В		Α	Α	A	A	Α		Α.	
	Development Driveway	TWSC	Delay V/C				RAN A ANG	14 0.15		14 0.15	14		0 0.25	0.25	Ö	0.01	0		0	1
	1 - William Street &		LOS	С	А	А	в	C	D	D	D	С	0.23 C	C	C	0.01 C	0.01 C	A	В	. C
	Caroline Street	Signal	Delay	20	10	10	16	22	36	36	36	31	31	31	31	33	33	6	17	23
			V/C LOS	0.71	0.24 A	0.24 A	Α	0.04 A	0.76 A	0.76	A	0,62	0.62	0.62 B	D	0.65	0.65	0.60		
	2 - William Street & Park Street	TWSC	Delay		0	0	0	10	Ō		6	145		13	28					11
	00000		V/C		0.14	0.14		0.41	0.19	N Daniel Na statistica Na statistica		0.73		0.46						
	3 - Allen Street & King	Signal	LOS Delay	C 21	C 21	<u>с</u> 21	21	C 23	23 23	A 8	В 18	B 13	8 13	8 13	8 13	B 13	B 13	B 13	B 13	<u>В</u> 14
lour	Street		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		
Т Т Т	4 - Allen Street &	AWSC	LOS Delav	A 9	<u>A</u>	A 9	A 9	A 10	A	A	A 10	B	В	8	В	A	A	A	Α	В
Pee	Caroline Street	AVV5U	V/C	ย 0.13	9 0.13	9 0.13	9	0.23	10 0.23	10 0.23	10	12 0.45	12 0.45	12 0.45	12	10	10 0.32	10 0.32	10	11
PM Peak Hour	5 - Allan Street & Park		LOS	D	D	D	D	E	E	E	ĝ. Ģ ist	Α	A	Α	A	A.	A	A	A	
-	Street	TWSC	Delay V/C	34 0.33	34 0.33	34 0.33	34	41	41	41	41	0	0	0	0	0	0	0	0	5
			LOS	0,33 C	0.33	0.33 C	C	0.48 C	0.48 B	0.4B B	.	0.02 A	0.02 A	0.02 A	A	0.01 A	0.01 A	0.01 A	A	A
	6 - John Street & Park Street	Signal	Delay	50	50	20	20	23	18	18	<u>,50</u>	5	6	6	6	5	7	7	7	10
			V/C LOS	0.32	D.32	0.32		0.34	0.42	0.42	<u> </u>	0.06	0.40	0.40		D.05	0.45	0.45		
	7 - Park Street &	TWSC	Delay					<u>C</u> 18		C 18	C 18		A 0	A 0	A 0	A	A D		A 0	1
	Development Driveway		V/C					0.12		0.12			0.30	0.30			0.03			

TABLE 4.1: BACKGROUND TRAFFIC OPERATIONS

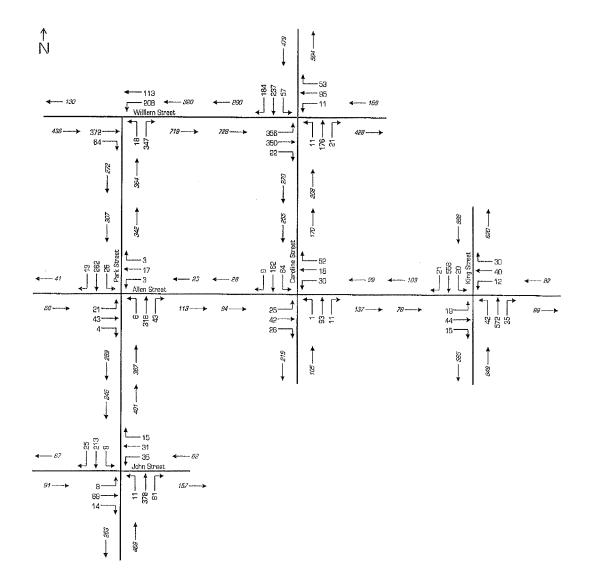
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TADLE 4.C. TRIP DENERATION	TAR	3LE	LE 4.2:	TRIP	GENERATION
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			AM P	eak			PM P	eak	
Development Type	Units	Rate per Unit	Total	In	Out	Rate per Unit	Total	In	Dut
220 - Apartment Building	190	0.51	97	19	78	0.62	118	77	41
230 - Residential Condominium/Townhouse	4	0.44	2	0	2	0.52	2	1	1
Total Generation			99	19	80		120	78	42

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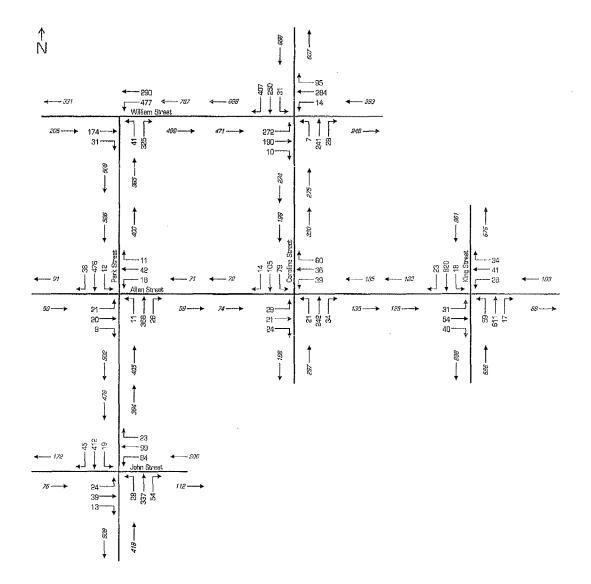


144 Park Tower 2, TIS

Paradigm

Figure 4.1a

AM Peak Hour Future Background Traffic Volumes 121



144 Park Tower 2, TIS

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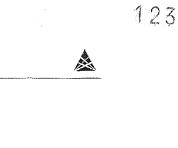
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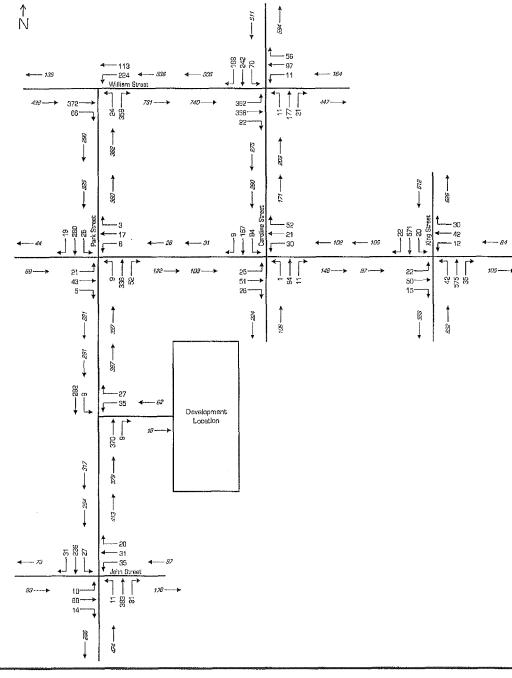
Figure 4.1b

PM Peak Hour Future Background Traffic Volumes

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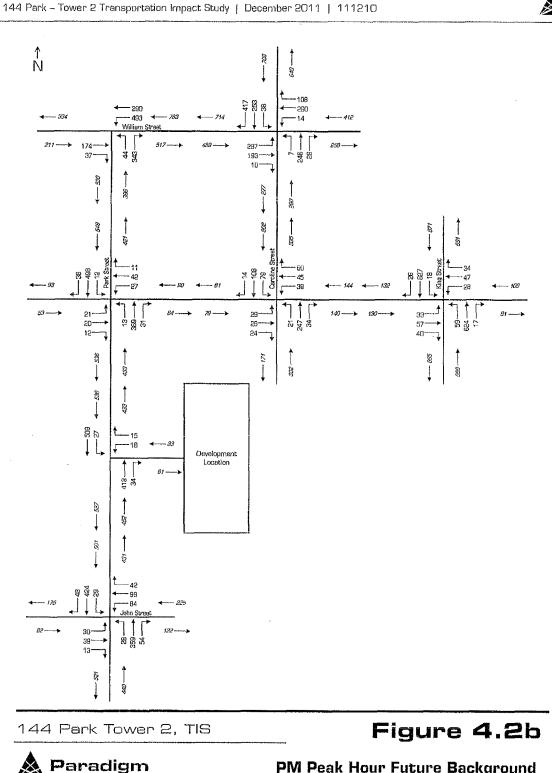


144 Park Tower 2, TIS

Figure 4.2a

Paradigm

AIN Peak Hour Future Background plus Other Development Traffic Volumes



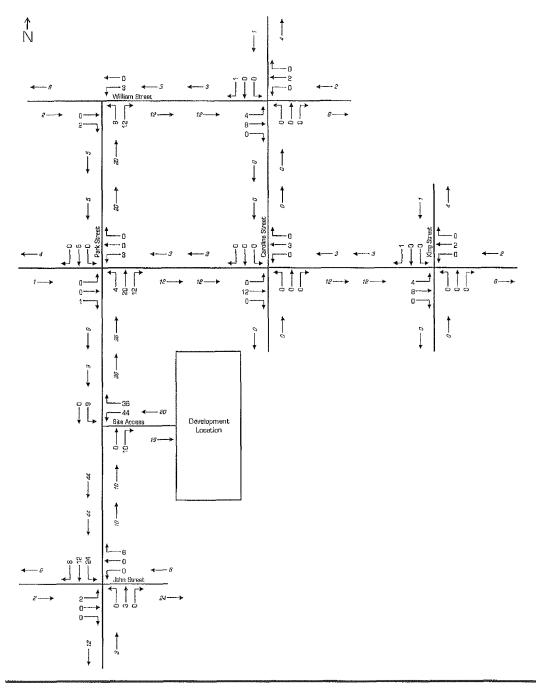
PM Peak Hour Future Background plus Other Development Traffic Volumes

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Figure 4.3a

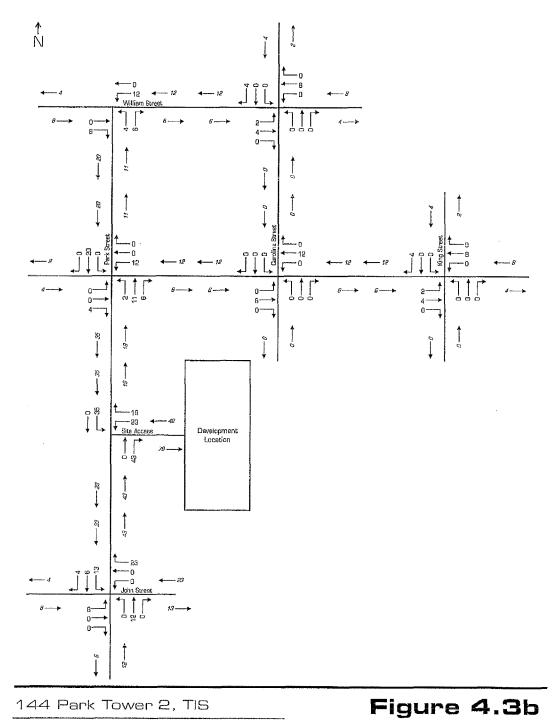
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AM Peak Hour Development Traffic Volumes

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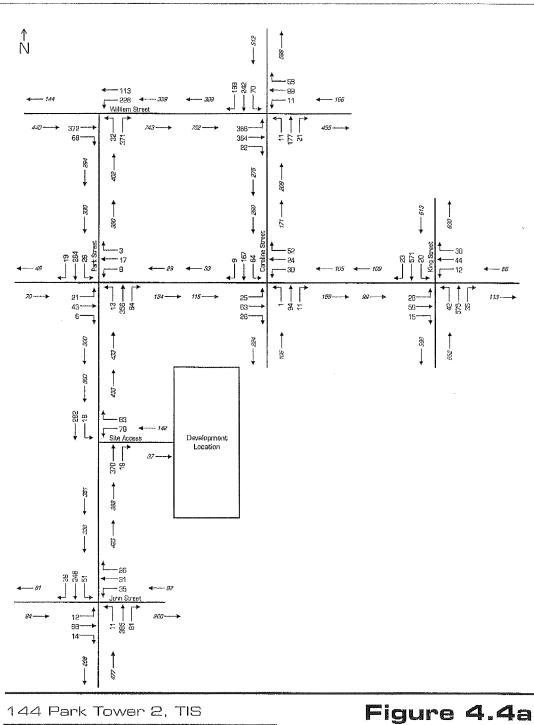


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PM Peak Hour Development Traffic Volumes

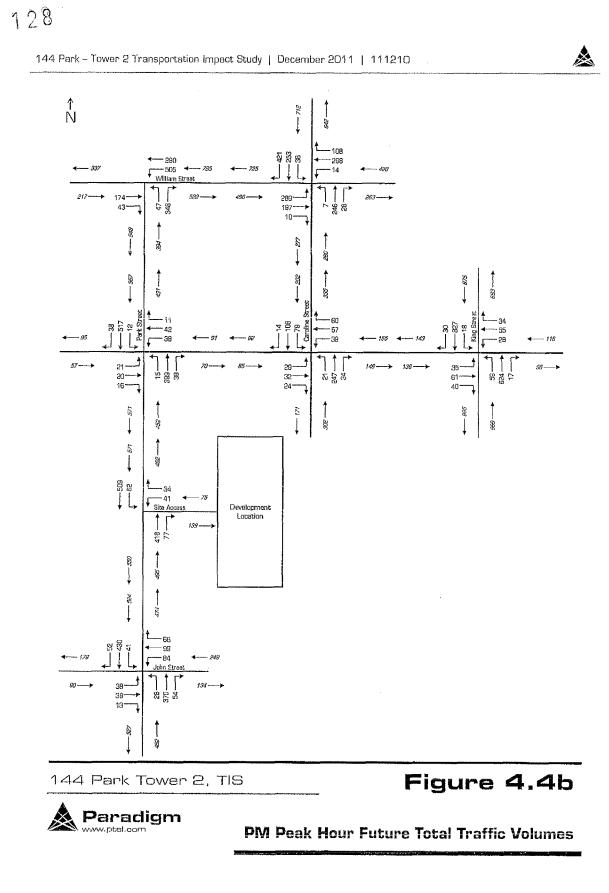
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AM Peak Hour Future Total Traffic Volumes



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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.

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									Dire	ectio	n / №	loven	nent	/ Ap	proa	ch				
g		Ø			East	baun	d	Westbound			Northbound				Southbound					
Analysis Period	Intersection	Cantral Type	MOE	LEFT	THROUGH	RIGHT	APPROACH	LEFT	THROUGH	RIGHT	APPROACH	LET	THROUGH	RIGHT	APPROACH	ЦЕН	THROUGH	RIGHT	APPROACH	OVERALL
			108	В	8	в	В	C	C	С	C	C	С	C	C	D		A	C	8
	1 - William Street & Caroline Street	Signal	Delay	13	11	11	12	21	50	50	20	27	27	27	27	42	42	5	28	19
Į	Caroline Street		V/C	0.59	D.45	0.45		0.04	0,33	0.33	154787 1451	0.51	0.51	0.51		0.80	0.80	0.38		
	2 - William Street & Park	Pack	LOS	, 	A	Α	Α	A	A		Α	D		C	C	1944 - Angel II Angel II (1947) Angel II (1947) Angel II (1947)			2. 	
	Street	TW9C	Delay		0	0	0	9	D		6	29		55	23	an an Ang san	1.			10
		····	V/C		0.29	0.29		0.23	0.07			0.19		0.68		10.55	en e			
	3 - Allen Street & King	6 1	LOS	B	B	B	8 18	8	8	A	B 14	B	6	B	В 11	A	A 10	A	A 10	<u>в</u> 11
5	Street	Signal	Delay	18 0.22	18	18	18	18 0.11	18	7	14	11 0.43	11 0.43	11		10 0.39	0.39	0.39	U	
4M Peak Hour				0.22 A	0.22	0.22 A	A	U. 11 A	0.11	A.	A	0.43 A	0,43 A	0.43 A	A	8	B	10.39 B	в	A
- K	4 - Allen Street &	AWSC	Delay	<u>А</u> 9	<u>А</u> 9		9	9	<u>А</u> 9	<u>А</u> 9	9	9	9	9	9	11	11	11	11	10
a d	Caroline Street	10000	V/C	0.18	0,18	0,18		0.16	0,16	0.16		0,16	0.16	0.16		0.38	0.38	D.3B		
Σ			LOS	D. 10	0.10	D.10	D	C	C	C	C	A	A	A	Α	A	A	A	A	
ৰ	5 - Allen Street & Perk Street	TWSC	Delay	25	25	25	25	23	23	23	23	1 D	0		o l	1	1	1	1	3
			V/C	0.30	0.30	0.30		0.14	0,14	D.14	2510	0.01	0.01	0.01		0.03	0.03	0.03		
			LOS	C	С	C	C	C	В	В	В	A	A	A	А	A	A	A	Α	Α
1	6 - John Street & Park Street	V/C	Delay	50	20	20	20	20	13	13	16	4	7	7	7	6	5	5	5	8
	Street		V/C	0.34	0.34	0.34	1.14	0.16	0.19	0,19		0.02	0.46	0.46		0.15	0.28	0.28		
	7.00.0		LOS					C	26.6	C	C,		A	A	A	A	A	19 C	Α	
	7 - Park Street & Development Driveway	TWSC	Deley		مر میں افراد کو		. 2	16		16	16		D	0	0	۵	D		ିଠ	Э
	Development Driveway		V/C	7	د مەنبەر بېغ - -	i di Normalina C		0.31		D.31			0.25	0.25		0.02	0.02	8948		74 (1)
	1 - William Street &		LOS	C	A	A	B	C	<u>a</u>	D	D	C	C	<u>C</u>	C	<u> </u>	C	A	В	C
	Caroline Street	Signal	Delay	21	10	10	17	55	37	37	37	31	31	31	31	33	33	6	17	23
ļ				0.73	0,25	0.25		0.04	0,78	D.78		0.62	0.62	0.62		0.65	0.65	0.60		
	2 - William Street & Park		LOS		A	A	<u>A</u>	A	A		A	F		В	D					
	Street	TWSC	Delay		0	0	<u>0</u>	10	0		6	177		13	33	-7-0				13
1			V/C LOS		0.14	0.14	G	0,42	0.19		в	0.83		0.47 B	В		B			B
	3 - Allen Street & King	Cienal	Delay	<u>C</u>	55 C	55 C	22 - 22	C	C 24	А 8	19	<u>8</u> 13	B 13	13	13	13	13	13	<u>B</u> 13	<u>В</u> 14
5	Street	Signal	V/C	22	0.34	0.34	C C	24 0.20		0.08	10	0.56	0,56	0.56		0.59	0.59		13	. 14
문			LOS	0. <u>04</u> A	A	A	A	8	8	8	В	8	8	B	В	8	8	8	В	8
는 높	4 - Allen Street &	AWSC	Delay	10	10	10	10	10	10	10	10	12	12	12	12	11	11	11	11	11
Ц Д	Caroline Street	/ 1100	V/C	0.15	0.15	0.15	1.1.1.1.1.1	0.26	0.26	0.26		0.46	0.46	D.46		0.32		0.32		
PM Peak Hour			LOS	E	E	E	ES:					A	A	A	A	A	A	A	Α.	
a a	5 - Allen Street & Perk	TWSC	Delev	36	36	36	36	54	54	54	54	1	1	1	1	0	0	0	0	6
	Street		V/C	0.36	0.36	0.36	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	0.60	0.60	0.60		0.02	0.02	0.02		0.01	0.01	0.01		
ł			LOS	C	C	C	C	C	B	8	В	A	A	A	À	A	A	A	Α	В
1	6 - John Street & Park	Signal	Delay	50	20	20	20	53	17	17	19	5	8	8	7	6	8	8	8	11
	Street 7 - Park Street & Development Driveway		V/C	0.36	0.36	0.36		0.34	D.46	0.46		0.07	0.45	0.45		0.09	0,51	0.51		
ļ			LDS					С		С	្រា		А	A	Α	А	A		A	
		TWSC	Delay				7	25		25	25		D	D	0	5	5		2	2
			V/C					0.32	£.,	0.32			0.32	0.32		0.07	0.07		a -	

TABLE 4.3: TOTAL FUTURE TRAFFIC OPERATIONS



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.

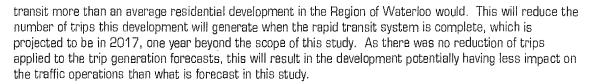
4.8 Park/Allen Collision History

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



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 Region¹. 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 (<u>www.grandrivercarshare.ca</u>). 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.

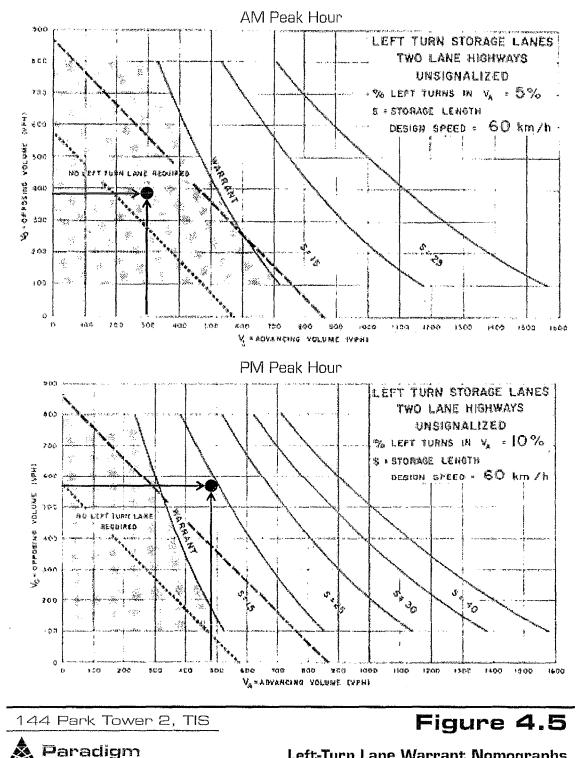
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¹ Memo to Bruce Erb/Ken Mayer- Apartment Trip Generation Studies, Arrow Loft Proposed Redevelopment, April 22, 2003.

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- 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.

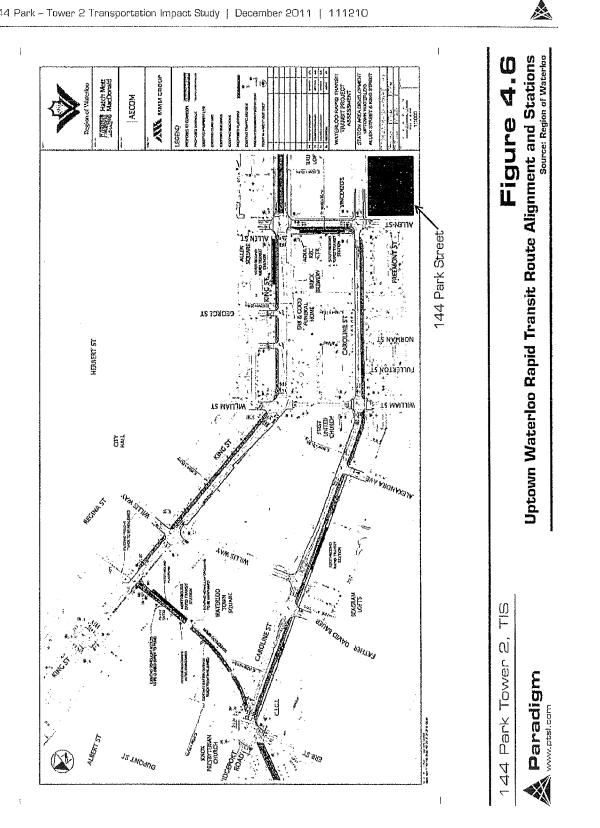


Left-Turn Lane Warrant Nomographs

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5.1 Conclusions

Based on the traffic projections and analyses contained in the report, it is concluded that a southbound leftturn 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 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.

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Appendix A

Existing Traffic Operations

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1: William Street & Caroline Street

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canes Groups and statistical and	EBL	SALEBI N	::::::::::::::::::::::::::::::::::::::	WBL	WEIT	SWER.	s. Neľ	X NBT	(NB96	SFSBL	. Seita	(SBP
Lane Configurations	ሻ	14		٦	\$≱			4			4	7
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	Q		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			· · ·	1.00	- 1 - P		1.00	0.95
Frt		0.993			0.962			0.986			·_ ·	0.850
	0.950	1. 1.		0,950		· · · ·		0.999			0,995	
Satd. Flow (prot)	1686	1620	. 0	1686	1561	0	. O.	1502	0	,D	1608	1473
	0.321	4000		0.632	4504	·.		0.991	· ·		0.946	1 400
Satd. Flow (perm)	564	1620	0	1107	1561	0	. 0	1490	0	0	1528	1406
Right Turn on Red	•	E	Yes	• *	40	Yes	••••	7	Yes		1. st	Yes
Satd. Flow (RTOR)		5 50	: •		19 50		1.1	· 50		•	50	410
Link Speed (k/h)	۰.	94.2	÷.	*	64,7			244.6			82.0	
Link Distance (m) Travel Time (s)	• • • •	94.2 6.8			4.7		÷	244.6	· . · .		62.0 5.9	1111
Confl. Peds. (#/hr)	14	0.0	9	9	4.7	14	35	17.0	7	7	. 0.0	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 (%)	0.00	1%	0%	0.30	0%	2%	17%	1%	0%	11%	1%	1%
Adj. Flaw (vph)	273	191.		14	·286	. 96	7	242	28	31	251	410
Shared Lane Traffic (%)	Ę/O	10.1	10					. حوار مع	· · · • • ·	01,	201	-110
Lane Group Flow (vph)	273	201		14	382	0	0	277	. 0	0	282	410
	pm+pt			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2	an a		. 6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4.	e an se	8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0	ere pull	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
-	28.9%	62.2%	0.0%	33.3%	33,3%	0.0%	37.8%		0.0%			37.8%
Yellow Time (s)	2.0	4.0	· j	4.0	4.0		4.0	4.0	1.1	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		-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	- 14 -		Lag	Lag			4 - 14. M				· . · · ·
Lead-Lag Optimize?	Yes			Yes	Yes			·				
Recall Mode		C-Max	· ·		C-Max	si tang	Max	Max		Max	Max	Max
Act Effet Green (s)	52.0	52.0		35.6	35.6			30.0			30.0	30.0
Actuated g/C Ratio	0.58		••	0.40	0.40	ř., † 1		0.33		1	0.33	0.33
V/c Ratio	0.57	0.21		0.03	0,61	1		0.55 28.9			0.55	0.55
Control Delay	14.6	9.6		19.2	26.7	• •					29.6	5.6
Queue Delay Totot Dolay	0.0 14.6	0.0 9.6		0.0 19.2	0.0 26.7			0.0 28.9		· · .	0.0 29.6	0.0 5.6
Total Delay LOS	14.0 B	9.6 A		19.2 B	20.7 C		÷.	C			29.0 C	а.с [.] А
Approach Delay		12.5		Ð	26.4			28.9			15.3	А
Approach LOS		12.0 B			20.4 C			20.9 C			B	
										·	<u>د</u>	

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Lanes, Volumes, [*] 1: William Street	Ų		reat					1	44 Pa	irk To		141 , TIS ng PM
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adnes Groups in the second	24 IEB		7 015000000	v Write	WRITE	WRRX) Senel	I	(Energia	Seite	Y	
Queue Length 50th (m) Queue Length 95th (m) Internal Link Dist (m) Turn Bay Length (m)	21.7 35.1 45.0	14.9 25.5 70.2	<u> Society (Constant</u>	1.4 5.7 25.0	47.6 #86.9 40.7			37.3 61.4 220.6			38.9 63.3 58.0	0.0 19.4
Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio	600 0 0 0 0.46	938 0 0 0 0:21	· · · · ·	438 0 0 0 0.03	629 0 0 0 0.61			501 0 0 0 0.55			509 0 0 0 0.55	742 0 0 0.55
Intersection-Summarys e Area Type: Cycle Length: 90 Actuated Cycle Length: 90	Other D											
Offset: 48 (53%), Refere	nced to ph	iase 4:EB	TL and 8:	WBTL	, Start of	Green	• .*.* *					
Natural Cycle: 75 Control Type: Actuated-Co Maximum v/c Ratio: 0.61 Intersection Signal Delay: Intersection Capacity Utili Analysis Period (min) 15 # 95th percentile volum	oordinated 19.1 zation 83.	1%		r (ntersectio CU Level (in LOS: E of Service	} ∋_E,					

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street

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	26.6	

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Lanes, Volumes, Timings	
2: William Street & Park Street	

144 Park Tower 2, TIS Existing PM

		$\mathbf{\tilde{\mathbf{x}}}$	Ý	4	*	r		
LanerGroup, and a state of the	ST ZEBT -	368P	(Web)	AWDE	N NBL	NNBR		
Lane Configurations	Ţ.		ሻ	1	Ť	7		
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	8 - F	7.5	7.5	•	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	0.980	· ·				0.850	· · · ·	
Flt Protected			0.950		0,950			
Satd, Flow (prot)	1617	0	1670	1900	1686	1473		
Flt Permitted			0.950		0.950			
Satd. Flow (perm)	1617	D:	1670	1900	1686	1473		
Link Speed (k/h)	50			50	50			
Link Distance (m)	66,4	1	· ·	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	1.11. 1.11.	
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:	Ither	Contraction of California	1. THE R. P. LEWIS CO	11111111111111111111111111111111111111	W-A 445-51010-3-524-68	A REAL PROPERTY AND ADDRESS OF	AND ADD ADD ADD ADD ADD ADD ADD ADD ADD	ana manana manana manana manana manana manana manana manana manana mana mana mana mana manana manana manana man Manana manana m

Area Type: Uther Control Type: Unsignalized ICU Level of Service A Intersection Capacity Utilization 50.5%

Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 2: William Street & Park Street

144 Park Tower 2, TIS Existing PM

		>	*	**	*	p	
Movement	EBIK	C GBR	WELC	WBIM	CAN BL	NBR:	
Lane Configurations	ţ,		ሻ	ŕ	ሻ	ř	
Volume (veh/h)	158	28	432	263	37	294	
Sign Control Grade	Free 0%		2	Free 0%	Stop 0%		
Peak Hour Factor	0,90	0.90	0.90	0%	0.90	0,90	
Hourly flow rate (vph)	176	31	4B0	292	41	327	
Pedestrians						Ψ=/	
Lane Width (m)			· ·		· · · · ·	19 A.	
Walking Speed (m/s)							
Percent Blockage	1	· ·		÷		· ·	
Right turn flare (veh) Median type	None	÷.,		None		:	
Median storage vehl	, NULE		•	NUME		e is	
Upstream signal (m)		at star		94		<u>.</u>	
pX, platoon unblocked				, = .			
vC, conflicting valume		1.1	207		1443	191	n an teach ann an Air an teach ann an teach a Tha ann an teach ann
vC1, stage 1 conf vol							
vC2, stage 2 conf vol			007			101	
vCu, unblocked vol tC, single (s)			207 4.1		1443 6.4	191 6.2	
tC, 2 stage (s)			14.1		0.4	0.2	
tF (s)		a farter	2.2	et dj.	3.5	3.3	
pD queue free %		· · ·	65		57	62	
cM capacity (veh/h)		· · · · · · · · · · · · · · · · · · ·	1371	t _{de} le le el Al dés	96	853	
Dinection Lane 4:	E E E E	WEAL	N8-244	NEXIX	NB 2		
Volume Total	207	480	292	41	327	ALL BUCKNESS THE	
Volume Left	0	480	0	41	D		
Volume Right	31	0	0	0			
cSH	1700		700	96	853		
Volume to Capacity	0.12	0.35 12.0	0.17 0.0	0.43	0.38		
Queue Length 95th (m) Control Delay (s)	0.0	9.0	0.0	1 A 4 4 A 4 4	13.6 11.8	t de la c	and the second
Lane LOS		Α	.0.0	F	B		tengto altitudo da Carlo Información de Carlos
Approach Delay (s)	0.0	5.6		18.2			i de la composición d
Approach LOS				С			
Intersaction Summary							
Average Delay		a a successive and the successive statements and the successive statements and the successive statements and th	8.2	201700101000	TAA NGI HILI SALAH KA	ar de la festivit	
Intersection Capacity U	tilization	5	0.5%	·	U Level	of Servic	ce di anti di A
Analysis Period (min)			15				
		. • . · ·	· · ·				

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Lanes, Volumes,	Timings
3: Allen Street &	King Street

144 Park Tower 2, TIS Existing PM

Each Configurations 0.4 7 4 7 4 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 7 7 5 5 5 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7		*		\mathbf{F}	¥	4	۸.	*	1	۴	1	Ļ	*
Values (pip) 28 49 36 25 37 31 52 53 15 16 743 21 lokes Flow (pripil) 000 1500 1500 1000 1000 1000 1000 1000 1000 1000 0.0 <td>Lanel Groups as association</td> <td>i eel</td> <td>5. EBIY</td> <td>EBRE</td> <td>WBL.</td> <td>i werk</td> <td>AWBR</td> <td>NEL</td> <td>NBIT</td> <td>SENDER (</td> <td>14.98<u>E</u></td> <td>SET</td> <td>MSBR</td>	Lanel Groups as association	i eel	5. EBIY	EBRE	WBL.	i werk	AWBR	NEL	NBIT	SENDER (14.98 <u>E</u>	SET	MSB R
Values (pip) 28 49 36 25 37 31 50 553 15 16 743 21 ledes Flow (pph) 000 1500 1000 1000 1000 1000 1000 1000 1000 1000 0.0	Lane Configurations		4>			र्स	7		ፋኩ			4 î b	-
Storege Langen (m) 0.0 0.0 0.0 1.00 0.0 0.0 0.0 Starege Lanes 0 0 0 1 0 0 0 0 Starege Lanes 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.956 1.00 1.00 1.00 1.00 1.00 0.99 0.996 </td <td>Volume (vph)</td> <td>28</td> <td></td> <td>36</td> <td>25</td> <td>37.</td> <td>31</td> <td>53</td> <td></td> <td>15</td> <td>16</td> <td></td> <td>21</td>	Volume (vph)	28		36	25	37.	31	53		15	16		21
Ston-ge Lan-es O <tho< th=""> O <tho< th=""> <t< td=""><td>Ideal Flow (vphpl)</td><td>1000</td><td>1550</td><td>1000</td><td>1000</td><td>1650</td><td>1750</td><td>1000</td><td>1650</td><td>1000</td><td>1000</td><td>1650</td><td>1000</td></t<></tho<></tho<>	Ideal Flow (vphpl)	1000	1550	1000	1000	1650	1750	1000	1650	1000	1000	1650	1000
Taper Length Im) 7.5	Storage Length (m)	0.0	· · · · · ·	0.0	0.0		10.0	0.0		0.0	0.0		0.0
Lana Unil, 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 0.99 0.96 1.00 <th1.00< th=""> 1.00 1.00</th1.00<>	Storage Lanes												
Ped Biks Factor 0.98 0.99 0.95 1.00 1.00 Frt 0.957 0.850 0.996 0.996 0.996 Std. Flow (prot) 0 1427 0 0 1617 1488 0 2934 0 2934 0 2934 0 2934 0 20 2934 0 20 2934 0 20 20 1333 0 0 1422 1430 0 2438 0 20 2035 Std. Flow (perm) 0 1333 0 0 1422 1430 0 2438 0 0 202 0 Right Tumon Red 'Yes 'Yes 'Yes 'Yes 'Yes 30 5	Taper Length (m)	7.5				÷	7.5		· · · ·				
Fri 0.957 0.850 0.986 0.996 0.996 Fit Protected 0.986 0.986 0.996 0.999 0 0.999 0.909 0.999 0.909 0.909 0.909 0.90 0.909 0.90 <td>Lane Util. Factor</td> <td>1.00</td> <td></td> <td>1.00</td> <td>1.00</td> <td></td> <td></td> <td>0.95</td> <td></td> <td>0.95</td> <td>0.95</td> <td>0,95</td> <td>0.95</td>	Lane Util. Factor	1.00		1.00	1.00			0.95		0.95	0.95	0,95	0.95
Fit Productad 0.986 0.980 0.985 0.985 0.995 0 0.999 Satd. Flow (perm) 0 1427 0 0 147 1488 0 2995 0 0 2994 0 Satd. Flow (perm) 0 1322 0 0 1422 1430 0 2438 0 0 2802 0 Right Turmon Red Yes <	Ped Bike Factor			. :		0.99		· · ·					
Satd, Flow (prot) 0 1427 0 0 1817 1488 0 295 0 0 2994 0 Fit Permitted 0:922 0.867 0 2438 0 0 283 0 0 283 0 0 283 0 0 283 0 0 283 0 0 283 0 0 283 0 0 283 5							0.850						
Fit Permitted 0.922 0.867 0.811 0.935 Satd. Flow (perm) 0 1323 0 0 1422 1430 0 2438 0 0 2402 0 Right Turnon Red Yes Yes Yes Yes Yes Yes Yes Yes Satd. Flow (RTOR) 28 5 50 50 50 50 50 Link Distance (m) 106.8 77.7 5.6 6.5 5.9 23 24<		· · ·			•		4.	$\{x_1, \dots, x_n\}$		· · ·			ete a la c
Satch, Flow, (perm) 0 1323 0 0 1422 1430 0 2438 0 0 2802 0 Right Turm, on Red Yes Yes <t< td=""><td>Satd. Flow (prot)</td><td>D</td><td></td><td></td><td>D</td><td></td><td>1488</td><td>0</td><td></td><td>Û</td><td>0</td><td></td><td>0</td></t<>	Satd. Flow (prot)	D			D		1488	0		Û	0		0
Hight Turmon Red Yes Yes Yes Yes Yes Yes Stat Stat Stat, Ricew (RTOR) 28 -50 50 50 50 50 50 Link Speed (Mh) 7.7 5.6 5.6 5.5 5.9 50		•						.†					
Setd. Flow (RTOR) 28 34 5 50 Link Speed (L/h) 50 50 50 50 50 Link Distance (m) 106.8 77.7 5.6 5.5 5.9 Confl, Peds. (#/hr) 23 74 23 24 23 24 23 Peak Hour Factor 0.90 0.9		0	1323		0	1422		Q	2438		0	5805	
Link Speed (k/h) 50 50 50 50 Link Distance (m) 106.8 77.9 90.8 91.8 Traviel Time (a) 7.7 5.6 6.5 5.9 Confi, Peds, (#/hr) 23 16 16 23 24 23 24 23 Peak Hour Factor 0.90				Yes						Yes	· · ·		Yes
Link Distance (m) 106.8 77.9 90.8 81.8 Travial Time (s) 7.7 5.6 5.5 5.9 5.9 Confl, Peds. (#/nr) 23 0.90							34						
Travel Time (s) 7.7 5.6 6.5 5.9 Confi, Peds, (H/nr) 23 16 16 23 24 23 24 23 Peak Hour Factor 0.90 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>t state</td><td></td><td></td><td>t in the</td><td></td><td></td></td<>								t state			t in the		
Confi, Peds. (#/hr) 23 16 16 23 24 23 24 23 Peak Hour Factor 0.90													÷.
Peak Hour Factor 0.90			7.7			5.6		~ •	6.5		.	5.9	
Heavy Vehicles (%) 7% 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 (%) 0 125 0 69 34 0 690 0 0 867 0 Turn Type Perm									D .07				
Adj. flow typh) 31 54 40 28 41 34 59 614 17 18 826 23 Shared Lane Traffic (%) 0 125 0 0 69 34 0 690 0 0 867 0 Turn Type Perm Perm Perm Perm Perm Perm Perm Perm 72 6 6 Permitted Phases 4 8 8 8 2 6 6 6 Switch Phase 4 8 8 8 2 6 6 6 Switch Phase 31.0 33.0 33.0 33.0 33.0 57.													
Shared Lane Traffic (%) Lane Group Flow (vph) 0 125 0 6 94 0 690 0 0 667 0 Turn Type Perm P													
Lane Group Flow (vph) 0 125 0 6 94 0 690 0 0 867. 0 Turn Type Perm Perm<		31	54	-40	58	41	34	59	614	17	18	826	23
Turn Type Perm		- i n	4.05	<u>.</u>		. Po	·		eno				
Protected Phases 4 8 8 2 6 Permitted Phases 4 4 8 8 2 6 6 Switch Phase 4 4 8 8 2 2 6 6 Switch Phase 4 4 8 8 2 2 6 6 Switch Phase 70 27.0 27.0 27.0 51.0 51.0 51.0 51.0 51.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0 0.0 <td></td> <td>2 S S 🔶</td> <td>120</td> <td>U.</td> <td>and the state</td> <td>09</td> <td></td> <td></td> <td>090</td> <td> U</td> <td></td> <td>007.</td> <td>, U</td>		2 S S 🔶	120	U.	and the state	09			090	U		007.	, U
Permitted Phases 4 8 8 2 6 Detector Phase 4 4 8 8 2 2 6 6 Switch Phase Minimum Initial (s) 27.0 27.0 27.0 27.0 51.0 <td< td=""><td></td><td></td><td>Л</td><td></td><td>reini</td><td></td><td>FCIII</td><td></td><td>· · · ·</td><td>st i i</td><td>FBIII</td><td>6.</td><td>·</td></td<>			Л		reini		FCIII		· · · ·	st i i	FBIII	6.	·
Detector Phase 4 8 8 8 2 2 6 6 Switch Phase Minimum Initial (s) 27.0 27.0 27.0 27.0 51.0		· · · · . A	. 4		 R	····· Ų		 	· · · · · ·		B	· · · U.	
Switch Phase Minimum Initial (s) 27.0 27.0 27.0 27.0 51.0		··· /·	A	i de perso		, p			g			6	ter set
Minimum Initial (s) 27.0 27.0 27.0 27.0 51.0		ं म्	47		Ų	U	, U		Ċ,	5 S. S. S.		U r	
Minimum Split (s) 33.0 33.0 33.0 33.0 33.0 57.0 57.0 57.0 57.0 57.0 0.0 Total Split (s) 33.0 33.0 0.0 33.0 33.0 33.0 33.0 57.0 57.0 57.0 57.0 57.0 0.0 Total Split (s) 36.7% 36.7% 36.7% 36.7% 63.3% 63.3% 0.0% 63.3% 60.4 4.0 <td></td> <td>27 N</td> <td>27 ח</td> <td>с. · · · ·</td> <td>27.0</td> <td>27 D</td> <td>27 N</td> <td>510</td> <td>51 0</td> <td>i di Sa</td> <td>i 51 Ó</td> <td>51 0</td> <td>jane t</td>		27 N	27 ח	с. · · · ·	27.0	27 D	27 N	510	51 0	i di Sa	i 51 Ó	51 0	jane t
Total Split (s) 33.0 33.0 33.0 33.0 33.0 33.0 57.0 63.3%										5			
Total Split (%) 36.7% 36.7% 36.7% 36.7% 36.7% 63.3%										nn			n n
Yellow Time (s)4.04.04.04.04.04.04.04.04.04.0All-Red Time (s)2.00.02.02.00.02.00.02.00.02.00.02.00.01.0<													
All-Red Time (s) 2.0 0.0 2.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 0.0 2.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.070</td> <td></td> <td></td> <td>0.075</td>										0.070			0.075
Lost Time Adjust (s) 0.0 -2.0 -2.0 0.0 4.0										n Arri			
Total Lost Time (s) 6.0 4.0 2.0 6.0 4.0 4.0 6.0 4.0 6.0 4.0 4.0 4.0 Lead/Lag Lead-Lag Optimize? Recall Mode None None None None None C-Max	and the second sec			-2.0						0.0			0.0
Lead/Lag Lead-Lag Optimize? Recall Mode None None None None 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 0.67 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 8 Approach Delay 19.5 18.0 10.3 10.6													
Lead-Lag Optimize? None None None None C-Max C C-Max C <td>Lead/Lag</td> <td>,</td> <td>· · ·</td> <td>1.</td> <td></td> <td></td> <td></td> <td>e je e</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Lead/Lag	,	· · ·	1.				e je e					
Act Effct Green (s)29.029.029.060.460.4Actuated g/C Ratio0.320.320.320.670.67v/c Ratio0.280.150.070.420.46Control Delay19.522.97.910.310.6Queue Delay0.00.00.00.00.0Total Delay19.522.97.910.310.6LOSBCAB8Approach Delay19.518.010.310.6													
Act Effct Green (s)29.029.029.060.460.4Actuated g/C Ratio0.320.320.320.670.67v/c Ratio0.280.150.070.420.46Control Delay19.522.97.910.310.6Queue Delay0.00.00.00.00.0Total Delay19.522.97.910.310.6LOSBCAB8Approach Delay19.518.010.310.6		None	None	et in een	None	None	None	C-Max	C-Max		C-Max	C-Max	
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 8 Approach Delay 19.5 18.0 10.3 10.6						29.0							
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 8 Approach Delay 19.5 18.0 10.3 10.6	Actuated g/C Ratio		0.32	÷ .		0.32	0.32		0.67	. •	· ·	0.67	··· .
Queue Delay 0.0 0.0 0.0 0.0 0.0 Total Delay 19.5 22.9 7.9 10.3 10.6 LDS B C A B 8 Approach Delay 19.5 18.0 10.3 10.6	v/c Ratio	,	0.28			0.15	0.07		0.42			0.46	
Total Delay 19.5 22.9 7.9 10.3 10.6 LOS B C A B 8 Approach Delay 19.5 18.0 10.3 10.6	Control Delay	5	19.5	e e e e		22.9	7.9		10.3			10.6	
LOS B C A B B Approach Delay 19.5 18.0 10.3 10.6	Queue Delay		0.0			0.0	0.0		0.0				
Approach Delay 19.5 18.0 10.3 10.6		·			• •		7.9				• • •		
	LDS						A						
													•
	Approach LOS		В			В			В			В	

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Lanes, Volumes, T <u>3: Allen Street & K</u>								1	44 Pa	ark To		2, TIS ting PM
	٨		***	V	, 		*	Ť	p	\$	¥	*
Usine Groups (August 1997) Queue Length 50th (m) Queue Length 95th (m) Internal Link Dist (m) Turn Bay Length (m) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio		12.0 25.5 82.8 445 0 0 0.28			8.3 17.8 53.9 458 0 0 0 0.15	0.0 6.2 10.0 484 0 0 0.07		32.4 45.4 66.8 1638 0 0 0 0,42	<u>XNBB</u>	SBL	42.4 57.3 57.8 1882 0 0 0 0 0.46	
Area Type: C Cycle Length: 90 Actuated Cycle Length: 90 Offset: 2.7 (3%), Reference Natural Cycle: 90 Control Type: Actuated-Co Maximum v/c Ratio: 0.46 Intersection Signal Delay: Intersection Capacity Utiliz Analysis Period (min) 15	ordinated	ase 2:NB I	TL and	i la In	Start of	on LOS:	B					

Splits and Phases: 3: Allen Street & King Street

™ n2	<i>→</i> ø4
	33 e
₽ [°] ø6	₹ <u></u> ø8
	33 6

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Lanes,	Volumes,	Timings	
4: Aller	<u>ı Street &</u>	Caroline	Street

144 Park Tower 2, TIS Existing PM

	<u>_</u>		•	*	·	×,	*	Ť	/*	1	ţ	4
Lane:Ghoup:	- EBL	EBIC	EBR.	e wee	WBT	WBE	NBE	NENDI A	NINBRA	SBL	CARSETT	WISBE
Lane Configurations		4			4			4			\$	
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
Frt		0.956			0.940			0.985			0.991	
Fit Protected		0.981		· . · ·	0.986			0.996			0.9BO	
Satd. Flow (prot)	0	1454	D	D	1437	0	0	1521	. D	Q	1505	0
Flt Permitted		0.981	·		0.986		(-1)	0.996			0.980	
Satd. Flow (perm)	0	1454	0	. D	1437	D	D	1521	D	0	1505	D
Link Speed (k/h)		50		· •	50		••	50	e ja ere ja	·	50	•
Link Distance (m)		97.9			106.8			59.9		•.	244.6	
Travel Time (s)		7.0			. 7.7		1.11	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 (%)								000	· . ·		000	
Lane Group Flow (vph)	Q	74	U.	0	136	υ.	U	298	U	U State	200	U .
Sign Control		Stop		1.14	Stop		1	Stop			Stop	
Intensection Summary				See al								

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.8% Analysis Period (min) 15

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HCM Unsignalized 4: Allen Street & C				eity An	alysis	*****			144 P	ark Tc		, TIS ing PM
			*	*		×,	*	Ť	M	1	ļ	4
Movement	everu.	AN IEBITA	EBR	WBL	ewer:	WBR)	NBL	NBIR	2 NBPM	SBR	SBIL	SER
Lane Configurations Sign Control Volume (vph) Peak Hour Factor Hourly flow rate (vph)	26 0.90 29	\$ 5top 19 0.90 21	22 0.90 24	35 0.90 39	♣ Stop 33 0.90 37	54 0.90 60	19 0.90 21	4 Stop 219 0.90 243	31 0.90 34	72 0.90 80	\$ Stop 95 0.90 106	13 0.90 14
Direction Wanes Association	N GBXIN	SV/BITIS	NE W	SB(1)								
Volume Total (vph) Volume Left (vph) Volume Right (vph) Hadj (s)	74 29 24 -0.12	136 39 60 -0.21	299 21 34 -0.06	GIO 1		· · · · ·			· ·			
Departure Headway (s) Degree Utilization, x Capacity (veh/h) Control Delay (s)	5,2 0,11 613 8,8	5.0 0.19 647 9.2	4.7 0.39 739 10.6	4.9 0.27 697 9.7	· ·	· · ·	•	· .				• . • • • •
Approach Delay (s) Approach LOS	8.8 A	9.2 A	10.6 B	9.7 A			a arte Kirty a					•••
Intersection Summary Delay HCM Level of Service Intersection Capacity Utiliza Analysis Period (min)	ition		9.9 A 49.8% 15	IC	U Level (of Servic			A			

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nelGroup,	Krebiy	EBT.	S EBBL	W.B.C.	S. WEIC	e werk	SAN BLY	e neir	SENBRE	SBL	S SBT	. SĐ
ne Configurations		44			¢‡>			\$	-		44	
lume (vph)	. 19	18	8	16	38	10	· 10	333	24	11	431	3
al Flow (vphpl)	1000	1500	1000	1000	1500	1000	1000	1500	1000	1000	1500	100
ne Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1:00	1.00	1.0
d Bike Factor												
		0.976			0.979	· ·.		0.991		· ·	0.990	•
Protected		0.979			0.987			0.999			0.999	
td. Flow (prot)	0	1433	0	· 0.	1449	· . · · 0	.0	1485	. 0 :	с, О Г	1483	
Permitted		0.979			0.987			0,999			0.999	
td, Flow (perm)	0	1433	· 0 ·	. 0	1449	: О	ί, Ο	1485	0	0	1483	
k Speed (k/h)		50			50			50			50	
k Distance (m)		. 84.0		· · · ·	97.9		•	58.8			244.8	
avel Time (s)		6.0			7.0			4.2			17.6	
nfl. Peds. (#/hr)	6	n da	16	16		6	24		20	20	(2,2,2)	6
ak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0,90	0.90	0.90	0.90	0.8
avy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0
j, Flow (vph)	21	20	9	18	42	11	11	370	27	12	479	3
ared Lane Traffic (%)				1.199	· · ·						• • •	
ne Group Flow (vph)	0	50	D	Q	71	0	0	408	0	0	529	
n Control	+ 1	Stop	1997 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 -		Stop	haa she		Free	1	$e_{i}=-i^{i}e_{i}$	Free	

Intersection Capacity Utilization 53.3% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 5: Allen Street & Park Street

144 Park Tower 2, TIS Existing PM

	<u></u>		*	*	-	Ł	*	Å	p	1	ł	4
Movement	e eele	BER	EBR	RWBL	WBI	WBR	NBL	NBT.	NBR	SBL	FSBN	ESBR
Lane Configurations		۹Ĵ.»			4>			44			4	and the second
Volume (veh/h)	19	18	8	16	38	10	10	333	24	. 11	431	34
Sign Control Grade		Stop 0%			Stop			Free 0%	. * .		Free	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0,90	0.90	0.90	0% 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	1		3.6			3.6	1.511		3.6	· ·
Walking Speed (m/s) Percent Blockage		1.2 2			1.2			1.2 1			1.2	
Right turn flare (veh)		- C	· · · ·		· C						1	-
Median type	· ,	19 ¹ 1	·		. ·		· · .	None	t gra		Norie	
Median storage veh)							,		• •			
Upstream signal (m)			1.2					165				
pX, platoon unblocked vC, conflicting volume	0.99 990	0,99 985	538	0,99	0.99 991	0,99 409	E 4'4 '			0.99		
vC1, stage 1 conf vol	000	. 300	040	900	991	409	541	·		417		
vC2, stage 2 conf vol					 		en tyr d	una (j	en des	÷		t transfer
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		2.2		an an the s	2.2	· . ·	·· .
pO queue free %	88	91	98	91	82	98	99	t hat a	1.494	99	· · · ·	
cM capacity (veh/h)	179	235	529	196	233	634	1017			1117		ta di
Dineovon Lane H. S. Mark	EBM.	2W8 11	INBHIK	SBSI						9		
Volume Total	50	71	408	529								
Volume Left Volume Right	21 9	18 11	11 27	12 38	4.5.51	14. ₁₂				et. e. t		
cSH	228	246	1017	1117		9.15 I	in in		나가 물건	S. 1995.		
Volume to Capacity	0.22	0.29	0.01	0.01			t ginn					
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 Approach Delay (s)	D 25:2	D 25.5	A 0.4	A 0.3					, sad t			
Approach LOS	D	20.0 D	0.4	0.0	4	· . ·			i e l'Anna			
hponsection Summery Sec.												
Average Delay			3.2								THE REAL PROPERTY OF THE PROPERTY OF THE REAL PROPE	C.3187-049-54
Intersection Capacity Utiliza	tion		53.3%	IC	U Level	of Servic	e	· · · ·	Á	49.3 ^{(*}	tela a	· ·
Analysis Períod (min)		· .	15				· .· .		۰.	· · · · ·	·	
 A state of the sta				· .	1997 - E. S.		1.17		·		· · · ·	

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Lanes, Volumes, ⁻ 6: John Street &	-								144 F	Park To	ower 2 Exist	2, TIS ing PM
	***		~	¥	11	*	*	Ť	p	1	ŧ	-
Lane Groups and the second	E8L	NA EOK	1468R	WBL	a wer	. WBR	NBL	SENET	ENER	SBL	SBIL	M388
Lane Configurations		4	- 1	ሻ	\$⇒		ሻ	ţ,		ሻ	4	
Volume (vph)	55	35	12		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		00	25.0		0.0	10.0		0.0	35.0		0.0
Storage Lanes	O		0	1		0	1		Q	1		O
Taper Length (m)	7.5		7.5	7.5	··· . ·	7.5	7:5		7.5	7.5	1	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	0,99	1.00	
Frt		0.977		0	0,972		-	0.979			0.985	·· .
Fit Protected	·. · ·	0.984	· · · ·	0.950	4500		0.950	4000		0,950	4000	·. ·
Satd. Flow (prot)	0	1416	<u> </u>	1637	1593	0	1686	1609	0	1686	1622	0
Fit Permitted		0.871 1248	 П	0.819	4500	· · · · · · · · · · · · · · · · · · ·	0.466	4000	., , П	0.512	4000	· `
Satd. Flow (perm)		1248	O Yes	1282	1593	0 Yes	826	1609		904	1622	
Bight Turn on Red Satd. Flow (RTOR)	· • • •	13	165		22	165		19	Yes	. *	13	Yes
Link Speed (k/h)		50		··	50			50		at	50	
Link Distance (m)		59.1			75.8	Star ist f	·· . · · ·	41.2	1 A. 1		105.9	
Travel Time (s)	evente a	4.3	at y e		5.5	:		3.0	t ta e e	a de la composición d	7.6	
Confl. Peds. (#/hr)	5	-4.0	34	34	0.0	5	2		10	10	. 7.0	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			23	28	339	54	19	414	46
Shared Lane Traffic (%)									v	,		·-
Lane Group Flow (vph)	in (0)	76	0	84	123	D		393	0	19	460	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4		na ana	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	1. 2. 4
Switch Phase								·				·
Minimum Initial (s)	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	<pre>////////////////////////////////////</pre>	34.0	34.0	1 - 12 M 21	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	00
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		40	4.0		4.0	4.0	e de la se
All-Red Time (s)	2.0 0.0	2.0		2.0	2.0		2,0	2.0	n n	2.0	2.0	0.0
Lost Time Adjust (s) Total Lost Time (s)	6.0	-2.0 4.0	0.0 4.0	-2.0 4.0	-2.0 4.0	0.0 4.0	-2.0 4.0	-2.0 4.0	0.0 4.0	-2.0 4.0	-2.0 4.0	0.0
Lead/Lag	U.U	4.0	4.0	4.0	4.0		1.2	4.0	a ta sa sa sa		4.U	4.0
Lead-Lag Optimize?	s. 1								1	. ·		4 N
Recall Mode	None	None		None	None		C-Max	C-Max	N	C-Max	C-Max	
Act Effct Green (s)	Nono.	13.3		13.3	13.3	t e se	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	4	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		В		C	В		А	А	·	А	А	·
Approach Delay		18.6			19.8	· .		5.8		·	6.4	٠.
Approach LOS		В			8			А			А	
		<u> </u>										

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Lanes, Volumes, Timings 6: John Street & Park Street

144 Park Tower 2, TIS Existing PM

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Lane:Groupsatzk, trastik - Store	BLEREBIC	EBR WB	Wet	I WBR	NNBE	NBI	NBRE	SBL	SISBI	SASER
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	1 T.
Turn Bay Length (m)		25.0			10.0			35.0		
Base Capacity (vph)	466	.47	598	• •	588	11:50		644	1158	
Starvation Cap Reductn	0				0	0		0	0	
Spillback Cap Reductn				i i	U .	U .		. 0	. 0	
Storage Cap Reductn Reduced v/c Ratio	0.16	0.41	0.21	· *	0:05	0.34			Ú 0.40	
	U.10	U. I	1.0.51	• • •	U.U.U	0.04		0.03	U.4U	· · · · · ·
Intersection Summary							SKOLX.			
Area Type: Other						· · · ·				
Cycle Length: 60										
Actuated Cycle Length: 60										· · · · · ·
Dffset: 0 (0%), Referenced to p Natural Cycle: 50	the first starting of the second		Start of G	reen						
Control Type: Actuated-Coordin						· · · · ·	• •	25		
Maximum v/c Ratio: 0.40			4	1. 2.14	л т.,		24 A	, et de		
Intersection Signal Delay: 9.3	and the second second		Intersecti		Δ	• . • • •	1.1			
Intersection Capacity Utilization	44.0%	1. 1. ¹⁹	ICU Level			e per este de la	s an		1. 1. j 1	
Analysis Period (min) 15										

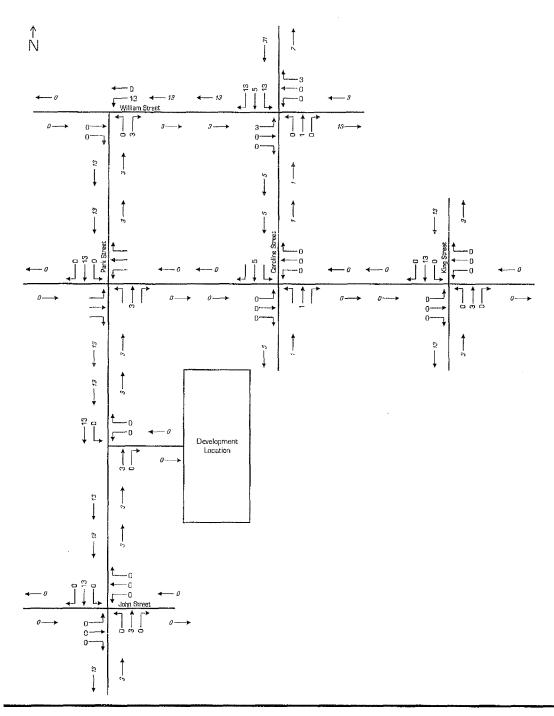
Splits and Phases: 6: John Street & Park Street

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Appendix B

Traffic Volumes from Other Developments

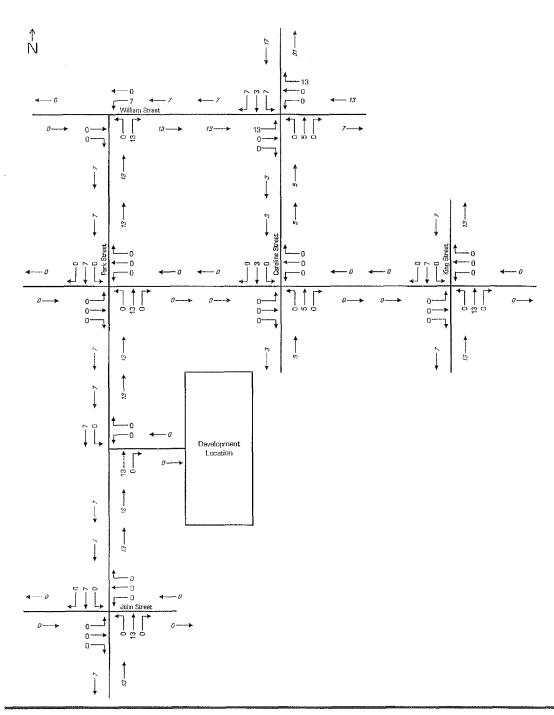


144 Park Tower 2, TIS

Appendix B1a

Paradigm

AM Peak Hour Alexandria Building Traffic

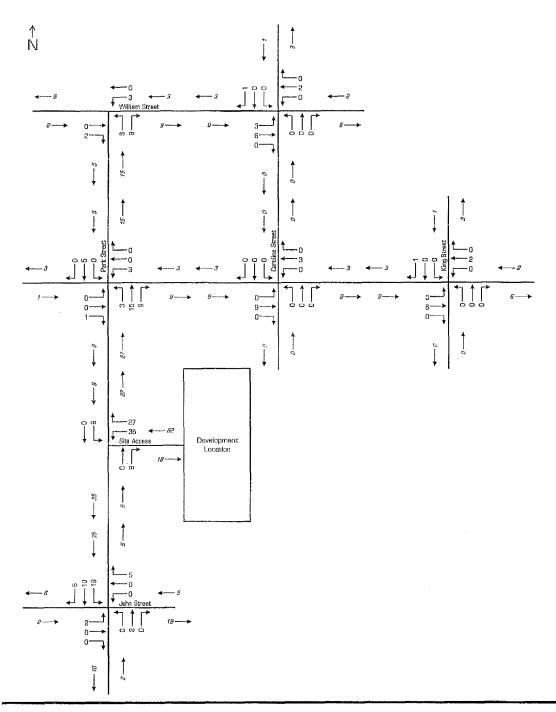


144 Park Tower 2, TIS

Appendix B1b

Paradigm

PM Peak Hour Alexandria Building Traffic

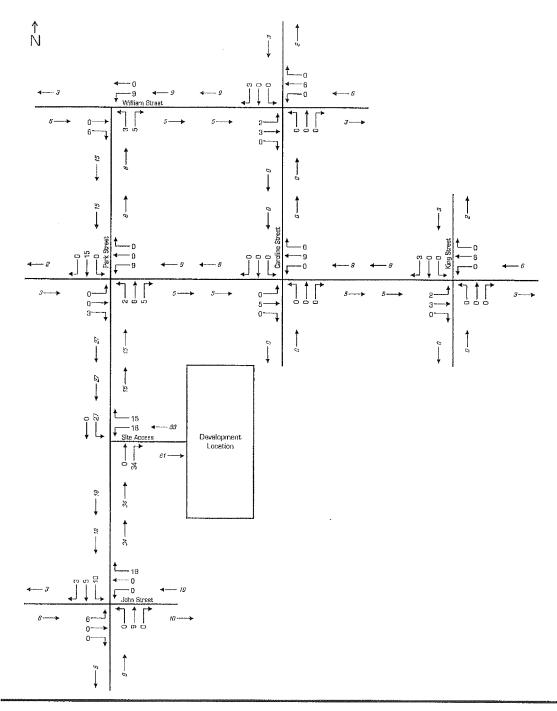


144 Park Tower 2, TIS

Paradigm

Appendix B2a

AM Peak Hour 21 Allen Street Traffic



144 Park Tower 2, TIS

Appendix B2b

Paradigm

PM Peak Hour 21 Allen Street Traffic

Appendix C

Background Traffic Operations

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Lanes, Volumes, Timings	
1: William Street & Caroline S	Street

144 Park Tower 2, TIS 2016 Background + Others AM

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Arrow Arrow <th< th=""><th>1. Vimain Coroco</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>1</th><th></th></th<>	1. Vimain Coroco											1	
Lane Donfigurations N A N A				¥	¥	-		*	Ī	1	*	¥	*
Lane Configurations h	Lane:GRoup	i Ebir	S. IEBT.	EER		a weir	WER	NBL	SUNBI P	NOR!	. GBE		See
Volume (xph) 362 358 22 11 97 56 11 177 21 242 198 Ideal Row (xphp) 1775 1650 000 1000 1000 1000 1000 1000 100 <td></td> <td>ሻ</td> <td>Î∌</td> <td></td> <td>ሻ</td> <td>4</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> <td>स्री</td> <td>7</td>		ሻ	Î∌		ሻ	4			4			स्री	7
Ideal Flow (ophp) 1775 1650 1000 1000 1650 1000 1650 1000 1650 1000 1750 Storage Length (m) 45.0 0.0 25.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.00 <td></td> <td>362</td> <td>356</td> <td>. 55</td> <td></td> <td></td> <td>56</td> <td>11</td> <td></td> <td>21</td> <td>70</td> <td></td> <td></td>		362	356	. 55			56	11		21	70		
Storage Langth (m) 45.0 0.0 25.0 0.00 0.00		1775		1000	1775	1650	1000	1000	1550	1000	1000	1650	
Storage Laneas 1 0 1 0 0 0 1 Taper Langth fm 7.5	Storage Length (m)			0.0	25.0		0.0			0.0.	0.0		
Teper Length fm 7.5		-		0							۵		
Lane Util Fastar 1.00		7.5	· · ·	7.5	7.5		7,5	7.5	1. 1. 1. 1.	7.5	7.5		7.5
Fric 0.991 0.945 0.987 0.980 Hi Protected 0.950 0.950 0.997 0.997 0.998 Satd, Flow (prot) 0.866 1612 0.1666 1420 0 0.1470 0 0 1598 Satd, Flow (prot) 0.866 0.525 0.517 0.975 0.056 50 Satd, Flow (RTOR) 7 35 7 220 0 1437 0 0 1381 1389 Right Tum on Rad Yes Yes Yes Yes Yes 220 Confl. Peds, (#hr) 50 20 20 <t< td=""><td>Lane Util. Factor</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1,00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td></t<>	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
FIC Protected 0.950 0.950 0.957 0.989 Satd. How (port) 1686 1612 0 1686 1482 0 0 1470 0 0 1598 1458 Satd. How (perm) 914 1612 0 908 1482 0 0 1473 0 0 1598 1458 Righ Turn on Red. Yes	Ped Bike Factor	0.98	1.00		0.99	0.98			1.00	· . ·		1.00	0.95
Setd. Flow (prot) 1686 1612 0 1686 1482 0 0 1477 0 0 0 1598 1458 Flt Permitted 0.525 0.517 0 0 1437 0 0 0 1381 1388 Flty Permitted 0.525 7 7 0 0 1507 220 Link Speed (Mh) 50	Frt		0.991			0.945			0.987				0.850
FIt Permitted 0.525 0.517 0.975 0.966 Satd. Flow (perm) 914 1612 0 908 1482 0 0 1437 0 0 1381 1388 Right Turn on Red. Yes <	Flt Protected	0.950	· . ·		0.950			•	0.997	· ·		0.989	
Setd, Row (perm) 914 1612 0 908 1482 0 0 1437 0 0 1381 1389 Right Turm on Red. ''''''''''''''''''''''''''''''''''''	Satd. Flow (prot)	1686	1612	۵	1686	1482	۵	۵	1470	۵	0	1598	1458
Hight Turn on Red. Yes Yes Yes Yes Yes Yes Yes Sed. Yes Sed.	Flt Permitted	0.525	. •		0.517		5 T.	1.1.1	0.975		· ·	0.856	1994 - S. 1997 -
Setd, How (RTOR) 7 35 7 220 Link Spead (V/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. (#/m) 14 9 9 14 35 7 7 35 Pesk Hour Factor 0.90 0	Satd. Flow (perm)	914	1612	Û	908	1482	Ō	۵	1437	0	D	1381	1389
Link Speed (k/h) 50 50 50 50 62 Link Distance (m) 94.2 64.7 17.6 5.9 17.6 5.9 Confl. Peds, (#/hn) 14 9 9 14 35 7 7 35 Peak Hour Factor 0.90 220 220 220 220 220 220 220 220 220 20 <td< td=""><td>Right Turn on Red</td><td></td><td></td><td>Yes</td><td></td><td>e e e</td><td>Yes</td><td></td><td></td><td>Yes.</td><td></td><td></td><td>Yes</td></td<>	Right Turn on Red			Yes		e e e	Yes			Yes.			Yes
Link Distance (m) 94.2 64.7 244.6 82.0 Trevel Time (s) 6.8 4.7 17.6 5.9 Confl. Peds. (#/nr) 14 9 9 14 35 7 7 35 Peak Hour Factor 0.90 220 Perm Perm Perm Perm Perm Perm Perm Perm Perm Pe	Satd. Flow (RTDR)								-				220
Travel Time (s) 6.8 4.7 17.6 5.9 Confi. Peds. (#/nr) 14 9 9 14 35 7 7 35 Peak Hour Factor 0.90 0.	Link Speed (k/h)		. 50	the state		50			. 50		·	50	
Confl. Peds. (#/nr) 14 9 9 14 35 7 7 35 Pesk Hour Factor 0.90 2.90	Link Distance (m)		94.2			64.7			244.6			82.0	·
Peak Hour Factor 0.90 220 Shared Lane Traffic (%) 402 420 0 12 170 0 22 6 6 6 Permited Phases 7 4 8 8 2 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 2	Travel Time (s)		6.8	-1 11 v		4.7			17.6			5.9	
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 78 289 220 Shared Lane Traffic (%) 402 420 0 12 170 0 232 0 0 347 220 Turn Type pm+pt Perm Perm <t< td=""><td>Confl. Peds. (#/hr)</td><td>14</td><td></td><td>9</td><td>9</td><td></td><td>14</td><td>35</td><td></td><td>7</td><td>7</td><td></td><td>35</td></t<>	Confl. Peds. (#/hr)	14		9	9		14	35		7	7		35
Ad). Flow (vph) 402 396 24 12 106 62 12 197 23 78 269 220 Shared Lane Treffic (%) 402 420 0 12 170 0 0 232 0 0 347 220 Turn Type pm+pt Perm Pe	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
Shared Lane Traffic (%) Lang Group Flow (vph) 402 420 0 12 170 0 0 232 0 0 347 220 Turn Type pm+pt Perm Perm </td <td>Heavy Vehicles (%)</td> <td></td> <td>1%</td> <td>5%</td> <td>0%</td> <td>3%</td> <td>4%</td> <td>0%</td> <td>4%</td> <td>0%</td> <td>6%</td> <td>1%</td> <td>2%</td>	Heavy Vehicles (%)		1%	5%	0%	3%	4%	0%	4%	0%	6%	1%	2%
Lane Group Flow (vph) 402 420 0 12 170 0 0 232 0 0 347 220 Turn Type pm+pt Perm Pe	Ad). Flow (vph)	402	396	24	12	108	62	12	197	23	78	269	220
Turn Type pm+pt Perm	Shared Lane Traffic (%)												
Protected Phases 7 4 8 2 6 6 Permitted Phases 4 8 2 2 6 6 6 Switch Phase 7 4 8 8 2 2 6 6 6 Switch Phase 7 4 8 8 2 2 6 6 6 Switch Phase 7 4 8 8 2 2 6 6 6 Minimum Initial (s) 5.0 19.0 19.0 19.0 23.0 23.0 23.0 23.0 29.0 <t< td=""><td>Lane Group Flow (vph)</td><td>402</td><td>420</td><td>Û</td><td>.12</td><td>170</td><td>0</td><td>0</td><td>535</td><td>0</td><td>0</td><td>347</td><td>220</td></t<>	Lane Group Flow (vph)	402	420	Û	.12	170	0	0	535	0	0	347	220
Permitted Phases 4 8 2 6 6 6 Detector Phase 7 4 8 8 2 2 6 6 6 6 Switch Phase 7 4 8 8 2 2 6	Turn Type	pm+pt			Perm			Perm			Perm		Perm
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 <		7	4			8			5			6	
Switch Phase Minimum Initial (s) 5.0 19.0 19.0 19.0 23.0		4											6
Minimum Initial (s) 5.0 19.0 19.0 19.0 23.0 2		7	4		8	8		2	2		6	6	6
Minimum Split (s) 9.0 25.0 25.0 25.0 29.	Switch Phase												
Total Split (s) 26.0 51.0 0.0 25.0 25.0 0.0 29.0 </td <td>Minimum Initial (s)</td> <td>5.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>23.0</td> <td></td> <td></td>	Minimum Initial (s)	5.0									23.0		
Total Split (%) 32.5% 63.8% 0.0% 31.3% 0.0% 36.3%													
Yellow Time (a): 3.0 4.0 2.0 <td></td>													
All-Red Time (s) 1.0 2.0 <th2.0< th=""> <th2.0< th=""> 2.0 <th2.0< th=""></th2.0<></th2.0<></th2.0<>				0.0%			0.0%			0.0%			
Lost Time Adjust (s) 0.0 -2.0 0.0 -2.0 0.0 0.0 -2.0 0.0 0.0 -2.0 0.0 0.0 -2.0 -2.0 -2.0 0.0 0.0 -2.0 -2.0 -2.0 0.0 0.0 -2.0 -2.0 -2.0 0.0 0.0 -2.0 -2.0 -2.0 -2.0 1.0 0.0 -2.0 -2.0 -2.0 1.													
Total Lost Time (s) 4.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0 4.0 6.0 4.0 4.0 4.0 Lead/Lag Lead Lead Lag Lag <thlag< th=""> Lag Lag <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<></thlag<>													
Lead/Lag Lead Lag Lag <thlag< th=""> Lag <thlag< th=""> <thlag<< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td>-2.0</td><td></td></thlag<<></thlag<></thlag<>										•		-2.0	
Lead-Lag Optimize? Yes Yes Yes Recall Mode None C-Max C-Max Max Ma		4.0	4.0	4.0			. 4.0	6.0	4.0	4.0	6.0	4.0	4.0
Recall Mode None C-Max C-Max C-Max Max													
Act Effet Green (s)47.047.026.926.925.025.025.0Actuated g/C Ratio0.590.590.340.340.310.310.31v/c Ratio0.580.440.040.330.510.800.38Control Delay12.810.921.319.126.641.75.2Queue Delay0.00.00.00.00.00.00.0Total Delay12.810.921.319.126.641.75.2LOSBBCBCDAApproach Delay11.819.326.627.627.6													
Actuated g/C Ratio0.590.590.340.340.310.310.310.31v/c Ratio0.580.440.040.330.510.800.38Control Delay12.810.921.319.126.641.75.2Queue Delay0.00.00.00.00.00.0Total Delay12.810.921.319.126.641.75.2LOSBBCBCDAApproach Delay11.819.326.627.6							. • •	Max			Max		
v/c Ratio 0.58 0.44 0.04 0.33 0.51 0.80 0.38 Dontrol 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 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 27.6													
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 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 27.6 27.6										· · · ·			
Queue Delay 0.0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>•.</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>							•.						
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							- :	1997 (A.1		• • •			
LOS B C B C D A Approach Delay 11.8 19.3 26.6 27.6													
Approach Delay 11.8 19.3 26.6 27.6				1.1			1 - 11				•.		5.2
		B			С								A
Approach LOS B B C C													
	Approach LOS		Б			B			0			C	

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Lanes, Volumes, Tir 1: William Street &	0		treet		2002-00-00-00-00-00-00-00-00-00-00-00-00			125-Techicumerum	144 Pa 2016 Ba		wer 2 Id + Othe	
	᠕		*	¥	4		*	Å	1	1	ļ	4
Zane Group, Sec. Product	NEBL.	SUBBT -	CEBR	WBLX	SWETC:	SWBRA	e nee	NBT	NER	exsee/	SET	SBR
Queue Length 50th (m) Queue Length 95th (m) Internal Link Dist (m) Turn Bay Length (m)	29.7 47.3 45.0	31.3 50.4 70.2		1.2 5.2 25.0	14.5 33.4 40.7			27.3 48.0 220.6			47.3 #89.4 58.0	0.0 14.2
Base Capacity (vph) Starvation Cap Reductn Spillback Cap Raductn Storage Cap Reductn Reduced v/c Ratio	749 0 0 0 0.54	950 0 0 0 0.44		306 0 0 0 0.04	522 0 0 0 0.33			454 0 0 0.51		· · · · · ·	432 0 0 0 0.80	585 0 0 0 0.38
Intersection:Summary	ner											
Cycle Length: 80 Actuated Cycle Length: 80 Offset: 8 (10%), Referenced Natural Cycle: 65		· · · · · · ·	TL and 8:	WBTL, {		Green				in the second		
Control Type: Actuated-Coor Maximum v/c Ratio: 0.80										ergia de la Alta de Mala		. 1
Intersection Signal Delay: 19 Intersection Capacity Utilizat Analysis Period (min) 15 # 95th percentile volume of	ion 90.				tersectio U Level (longer:	of Servic			고 2015. 연 <i>속 가</i>	h i st Fili i st		

Queue shown is maximum after two cycles.

1: William Street & Caroline Street Splits and Phases:

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[‡] ₽²² ø6	⊿ Ø7	
29 @	26.0	275 e

Lar	nes,	Vol	um	es, [·]	Tin	nings	
2:	Willi	am	Str	eet	8	Park	Street

144 Park Tower 2, TIS

2016	Background	≁	Others	AM
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Lanel Groups and succession	S NEBIE	V EBR	N WBE	a wer	NB	M. NBR	
Lane Configurations	4		ሻ	ተ	ሻ	۴	
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	
Frt	0.980	an san a			н. 1. н. н. –	0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	1617	0	1637	1845	1686	1473	
Flt Permitted			0.950		0.950		
Satd, Flow (perm)	1617	0	1637	1845	1686	. 1473	
Link Speed (k/h)	50			50	5Û		
Link Distance (m)	66.4		ere di e let	94.2	244.8	in the	
Travel Time (s)	4.8			6.8	17.6		
Peak Hour Factor	0.90	0.901	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	Ū	249	126	27	399	
Sign Control	Free			Free	Stop		
htersection Summary							
	ither			16-16-18-18-28-28	332-24 1 6-0-6640	1993 BOIDE BOIDE	

Area Type: Other

ICU Level of Service 8 Control Type: Unsignalized Intersection Capacity Utilization 58.0% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 2: William Street & Park Street

144 Park Tower 2, TIS 2016 Background + Others AM

		N	¥	National	1	M	
Movement States and S	REEDTA	SEBR ¹	webs	WBII!	NAN BE	SINER	
Lane Configurations	4		ሻ	ŕ	٣	۴	
Volume (veh/h)	372	66	224	113	24	359	
Sign Control Grade	Free 0%			Free 0%	Stop 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)			10.00				and the second
Percent Blockage Right turn flare (veh)	· · · · ·		for some				
Median type	None	e e s	· ·	None			
Median storage veh)	1,00,00						
Upstream signal (m)				94			
pX, platoon unblocked		• . • •	10.7			450	
vC, conflicting volume			487		1073	450	비사는 이제들에게 가지? 관계 제가 가지 바람하기?
vC1, stage 1 conf vol vC2, stage 2 conf vol	1.1.11		1×2 - 1	t in de co		y server e	
vCu, unblocked vol			487		1073	450	
tC, single (s)			4.1		6.4	62	
tC, 2 stage (s)							
tF (s)			2.2	신문자	3.5	3.3	지 못 집에 가지 않는 것은 것은 것 봐요? 것 같아.
pO queue free % cM capacity (veh/h)	a Secon		77 1071	. 64.	86 189	35 611	ered of the set of the set of the set of the
Directional tane data a second	487	249	126	27	399 399	A CANE	
Volume Total Volume Left	. 487 0	249 249	د مے اند 0	27	 0	i i si si si	e de la companya de La companya de la comp
Volume Right	73	0	0	0	399		학교 고양한 소설, 소전 관광관 수 같아?
cSH	1700	1071	1700	189	611	11.	
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		والمراجع
Control Delay (s) Lane LOS	0.0	9.4 A	0.0	27.2 D	- 21.3 C		e al Richter in einer van de training ander 12 daea
Approach Delay (s)	0.0	6.2		21.6	L.		
Approach LOS	.	-,		C	· ·		
· ·							
		57678-185394549	n P	al an	BERTHER BUILD		
	ation			i.	CU Level	of Servi	ee、你们是是是你的考虑的。"他们们们是是是不是
Intersection Summary 22 Average Delay Intersection Capacity Utiliz	ation	Ę	9.0 58.0%		CU Level	of Servi	ce , the day and the last B is a training of the state of

 15
 Instantia de la constante de la const Constante de la constante d Analysis Period (min)

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Lanes,	Volumes,	Timings
3: Aller	n Street &	King Street

144 Park Tower 2, TIS 2016 Background + Others AM

U. Allen Direct D										, aongi olai		
	Sand Barris		*	*	rijijanana	A ,	*	Ť	P	-	Ŧ	4
lane Group Assas		a lebre	e e e e e e e e e e e e e e e e e e e	WEE	e wen	New Ber	NEW	NBIN	NBR	ALCORD	MASEIR	COSE E
Lane Configurations	and the second	\$	and a second second		4	ሻ	AT ALL PROPERTY AND INCOME.	ፈ ጉ	entra a reaction of	AN THE PARTY OF LEVEL	ብ	and the second
Volume (vph)	22	50	15	12		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	1000	0.0	0.0	1000	10.0	0.0	1000	0.0	0.0	1000	. 0.0
Storage Lanes	0.0		0.0	0.0	*. [*]	1 10.0	0.0.		0.0	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	1.00	0.99	1.00	1.00	1.00	0.96		1.00	0.30	0.30	1.00	0,30
Fit		0.976		14.14	· r.uu	0.850		0.992	+ + +	1.1	0.995	
Fit Protected	·	0.988		1.1	0,989	0.000		0.992			0.998	4.
Satd. Flow (prot)		1469		0	1632	1488	N	3009	0	 0	2987	· · ·
Flt Permitted	U C	0,931	U	U	0.943		Ų.	D.873	U		0.921	. 0
Satd. Flow (perm)		1377	0	0	1551	1435	n.	2634	0	Û	2755	Ö
Right Turn on Red		10//	Yes		1001		U.	2034		U	2700	
Satd. Flow (RTOR)	11 - A - A	15	1.62	ert de la s		Yes		11	Yes		·	Yes
		15 50			EO	33		····50.	1		7	1.5.4.4
Link Speed (k/h)	· · · · ·				50	iter -					50-	
Link Distance (m)	51.01 S.S.	106.8 7.7	1. 1. 2.		77.9			90.8 6.5			81.8	
Travel Time (s)	00	1.1		40	5.6			6.0		0.4	5.9	· ``.
Confl. Peds. (#/hr)	23	0.00	16	16	0.00	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)	1714 NO. Based	97	Υ, U.	_ 0	60		0	725	0	2 X X X X X	680	0
Turn Type	Perm			Perm		Perm	Perm		6 x 2x	Perm		
Protected Phases		4	t i i	astel je	8			2			6	, 18 ¹¹ - 19
Permitted Phases		· · · •		8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase					- Castalia		10.0	(a) a)	and and the			
Minimum Initial (s)	26.0	26.0		26.0	26.0	26.0	42.0	42.0		42.0		A THE A
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 (%)	and the second second	40.0%	0.0%	40.0%	40.0%	40.0%		60.0%	0.0%		60.0%	0.0%
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	1 8 10	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	Section Con-
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					i dhai							
Lead-Lag Optimize?		· · · · · ·										
Recall Mode	None	None	a tak	None	None		C-Max			C-Max		х. Х. А.
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		1. s	0.64	
v/c Ratio		0.20		,	0.11	0.06		0.43			0.39	
Control Delay		16,7	an da Ang		18.4	6.9	e Redi	10.7			10.2	
Queue Delay		0.0			0.0	0,0		0.0			0.0	
Total Delay	· · · · ·	16.7	11 e.		18.4	6.9	· · · · · ·	10.7			10.2	
LOS		В			8	А		В			В	
Approach Delay		16.7			14.3			10,7	1. A.		10.2	
Approach LOS		8			В			В			В	
				Awar								

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Lanes, Volumes, Ti <u>3: Allen Street & K</u>			a and a state of the state					-	144 Pa 2016 Ba	ower 2 nd + Othe	
			*	*	\$ ~~~	4	*	Ť	M	\$ ¥	*
Gueue Length 50th (m) Queue Length 95th (m) Queue Length 95th (m) Internal Link Dist (m) Turn Bay Length (m) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio		8.4 18.6 B2.8 492 0 0 0 0 0.20			6,0 13.7 53.9 543 0 0 0 0.11	10.0 524 0 0		32.2 45.8 66.8 1690 0 0 0 0.43		29.3 41.5 57.8 1765 0 0 0 0 0.39	
Area Type: O Cycle Length: 80 Actuated Cycle Length: 80 Offset: 40.8 (51%), Refere Natural Cycle: 80 Control Type: Actuated-Coo Maximum v/c Ratio: 0.43 Intersection Signal Delay: 1 Intersection Capacity Utiliza Analysis Period (min) 15	ther nced to rdinated 1.1	phase 2:1	NBTL anı	d 6:SBTI In	., Start o	of Green on LOS: E					

Splits and Phases: 3: Allen Street & King Street

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	32.8
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Lanes, Volumes,	Timings	
4: Allen Street &	Caroline Street	

144 Park Tower 2, TIS 2016 Background + Others AM

		-	7	*	*	Ł	*	Â	Þ	1	ł	-
<u>Lanel Gloupi se stresser</u>	EBL		OSEBR		e wat	e wer	NBL	NBT	MIN BAN	SBL	1. Sett	2 SBR
Lane Configurations		4			4			4			4	
Volume (vph)	25	51	26	30	21	52	•••• 1	94	11	84	167	9
(deal 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
Frt		0,966			0.931			0.986			0.995	
Fit Protected	ta (he	0.988			0,986		, so the second se	· · ·	1.1		0.984	· . ·
Satd. Flow (prot)	0	1479	0	0	1364	D	Q	1502	0	D	1494	0
Fit Permitted		0.988		- 4. S.	D.986	1	·· ··.		14 A. A		0.984	
Satd. Flow (perm)	0	1479	0	Q	1364	0	D	1502	D	D	1494	0
Link Speed (k/h)	an diret.	50	· · · .		50			50	2.5	·. · ·	50	
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)	a a sur a 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%	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 (%)					· · · · ·	1.1.1	1.1					i gere
Lane Group Flow (vph)	, D	114	D	D	114	D	0	117	D	0	289	0
Sign Control		Stop		•••	Stop			Stop			Stop	n an
	104 30 30 7	ZHE MARK	原始和这种问题			NEW CONTRACTOR	TERMINE A	THATHER		1447 Y CO		

niereection SUmmary v. 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 Area Type: Other

Control Type: Unsignalized

Intersection Gapacity Utilization 40,9% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 4: Allen Street & Caroline Street

144 Park Tower 2, TIS 2016 Background + Others AM

	A		~	V		4	*	Ť	1	1	ţ	~
Movementerte	EBL	NY EBTY	E EBR		. WBR:	KWBR.	NBL	NBL:	ENER	X SBL	ANSBIL	SBR
Lane Configurations		¢.			<u></u>			ر):			4	
Sign Control	· · · ·	Stop			Stop			Stop		- · ·	Stop	
Volume (vph) Peak Hour Factor	25 0.90	51	26	30	21	52	1	94	11	84	167	9
Hourly flow rate (vph)	28	0.90 57	0.90 29	0.90 33	0.90 23	0.90 58	0.90	0.90 104	0.90 12	0.90 93	0.90 186	0.90 10
			ں ۔۔۔ مصنعہ محمد محمد	UU 1990			 ::::::::::::::::::::::::::::::::::::			00 	100	
Dinection Lianen#	REBMA	<u>SVVB(18</u>	<u>MUBNE</u>	(USBH)	des a com	Crimes		stanu a u.				
Volume Total (vph)	113	114	118	289 93		e e e						
Valume Left (vph) Volume Right (vph)	28 29	33 58	12	10				·				, `
Hadi (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	$\mathbb{K}^{n} \mapsto$	i i i Ni i i		ing die		· . ·		$\{ i_1, i_2 \}$
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	Α	В						-		
htepseotjon Summary as										i Davin-ki		
Delay			9.6								· · · · ·	
HCM Level of Service			A					· · · ·				
Intersection Capacity Utiliz Analysis Period (min)	ation		40.9%	IL	3U Level	of Servic	e		A	1977 - S		
Anaysis renuu (min)	·		10			· · · .						2.2.5
 All states of a first strategy of the state 	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		5	an a shekarar	er i strike		1		1997 - 1997 - 1997 1997 -	1.1		

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Lanes, Volumes, Timings144 Park Tower 2, TIS5: Allen Street & Park Street2016 Background + Others AM												
	٨	->	\mathbf{i}	*	-#jeenee		*	∱	Þ	\$	Ļ	*
NenerGroup: 2012 - 222		. CEBIN	E FBR		WBT		NBL	a NBT	- Inbry		SE SER	SEP
Lane Configurations		4			4			4 >			4	
Volume (vph)	21	43	5	6	17	· 31	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												
Frt		0,9B9	· · · ·		0.986		· · ·	0.982		a firi	0.992	· · ·
Flt Protected		0.985			0,988		·	0.999	· . ±		0.996	
Satd. Flow (prot)	· · · · 0	1440	0	; : O	1298	0.	0	1459	D	D	1477	0
Flt Permitted		0.985		-	0.988			0.999			0.996	
Satd. Flow (perm)	: U	1440	0	0		0	О.	1459	0	0.	1477	0
Link Speed (k/h)	e en le ser	50			50			50	·		50	
Link Distance (m)		84,0		· · · ·	97.9			58.8			244.8	
Travel Time (s) Confl. Peds. (#/hr)	Ċ	6.0	16	4.0	7.0	· .		4.2	20	····	17.6	
Peak Hour Factor	6 0.90	0.90	0.90	16 0.90	0.90	6 0.90	24 0.90	0.90	0.90	20 0.90	0.90	24 0.90
Heavy Véhicles (%)	5%	0.90	0.90	33%	7%	0.90	0.90	1%	0.90	0.90	0.90	0.90 6%
Adj. Flow (vph)	23	48	6	7	19	3	10	373	58	29	311	21
Shared Lane Traffic (%)	20				1.1	U		0/0		ل اع		C 1
Lane Group Flow (vph)	0	77	л П	0	29	0	0	441	0	n	361	n
Sign Control		Stop	5		Stop			Free			Free	
TERMINING SHARE SHERE AND A												ERRERA
) Dther		ales al ci				ANJA 1020			AR STREET	ALC: LOUGH	
Area Type: Control Type: Unsignalized			··· (.).		1 ·					12 (MA)		t ti s a

Control Type: Unsignalized Intersection Capacity Utilization 53,5% Analysis Period (min) 15

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Synchro 7 - Report

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HCM Unsignalized Intersection Capacity Analysis	
5: Allen Street & Park Street	

144 Park Tower 2, TIS 2016 Background + Others AM

	٨		\mathbf{i}	V	Andrew	A.	*	Ť	p	1	ł	4
Movemencesses as	EBL	C NEBIT	EBR	e weit	e weite	si weeks	NELS	ENBRO	NER	SBE	SSBI	SISBA
Lane Configurations		\$			ф,			\$	12210	1.000 ALC: 1.000	ф .	
Volume (veh/h)	21		5	. 6	17	3	·' g	336	. 52	26	280	.19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%	$x_{i} \in \{x_{i}\}^{d}$		0%	and the		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	59	311	21
Pedestrians		24 3.6	· · · .		20			16	·		6	
Lane Width (m) Walking Speed (m/s)	.: · ·	1.2	an an Arristan An Arristan		3.6 1.2			3:6 1.2			3.6 1.2	
Percent Blockage		2	e sete		2		÷.	1.2	·		1.2	
Right turn flare (veh)		· · · E			. <u>C</u>	· · ·		1.	• • •	· · ·	· 1	:
Median type						tetere j		None	• • .	a at se	None .	. + :
Median storage veh)	••				•	4., 24	· · · · ·		·.		100110	
Upstream signal (m)				y jun		•		165				
pX, platoon unblocked						,						
VC, conflicting volume	844	875	362	867	856	428	356	n start 1. start		451		
vC1, stage 1 conf vol												
vC2; stage 2 conf vol	~ ~ ~	075				:						
vCu, unblocked vol	844	875	362	867	856	428	356			451	t	
tC, single (s) tC, 2 stage (s)	7.1	6.5	6.2	7.4	6.6	6.2	4.1			4.1		
tC, 2 stage (s)	3.5	4.0	3.3	3.8	4.1	3.3	2.2		dia a	2.2	ti gra	
pO queue free %	90	82	99	97	93	99	99			97	t haad to t	
cM capacity (veh/h)	243	270	665	191	270	617			1.1.1	1101		
Direction tener#	A STATE DE LA	Went	INBME									
Volume Total	77	59 29	441	361	<u>Le provert</u>		<u> Karantan</u>	<u>Generate</u>		NACES OF		
Volume Left	23		10	29				3. * 4. s	atu titir			
Volume Right	 6		58	21		la serie de la Constante de la serie de la s			n. Alta			
cSH	272	262	1189	1101			114 (* ·	· · · ·				1.1
Volume to Capacity	0.28	0.11	0.01	0.03			uttu -					
Queue Length 95th (m)	8.4	2.8	0.2	0.6								
Control Delay (s)	23.3	20.5	0.3	0.9						An the second		en l'el
Lane LOS	С	D	A	A								
Approach Delay (s)	23.3	20.5	0.3	0.9								. •
Approach LOS	С	С										
Intersection Summary.												
Average Delay	in faith the second		3.1									2
Intersection Capacity Uti	llization		53.5%	(CU Level	of Servic	:e`	14 - 44 - 14 14 - 44	Α		• •	
Analysis Period (min)	and the second	t si ti	15			11.00	· ·					
	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		11 - ¹ - 1				· .	· · · ·	an an an a'	· · · ·	at at	· ·

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Lanes,	Volumes,	Timing	S
6: Joh	n Street &	. Park S	Street

144 Park Tower 2, TIS 2016 Background + Others AM

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	Sec. 1		*	¥	-	No.	*	Ť	P	\$	¥	***
Lane Group Lands A.	K (KEBB	in the second se	EBR:	WWBL	SWBT:	wer.	NEL	CANET	NBR	RY SBM	SBIT	SER
Lane Configurations		4		'n	4Î		ሻ	4		ሻ	ĵ.	
Volume (vph)	10	68	14	35	31	20	11	383	B1	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	e e e e e e e e e e e e e e e e e e e	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	۰.	1.00	1.00	
Frt		0.979			D.941			0.974			0.983	
Fit Protected		0.995	· ·	0.950		at a st	0.950		•	0,950	· · · · · · · · ·	
Satd. Flow (prot)	. O	1442	0	1637	1436	0	1686	1572	0	1074	1604	0
Flt Permitted		0.964		0.745		_	0.579	4530		0.432	1001	
Satd. Flow (perm)	O .	1395	0	1174	1436	0	1026	1572	0	486	1604	. 0
Right Turn on Red		40	Yes	s tê des		Yes		oF.	Yes		40	Yes
Satd. Flow (RTOR)	i da seren	16 50			22			25 50	· .	(1)	16	
Link Speed (k/h)		50 59.1	· • • · · ·		50 75.8	N. J. S.		50 41.2	· ·	·· · · î.	50 105.9	19 - 19 B.
Link Distance (m)	• • •	4.3	;	·	5.5		· ·	3.0	- <u>-</u>		7.6	
Travel Time (s) Confl. Peds. (#/hr)	5	4.3	. 34	34	0.0	5	2	.		10	7.0	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0,90	5 0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	0,90	0.90 8%	3%	11%	0.90	0.90	1%	5%	57%	1%	0.90
Adj, Flow (vph)	1470	76	16	39	34	22	12	426	90	30	262	34
Shared Lane Traffic (%)	11.	2.170	, iu		04	. <u>.</u>	· · · · · • •	4 60		00		
Lane Group Flow (vph)		103-		39	56	0	. 12	516	·	30	296	Ő
Turn Type	Perm	100	0	Perm	00	· · · · ·	Perm	, 616 .		Perm		
Protected Phases		4			8			2			6.	t ga
Permitted Phases	4		. 11 . 1911 - 11	8	V	····	2	·····		6		. 17
Detector Phase	4	4	r est	B	8		2		r det pr	6	6	
Switch Phase				** '* i '*			· · · · ·					
Minimum Initial (s)	10.0	10.0	na special Angles	10.0	10.0		28.0	28.0	en angen an Angen angen ang	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	D.0	26.D	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.D	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	•4.55
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.D	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			ine da compositiones de la				di Ab		• • •			
Lead-Lag Optimize?		و المربو ال					- Landard - A	·				
Recall Mode	None	None			None			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	171.	0.72		· · · ·	0.72		
√c Ratio		0.33	s genet	0.16	0.17		0.02	0.45		0.09	0,26	
Control Delay		20.2		20.3			4.3			5.1	4.8	
Queue Delay		0.0	4 . a	0.0	0.0		0.0	0.0	·	0.0	0.0	
Total Delay	1.2.2	20.2		20.3	14.4		4.3		· · ·	5.1	4.8	· • :
LOS Approach Deloy		0	·	C	1e 0.		А	A	· .	A	A	
Approach Delay		20,2	-	$(1,2,\ldots,n)$	16.8			6.5			4.9	
Approach LOS		С			В			A			Α	

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Lanes, Volumes, Timings 6: John Street & Park Street

144 Park Tower 2, TIS 2016 Background + Others AM

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lane/@koup: . C. versious annuel	IL STEBT STE	BR. WBL	S.WBIP	WBRE	Nela:	NBIN	NBR	MSBA	SA SETA	MSBR
Queue Length 50th (m)	8.1	3.6	3.1	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 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	E 40		10.0	4400		35.0	4450	
Base Capacity (vph) Starvation Cap Reductn	522	430				1139		350	1159	
	U 0.551	· 0.	U 1 - 1		0 • n	U . n	· ·	U N	U n	
Storage Can Reducto	Π	n	Ő		Ő	0		0	0	
Reduced V/c Ratio	0.20	0.09	0.10		0.02	0.45		0.09	0.26	
Intersection Summary				N: 11 111-						
Area Type: Other						<u></u>	DOP-DURKATIVADA	CCF/A/24582526		16948-1993-066-7 <u>8</u>
Cycle Length: 60	· · · · · · · · ·	•								
Actuated Cycle Length: 60									đ., , ,	
Offset: 0 (0%), Referenced to pl	nase 2:NBTL and	6:SBTL, St	art of Gre	en				÷ 14		
Natural Cycle: 50 Control Type: Actuated Coordina	tod	in in status						•		
Maximum Vc Ratio: 0.45				a da	e. e		. And	··· · ·		
Intersection Signal Delay: 8.3		ln	tersectior	1 LOS: A						
Intersection Capacity Utilization	49.0%	IC	U Level o	f Servi <mark>ce</mark>	A					
Analysis Period (min) 15										

Splits and Phases: 6: John Street & Park Street

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Synchro 7 - Report

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	La	anes,	Volumes,	Timings			
	7:	Dev	elopment	Driveway	&	Park	Street

144 Park Tower 2, TIS 2016 Background + Others AM

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Lane.Gnoupray and Store	SAWBIN	AWBR.	NY NET	MINBR.	Sel	SBI	
Lane Configurations			4Î			ର୍ଶ	
Volume (vph)	35	- 27	370	· 9`;	. 9	585	
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		e ale de t			0.998	
Satd. Flow (prot)	1616	0	1629	0	0	1647	
Flt Permitted	0.973				er, e c	0.998	
Satd. Flow (perm)	1616	0	1629	0	0	1647	
Link Speed (k/h)	50	1.11	- 50	din e		50	
Link Distance (m)	38.0		105.9			58.8	
Travel Time (s)	2.7	14.14	7.6			4.2	
Peak Hour Factor	0.90	0.90	Ũ.9Ó	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 (%)			to dan je s			li the	승규가 많은 것은 것은 것을 하는 것이 없는 것이 없다.
Lane Group Flow (vph)	69	0	421	0	O	323	
Sign Control	Stop		Free			Free	방어 백이는 아님과 승규들에 모두 백고 운동이
ntersection Summarvussu							
)ther	(*-373#/78005.5478895		AND THE OWNER AND THE	100000022-1028-1077231	2742.9797.4754.94893	

Control Type: Unsignalized

Intersection Capacity Utilization 36.0% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 7: Development Driveway & Park Street

144 Park Tower 2, TIS 2016 Background + Others AM

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Móvementus as as sus	. WBEN	WBRA	NBT	NER	SBL	R SBT	
Lane Configurations Volume (veh/h) Sign Control Grade Peak Hour Factor Hourly flow rate (vph) Pedestrians	35 Stop 0% 0.90 39	27 0.90 30	₿ 370 Free 0% 0.90 411	9 0.90 10	9 0.90 10	4 282 Free 0% 0.90 313	an a
Lane Width (m) Walking Speed (m/s) Percent Blockage Right turn flare (veh)				"			e in los en transferige de la 1999 - Maria Maria de Maria de la composition de la composition de la composition de la composition de la compo 1999 - Antonio de la composition de la c
Median type Median storage veh) Upstream signal (m) pX, platoon unblocked VC, conflicting volume vC1, stage 1 conf vol	0.93 749	0.93 416	None 106		0.93 421	None:	
vC2, stage 2 conf vol vCu, unblocked vol tC, single (s) tC, 2 stage (s)	696 6.4	339 6.2	라고 알 지원에는 도		345 4.1		
tF (s) pD queue free % cM capacity (veh/h)	3.5 90 380	3.3 95 661			2.2 99 1144		o en de la constante de la la destra. No tores de la catalectro de la destra de la d
Volume Total Volume Left Volume Right cSH Volume to Capacity Queue Length 95th (m) Control Deley (s) Lane LOS Approach Delay (s) Approach LOS	69 39 30 466 0,15 3.9 14.1 B 14.1 B	421 0 10 1700 0.25 0.0 0.0 0.0	323 10 1144 0.01 0.2 0.3 A 0.3				
Intersection Stimmary & Average Delay Intersection Capacity Util Analysis Period (min)	ization	2 	1.3 36,0% 15	IC	CÜ Level	of Servi	i <mark>ce</mark> , haar oo Ah ah ah ah ah ah ah

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Lanes, Volumes,	Timings
1: William Street	: & Caroline Street

144 Park Tower 2, TIS 2016 Background + Dthers PM

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Lanel Groups the sector		(INCERT		WBB	e e went	e weer	NEL	Neite	CANBRA		SASEN	SBR
Lane Configurations	ሻ	1		ሻ	4		in the second second second second	44			4	1
Volume (vph)	284	193	10	.14	290	108	7.		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	19. A.	0.0	- 0,0	t tra	0.0	0.0	·	0.0
Storage Lanes	1		0	1		. 0	0	s - 10	0	0		() • ••• • •••
Taper Length (m)	7.5	4 00	7.5	7.5	 4 OD	7.5	7.5	4.00	7.5	7.5	4 00	7.5
Lane Util. Factor Ped Bike Factor	1.00	1.00	1.00	1.00	1.00 0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Feu bike raciur . Frt	0.99	0.993		0.99	0.959			0.987	3		1.00	0.95 0.850
Fit Protected	0.950	0.550		0.950	0.909		•.	0.997	. ·		0.994	0.000
Satd. Flow (prot)	1686	1620	D	1686	1554	 D		1504	D	П	1603	1473
Fit Permitted	0.229	1040	с. С. С.	0.618	100-	Ŭ		0.990			0.921	1470
Satd. Flow (perm)	403	1620	Ö	1083	1554	0		1490	D	П	1484	1406
Right Turn on Red			Yes	1000		Yes			Yes	Ŭ		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		e e Marian	17.6			5.9	di se di se
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%	D%	11%	1%	1%
Adj. Flow (vph)	316	214	11	16	355	120	8	273	31	42	281	463
Shared Lane Traffic (%)	1. A.A.	(marini)										·····
Lane Group Flow (vph)	316	225	····: 0.	16	. 442	· · · · 0 ·	0	812	0		323	_463
Turn Type	pm+pt			Perm			Perm	1		Perm		Perm
Protected Phases		4	14 1 14 1 1 1 1 1		8		- -	2		- -	6	
Permitted Phases Detector Phase	4	nin k		8 8:	8		2	9		6 6	e	6
Switch Phase		· · · · · · · · · · · · · · · · · · ·		9 1 1 1 D	U		<u>د</u>	C.		0	0,	Q
Minimum Initial (s)	5.0	24.0		24.0	24.0		28.0	28.0	te pa part	28.0	28.0	28.0
Minimum Split (s)	8.0	30.0		3D.D	30.0		34.0	34.0	1990 - A.	34.0	34.0	34.0
Total Split (s)	26.0	56.0	0.0	30.D	30.0	0.0	34.0	34.0	0.0	34.0	34.0	34.0
Total Split (%)		62.2%		33.3%	33.3%		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	D.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					g interest			
Lead-Lag Optimize?	Yes			Yes	Yes							
Recell Mode	None	C-Max			C-Max		Max			Niax		Max
Act Effct Green (s)	52.0	52,0		32.9	32.9			30,0			30.0	30 D
Actuated g/C Ratio	0.58	0.58		D.37				0.33		- 1.1 1	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	1.1.1.1	21,9	36.0			31.2		· · ·	33.0	5.9
Queue Delay	0.0	0.0		0.0	D.O			0.0			0.0	0.0
Total Delay	20.0	9.9	ler i e	. 21.9	36.D			31.2	, , , , , , , , , , , , , , , , , , ,		33.0	5.9
LOS Approach Delay	C .	A 15.8		C	D 35.5		1. A.	C 31,2			C 1 7. 0	A
Approach LOS		10.8 B			30.0 D			31.2 C				
white and roo		<u>ں</u>			U			ь L			8	

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Lanes, Volumes, Ti <u>1: William Street &</u>			reet					1			ower 2 nd + Othe	
	_ A	×\$	*	*	4	Ł	*	Ì	p	1	ţ	*
Lene Grouptas Salas Salas	EBB	N EBT 2	EBR	WBB	WBILS	WBR	ANBO	N. NBI	Ner	USBE	e vsbill.	SBR
Queue Length 50th (m) Queue Length 95th (m) Internal Link Dist (m) Turn Bay Length (m)	25.9 45.2 45.0	17.0 28.5 70.2		1.7 6.6 # 25.0	62.0 128.5 40.7			43.3 70.5 220.6			46.5 74.7 58.0	0.0 20.9
Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn	546 0 0 0 0.58	938 0 0 0 0.24		397 0 0 0 0.04	582 0 0 0 0.76			501 0 0 0 0 0,62			495 0 0 0 0.65	777 0 0 0 0.60
Intersection Summary												
	ther		<u> </u>	· ·		~ .						
Offset: 48 (53%), Reference												
Natural Cycle: 80 Control Type: Actuated-Coo			· . : · · ·				• •					
Maximum v/c Ratio: 0.76 Intersection Signal Delay: 2 Intersection Capacity Utiliza Analysis Period (min) 15 # 95th percentile volume	2.8 ation 90.	0%		in JC	tersectio U Level c	n LOS: C	3					

Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street

↑ ø2	ø4	
34 8	56 s	
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24-6-	26 @	200

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Lanes, Volumes, Timings 2: William Street & Park Street 144 Park Tower 2, TIS

2016 Background + Others PM

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LanelGioUp	é é e Bite	S EBR?	s welf	WBI	NNBL	SANDE	
Lane Configurations	Þ		ኻ	Ł	ሻ	កី	f
Volume (vph)	174	37	493	290	44	343	· · · · · · · · · · · · · · · · · · ·
Ideal Flow (vphp!)	1650	1000	1775	1900	1775	1750	
Storage Length (m)		0.0	0.0	$(1,1) \in \mathbb{C}$	15.0	~ 0. 0	
Storage Lanes		Q	1		1	1	,
Taper Length (m)	2	7.5	7.5		7.5	_ 7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1,00	1.00	
Frt	0.976	a se				0.850	
Flt Protected	5		0.950		0,950		
Satd. Flow (prot)	1610	· 0	1670	1900	1686	1473	
Flt 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	i ta di		94.2	244.8		
Travel Time (s)	4.8	O do		6.B	17.6		
Peak Hour Factor	0.90			0.90		0.90	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%	
Adj. Flow (vph)	193	41	548	322	49	381	1월 11일 - 1일 11일 11일 11일 11일 11일 11일 11일 11
Shared Lane Traffic (%)	. Soga.	····	540	000	· 10	- DD4	
Lane Group Flow (vph)	234		548	322	49 Ctop	381	
Sign Control	Free			Free	Stop		
htersection/Summary s							
Area Type: O	ther						
Control Type: Unsignalized							
Internetien Orgeniter Heile	- Han EE	704		1		of Damid	den P

Intersection Capacity Utilization 55.7% Analysis Period (min) 15 ICU Level of Service B

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	< *-	*	*
Movements and success teers steered	AWELS AWEIT	NBSIO	NERSCRIPT
Lane Configurations 🚯	<u>*</u>	٣	1
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
Hourly flow rate (vph) 193 41 Pedestrians	548 322	49	381 ¹¹ (1997)
Lane Width (m)	te e e e		
Walking Speed (m/s)			en an air fhean a' fhan a' an ean <u>a</u> a tean stair.
Percent Blockage		1. T.	and the second
Right turn flare (veh)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Median type None	None		and the state of the second state of the secon
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			에는 상황한 같은 것이 가지만 것을 받았는 것을 수 있다.
vCu, unblocked vol	234		214
tC, single (s)	4.1	6.4	6.2 ·
tC, 2 stage (s)		o E	- An and a state of the state of the state of the state
<pre>tF (s) the second s</pre>	2.2 59	3.5 27	- 8.9 % (1997) (1997) (1997) (1997) (1997) (1997) - 54
cM capacity (Veh/h)	09 1339		- 54 - 829 - A. M.
	March Martin States and the 2000 to 2000 to 1000 to 1000		
	WB/24 MINE NA	NINBI2	
Volume Total 234 548	322 49	381	일 같은 것이 아파 것 것으로 말했다.
Volume Left 0 548	0 49	0	
Volume Right	00	381	요즘 같은 데 같은 사람이 같은 것을 다 전쟁을 받았다.
	1700 67 0.19 0.73	829 0.46	An an an an an an an ann an an an an an a
Queve Length 95th (m) 0.0 15.3	0.0 24.8	0.45 1B.4	이 있는 것이 아이지 않는 것이 아이지 않는 것을 하는 것을 하는 것을 했다.
Control Delay (s)	0.0 24.8	13.0	e de la companya de l
Lane LOS A	r, u,u, ⊴i,4o,4 ; F	B B	(a) A set of the set of the set of the set of the set of the se
Approach Delay (s)	28.0	L L	
Approach LOS	D		
<u>Intersection Summary</u> Average Delay			
	44 0		
	11.3 5 704	عد 14 مراحلا	Ponvine in a fill for a fill of the second difference of the
		CU Level of	Service test when the set of B is the set of the set

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Lanes,	Volumes,	Timir	ngs
3: Allei	n Street &	Kina	Street

144 Park Tower 2, TIS 2016 Background + Others PM

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LanelShouper .	I HERI	EXERN	S EBRA		e weit	SWRB.	2. MARIE	Nata	INER	N SER	N. SHIV	NORP
Lane Configurations		ф э	Longer and the	Downer and the second	र्भ	<u>aanseenater</u> M	reverse guineau	ብ ጉ			4 î >	Constantine a
Volume (vph)	33		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		Ο	Ō		1	0		Ο	Ο		Ó
Taper Length (m)	7.5	2.5	. 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	e e e	1.00		х · ·	1.00	• • •
Frt		0.959				0.850		0.996			0.996	
Flt Protected	1.1.1.1.1	0.987		· . · .	0.982			0.996			0.999	1.5
Satd. Flow (prot)	0	1428	Û	0	1620	1488	0	2995	Ο	0	2994	0
Flt Permitted		0.917		3 - ¹ -	0.873	·		0.785	 		0.931	
Satd. Flow (perm)	Ū	1318	Û	0	1433	1430	0	2360	D	0	2790	0
Right Turn on Red	Ъ	· · · ·	Yes			Yes	· · ·	· · · ·	Yes			Yes
Satd. Flow (RTOR)		26				38		5			6	
Link Speed (k/h)		50	· · · ·		50	·		50	feret.	· · · · · ·	50	. š
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 (%)		···		· · · · · · · · · · · · · · · · · · ·			0	änö				
Lane Group Flow (vph)	0	144	U	<u></u> . 01	. 83		0.	778	14 di 0	. 0	968	0
Turn Type	Perm		÷	Perm		Perm	Perm	an the be		Perm		
Protected Phases		4		101 5	8		i si 🦕	- - 2	÷. *	·	6	1
Permitted Phases	4	· · · A		8 8.	·	8	2	. · · ·		6 6		· · ·
Detector Phase	4	4		D.	8	8	-	2	1 T - 1	D,	6.	
Switch Phase Minimum Initial (s)	27.0	27.0	e gan de	27.0	27.0	27.0	51.0	51.0	, se	51.0	51.0	
Minimum Split (s)	33.0	33.0	e i sufrit	33.0	33.0	33.0	57.0	57.0	• • •	57.0	57.0	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Total Spiit (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%		36.7%		36.7%	63.3%	63.3%		63,3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0	0.070	4.0	4.0	4.0	4.0	4.0	0.070	4.0	4.0	Q, U70
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		1.0		0.0	1.0	2		1.0	1.0	5.0		
Lead-Lag Optimize?		· ,				•		1			. •	
Recall Mode	None	None	· · ·	None	None	None	C-Max	C-Max	a star	G-Max	C-Max	n di si Shek
Act Effct Green (s)		29.0		, tong	29.0	29.0	U (IIII)	53.0		- III an	53.0	
Actuated g/C Ratio	1.1	0.32	and the state	· · ·	0.32	0.32	e e turt	0.59	н., т. — — — — — — — — — — — — — — — — — —	•	0.59	· · .
v/c Ratio		0.33			0.18	0.08		0.56	• .		0.59	
Control Delay		21.2		din se	23.3	7.7		13.2			13.4	
Queue Delay		0.0			0.0	0.0		0.0	5		0.0	
Total Delay	· · .	21.2		· · · · ·	23.3	7.7	· · · · · ·	13.2			13.4	
LOS	*	C			C	А		В			В	
Approach Delay		21.2	1 14 -	· . ·	18.4			13.2			13.4	
Approach LOS		C			В			В			В	

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Lanes, Volumes,	Timings
3: Allen Street &	. King <u>Street</u>

144 Park Tower 2, TIS 2016 Background + Others PM

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Lane: Group: 1977 - 252 - 25	REBLAC	EBT EE	RE OWBLY	WBIT	WERK	SINBLE S	ANBINA	NBRUS	SEL	IASBITA	SBR
Queue Length 50th (m)	1	4.9		10.1	0.0	1 ¹	39.1	• • •		50.0	
Queue Length 95th (m)	3	10.0		20.7	6,4		54.7			67.5	
Internal Link Dist (m)	В	2.8 .		53.9			66.8			57.8	
Turn Bay Length (m)					10.0						
Base Capacity (vph)	· . 4	142		462	487		1392		÷	1645	
Starvation Cap Reductn		D	•	0	0		0			0	
Spillback Cap Reductn		0	· · · ·	••••• Q +	0		0			• 0	5 - C.
Storage Cap Reductn				U G X G	U					U D C D ·	
Reduced v/c Ratio	Ų	.33		0.18	0,08	· .	0.56	· · · ·		0.59	
Intersection Summary 272				S. Dear				an a	is nel l		
Area Type: Oth	ner										
Cycle Length: 90			•								
Actuated Cycle Length: 90											
Offset: 2,7 (3%), Reference		2:NBTL ar	nd 6:SBTL,	Start of (Green						
Natural Cycle: 90		•	· · ·		1.						
Control Type: Actuated-Coor			a da ang a								
Maximum v/c Ratio: 0,59		· · · · · · · · ·	a tana _a a Is	topootic		, .' 1		· · ·			÷ +
Intersection Signal Delay: 14 Intersection Capacity Utilizat		0%		ntersectio CU Level							
Analysis Period (min) 15	ion iuc.a	70	in de la Au	TO FRASI	u gerviu	60			11.2.14		
maayaa cadu umpi to											

Splits and Phases: 3: Allen Street & King Street

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₩ g6	<u>≁</u> ≪ ø8
57 e	

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Lanes, Volumes,	Timings
4: Allen Street &	. Caroline Street

144 Park Tower 2, TIS 2016 Background + Others PM

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Lanet Ghoups was a sense be		S.EBR.	i web	NAME IN	AWBRK	NBL	S. NETA	NOR:	i niselie	F. SEIT	SSER
Lane Configurations	44			ф.			4			4	
Volume (vph) 29	26	24	39	45	60	21	247	.34	79	108	.14
Ideal Flow (vphpl) 1000		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
Frt	0.959			0.943			0.985			0.990	
Flt Protected	0.982			0.987			0.997		·	0.981	
Satd. Flow (prot) 0	1460	Ò	0	1443	0	Ο	1522	Q	Û	1505	0
Flt Permitted	0.982	<u>,</u>		0.987	Maria de Sa	а. "С	0.997	1. 1. 1. 1. 1. 1.		0.981	1
Satd. Flow (perm) 0	1460	0	0	1443	D	Ū	1522	0	0	1505	0
Link Speed (k/h)	50		. `	50		· . · · ·	50		: . <u>.</u> .	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
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 (%)	e tit			er, E. e							
Lane Group Flow (vph) 0	88	0	0	160	0	0	335	. 0	0	224	0
Sign Control	Stop		· · · · ·	Stop			Stop			Stop	
ntenseotion.Summany etc.									naska k		

Area Type: Control Type: Unsignalized

Intersection Capacity Utilization 55.2% Annual ICU Level of Service B Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 4: Allen Street & Caroline Street									144 Pi 2016 Bi	ark Tc eckgrour		
			*	*		Ł	*	Ť	M	1	Ļ	*
Movement, 200	N BBL	SEE IN	SEBR:	NO N	(TWBIT)	IWBB	A NEL	NBIR	NBB	FISBIO	ASEN	SBR
Lane Configurations		4>			4			4>			4	
Sign Control		Stop	-		Stop		· . ·	Stop			Stop	
Volume (vph)	29	26	24	39	45	60	21	247	34	79	108	14
Peak Hour Factor Hourly flow rate (vph)	0:90 32	0.90 29	0.90 27	0.90 43	0.90 50	0.90 67	0.90° 23	0.90 274	0:90 38	0.90 88	0.90	0.90
	ےت	29	2/	43	οu	67	ದರ	2/4	38	88	120	16
Direction Lane H. S. S. A. J.	EBAN	WBM-	1010 - 2140 - 214 - 20 - 10 - 10 - 10 - 10 - 10 - 10 - 10	SBAR			at in the	E P. S.				
Volume Total (vph)	88	160	336	223								
Volume Left (vph)	- 32	43	23	88	1.1.19				· · ·			
Volume Right (vph)	27	67	38	16		• .		·				
Hadj (s)	-0.11 5.5	-0.20 5.3	-0.05 4.9	0.04 5.1	· · · ·	. : .	21.2		te te sta		÷	e triby
Departure Headway (s) Degree Utilization, x	0.13	0.23 -	4.9 0.45				· .			1.11	t, sur	
Capacity (veh/h)	575	615	710	664			,		1			
Control Delay (s)	: 9.3	9.9	11.8									
Approach Delay (s)	9.3	9.9	11.8	10,4	· . ·	· · . ·			• • • • •			
Approach LOS	A	A		В			len de					an y Stat
Intersection Summary		<u>OTINE ANG</u>						1465 (J. 1977)				
Delay	<u> CALING CONTRA</u>	a presidente	10.8	15.000000000	515354028352A	<u></u>					<u></u>	AN STREET AND
HCM Level of Service			B	· · · · ·					· .			
Intersection Capacity Utiliza	tion	ert i se Lite	55.2%		CU Level a	of Servic	e .		В		Ali se se	
Analysis Period (min)			15						· =			
				, it.,		•	f hersen S		e Fordel			

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Lanes, Volumes, Timings 5: Allen Street & Park Street 144 Park Tower 2, TIS 2016 Background + Others PM

		}	*	¥	·#	•	*	1	p	\	Ļ	*
Lane Choups	i de Blu	X EBIC	CHEBRIN	WBU	awen	AWB RU	KINBU	Ned	er inbry	ALCE S	SZ SBID	SBF
Lane Configurations		44			44			€				
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												
Frt	· · · ·	0.970			0.982			0.990		1.1	0.991	e se l'alla
Fit Protected		0.981			0.983			0,999			0.999	
Satd. Flow (prot)	0	1427	្តែ ្លា	· 0	1448	0	: ()	1484	· · · O	· 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	
Ganfl. Peds. (#/hr)	6		16	16		6	24		· · · 20 ·	20	er ding.	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 (%)							9 - 11 A.					
Lane Group Flow (vph)	0	58	0	0	89	Û	0	480	0	0	608	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary 4.5								inge stander Kanzaleren				
)ther											

Area Type: Control Type: Unsignalized

Intersection Capacity Utilization 58.3% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 5: Allen Street & Park Street

144 Park Tower 2, TIS 2016 Background + Others PM

	AMARA		~	*	4	4	*	Ť	M	\ _{\$}	ł	-
Movement states as a state		in the second		X.WEB	as weits	awern:	NBL	Netic	INBRS	SEL	NSEM	SBR
Lane Configurations Volume (veh/h)	21	4 20	12	. 27	4 2	.11	13	4 > 389	31	12	4 98	
Sign Control	21	Stop	, ,	· · · ·	Stop		10	Free	01.	16	Free	
Grade		0%			0%	· ·		0%			0%	1.
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) Pedestrians	23	22	13	30	47 20	12	14	432 16	34	13	553 6	42
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	i i	s. _S			2			1.	· ····	·*•. · ·	1	
Right turn flare (veh) Median type				4. F		an a	·.	Nie			ALC: N	
Median storage veh)	. • •			1.1				None	· · · · ·	· · · ·	None	
Upstream signal (m)		en en en Transformer						165	tere .	. : .		
pX, platoon unblocked	0.98	0.98		0.9B	0.98	0.98				0.98		
vC, conflicting volume	1145	1141	614	1140	1145	475	620	n i ser	1	487	, s. 11	
vC1, stage 1 conf vol vC2, stage 2 conf vol		i ja se ta		·		an ngun r				, 1. H.		
vCu, unblocked vol	1139	1134	614	1133	1138	457	620			469	ti st	·*· ·
tC, single (s)	7.1	6.5	6,2	7.1	6.5	6.2	4.1	1.1		4.1	et i spe	
tC, 2 stage (s)						- · · ·						
tF (s) p0 queue free %	3.5 82	4.0 88	3.3 97	3.5 79	4.0 75	3.3 98	2.2 98		at inde	2.2		
cM capacity (veh/h)	130	188	479		187	98 584	951	A Teles	N.	99 1051		• • •
Linection Lanest			NEM									
Volume Total	59	89	481	609						245124-3015Te		
Volume Left	23	30	14	13				. ***	· · · · ·			
Valume Right	13	12	34	42								
cSH Volume to Depositu	1B1 0.33	187	951	1051	an an an an an				.,			ta an at
Volume to Capacity Queue Length 95th (m)	10.0	0,48 17.2	0.02	0.01 0.3								
Control Delay (s)	34.2	40.7	0.4	0.3		n. Des proces						
Lane LOS	D	Ē	А	, A		1	÷÷			1.1.		
Approach Delay (s)	34.2	40.7	0.4	0.3						$(x_1, y_2, y_3) \in \mathbb{N}$		
Approach LOS	D	E		I to a block in our operation								
Intense of ion Summary, c.					2 5							
Average Delay Intersection Capacity Utiliza	tion	te fere	4.9 58.3%	in din	CU Level	of Convio	o .			·		<u>ti</u> see
Analysis Period (min)	101011	· · · ·	15 15	. :· · · 1	UU LUUUL.		6	e de la composition Altra de la composition	. D:	and the g		e a N
							1 . F				st.j	

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Lanes,	Volumes,	Timin	gs
6: Johr	n Street &	Park	Street

144 Park Tower 2, TIS 2016 Background + Others PM

		source the	``₩	****	- 	*	*	Ť	P	`	ţ	*
Lane Croup (S IEBII	. YEBRI		a weith	MWBRI	SINE	NBIN	NER	ALSEL	SBI	
Lane Configurations		44		۳j	4		ሻ	ĵ.		ሻ	1.	
Volume (vph)		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	1000	0.0	10.0	1000	0.0	35.0		0.0
Storage Lanes	0		0.0	1		0	10.0		0	1		0
Taper Length (m)	. 7.5		7.5	7.5	: : · · ·	7.5	7.5		7.5	7.5		7.5
	1.00	1 00	1.00	1.00		1.00	1.00	4 00	1.00	1.00	1 00	1.00
Lane Util. Factor	1.00	1.00 0.98	1.00	0.91	1.00	1.00	1,00	1.00 1.00	1.00	0.99	1.00	1.00
Ped Bike Factor	·			0.91			1,00	0.980	1 - 1 - 2	0,39		
Frt		0.979		o oro	0.955		0.050	0.900			0.985	•
Flt Protected		0.982		0.950	4650		0.950	1011	: : 	0.950	4000	· ·
Satd. Flow (prot)	0	1422	0	1637	1559	0	1686	1611	. 0	1686	1622	0
Flt Permitted	19 N. 19	0.833	s 21 _s	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	n to sta		Yes			Yes	12.00		Yes
Satd. Flow (RTOR)		14			40			18			14	
Link Speed (k/h)	s at side	50			50			50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)	e tra sete	4.3	i di sec		5.5			З.О		gi she	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		459	0	32	524	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			В			2			6	
Permitted Phases	4			8			2		••	6		
Detector Phase	. 4	4	, i testo. Gradu	8	8		2	2		6	<u>6</u>	
Switch Phase				;. –			····			=	1.1.171	· · · ·
Minimum Initial (s)	10.0	10.0	at the	10.0	10.0	tine di	28,0	28.0		28.0	28.0	
Minimum Split (s)	16.0	16.0		16.0	16.0	11 11 A.C	34.0	34.0	a si si s	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%	43.3%		56.7%	56.7%	0.0%		56.7%	0.0%
Yellow Time (s)	4.0	4.0	0.070	4.0	4.0	0.070	4,0	4.0	0.070	4.0	4.0	0,070
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	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	. U.U	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	+.u	4.U	4,0
			1					· · · ·	i i i i i i i i	1 1 P.	i su the	· · · · ·
Lead-Lag Optimize?	N i	A facility		· N	· ALLER		O Mari	ON		ONAN	Ö KALL	
Recall Mode	None	None		None	None			C-Max			C-Max	1111
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	1.1
v/c Ratio		0.32		0.34	0.42		0.06	0.40	4.15	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	1	19.9		22.9		et dela	5.0	6.4		4.9		
LOS		8		,C	B		A	A		А	A	
Approach Delay		19.9			19.9			6.3	· · · ·	÷	6.9	
Approach LOS		В			В			А			А	
Approach LOS		В			В			А				

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Lanes, Volumes, Timings <u>6: John Street & Park Street</u>

144 Park Tower 2, TIS 2016 Background + Others PM

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Lane Group: A Sector A Sector	A EBIC MEB	Per Well	EWBIL: SW	BRICHNBER	NBING	NBR	SBE	SE BIL	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	la an de	51.8		17.2			81.9	÷ .
Turn Bay Length (m)		25.0		10.0			35,0		
Base Capacity (vph)	449	44 B	597	535	1151	•	587	1158	• •
Starvation Cap Reductn	0	. 0	0	0	0		D	0	
Spillback Cap Reductn	0	. 0	D	j - 0	0		. 0.	0.	· ·
Storage Cap Reductn		0	U	0	0		0	0	
Reduced v/c Ratio	0.20	0.21	0.26	0.06	0.40	· · · · :	0.05	0.45	
mbersection Summery C.									
Area Type: Other							ny avana Ny INSEE dia		
Cycle Length: 60									
Actuated Cycle Length: 60						. 7			
Offset: 0 (0%), Referenced to phas									
Natural Cycle: 50									
Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.45				n an an an Anna an Ann An Anna an Anna		a seg	page 1	. •.	
Intersection Signal Delay: 9.9		la de la de In	tersection LI						
Intersection Capacity Utilization 56	5%			ervice B	. N. 1		di je se		
Analysis Period (min) 15							ing and		

Splits and Phases: 6: John Street & Park Street

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Lanes, Volumes, Timings	
7: Development Entrance	& Park Street

144 Park Tower 2, TIS 2016 Background + Others PM

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	×	×.	1	Þ	1	↓ ₩			
Lane:Ghoup, Statistics	a siweek.	WBR/	<u>Re</u> nbik	LANERS	SEE.	A BBT			
Lane Configurations	ħf		Þ			र्स			
Volume (vph)	1.8	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		and the second	· · ·
Frt	0.938		0.990						
Flt Protected	0.974	1	·		•	0.997			1. S. 1.
Satd. Flow (prot)	1613	0	1634	0	. 0	1630			
Flt Permitted	0.974		÷.,			0.997	e . 1		
Satd. Flow (perm)	1613	D	1634	D	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	Ŭ.90	0.90	0.90			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	1.1		
Adj. Flow (vph)	20	17	464	38	30	566			
Shared Lane Traffic (%)	$m_{\rm eff} = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$. * *				
Lane Group Flow (vph)	37	0	502	0	0	596			
Sign Control	Stop		Free			Free			
intersection Summany as									

Area Type: Other Control Type: Unsignalized

CONTRACTOR OF Service Contractor and a state of the second s Intersection Capacity Utilization 66.2% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 7: Development Entrance & Park Street 144 Park Tower 2, TIS 2016 Background + Others PM

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Movement	William	XWBR:	NBI	NBRA	293BC	C. ISBIT	
Lane Configurations	k 4		4			4	
Volume (veh/h)	18	15	418	, 34	27		
Sign Control	Stop		Free	· ···.		Free	
Grade Back Hour Footon	0% 0.90	0.90	0% 0.90	0.90	0.90	0% 0,90	
Peak Hour Factor Hourly flow rate (vph)	20	0.90 17	464	38	0.90	566	
Pedestrians			ָ דְיָטָד		:	000	
Lane Width (m)		ti de la sec	 	e tagg	a situti a situti	di la se	
Walking Speed (m/s)							
Percent Blockage			· ·· '	e in te			
Right turn flare (veh) Median type			None		· ·	None	
Median storage veh)				·. ·	· · · ·	NUNG	an di seri seri se se da taka data di basa di se
Upstream signal (m)		a appo	106				
pX, platoon unblocked	0,92	0,92			0.92		
vC, conflicting volume	1109	483		1999 - 1997 1997 - 1997	502	s en en en	아는 것은 아이는 것은 것은 것을 것을 했다.
vC1, stage 1 conf vol							
vC2, stage 2 conf vol vCu, unblocked vol	1074	393	h Ah li		413	ter e el	and a stranger of a trade of a trade of a stranger of a
tC, single (s)	6.4	6.2		e i grad	4.1		
tC, 2 stage (s)	1.1.76.5						
tF (s)	3.5	3.3	en e		2,2		
pO queue free %	91	97		an shekara	97		
cM capacity (veh/h)	219	607	14 - GAD		1062		
Direction Lane (S	WEME	NB 1	SBVID				
Volume Total	37	502	596				지 사람은 것이라는 것을 얻는 것이다.
Volume Left	20 17	0 38	30	2010-001	et te tare		 The analysis of the transition takes and the Additional transition.
Volume Right cSH	309	1 7 00	1062	antar di s			En 1979 - Andre Sterner, mark te litat twe to the
Volume to Capacity	0.12	0.30	0.03			ne di si	
Queve Length 95th (m)	3.0	0.0	0.7				
Control Delay (s)	18.2	0.0	0.8		Мани N		
Lane LOS	C		A	·,			
Approach Delay (s)	18.2	0.0	0.8		all and a		
Approach LOS		Sector States	Signal and the second second	2. THE REPORT	SAMPLE AND	2010/06/2010/2014	Security actual to the international states of the states of the states and the states and the states and the st
htersection.Summary.						1.1.1.1	
Average Delay			1.0		أسير أللا	. of Com	\mathbf{r} where \mathbf{r} is a factor \mathbf{r} is the second state of \mathbf{r} .
Intersection Capacity Utili Analysis Period (min)	Ization		66.2% 15	نال ا	U Level	of Servi	iee - a alternation de la proviet de la seconda de la companya de la companya de la companya de la companya de
Апауыз гоноссини					e se t	e navj	

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Appendix D

Future Total Traffic Operations

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Lanes, Vol	umes, T	Tin	nings	
1: William	Street	8	Caroline	Street

144 Park Tower 2, TIS 2016 Total AM

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	and the	-	*	¥.		. Canada	A.	T	ſ	\$	ŧ	*
Lanel Gnoup, and a surface	E SEBL	KAREBI R	MEB RI	MWER	SAWBIE		SANDE	a siner	ENBR	MASB E	RESER	SBR
Lane Configurations	5	4		ሻ	ĥ			44			4Î	۴
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	1.0	0.0	0.0	1.1	0.0
Storage Lanes	_ 1		Ū,	1		O	0		C	, O		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	1.00	0.95
Frt		0.992		m : m = n ¹	0.946	÷		0.987				0.850
Flt Protected	0.950	1011		0.950				0.997			0.989	
Satd. Flow (prot)	1686	1614	0	1686	1484	0		147D	0	O	1598	1458
Flt Permitted	0.522	4044		0.513		· :	· . · .	0.975			0.856	1000
Satd. Flow (perm)	909	1614	Û	901	1484	0	0	1437		0	1381	1389
Right Turn on Red		inter p	Yes			Yes	1.1.1		Yes		1 . T	Yes
Satd. Flow (RTOR) Link Speed (k/h)	See all	6 5D	1. A. 19		34 50	i i i i i i i i i i i i i i i i i i i		7 50	·		Ė n.	221
Link Opeeu (M)		94.2		· · · ·	64.7		2 T.A.	244.6			50	
Travel Time (s)		54.2 6.8			4.7		a a traj	17.6		ditta ee	82.0 5.9	÷.
Confl. Peds. (#/hr)	14	0.0	9	9	- 	14	35		7	 7	0.5	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 (%)	0.50	1%	5%	0.50	3%	4%	0%0	4%	0,30	0.50 6%	0.50 1%	2%
Adj. Flow (vph)	407	404	24	····12.			12	197	. 23	78	269	221
Shared Lane Traffic (%)		., <u>ד</u> טד	<u>,</u> шчт,	16.	110		IL.,		μU	70	200	ا ما من ا
Lane Group Flow (vph)		428	Ò	12	172	0	0	232		0	347	221
Turn Type	pm+pt			Perm			Perm		ing a start of the	Perm	0.47	Perm
Protected Phases	7	4			8	a a sa		2			6	
Permitted Phases	4	· · ·	·	8	n i duate		2		N	6		6
Detector Phase	7	4		8	8	ta esta esta esta esta esta esta esta es	2	2	ag ar	6	6	6
Switch Phase		e e fele é G	·· · · ·		10 10 J					्र क		
Minimum Initial (s)	5.0	19.0		19.0	19,0		23.0	23.0	net Nered Grant State	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 Spiit (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%
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	i e stalij		Lag	Lag	gini u						
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode		C-Max		C-Max			Max			Max		Max
Act Effet Green (s)	47.0	47.0		26.8	26.8			25.0			25.0	25.0
Actuated g/C Ratio	0.59	0.59	tta te f	0.34		•		0.31		(Second	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	i i i i i i i i i i i i i i i i i i i	21,4	19.5			26.6			41.7	5.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	D.0
Total Delay	12.9	11.0	1.000	21.4	19.5	$(r_{i}) = r_{i} r_{i}$	· · · ·	26.6			41.7	5.2
LOS	В	В		С	В			C	5 T		D	А
Approach Delay		11,9			19.6			26.6			27.5	
Approach LDS		В			В			C			С	

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Lanes, Volumes, Timings
1: William Street & Caroline Street

144 Park Tower 2, TIS 2016 Total AM

<u>andras anna stainn anna dhù nà sha anna anna dhù na sha anna anna dhù na sha anna anna anna anna anna anna an</u>	A		~	¢	Variation	Ł	*	ţ	M	1	Ļ	1
LanexGroupses	KAEBLA	N EBIS	t EBR	NW8E	SWER:	awer a	NBL	NBT	NBR	SBB	DESBIT.	CUSER
Queue Length 50th (m)	30.2	32.3	· · ·	1.2	14.9			27.3		, seeding	47.3	0.0
Queue Length 95th (m)	48.1	51.8		5.2	33.8			48.0			#B9.4	14.2
Internal Link Dist (m)	15.0	70.2			40.7	· . ·		220.6			58.0	
Turn Bay Length (m)	45.0	054		25.0	500						100	. ÉDO
Base Capacity (vph) Starvation Cap Reductn	748	951	5 (1997) 19	302	520		•	454			:432	586
Spillback Cap Reductin	O	. 0			··· 'n		. ,	. n.			. h	u n
Storage Cap Reductn	0	0	· · ·	Õ	0			0		-	0	0
Reduced v/c Ratio	0.54	0.45	er ek Gilege	0.04	0.33		i ai	0.51			0.80	0.38
Intersection:Summaryatura												
Area Type: O	ther											
Cycle Length: 80	a a ta a					÷ .						
Actuated Cycle Length: 80		4 5 5 5							an fi An St	ele esti	e de la constante de	5 y 4
Offset: 8 (10%), Reference									d stik			
Natural Cycle: 65 Control Type: Actuated-Coo						i ger dev						
Maximum v/c Ratio: 0.80			and a second	·			1.1.1	ja s				
Intersection Signal Delay: 1			· ·		tersectio							· .·
Intersection Capacity Utilization		1%		(CU Level d	f Service	∍F	145 - 141				
Analysis Period (min) 15					·							
# 95th percentile volume	exceeds	capacity	y, queue	may be	longer.						n da Shekarar a	

Queue shown is maximum after two cycles.

Splits and Phases: 1: William Street & Caroline Street

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Lanes,	Volume	s, Timin	gs
2: Willi	iam Stre	et & Pa	rk Street

144 Park Tower 2, TIS 2016 Total AM

		* **	¥		*	F						
Jane Groups - States		EBAR	awels:	NWBT	RANBLA	NBR:					15715	
Lane Configurations	¢,		ሻ	Ť	ሻ	ř						
Volume (vph)	372	68	226	113	32	371			. e			
Ideal Flow (vphpl)	1650	1000	1775	1900	1775	1750						
Storage Length (m)	· ·	0.0	0.0		15.0	0,0	 					
Storage Lanes		D	1		1	1						
Taper Length (m)		7.5	7.5	•	7,5	7.5					11. A	
Lane Util, Factor	1.00	1.00	1.00	1.00	1.00	1.00						
Frt	0.979					0.850	 					
Fit Protected			0.950	÷.,	0.950							
Satd. Flow (prot)	1615	D	1637	1845		1473	e te e	•	1.0	 		•
Flt Permitted			0.950		0.950							
Satd. Flow (perm)	1615	Ö	1637	1845	1686	1473			· · · ·	 9 4 Å		
Link Speed (k/h)	50			50	50							
Link Distance (m)	66.4			94.2	244.8							1
Travel Time (s)	4,8		· · ·····	6.8	17.6	·				х. — к		
Peak Hour Factor	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	1.1					
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	u star U t	251	126		412						
Sign Control	Free			Free	Stop							
Intersection (Summary)	(0. st.) (9)											
Area Type:	Other											

Area Type: Uther Control Type: Unsignalized Intersection Capacity Utilization 58.9% Analysis Period (min) 15 ICU Level of Service B

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HCM Unsignalized Intersection Capacity Analysis 2: William Street & Park Street

		*	F	4	*	p	
Movement:	in eend	i eer	RIVIBLE	22WBm		SYNER!	
Lane Configurations Volume (veh/h) Sign Control Grade Peak Hour Factor Hourly flow rate (vph) Pedestrians	♣ 372 Free 0% 0.90 413	68 0.90 76	* 226 0.90 251	↑ 113 Free 0% 0.90 126	32 Stop 0% 0.90 36	77 371 0.90 412	
Lene Width (m) Walking Speed (m/s) Percent Blockage Right turn flere (veh)	,		* · · · · · · · · · · · · · · · · · · ·		*	· · · ·	an de la sector de la composition de la sector
Median type Median storage veh) Upstream signal (m) pX, platoon unblocked	None			None 94			filiada da servicio de termina da servicio de la companya de la companya de la companya de la companya de la c En la companya da companya d
VC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol vCu, unblocked vol tC, single (s) tC, 2 stage (s) tF (s) pD queue free %			489 489 4.1 2.2 77		1079 1079 6.4 3.5 81		
cM capacity (veh/h)	(IEBII	AWB/112	1069 WBI20	Nevi	187 (NB)2		
Volume Totel Volume Left Volume Right cSH Volume to Capacity Queue Length S5th (m) Control Delay (s) Lane LDS Approach Delay (s) Approach LDS	489 0 76 1700 0.29 0.0 0.0	251 251 1069 0.23 6.8 9.4 A 6.3	126 0 1700 0.07 0.0 0.0	36 36 0 187 0.19 5.1 28.8 D 22.8 C	0		
Intersection(Summary) Average Delay Intersection Capacity Utiliza Analysis Period (min)	ation		9.6 58.9% 15	IC	CU Level	of Servi	ice. A second second B second s

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Synchro 7 - Report Page 4

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Lanes,	Volumes,	Timings
3: Alle	n Street &	King Street

144 Park Tower 2, TIS 2016 Total AM

	.*	Recourses the	**	*			*	1	m	Å. ₩	ţ	4
LanetGloupkassessatis	a kebu	KEBI N	C EBR	KAWELA	SWER.	XWB B	SA NBA	C ANBIE	SENER!	u sel	S ISBIR	SBR
Lane Configurations		44			ب ا	۲		4 î þ			4î}	
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	4	7.5	7.5		7.5	7.5	÷.,	7.5	7.5	۰.	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	D.95	0.95
Ped Bike Factor		0.99	· · ·	1	1.00	0.96	· *	1.00			1.00	
Frt		0.979				0.850		0.992			0.994	
Fit Protected	· · · ·	0.987		•	0.990			0.997	÷., ,	1.	0.998	
Satd. Flow (prot)	0	1475	0	0	1634	1488	0	3009	0	0	2984	0
Fit Permitted	·	0.923			0.942		· · ·	0.873			0.922	
Satd. Flow (perm)	0	1372	Ū	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		1	6.5	si La sub de la		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	Q	62	33	0	725	0		682	0
Turn Type	Perm	,		Perm		Perm	Perm			Perm		÷.,
Protected Phases		4			8	e e e entre E e t		2	с. д.н. 194		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	4B.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%	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
Totai 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			21. E.			- 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997	*					
Lead-Lag Optimize?		.:					- · · ·	ä			·	
Recall Mode	None	None		None			C-Max			U-Max	C-Max	· · · ·
Act Effct Green (s)	·	28.0			2B.0	2B.0		51.2			51.2	
Actuated g/C Ratio		0.35	11 A.		0.35	0.35	$ \mathcal{A} = 0$	0.64		$(k_{1})^{(1)} \in \mathbb{C}$	0.64	
v/c Ratio		0.22			0.11	0.06	14 g	0.43			0.39	
Control Delay		17.6			18.4	6.9	t to the	10.7	a dag		10.2	• •
Queue Delay		0.0			0.0	0.0	· .	0.0			0.0	
Total Delay	+ ¹ - 1,1	17.6			18.4	6.9	*	10.7	·		10.2	
LOS		B	· .		B	A.		8			В	
Approach Delay	· ·	17.6			14.4			10.7			10.2	
Approach LOS		В			В		1 1000000000	В			8	

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Lanes, Volumes, Tir 3: Allen Street & Ki	-				ihoran i Marada mahan iki						ower 2 2016 To	-
		5155 	\mathbf{i}	*	-	×.	*	Ť	M	\$	Ł	~
Lane:Gnoup	Seek.	CA EBITON	EBRU	NAMBIE	N WBIE	WERM	SINER.	NET NET	<u>ANBRÉ</u>	SBL	SISBIC	SB R
Queue Length 50th (m) Queue Length 95th (m)		10.0 21.2			6.2 14.1	0.0 5.3	•••	32.2 45.8	· · · ·		29.4 41.5	•.
Internal Link Dist (m) Turn Bay Length (m)	* *	82.8			53.9	10.0	t.	66.8			. 57.8	
Base Capacity (vph)	· · .	489			543	524	·. ·	1690			1766	·
Starvation Cap Reductn Spillback Cap Reductn					U n			U · D			U n	
Storage Cap Reductin		: U· N			о П	. U.		, u . N			 N	
	·	0.22		· · ·	0.11	0.06	· · · ·	0.43		•	0.39	
ntersection Summary 2.24												
	her											
Cycle Length: 80 Actuated Cycle Length: 80			. ¹ .							·	n standar	·
Offset: 40.8 (51%), Referen	nced to	phase 2:1	VBTL ar	nd 6:SBT	L. Start o	f Green	• • • •		· · ·			
Natural Cycle: 80											, server , Serve	·
Control Type: Actuated-Coor	rdinated											
Maximum v/c Ratio: 0.43												
Intersection Signal Delay: 11	1.2	601		1	ntersectio	n LOS: E	3				·	
Intersection Capacity Utilizat Analysis Period (min) 15	cion 88	.3%			JU Level (T Servic	et			· · · ·		· · ·

Splits and Phases: 3: Allen Street & King Street

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↓× ø6	∲ ø8
412 g	20 c

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La	nes, \	/olumes	5,	Timings	
4:	Allen	Street	8	Caroline	Street

144 Park Tower 2, TIS 2016 Total AM

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LaneiGroup	<u>kaebk</u>	() BBIN	es BBRI	SW8L	ik WBIR	WBR C	SANBLA	NBI	<u>ín de s</u>	SEU	SUSBIE	17.SEP
Lane Configurations		4			44			÷Ĵ+			4	
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
Frt		0.969			0.934			0.986			0.995	
Flt Protected		0.989	1 - A - A - A - A - A - A - A - A - A -		0.986						0.984	
Satd. Flow (prot)	0	1485	0	0	1370	0	0	1502	0	0	1494	0
Flt Permitted		0.989			0.986				i de la	let de l	0.984	1121
Satd. Flow (perm)	0	1485	D	0	1370	0	Ū į	1502	D	Q	1494	Q
Link Speed (k/h)		50			.50		and a second	50		·	50	ê r
Link Distance (m)		97.9			106.8			59.9			244.6	
Travel Time (s)		7.0	$\gamma^{(1)} = 1 - \epsilon$		7.7	• • •		4.3		1111	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 (%)			de Long			11.1			•••			el la ve
Lane Group Flow (vph)	D	127	0	0	118	D	0	117	D	. 0	289	0
Sign Control		Stop		1 har	Stop			Stop			Stop	
htersection Summary's				a Tridar Alama								

Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 41.5% Analysis Period (min) 15

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4: Allen Street & (Carolin	e Stre	et		the transmission of the second se						2016 To	tal AM
			¥	*	-	*		Ť	M	1	Ť	-
Movement as a set of	XXEBP.	EBI	. EBR	rweev	Weiri	WBR!	NEU	SANBIE	NBR	KSEIK	SEBT	SBP
Lane Configurations		4			4			4			ф.	
Sign Control		Stop		i i	Stop			Stop			Stop	
Volume (vph)	25	63	26	30	24	52	<u>1</u>	94	11	84	167	5
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	1C
Queerion Reader Hereiter	e e Bille	Wene	2.NB.1C	SBA								
Volume Total (vph)	127	118	11B	289								
Volume Left (vph)	: 28:	33	1	93			Nr					
Volume Right (vph)	29	58	12	10								
Hadj (s)	-0.09	-0.17	-0.03	0.07	i en la elementa elem Elementa elementa elem Elementa elementa e		1					·. ·
Departure Headway (s)	5.0	4.9	4.9	4.8								
Degree Utilization, x	0.18		0.16	0.38			1 	1 - 1 - 1 ³			1.1.1	1913
Capacity (veh/h)	657	662	685	719								,
Control Delay (s)	9.0	8.9	8.8	10.7	1.1		1977 - 19			1		·
Approach Delay (s)	9.0	8.9	8.8	10.7		ي من						
Approach LOS	A	A	···· A ·	8			1. S. 1	Multine and				
htersectionSummary.												
Delay			9.7	n an anna an Talaiste Talaiste								
-ICM Level of Service			A									
ntersection Capacity Utiliz	zation		41.5%	- IC	U Level (of Servic	е		Α			
Analysis Period (min)			15									

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La	nes,	Volumes,	Timing	js
5.	Δller	1 Street &	Park	Street

144 Park Tower 2, TIS 2016 Total AM

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Vanes Grou postova statu se 22	i eel	is term	L ZEBR N	EWBLE	WWBIR	N.WBRU	NINE BU	AN BIR	SINBRA	e. 830 i	S SBIL	STEER
Lane Configurations		4			4			* \$		-	4	
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								_				
Frt		0.988			0.987			0,980	1.1 I.	$\{ f_{i} \in \mathcal{F}_{i} \}$	0.992	
Fit Protected		0.985		·	0.985	_		0.999	-		0.996	
Satd. Flow (prot)	- 🗋 -		. 0	<mark>.</mark> 0	1274	0	0	1457	· . 0	0	1477	.Q
Flt Permitted		0.985			0,985			0.999	-	1 1 2 1	0.996	
Satd. Flow (perm)	. 0	1439	0	0	1274	0	D	1457	0	. 0	1477	D
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		84.0	1 1 di		97,9	· · · · ·		58.8			244.8	
Travel Time (s)	-	6.0			7.0	· _	2 V	4.2			17.6	
Confl. Peds. (#/hr)	6	0.00	. 16	16		6	24	0 70	· 20%	20	0.00	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		10	19	3	14	396	71	29	316	21
Shared Lane Traffic (%)	~	70		2 · · · · · · · · · · · · · · · · · · ·		·	utu v	404	0	~	000	
Lane Group Flow (vph)	0	78	U.	U	32	0	Q	481	U	O .	366	0
Sign Control		Stop			Stop	a sera a s		Free		13 J.C.	Free	
Intensection/SUmmany.ssc												
Area Type: Ot	her		19.24							31 -		
Control Type: Unsignalized					· .						• • • •	

Intersection Capacity Utilization 51.5% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 5: Allen Street & Park Street 199

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Movements and states and	(tella	C EBI	K EBR/	WBL	SWBT 8	WBRIC	2 NBL	NBI	NBR	SBL	SBT	XSER
Lane Configurations Volume (veh/h) Sign Control Grade	21	↔ 43 Stop 0%	. 6	9	4) 17 Stop 0%	3	13	↔ 356 Free 0%	64	26	↔ 284 Free 0%	19
Peak Hour Factor Hourly flow rate (vph) Pedestrians	0.90	0.90 48 24 3.6	0.90 7	0.90 10	0.90 19 20 3.6	0.90 3	0.90 14	0.90 396 16 3.6	0.90 71	0.90 29	0.90 316 6 3.6	0.90 21
Lane Width (m) Walking Speed (m/s) Percent Blockage Right turn flare (veh)		3.6 1.2 2		··· ··	3.0 1.2 2			1,2 1		•	1.2 1	· · ·
Median type Median storage veh) Upstream signal (m)							la da la Constantes	None 165	· ·		None	
pX, platoon unblocked							isa internet. Anternet			·	· · · · · ·	<i>.</i> † .
vC, conflicting volume vC1, stage 1 conf vol	887	923	366	910	898	457	361		· · · · · ·	487		
vC2, stage 2 conf vol vCu, unblocked vol tC, single (s) tC, 2 stage (s)	867 7.1	923 6.5	366 6.2	910 7.4	898 6.6	457 6.2	361 4.1			487 4.1		
tF (s) pO queue free % cM capacity (veh/h)	3,5 90 226	4.0 81 252	3.3 99 661	3.8 94 175	4.1 93 253	3.3 99 595	2.2 99 1185			2,2 97 1069		
Directions Lane: #44222355	EB 1	AWBME	<u></u>	SBAR								
Volume Total Volume Left	78 23	32 10	481 14	366 29								
Volume Right cSH Volume to Capacity	7 256 0.30	3 235 0.14	71 1185 0.01	21 1069 0.03								
Queus Length 95th (m) Control Delay (s) Lane LOS	9.3 25.0 D	3.5 22.8 C	0.3 0.4 A	0.6 0.9 A								
Approach Delay (s) Approach LOS	25.0 0	22.8 C	0.4									
Intersection Summary Average Delay			3.3									
Intersection Capacity Utiliz Analysis Period (min)	ation		51.5% 15		U Level	of Servic	0	s di di	А			

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Lane	s, Volu	mes, Ti	mings	
6: Jc	hn Str	eet & P	ark Stree	t.

144 Park Tower 2, TIS 2016 Total AM

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			*	Ý		and the second	<u>ل</u> م	T	<u>r</u>	\$	÷	4
Lane Group was a star	A REEL	i yebir	EBR)	SWBL.	And the standard and the second	S WBB	NBL	. NER	NER!	SBL	CASER	XASER
Lane Configurations		4		ሻ	4		ሻ	í)		ሻ	Þ	
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	1. S.	0.0
Storage Lanes	0		0	1		0	1		0	1		D
Taper Length (m)	7.5		7.5	7.5		7.5	7.5	1. 1.	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	and the second	1.00	0.99		1.00	1.00	
Frt		0.979			0.931			0.974			0.980	·
Flt Protected		0,994	н., н. 1	0,950	· , · ·		0.950		· .·	0.950		·
Satd. Flow (prot)	0	1438	. 0	1637	1427	0	1686	1572	0	1074	1598	D
Flt Permitted	·	0.957		0.739			0.566		_	0.430	· · · · · · · · · · · · · · · · · · ·	
Satd. Flow (perm)	. 0	1382	. O	1165	1427	0	1003	1572	0	484	1598	. 0
Right Turn on Red	· · · ·	s ili	Yes	1111	· · · · ·	Yes	÷ .		Yes			Yes
Satd. Flow (RTOR)		16			29			25			19	
Link Speed (k/h)		50		1.115	50	- 84 - J		50		. * .	50	e fra ta
Link Distance (m)		59.1			75.B		· · · ,	41.2			105.9	
Travel Time (s)		4.3			5.5			. ··· `.`		4.0	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
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 (%)	· : · .				ën.	. n	40	518	0	57	319	0
Lane Group Flow (vph)	Dones	105	0.	.39	63	0.	ୀଥ୍ଲ Perm	510.	. U	Perm	519	0
Turn Type	Perm	1	1 - 115 - 44	Perm		1.1.2	Peliili			Perm.		19 - 19 - 1 19 - 19 - 19 - 19 - 19 - 19
Protected Phases Permitted Phases	4		n Alexander	8	·· D ··	·· · · .	2	. .		6	Ú	·
Detector Phase	4	, : : л	stat a	8	8 .	e generale e	. 2	o	an a sta	6	5	ta de la
Switch Phase	. 4	. 7.1		U	U	e	<u>-</u>	. .	• . •		. U.	1.1
Minimum Initial (s)	10.0	10.0	alle on	10.0	10.0	2. 20	28.0	28.0	2	28.0	28.0	21. ¹
Minimum Split (s)	16.0	16.0	i i inner	16.0	16.0		34.0	34.0	11	34.0	34.0	1 - 1
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%	43.3%	0.0%	56,7%	56.7%	0.0%	56,7%	56.7%	0.0%
Yellow Time (s)	4.0	4.0	υ.υ/υ	4.0	4.0	0.070	4.0	4.0	9.070	4.0	4.0	0.070
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	ц											1.14
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max	e se st	C-Max	C-Max	
Act Effct Green (s)		12.9	a 1.	12,9	12.9		43.1	43.1	•	43.1	43.1	
Actuated g/C Ratio		0:22		0.22		· · ·	0.72	0.72		0.72		
v/c Ratio		0.34	5. T. F	0.16	0.19		0.02	0.46		0.16	0.28	
Control Delay	1. S. 1	20.3	at the	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	Ó.O	
Total Delay		20.3	n da s Geografia	20.2	13,4		4.3			6.1	5.0	14 - A - A
LDS				С	B		А	A		А	А	
Approach Delay		C 20.3		e ette	16.0	ļ.	•	6.6	•		5.2	
Approach LOS		С			В			Α			А	

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12	1.1	- 71

Lanes, Volumes, Timir <u>6: John Street & Park</u>	0				1944-12793-104-1079-104-1079-104-1079-104-1079-104-1079-104-1079-104-1079-104-1079-104-104-104-104-104-104-104	TERMENTIN STREET, ST	1	44 Pa)wer 2 2016 To	•
اس	¢ }>-	*	*	aligneer.	Ł	*	Ť	M	1	Ļ	~
Gueue Length 50th (m) Queue Length 50th (m) Queue Length 95th (m) Internal Link Dist (m) Turn Bay Length (m) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio	<u>ве</u> 8.4 18.3 35.1 517 0 0 0 0		Ο	0 		0	21.0 47.2 17.2 1137 0 0 0 0 0,46		Ο	10.8 24.6 81.9 1154 0 0 0 0 0.28	<u>SER</u>
Area Type: Other Cycle Length: 60 Actuated Cycle Length: 60 Offset: 0 (0%) Referenced to p	hase 2:NBTI ated	- and 6:5	BTL, St.	art of Gre	en n LOS: 4						

Splits and Phases: 6: John Street & Park Street

<h style="text-align: center;">1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 /</h>	A 04
34 8	218 8
₩ [%] ø6	₹ø8
34.5	12/16 e

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Lanes, Volumes, Timings	
7: Development Driveway	& Park Street

144 Park Tower 2, TIS AM

	 2016	Iotal A
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LanerOnovone zasar szer		SW8R	in NBT	IS NOR	SBL	SA SBIL	
Lane Configurations	¥		ĥ			A	,
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				
Fit Protected	0.973	5. K				0.997	
Satd. Flow (prot)	1616	D	1625	Q	Q	1645	
Flt Permitted	0.973					0.997	
Satd. Flow (perm)	1616	0	1625	D	D	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%		
Adj. Flow (vph)	78	60	411	20	20	313	
Shared Lane Traffic (%)	an i si				e di e di		an a
Lane Group Flow (vph)	138	Q	431	Q	Q	333	
Sign Control	Stop		Free			Free	
Intensection Summary 22							
Δ 7	NU.				an a		

Other Area Type:

Control Type: Unsignalized Intersection Capacity Utilization 48.5% Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 7: Development Driveway & Park Street 144 Park Tower 2, TIS 2016 Total AM

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Movementsessessesses	ia web	AWBRA	NN BTA	NBR	STERN.	CNSBT-	
Lane Configurations	k#		4Î			स्	
Volume (veh/h)	70	54		18	. 18 .		
Sign Control	Stop		Free			Free	
Grade	0%	0.00	0%	0.00	0.00	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)		<u>.</u>	1. A.				
Walking Speed (m/s)						i.	
Percent Blockage		ta se	1. 2.		a ser ang		and the second secon
Right turn flare (veh)	÷.	*		12	· · ·	· · · ·	
Median type			None	5		None	
Median storage veh)			110110			, , , , , , , , ,	
Upstream signal (m)			106				
pX, platoon unblocked	0.93	0.93	•		0.93		
vC, conflicting volume	774	421		ii ta	431	. ¹¹ 1.1	
vC1, stage 1 conf vol				• •			
VC2, stage 2 conf vol			ang tabu Tabu pitan				
vCu, unblocked vol	721	342			353		
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)							e de la companya de l
tF (s)	3.5	3.3			2.2		
pO queue free %	79	91	1 1.4		98		والمحاور والمرور والمعروف المراجع والمراجع والمحاور والمحاور والمحاور والمحاور والمحاور والمحاور والم
cM capacity (veh/h)	363	657			1134		나가 전 것 같은 것이 가지만 것 같은 것 못 못 못 했다.
Difeotion (Lanex#1734)	Went	NEM	ASB (M				
Volume Total	138	431	333				
Volume Left	78	0	20				
Volume Right	60	20	0	A DEC 19			
cSH	451	1700	1134				
Volume to Capacity	0.31	0.25	0.02				
Queue Length 95th (m)	9.6	0.0	0.4				an a
Control Delay (s)	16.4	0.0	<u>, 0.7</u>				
Lane LOS	C 10-4	0.0	A	ann a'	1		
Approach Delay (s)	: 16.4 C	0.0	0.7		er je ji ali		
Approach LOS	L						
intersection Standaux et a							
Average Delay			2.8				
Intersection Capacity Utili	zation		48.5%	10	CU Level	of Servi	ce vitte subscription di Alabaha di Vita da Bardana
Analysis Period (min)			15			· · · ·	and the second
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 L	a de la co	•	an an an a' sh	

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Lanes, Volumes, Timings

1: William Street & Caroline Street

144 Park Tower 2, TIS 2016 Total PM

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			*	****		▲.	*	Ť	Þ	` *	ţ	*
	i EBL	C. EBI.	EBR)	N WEL	XAWBID	WER	a nee	(\$NBTP	SENBR:	X GBE	- ASBIL	ANSER
Lane Configurations	7	ţ,		ሻ	4Î			4			÷Ĵ	7
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	11.1	0.0	0.0	: . · ·	0.0
Storage Lanes	1		0	1		0	0	• • • •	0	D		1
Taper Length (m)	7.5	e Albara	7.5	7,5		7.5			7.5	7.5	1.5	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
Frt		0.993		:	0.960			0,987				0.850
Fit Protected	0.950	1.1.1.1	÷.,	0.950			. • • •	0.999		4 ¹	0.994	
Satd. Flow (prot)	1686	1620	0	1686	1556	0	0	1504	Ō	D	1603	1473
Fit Permitted	0.218			0.615		44 E		0.990			0.921	• • •
Satd. Flow (perm)	384	1620	Ũ	1078	1556	Ū	0	1490	0	Ď	1484	1406
Right Turn on Red			Yes			Yes			Yes	• •		Yes
Satd. Flow (RTOR)		5			20			7				468
Link Speed (k/h)	· · · ·	50	an a		50			50	e terlet		50	an an ann an
Link Distance (m)		94.2		*	64.7			244.6			82.0	
Travel Time (s)	t suite	6.8	in th	19 N. 19 P.	4.7	$\{ j \in \mathbb{N} \}_{i \in \mathbb{N}}$	u struk Station	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	Ū,	823	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		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	24.0		24.0		en e	58.0	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 (%)		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	14. C. 14	4.0	4.0	4.D
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)	. <u>1.</u> C	-2,0	0.0	-2.D	-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						n line	
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode		C-Max		C-Max	C-Max		Max			Max	Max	Max
Act Effet 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		e je sti		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	А		C	D			C			C	A
Approach Delay		16.6		· .	36.8		- 14 C	31,2			17.0	-
Approach LOS		В			D			С			В	

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Lanes, Vo	lumes, Til	mings	
1: William	n Street &	. Caroline	Street

26.5

47.9

45.0

540

Lane Group, St. P. C. S.

Queue Length 50th (m)

Queue Length 95th (m)

Internal Link Dist (m)

Turn Bay Length (m)

Base Capacity (vph)

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	*	4	s∰-more	*	*	Ť	M	1	Ť	~
EBIC.	XEBRS	SWBUS	GWBT.	WBRS	INBE:	MANBITA:	NBR	USBL	USB TK	LISB R
17.4		1.7	64.3		1	43.3			46.5	0.0
29.2		6.6 ŧ	£132.3			70.5			74.7	21.1
70.2			40.7		t de la	220.6	s.		58.0	
		25.0								
938		392	579	· · · · ·		501			495	781

1 4 4 Devel Town

Starvation Cap Reductn D D	0 0	D	D	D
Spillback Cap Reductn 0 0	0 0	0	та _{из} на 11 0	Ö
Storage Cap Reductn O O	0 0	D	0	D
Reduced v/c Ratio 0.59 0.25 0.0	4 0.78	0,62	0.65	0.60
Intensection Summary 22 State 24 States St				
Area Type: Other				
Cycle Length: 90				••
Actuated Cycle Length: 90				
Offset: 48 (53%), Referenced to phase 4:EBTL and 8:WB	TL, Start of Green			
Natural Cycle: 8D				na series Na series
Control Type: Actuated-Coordinated				
Maximum v/c Ratio: 0.78				
Intersection Signal Delay: 23.3	Intersection LOS: C			

ICU Level of Service E Intersection Capacity Utilization 90.8% 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

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34 8		M e

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Lanes, Vol	umes, T	Fimings	
2: William	Street	& Park	Street

144 Park Tower 2, TIS 2016 Total PM

	<u> </u>	~	¥	- # -	٦	p	
Lane Groups		K EBPS	WBL	a war	CONBLE	(NBR)	
Lane Configurations	eĵ -		ሻ	Ť	ኻ	Ť	
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	
Frt	0.973		• • • •			0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	1605	0	1670	1900	1686	1473	
Fit Permitted			0.950		0.950		
Satd. Flow (perm)	1605	0	1670	1900		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		
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%	
Adj, Flow (vph)	193	48	561	355	52	387	
Shared Lane Traffic (%)							a and a second
Lane Group Flow (voh)	241	0	561	322	52	387	
Sign Control	Free			Free	Stop		
Intense offont Summality 4.5							
Area Type: O	ther						
Control Type: Unsignalized							

Intersection Capacity Utilization 56.8%

ICU Level of Service B Analysis Period (min) 15

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HCM Unsignalized Intersection Capacity Analysis 2: William Street & Park Street 144 Park Tower 2, TIS 2016 Total PM

	-> >	* *	- 1	M	
Movement	255,E816r3, E8	RAN WEI NWB	TA: NBL	NBRA:	
Lane Configurations	4		<u> </u>	ř	
Volume (veh/h)		3 505 29		348	
Sign Control Grade	Free 0%	Fre 09			
Peak Hour Factor	0.90 0.9			0.90	
Hourly flow rate (vph)		8 561 32		387	
Pedestrians					
Lane Width (m)			t i sa ka	- 14 - A.	
Walking Speed (m/s)	·				···
Percent Blockage Right turn flare (veh)	•		• •	· · · ·	
Median type	None	Non			
Median storage veh)				хулт (т.) -	
Upstream signal (m)		9	4		
pX, platoon unblocked					
vC, conflicting volume	i e esta	241	1662	217	att i the internet of the internet of the section of
vC1, stage 1 conf vol		an anger		1 N	and a second
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	
pO queue free %	an a sata an	58	17	53	
cM capacity (veh/h)		1331	63	825	
Direction Lone Hosting	CEBYIC WB	114 WB 2 NB	and the second second second		
Volume Total	241 56		2 387		방법 사람이 있는 것은 것은 것을 하는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있다. 같은 것은 것은 것이 있는 것이 같은 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있다. 같은 것은 것은 것이 있는 것이 같은 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 있다.
Volume Left Volume Right	0 56 48		2 O O 387	the the	
cSH	1700 133			tala sektore I	사람 사람은 이 가지 않는 것이 있는 것이 가지 않는 것이 있었다. 같이 같이 있는 것이 있는 것 같이 같이 있는 것이 같이 있는 것이 있는 것이 있는 것이 있는 것이 있는 것이 없는 것이 없는 것이 있는 것이 없는 것이 있는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 있
Volume to Capacity	0.14 0.4			a de la parte	e Altredige gebied and a second second
Queue Length 95th (m)	0.0 16.	0 0.0 28.			
Control Delay (s)	0.0 9,				
Lane LOS			F B	2 . F	
Approach Delay (s) Approach LOS	0.0 6.		/ D	111	
	NAMES IN A DESCRIPTION OF THE OWNER OF THE OWN	and the state of the		13.52 - 114.002 - 1400	STERE MANTEN MARTINE CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CO
Intersection Summary 22		40.2			
Average Delay	intion	12.6 56.8%	ICU Level	of Convict	andra and a state of the state
Intersection Capacity Utiliz Analysis Period (min)	(gulUf)	56.8% 15	ICO LEVEI	UI OBLACIO	3. The second s second second se second second s

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Lanes, Volumes,	Timings
3: Allen Street &	King Street

144 Park Tower 2, TIS 2016 Total PM

	٨		*	*	N CONTRACTOR	*	*	Î	p	4	Ļ	1
LanelGhoup/weisessissi	i reels	een:	S EBB :	awee	WBF	TWBR:	1 ONBL	NETR	NBR	SBL	S (SBIE	SBR
Lane Configurations	05	4			र्भ	1		ፋኩ	47		4 1 }	00
Volume (vph)	.35	61	40	28	55	34	59 1000	. 624	17 1000	18 1000	827 1650	30
Ideal Flow (vphpf)	1000	1550	1000	1000	1650	1750		1650	-0.0	0.0	1000	1000
Storage Length (m)	0.0		. 0.0	0.0		10.0	· 0.0					0.0
Storage Lanes			0 7.5			1 7.5	0		0 7:5	0 7.5		0 7.5
Taper Length (m)	7.5 1.00	1 00		.7.5 1.00	1.00	1.00	7,5 0,95	0.95	0.95	0.95	0.95	0.95
Lane Util. Factor	1.00	1.00 0.99	1.00	1.00	1.00	0.96	0,90	1.00	0.90	0.90	1.00	0.90
Ped Bike Factor Frt	•	0.99			1.00	0.850		0.996	• •		0.995	
Fit Protected		0.987		÷ .	0.983	0.000	۰.	0.996			0.999	
Satd. Flow (prot)	0	1431	0		1622	1488	. 0	2995	Ō	0	2990	0
Flt Permitted		0.913		U	0.882	1400	та	0.784	:	· · · .	0.931	
Satd. Flow (perm)	Ū	1316	0	0	1449	1430	Ó	2357	0	O	2786	Ó
Right Turn on Red		: '	Yes	Ŭ	14-10	Yes			Yes	Ū,		Yes
Satd. Flow (RTOR)	•	24	100		*	38		5	,100		. 7	100
Link Speed (k/h)	$\{ f_{i} \}_{i \in I} \in I$	50			50		· · · ·	50			.50	
Link Distance (m)		106.8	1		77.9	• •	••	90.8			81.8	
Travel Time (s)		7.7			5.6	1.11	a a a a a a a a a a a a a a a a a a a	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	Û.	972	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2	in estr	· · · · · ·	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		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	0.68	.33.0	33.0	57.0	57.0	0.0	57.0	57.0	0.0
Total Split (%)		36.7%	0.0%	36.7%	36.7%		63.3%	63.3%	0.0%	63.3%	63.3%	0.0%
Yellow Time (s)	4.0	4.0	. ¹ 1	4.0	4.0	4.0	4.0	4.0	e states	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	. O Ó
Lost Time Adjust (s)	0,0	-2.0 4.0	-2.0 2.0	0.0 6.0	-2.0 4.0	-2.0 4.0	0.0 6.0	-2.0 4.0	0.0 4.0	0.0 6.0	-2.0 4.0	0.0 4.0
Total Lost Time (s)	6.0	4.0	2.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0
Lead/Lag						÷						·
Lead-Lag Optimize? Recali Mode	None	None	· · · .	Mana	None	None	C-May	C-Max		C-Mov	C-Max	
Act Effct Green (s)	NULE	29.0		NOLIC	29,0	29.0	O-Midv.	53.0	·. ·		53.0	
Actuated g/C Ratio	i yati	0.32	. • 1		0.32	0.32	$(1,1) \in \mathbb{R}^{n}$	0,59			0.59	· · .
v/c Ratio		0.34			0.20	0.02		0.56			0.59	
Control Delay		22.1			23.6	7.7		13.2	·		13,4	
Queue Delay		0.0		1 A.	0.0	0.0		0,0			0.0	
Total Delay	1999 - A.	22.1			23.6	7.7	· . · ·	13.2		t .	13,4	
LOS		C		'	. <u>с.</u> С	A		B			B	
Approach Delay		22.1			18.9	רי.		13.2			13,4	
Approach LOS		C			B			B			B	

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Lanes, Volumes, 1 3: Allen Street &	Ψ.					S. S. Martin States and Sciences and Sciences		1	44 Pa		wer 2 2016 To	•
		******	*	*	, affanana	Ł	*	Ť	M	1	Ť	*
Lanet Scoups and the second se	68	16.1 31.8 82.8 440 0 0 0.34			11.3 22.5 53.9 467 0 0 0.20	0.0 6.4 10.0 487 0 0 0 0 0		39.2 54.8 66.8 1390 0 0 0 0.56	NBRA	SBL	50.4 67.7 57.8 1644 0 0 0 0.59	<u>IIIIIIIIIIIIII</u>
Cycle Length: 90 Actuated Cycle Length: 90 Offset: 2.7 (3%), Referen	Other Ced to pha pordinated 14.3	sse 2:NE	BTL and 6	SBTL, S	tart of l	Green on LOS: F		stora Line or Marita Marita			• •	

Splits and Phases: 3: Allen Street & King Street

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Lanes, Volumes, Timings

<u>4: Allen Street & Car</u>	rolin	<u>e Stre</u>	et							2016 To	tal PM	
	*		7	*	4	No. of the second secon	*	*	p	1	ţ	*
eanerGPoupar Skiewenkers	₿₿₿	EBI	E88	: WBI	WB T	WBR	NEL	(NBI)	XNBR	(S.SBL)	S ASBIT	SBR
Lane Configurations		4			\$			4			4	
Volume (vph)	29	32	24	39	57	60	21	247	34	-79	108	14
Ideal Flow (vphpl) 1	000	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
Frt		0.962			0.948			0.985			0.990	
Fit Protected		0.983			0.988	· · ·	. * •	0.997		• • •	0.981	
Satd. Flow (prot)	D	1466	D	D	1452	D	D	1522	0	0	1505	0
Flt Permitted	·· .	0.983		dia de	0.988			0.997			0.981	
Satd, Flow (perm)	O	1466	D	D	1452	D	D	1522	0	O	1505	Q
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	- 1. ¹ .		17.6	
Peak Hour Factor C	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 (%)					an a				:			a da la
Lane Group Flow (vph)	Q	95	D	D	173	D	0	335	D	0	224	0
Sign Control	· . ·	Stop			Stop			Stop			Stop	
hiersection Stramany as that												

Area Type: Control Type: Unsignalized

Intersection Capacity Utilization 56.2% ICU Level of Service 8 Analysis Period (min) 15

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144 Park Tower 2, TIS

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HCM Unsignalized Intersection Capacity Analysis 4: Allen Street & Caroline Street

144 Park Tower 2, TIS 2016 Total PM

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Movementess	EBL	(S) (EBT)	EBR	XWBL:	WBT	WBRX	NBL	(CINET)	in NBR	SBL	NISBIT?	SER
Lane Configurations		4			4			4			4	
Sign Control		Stop	· · · · ·		Stop		• •	Stop			Stop	
Volume (vph)	29	32	24	39	57	60	21	247	34	79	108	14
Peak Hour Factor Hourly flow rate (vph)	0.90 32	0.90 36	0.90 27	0.90 43	D.9D 63	0.9D 67	0.90 23	0.90 274	: 0.90 38	0.90 88	0.90 120	0.90 16
			/ محمد محمد محمد ا	0+ 		U /		⊂/4		00		
Direction Lanes#22.2.1	<u>WEBNIK</u>	s WBS15	ENBM	SSB11	D i jaza							
Volume Total (vph)	94	173	336	223								
Volume Left (vph)	32	43.	23	88			• •		• • • •			. 11 -
Volume Right (vph)	27	67	38	16								
Hadj (s)	-0.10	-0.18	-D.05	0.04					•		÷ .	··· ··.
Departure Headway (s)	5.5	5.3	4.9	5.2								:
Degree Utilization, x	D.15	0.26	D.46	0.32	1.15		· · ·		: • • •	1 T T +		
Capacity (veh/h)	568	610	688	652		· 2.						2 2 A
Control Delay (s)	9.5 9.5	10.1 10.1	12.0	10.6	1	a to the	· · ·				· · · ·	
Approach Delay (s) Approach LOS	9.0 9.0	IU. I B	12.0 B	10.6 B	÷	s., 1.3.					<u>,</u>	
	H Marketerererererererererererererererererer				and the second second	20150000000000000	DENINGSSTOR	anter or the first			*****	66129579-76000002
Intersection Summary as a												
Delay.			1D.9									
HCM Level of Service			B			الد المعامات						
Intersection Capacity Utiliza	tion		56.2%	10	U Level	of Servic	e		В		• • •	
Analysis Period (min)	· .		15									
a la parte de la construction de la construcción de la construcción de la construcción de la construcción de la	se es l		11 N N N		11 - A A	111	- 19 A.		an a	e grad		

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Lanes, Volumes, Timings

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Lane: Ghoup to sar to show the	i de Bla	EBT.	TEBR		yawan.	R WER	NEL	<u>CINE</u> R:	NBRA	see	SC (SBIK	B SBR
Lane Configurations		4			4			4			4	
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												
Frt		0.961	, ⁵¹⁶ - 51		0,984	· ·		0.989	· ·	1 . · ·	0.991	· · ·
Flt Protected		0.982			0.980			0.998			0.999	
Satd. Flow (prot)	0	1416	0	· 0	1446	·	· . 0	1481	0	. 0	1484	<u>, : : · · (</u>
Flt Permitted		0.982			0.980			0.998			0.999	
Satd, Flow (perm)	Ó	1416	0	0	1446	0	0	1481	0	. 0	1484	. C
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 (%)			1.1.1.		en Neg							
Lane Group Flow (vph)	0	63	0	0	101	0	0	502	0	0	629	C
Sign Control		Stop			Stop			Free			Free	
ntensection Summary.												
	ther	And the second se				Derest and a second second second						

Intersection Capacity Utilization 60.0% Analysis Period (min) 15

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144 Park Tower 2, TIS

HCM Unsignalized Intersection Capacity Analysis 5: Allen Street & Park Street

144 Park Tower 2, TIS 2016 Total PM

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Movement	a eer	Si EBI	EBR	A WEL	. WBIG	War a	NBU	NBT	NBRY	SBL	SBIL	SBR
Lane Configurations	21	4 2	40	· · · · · · · · · · · · · · · · · · ·	4	·		4			<u></u>	0.0
Volume (veh/h) Sign Control	. 21	20 Stop	16	38	42 Stop	11	15	399 Free	38	12	517 Free	- 38
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) Pedestrians	23	22	18	42	47	12	17	443	42	13	574	42
Pedestrians Lane Width (m)		24 3.6			20 3.6	· .		16 3.6			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)								Nton	:		** N F *	
Median type Median storage veh)				• .				None			None	. `
Upstream signal (m)	n Nitari			1. 1. 3.3		- <u>1</u>		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		ets, a		taa ta	÷				ta in		х	· · .
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)) or					o' é	0.0	ţ.,				
tF (s) pO queue free %	3.5 B1	4,0 87	3.3 96	3.5 68	4.0 74	3.3 98	2.2 98	se jui	···· · · ·	2.2 99	•	÷
cM capacity (veh/h)	: 121	177	466	134	177	571	934		میں رو <u>م</u>	1035		
Direction Lenet Hereits	C CEBNIC	Went	NBRID	Series and the series of the								
Volume Total	63	101	502	630	*****		*******	48.277.5766.58	2254 939 9494949494	<u>999-99-99-99-99-99-99-99-99-99-99-99-99</u>		<u>(ennennenn</u>
Volume Left	23	42	17	13								
Volume Right cSH	18 177	12	42 934	42 1035								
Volume to Capacity	0.36	168 0.60	0.02	0.01	a jere	a da u			an a	ege ei ez		
Queue Length 95th (m)	11.3	24.4	0.4	0.3					· · ·			
Control Delay (s)	36.1	54.2	0,5	0.3		ege de tri						1.1.1
Lane LOS Approach Delay (s)	E 3 6.1	F 54.2	A 0.5	A 0.3		ana an	a se	r . s .				
Approach LOS	30.1 E	04.2 F	U.5	0.3								
huersection summary as		, 			51095-351S							
Average Delay			6.4									
Intersection Capacity Utiliz	ation	1.5	.60,0%	- :::· (CU Level	of Servic	e	. 4 t . 	B		ere en d	
Analysis Period (min)			15									
						NA SA	5 ¹¹ - 1 - 4		· · ·		•	

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			-

Lanes, Volumes, Timings <u>6: John Street & Park Street</u>

144 Park Tower 2, TIS 2016 Total PM

	<u>arku</u>											
				F	s Hannan		*	Î	M	1	¥	*
Lene Gloupes, strass, st	EBL	- EBIN	S EBR	SW BLB	AWBTR	WER.	. Ned	ENBI	XINBR	23198L4	ê seit	SBR
Lane Configurations		4		ሻ	4		ሻ	₽		ሻ	Þ	
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	2.15	0.0	35.0	e se de la composición	0.0
Storage Lanes	O		0	1		Ō	1		0	1		0
Taper Length (m)	7.5	age i s	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	
Frt		0.981			0.940	• •		0.981			0.984	
Flt Protected	•	0.979	144	0.950			0.950			0.950		. •
Satd. Flow (prot)	0	1426	0	1637	1530	D	1686	1612	0	1686	1620	0
Flt Permitted		0.809		0.754			0.401			0.446		de p
Satd. Flow (perm)	Ó	1173	0	1187	1530	D	711	1612	0	788	1620	Ō
Right Turn on Red			Yes	·		Yes	i,	· .	Yes			Yes
Satd. Flow (RTOR)		14			63			18			15	
Link Speed (k/h)		50			50		- <u></u>	50			50	
Link Distance (m)		59.1			75.8			41.2			105.9	
Travel Time (s)		4.3	an a	÷	5.5	i si	1.1.1.1			1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	7.6	n an Alain
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%	۵%	0%	0%	0%	0%	0%
Actj. 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	Ó	31	471	D	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	В		2	2		- · · · 6-	6	
Switch Phase							/	· · _ · · ·		. States	the start of the	
Minimum Initial (s)	10.0	10.0		10.0	10.0		28.0	28.0	ter ser en s	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%		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	star e	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	55	2.0	2.0	00	2.0	2.0	0.Å	2.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	0.0	-2.0	-2.0	0.0		-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			f eister	i stati		1.1.4		1		· · ·		
Lead-Lag Optimize?	N I - min	· NI		N	N la va a	ç	OM		÷	0 1	C) Mail	
Recall Mode	None	None		None	None		C-Max	C-Max	· · · · · ·		C-Max	
Act Effet Green (s)		13.7		13.7	13.7 n ba	. •	38.3	38.3		38.3 0.64	38.3	
Actuated g/C Ratio		0.23		0.23	0.23		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	1,6.7 0.0		5.4	7.5		5.5	8.4	
Queue Delay Total Delay		0.0 20.4		0.0 22.5	16.7		0.0 5.4	0.0 7.5		0.0 5.5	0.0	
LOS	14	20.4 C		22.0 C	. 16. 7. В		A 0.4	A		о.о. А	8.4 A	
Approach Delay		20.4		ل ا	18.7		A	7.4	÷	А	A 8.2	
Approach LOS		20.4 C			18.7 B			- 7,4 A			2.8 ; А	
white and the water and the water and the second se					<u>ں</u>			A			A	

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Synchro 7 - Report Page 11

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Lanes, Volumes, Timings <u>6: John Street & Park Street</u>

2016 Total PM

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Lane: Groups and Sector Sta	S EBIO DEB	No debro	WBL	GWETHY	WBRG	INBL	NBING	NBRM	V SBL	SBT	2886B
Queue Length 50th (m)	B.	<u>ן</u>	8.8	11.3		1.0	18.7		1.4	22.9	
Queue Length 95th (m)	17.		17.6	23.7		4.3	45.7		5.B	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)	43	3	435	601		454	1037		504	1041	•
Starvation Cap Reductn Spillback Cap Reductn	5))	U	U		U ().:	U n ···		U	0	
Storage Cap Reductin		י ייע ר	0 0	n - U		. U.	<u> </u>		. U ·	· U	·.
Reduced v/c Ratio	0.2	3	0.21	0.30		0 0.07	0.45	•	0,09	U 1051	
Intersection Summary Area Type: Cycle Length: 60 Actuated Cycle Length: 60 Offset: 0 (0%), Reference Natural Cycle: 50 Control Type: Actuated-Co Maximum v/c Ratio: 0.51 Intersection Signal Delay: Intersection Capacity Utiliz Analysis Period (min) 15	other d to phase 2:Ni ordinated 10.7	3TL and 6:S	BTL, Sta	nt of Gree cersection	n LOS: B	1 -					

Splits and Phases: 6: John Street & Park Street

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34 8	26.8
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²¹⁵ 144 Park Tower 2, TIS

7: Development E	ntranc	<u>e a P</u>	ark St	reet			
	*	Ł	Î	Þ	1	Ļ	
zanezGioup.sztrasta	WBI	WBA	NBT NBT	NER.	Sele	SBT	
Lane Configurations	¥¥		₽			÷4	
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		÷.,		8 . <u>1</u> . 14	0.995	
Satd. Flow (prot)	1613	0	1615	0	0	1627	
Flt Permitted	0.973	ent a		· . :		0.995	
Satd. Flow (perm)	1613	Û	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%		
Adj. Flow (vph)	46	38	464	86	69	566	
Shared Lane Traffic (%)	in the second					· · · · · ·	and the second secon
Lane Group Flow (vph)	84	. 0	550	0	0	635	· · · · · ·
Sign Control	Stop		Free		t de la terres	Free	이 사람이 많은 것을 한 것 같아요. 이 것이 없는

Intersection Slimmany Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 80.2% Analysis Period (min) 15

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Synchro 7 - Report Page 13

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Lanes, Volumes, Timings 7. Development Entrance & Park Street

144 Park Tower 2, TIS 2016 Total PM

HCM Unsignalized Intersection Capacity Analysis 7: Development Entrance & Park Street

144 Park	Tower 2, TIS
	2016 Total PM

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Movennentaardex	N. WELS	o werk	NBT	NBRA	ak seda	N.ISBI	
Lane Configurations	¥¥		ĥ			. A	
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)	1		· · ·		1.121.111		
Walking Speed (m/s)					·		
Percent Blockage			1	•			
Right turn flare (veh)			NI .			N 1	and the second
Median type		··· · · · ·	None		111	None	
Median storage veh)	· ·		100	· .	·	•	
Upstream signal (m)	0.00	<u>n nn</u>	106		· ·		
pX, platoon unblocked vC; conflicting volume	0.89 1211	0.89 507			0.89		
vC1, stage 1 conf vol	1211	- JU/			550	. : •	
vC2, stage 2 conf vol	90 J. 4						n an
vCu, unblocked val	1176	388			436		
tC, single (s)	6.4	6.2			436		and a second
tC, 2 stage (s)	0,4	0.C			4.1		
tF (s)	3.5	3.3		·	2.2		
pO queue free %	74	94	e e f		93		es de la compañía de las de las estas das Recebbos
cM capacity (veh/h)	178	593	1912 1914 - 1917	:	1013	tet tet	and a second second Second second
	1		-	OPODDANKERSTER		Rithbafuarurza	
Direction Lane #	and the second	NBAL	NSBAI				Contraction of the second s
Volume Total	83	550	634				영상에 다 여기 가슴 가슴 가슴 한 것이 같은 것이 같다.
Volume Left	46	0	69				
Volume Right	38	86	0		ele anne i		an an an an an ann an Anna an Anna an Anna an Anna an Anna an Anna. An an Anna an An
cSH	260	1700	1013				
Volume to Capacity	0.32	0.32	0.07			· . · · · ·	
Queue Length 95th (m)	10.0	0.0	1.6				and the second
Control Delay (s)	25.2	-0,0	1.8				
Lane LOS Approach Delay (s)	D 25.2	0.0	A				and the second
Approach LOS	20,2	0.0	1.8				
	U						
ntersection Summary is							
Average Delay			2.5				
Intersection Capacity Util	zation		80.2%	10	CU Level	of Serv	iče, po stalo da da Diana da Alabara da
Analysis Period (min)		-	15				
				di se	2	t it.	

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Appendix E

Signal Warrant Analyses

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Signal Warrant Calculation for Forecasted Volumes (DTM Book 12 - Justification 7)

.....



Horizon Year: Future Total Region/City/Township: Weterloo

> Major Street; William Street Minor Straet: <u>Perk Street</u>

North/South?: N

Number of Approach Lenes: 1 Tee Intersection? Y Flow Conditions; Restricted

220

		Warrant Results
1 50% Satisfied	Na	Warrent for new Intersections with forecast treffic
120% Satisfied	No	Warrant for existing intersections with forecest traffic

PM Forecast Only? <u>N</u>

1			Major	Street					Minor	Street			
			William	Street			Park Street						
) 1	Eastbound							Northbound			Southbound		
Time Period	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Rìght	
AM Peak Hour		372	68	558	113		32		371				
PM Peak Hour		174	43	605	290		47		348				

A	verage Ho	urly Volume	95
Volume	AM	PM	ΑΗν
1A · All	1182	1407	647
18 - Minor	403	395	200
2A - Major	779	1012	448
2B - Cross	32	47	20

Warrent 1 - Minimum Vehicular Volume

	Approach Lanes		1	20	r more	Average	
1A	Flow Canditions	Free	Restricted	Free	Restricted	Hourly Volume	
	All Approaches	480	720	600	CO3	647	
	Ак Аррі вавітев	1			% Fulfilled	89.9%	
	Auppoach Lange	1	1	20	r more	Aveneria	
	Approach Lanes	Enco	1 Doptnicted		r more		
18	Approach Lanes Flow Conditione	Free	1 Restricted X	2 o Free	r more Restricted	Hourly	
1B		Free 180	1 Restricted X 255			Average Hourly Volume 200	

Warrant 2 - Delay To Cross Traffic

			20	r more	Average
Slaw Conditions	Free	Restricted	Free	Restricted	Hourly
		r x		11	Volume
Major Street	480	720	600	900	448
Approaches				% Fulfilled	62,2%
		Flow Conditions Major Street 480	Flow Conditions X Major Street 480 720	Flow Conditions X Major Street 480 720 600	Flow Conditions X 0 Major Street 480 720 600 900

	Flow Conditions	Free	Restricted	Free	Restricted	Hourly
2B	PIOW CONDITIONS		X			Volume
	Traffic Crossing Major	50	75	50	75	50
	Street				% Fulfilled	25.3%

Signal Warrant Calculation for Forecasted Volumes (OTM Book 12 - Justification 7)



Horizon Year; Region/City/Township;				
Major Street: Minor Street:		North/South?:	<u>Y</u>	_
Number of Approach Lenes:				Warrant Results
Tee Intersection?	N	150% Satisfied	No	Warrant for new intersections with forecast traffic
Flow Conditions:	Restricted	120% Satisfied	No	Warrant for existing intersections with forecest treffic

PM Forecast Only? N

]	Major Street				Minor Street							
ſ	Park Street				Allen Street				-			
l ľ		Northbound			Southbound			Eastbound			Westbound	
Time Period	Left	Through	Blght	Left	Through	Right	Left	Through	Right	Left	Through	Right
AM Peak Hour	13	356	84	26	284	19	.21	43	ß	. ,9	17	3
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			
18 - Minor	99	148	62			
2A - Major	762	1019	445			
2B - Cross	73	101	44			

Warrant 1 - Minimum Vehicular Volume

	Approach Lanes		1	5.0	r more	Average
1A	Flew Conditions	Free	Restricted X	Free	Restricted	Hourly Volume
	All Approaches	480	720	600	900	507
	Ап Арргоаспес				% Fulfilled	70.4%
	Approach Lanes	T	1	2 0	פיוטרח יו	Average
18	Flow Conditions	Free	Restricted	Free	Restricted	Hourly
	FIGW Conditions		X			Volume

1B	Figw Conditions		X			Volume	
	Minor Street	120	170	120	170	62	
	Approaches				% Fulfilled	36.3%	
	-						

Werrant 2 - Delay To Cross Traffic

	Approach Lanes	1		2 0	Averaga	
2A	Flow Conditions	Free	Restricted	Free	Restricted	Hourly
	riow continuons		X			Volume
	Major Streat	480	720	600	900	445
	Approaches				% Fulfilled	61.B%

	Approach Lanas		1	2 or	more	Avaraga
2B	Flow Conditions	Free	Restricted	Free	Restricted	Hourly
			X			Volume
	Traffic Crossing Major	50	75	50	75	44
	Streat				% Fulfilled	58.0%

TAB 3F

This is Exhibit "F" referred to in the Affidavit of

Christopher Pidgeon sworn before me, this

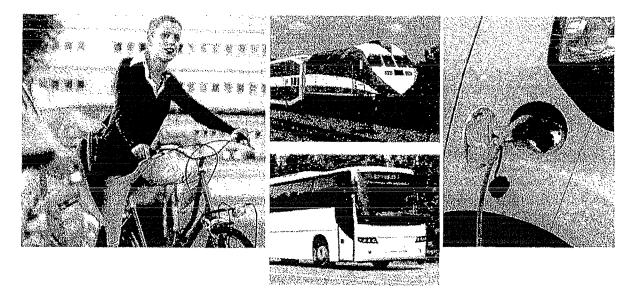
M day of October, 2015 A COMMISSIONER FOR TAKING AFFIDAVITS Rived R. Fady ILLE

CONDOMINIUMS

City-Centric. Where you want to be. Downtown Kitchener

Welcome (/citycenter.html)
Suites (/citycenter/suites.html)
Building Amenities (/citycenter/amenities.html)
Features & Finishes (/citycenter/features.html)
The Neighbourhood (/citycenter/neighbourhood.html)
Smarter Living (/citycenter/living.html)
Building & Lifestyle (/citycenter/living/lifestyle.html)
LEED® Difference (/citycenter/living/leed-difference.html)
Panoramic Views (/citycenter/panorama.html)
Model Suite Gallery (/citycenter/gallery.html)
Stay Informed (/register/kitchener-city-center-tower.html)
Team Story (/citycenter/team.html)

(https://www.youtube(https///sei/f/andrimh/e/http)e///sivende)cebook.com/citycentrecondominiums)



Lifestyle

Car Plug In's

Electric cars will become more common place on our roads and in response to this future demand, it will be an option at City Centre to have your parking stall equipped with a rough-in for an electric/hybrid vehicle.

Car Share Program

Grand River Car Share already operates car share vehicles at the Charles Street Transit Terminal right in the downtown. In future, car share can be available right on-site. Andrin will provide a parking stall within the publicly accessible courtyard with provisioning for an electric vehicle for a car share operator to utilize in the future.

Leave the Car at Home

Today, Grand River Transit puts the entire Region right at your doorstep and you are within walking distance to major employers, shopping, dining and entertainment.

In the future, the Region of Waterloo's planned LRT and the GO Transit expansion will make the Toronto Pearson International Airport and the broader GTA even more accessible for work or for pleasure.

Secure Indoor Bicycle Storage

City Centre offers secure blcycle storage on the ground floor of the building with direct access to the publicly accessible courtyard to encourage cycling for shorter trips and to take advantage of the Regions' many cycling trails/routes.

BUILDING

for a Better Tommorrow

Urban redevelopment takes advantage of existing infrastructure.

"Night Sky Friendly" exterior lighting to reduce light pollution.

Light coloured roofing materials and areas of planted green roof to reduce the urban heat island effect.

Tri-sorter facilities for refuse recycling.

Recycling of suitable construction waste.

Use of local and recycled materials where available, reducing the impacts of extraction, processing and transportation.

High efficiency heat pump heating system for reduced energy consumption, non-ozone depleting cooling systems and lower emissions directly contribute to a healthier environment.



Leadership in Energy and Evironmental Design (LEED®)

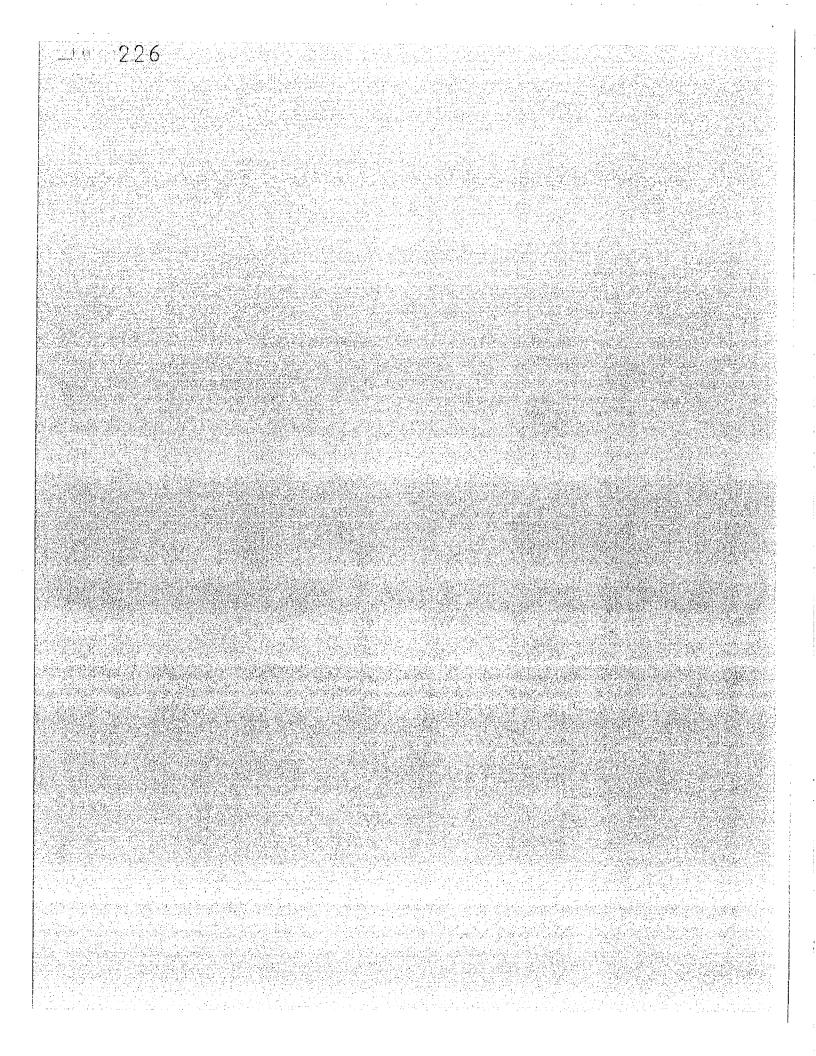
Contact Us 26 Lesmill Road, Unit 3, Toronto, ON M3B 2T5 P, 416,733.3128 | F. 416-733.3129

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BUILDING INTERIORS

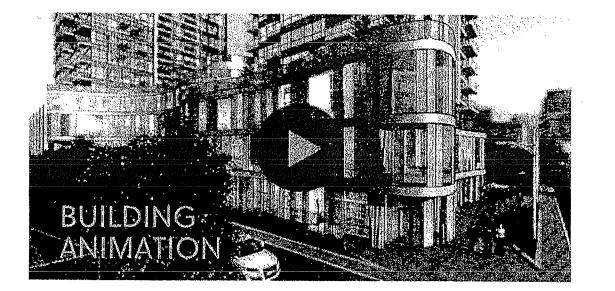
HOME

ESHA en and 0 e da a

FLOOR PLANS LOCATION

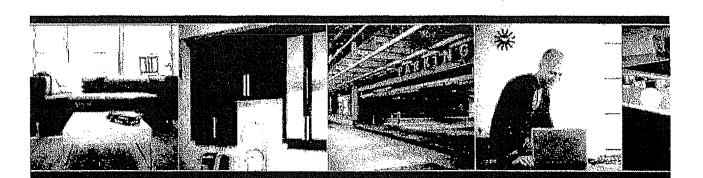
INNOVATION IS SHAPING THE FUTURE. ONE HUNDRED IS SHAPING THE INNOVATION DISTRICT. ١N

100 REASONS



SULDING AMENITIES

Party lounge with catering kitchon Landscaped rooftop tenace with BBQs State-of the alt theatre room Spacious fully-equipped fitness facility Secure vehicle and bicycle parking On-site Car Share program Garbage, recycling, and organic chute Energy efficient central heating and cooling systems Energy efficient windows and doors Energy efficient Eghting Environmentally-friendly green roof Reclamation of unused recyclable building site material Entrance phone security system for residents





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55 Normfield Drive East, Suite 385 (Waterloo, Onterio N2K 3TE) 4865-533-4649

Black is any source of the constraint from proping and so down store monorable bound to the starts and upper or one of our constraints between the constraints and upper or one of our constraints and the starts of the starts.

TAB 3G

This is Exhibit "G" referred to in the Affidavit of

Christopher Pidgeon sworn before me, this

14 day of October, 2015 A COMMISSIONER FOR TAKING AFFIDAVITS Dard R. Fedy

Court File No. CV15-10843-00CL

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

ACKNOWLEDGMENT OF EXPERT'S DUTY

1. My name is Christopher Pidgeon. I live in the City of <u>KITCHEVER</u>, in the Province of Ontario.

2. I have been engaged by or on behalf of William Seegmiller to provide evidence in relation to the above-noted court proceeding.

3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:

- (a) to provide opinion evidence that is fair, objective and non-partisan;
- (b) to provide opinion evidence that is related only to matters that are within my area of expertise; and
- (c) to provide such additional assistance as the Court may reasonably require, to determine a matter in issue.

4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

toter 14,2 Date ignature

NOTE: This form must be attached to any expert report under subrules 53.03(1) or (2) and any opinion evidence provided by an expert witness on a motion or application.

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 PROCEEDING COMMENCED AT TORONTO ACKNOWLEDGMENT OF EXPERT'S DUTY LENCZNER SLAGHT ROYCE SMITH GRIFFIN LLP Barristers Suite 2600 130 Adelaide Street West Toronto ON M5H 3P5 Peter H. Griffin (19527Q) (416) 865-2921 Tel: (416) 865-3558 Fax: Email: pgriffin@litigate.com Brian Kolenda (60153N) (416) 865-2897 Tel: (416) 865-9010 Fax: Email: bkolenda@litigate.com Lawyers for William Seegmiller

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