## Dymon Group of Companies

## 5210 Innes Road



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# 5210 Innes Road Scoped Transportation Impact Assessment 

Prepared for:
Dymon Group of Companies
2-1830 Walkey Road
Ottawa, ON, K1H 8K3

Prepared by:

13 Markham Avenue
Ottawa, ON K2G $3 Z 1$

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PN: 2021-024

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## 1 Screening

This scoped TIA has been prepared to support the proposed development at 5210 Innes Road in the City of Ottawa and will include Design Review component of the City of Ottawa Transportation Impact Assessment (TIA) Guidelines. The scope of this TIA has been confirmed with transportation staff from the City of Ottawa during an online meeting on December 1, 2020. Additionally, a Step 1 TIA Screening Form has been prepared and is included in Appendix A, along with the Certification Form for the Study PM.

## 2 Existing and Planned Conditions

### 2.1 Proposed Development

The subject property, located at 5210 Innes Road, is zoned as Rural Commercial Zone (RC[36r]) and is currently undeveloped. The GFA of the proposed Dymon self-storage facility is 17,000 square metres ( 182,981 square feet), including an interior loading and parking area of 919 square metres ( 9,893 square metres), and a reception area of 981 square metres ( 10,560 square feet). A total of 62 parking spaces are proposed, 55 are exterior while 7 are in the loading bay area. The site will also include one exterior loading dock and an interior drive-thru area for loading / parking.

Access to the site will be accommodated via Trim Road, approximately 75 metres (Site Access \#1) south of Innes Road, and Innes Road (Site Access \#2), approximately 80 metres east of Trim Road, measured from centreline to centreline. Both site accesses will be restricted to right-in / right-out only due to the centreline medians along the frontage of the site. Trucks will enter the site by via Access \#1 and leave the site though the Site Access \#2.

Figure 1 illustrates the Study Area Context. Figure 2 illustrates the proposed concept plan.


Source: http://maps.ottawa.ca/geoOttawa/ Accessed: February 22, 2021


### 2.2 Dymon Business Model and Site Context

Dymon offers a unique customer-centric storage solution unlike anything else in the marketplace. Unlike traditional self storage operations, Dymon facilities are located along arterial corridors, in very prominent locations within close proximity to its residential and business customers. With its high level of security, total humidity and climate control environment, and relentless focus on customer service, Dymon offers a reliable extension to people's homes and businesses. The primary access to Dymon's facilities is via an interior loading area (with secure access 24 hours a day) that protects customers from the weather while loading/unloading their possessions. By providing this interior area the reliance on surface parking is significantly reduced, as up to 75\% of visitors to the site during any period use the interior loading bay, rather than the provided parking lot. In fact, any visit after the initial visit uses the interior loading area as this is the direct access to the storage lockers. Dymon sites include a reception and a retail area that is not used directly for self-storage. This space has several functions, including allowing space for new customers to come in and rent a storage locker or purchase storage supplies (boxes, tape, bubble wrap, etc.). In Spring 2019 Dymon has expanded the services available in this space to include home storage solutions including closet organizers, under counter shelving, and storage bins. This service is now offered at several Ottawa Dymon locations.

### 2.3 Existing Conditions

### 2.3.1 Area Road Network

Innes Road:
Innes Road is a City of Ottawa arterial road with a four-lane cross-section including sidewalks, curbside bike lanes, a centreline median, and auxiliary lanes at major intersections. The posted speed limit on Innes Road within the Study Area is $60 \mathrm{~km} / \mathrm{h}$ and the City of Ottawa reserves a 37.5 metre right of way.

## Trim Road:

Trim Road is a City of Ottawa arterial road with a four-lane cross-section including a sidewalk on the west side, a multi-use path on the east side, south of Innes Road, and sidewalk on both sides north of Innes Road. Trim Road also includes curbside bike lanes, a centreline median, and auxiliary lanes at major intersections. The posted speed on Trim Road within the Study Area is $60 \mathrm{~km} / \mathrm{h}$ and the City of Ottawa reserves a 37.5 metre right of way.

### 2.3.2 Intersections

## Innes Road at Trim Road

The intersection of Innes Road at Trim Road is a signalized intersection with auxiliary left turn lanes and right turn channels on each approach. Crosswalks are present on all legs with pedestrian signal heads and call buttons. No turn restrictions were noted.


### 2.3.3 Cycling and Pedestrian Facilities

Figure 3 illustrates the pedestrian facilities in the study area and Figure 4 illustrates the cycling facilities.

Sidewalks are provided along both sides of Innes Road and Trim Road, with the exception of east side of Trim Road, south of Innes Road, where a multi-use pathway is provided. Cycling facilities include curbside bike lanes along both Innes Road and Trim Road.


Source: http://maps.ottawa.ca/geoOttawa/ Accessed: December 22, 2022


Source: http://maps.ottawa.ca/geoOttawa/ Accessed: December 22, 2022

## 3 Exemption Review

Based on discussions with the City of Ottawa staff, the magnitude of this development, and the anticipated access locations, a reduced scope TIA has been prepared documenting the trip generation, accesses, site circulation, and parking.

## 4 Development-Generated Travel Demand

### 4.1 Trip Generation

To better understand the trip generation of the proposed development, a proxy site trip generation survey has been undertaken at three established, comparable Dymon sites in Ottawa. These sites have been selected as they are similar in size to the proposed development and have similar features (GFA, Land Uses, Arterial Road Access). The selected sites include the new Dymon retail functions and sell the home storage solutions discussed previously. These will operate in the same manner as the proposed site plan at 5210 Innes Road and are appropriate proxy sites for comparison. Table 1 summarizes the site statistics for the surveyed and proposed sites. The number of parking stalls per the approved Site Plan have been documented in Table 1, however the parking provisions will be discussed further in later sections of this letter.

Table 1: Site Statistics Comparison

| Site | Reception/Retail GFA $\left(\mathbf{m}^{\mathbf{2}}\right)$ | Self-Storage GFA $\left.\mathbf{( m}^{\mathbf{2}}\right)$ | Total GFA $\left(\mathbf{m}^{\mathbf{2}}\right)$ | Parking Stalls (SPA) |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 5 5 4}$ Carling Avenue | 2,714 | 18,204 | $\mathbf{2 1 , 6 8 5}$ | 59 Exterior <br> (4 Loading Area) |
| $\mathbf{3 2 3}$ Coventry Road | 867 | 11,484 | 12,351 | 44 Exterior ${ }^{1}$ |
| $\mathbf{3 0 0}$ Greenbank Road | $\sim 700$ | 8,495 | 9,195 | 9 Exterior <br> (4 Loading Area) |
| $\mathbf{5 2 1 0}$ Innes Road | 981 | 16,019 | 17,000 | 55 Exterior <br> (7 Loading Area) |

Note 1: some of these parking stalls are restricted due to truck movements. This will be discussed further below.
Table 2 summarizes the surveyed trip generation for 1554 Carling Avenue, 323 Coventry Road (two survey dates), and 300 Greenbank Road.

Table 2: Proxy Site Trip Generation

| Site | AM Peak Hour |  |  | PM Peak Hour |  |  | Sat Peak Hour |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | Out | Total | In | Out | Total | In | Out | Total |
| 1554 Carling | 6 | 2 | 8 | 13 | 9 | 22 | - | - | - |
| 323 Coventry <br> (May Counts) | 14 | 9 | 23 | 17 | 19 | 36 | - | - | - |
| 323 Coventry <br> (June Counts) | 7 | 5 | 12 | 11 | 15 | 26 | 11 | 15 | 26 |
| 300 Greenbank | 7 | 4 | 11 | 10 | 10 | 20 | 14 | 18 | 32 |

The selected sites have a wide range of gross floor areas. To accurately compare these sites to the proposed site, the trip generation rate has been determined for each survey in terms of vehicle trips generated per 1000 square metres. Table 3 summarizes the trip generation rates for each site. Appendix B includes the trip generation proxy counts and site plans for each surveyed site.

| Site | $\begin{aligned} & \text { GFA } \\ & \left(m^{2}\right) \end{aligned}$ | AM Peak Hour Rate (/1000 sm gfa) |  |  | PM Peak Hour Rate (/1000 sm gfa) |  |  | Sat Peak Hour Rate (/1000 sm gfa) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | In | Out | Total | In | Out | Total | In | Out | Total |
| 1554 Carling | 21,685 | 0.28 | 0.09 | 0.37 | 0.60 | 0.42 | 1.01 | N/A | N/A | N/A |
| 323 Coventry (May) | 12,351 | 1.13 | 0.73 | 1.86 | 1.38 | 1.54 | 2.91 | N/A | N/A | N/A |
| 323 Coventry (June) | 12,351 | 0.57 | 0.40 | 0.97 | 0.89 | 1.21 | 2.11 | 0.89 | 1.21 | 2.11 |
| $300$ <br> Greenbank | 9,195 | 0.76 | 0.44 | 1.20 | 1.09 | 1.09 | 2.18 | 1.52 | 1.96 | 3.48 |
| Average Rate | - | 0.68 | 0.42 | 1.10 | 0.99 | 1.06 | 2.05 | 1.21 | 1.59 | 2.79 |

The trip generation rates above have been examined and these sites do not have a strong correlation between increased gross floor area and increased trip generation. Figure 5 is a graph illustrating the relationship between trip generation and gross floor area. A linear trendline has been added to the graph to illustrate the correlation.

Figure 5: Trip Generation vs. Gross Floor Area


Given the number of sites surveyed, and the various survey dates, an average of the trip generation rates has been calculated. The average trip generation rate has been applied to the proposed site to determine the anticipated trip generation of the subject development. Table 4 summarizes the projected trip generation for the proposed development of a Dymon storage facility at 5210 Innes Road.

Table 4: Projected 5210 Innes Road Site Trip Generation

| Site | AM Peak Hour |  |  | PM Peak Hour |  |  | Sat Peak Hour |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | Out | Total | In | Out | Total | In | Out | Total |
| 5210 Innes Road | 12 | 7 | 19 | 17 | 18 | 35 | 21 | 27 | 47 |

For comparison ITE Trip Generation Rates for ITE Land Use Code (LUC) 151 Mini Warehouse have also been used to calculate the trip generation. It should be noted that the ITE $10^{\text {th }}$ Edition Trip Generation Manual only has a single sample for the Saturday, Peak Hour of Generator data set. This data set has been documented herein but is not reliable and should not be used in traffic analysis. Table 5 summarizes the ITE Trip Generation rates for LUC 151 Mini-Warehouse. Appendix C includes a summary of the description of LUC 151. Table 6 summarizes the trip generation for the proposed site based on the ITE LUC 151 rates.

Table 5: ITE Trip Generation LUC 151 Mini-Warehouse

|  | AM Peak | PM Peak | Sat Peak* |
| :--- | :---: | :---: | :---: |
| Average Rate (/1000 sf gfa) | 0.10 | 0.17 | $0.31^{*}$ |
| In/Out | $60 \% / 40 \%$ | $47 \% / 53 \%$ | $59 \% / 41 \%^{*}$ |
| *Small Sample Size, Data should be used with caution. Single data set provided in ITE Trip Generation Manual 10"t ${ }^{\text {E }}$ Edition. |  |  |  |

Table 6: ITE LUC 151 Trip Generation

| Land Use | AM Peak Hour |  |  | PM Peak Hour |  |  | Sat Peak Hour |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | Out | Total | In | Out | Total | In | Out | Total |
| LUC 151 Trip Gen | 11 | 7 | 18 | 15 | 16 | 31 | 33 | 24 | 57 |

The proxy site trip generation results are similar to the projections created using ITE trip rates. The Saturday peak hour should not be relied on as the ITE $10^{\text {th }}$ Edition Trip Generation Manual contains a single sample for this LUC.

Based on the proxy site trip generation exercise there is no need to undertake a TIA for the proposed development, as the total number of trips generated is less than 60 in any peak hour which is the threshold for undertaking a TIS in the City of Ottawa TIA Guidelines.

## 5 Development Design

### 5.1 Circulation and Access

The proposed site plan and access configuration have been reviewed using two design vehicles including an HSU (standard delivery truck) and WB-20 tractor trailer (infrequent delivery truck). It is assumed that the HSU trucks will access the interior and exterior loading areas as well as the garbage bins at the rear of the property, and the WB-20 will utilize the exterior loading dock. Appendix $D$ includes two drawings illustrating the turning paths for all design vehicles. All turning paths are accommodated by the proposed curbs and driveways.

## 6 Parking

### 6.1 Parking Generation / Supply

The proposed development will include 62 interior and exterior parking stalls, one exterior loading dock, and space in the interior loading area for additional overflow unloading vehicles. The zoning requirements and parking provisions are summarized in Table 7.

| Table 7: Vehicle Parking Requirement Zoning By-Law Approach |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | GFA <br> (s.m.) | Parking Rate (Required) | Parking <br> Spaces <br> (Required) | Parking <br> Spaces <br> (Provided) | Difference |
| Self-Storage <br> Warehouse | 16,019 | N95: 0.8 per $100 \mathrm{~m}^{2}$ for the first <br> $5,000 m^{2}$ of $G F A$ and 0.4 per 100 <br> $m^{2}$ above $5,000 ~ m^{2}$ GFA | 84 |  |  |
|  <br> Retail | 981 | N79: 3.4 per $100 m^{2}$ of GFA | 34 | 62 | -56 |
| Total |  |  | 118 | 62 | -56 |

As noted above the proposed site does not include the number of parking stalls prescribed by the zoning by-law. The proposed site includes 62 parking spaces, where as the requirement is 118 parking spaces.

To support the proposed parking variance, a parking survey has been undertaken at two of the proxy sites used for the Trip Generation. The Parking Surveys were undertaken on the same dates, and locations as the Trip

Generation Proxy Surveys. Appendix E contains the proxy parking generation counts and calculation sheets for 323 Coventry Road and 300 Greenbank Road.

323 Coventry includes parking operations that will not be present on the proposed 1370 Neilson Road site. 323 Coventry currently has parking stalls reserved for long term parking. While these are reserved for this use it is possible for vehicles to park in these stalls throughout the day. To ensure that the daily, short-term, high turnover parking requirements are accurately captured the parking survey for this site was undertaken starting 30 minutes prior to the opening of the site and ending 30 minutes after the site closed for business. This was done for both the weekday and weekend survey periods. The minimum number of parking stalls occupied throughout the entirety of each survey period was noted. This was then subtracted from the maximum total parking demand. This represents the maximum short-term demand. Additionally, as noted on the approved site plan there are 11 parking stalls that are not in use to accommodate truck turning movements. Through the site survey it was determined that eight parking stalls are not in use in this area and are signed to prohibit parking. Table 8 below summarizes the total parking provisions for 323 Coventry Road.

Table 8: 323 Coventry Road Parking Provisions

| Total Parking Stalls | Unsecured Parking Stalls | Secured Parking Stalls | Restricted to <br> Accommodate Truck <br> Movements |
| :---: | :---: | :---: | :---: |
| 44 | 18 | 26 | 8 |

The 18 unsecured parking stalls noted above are potentially available for short-term parking (the secured parking is reserved for long-term parking). However, the survey found that four of the unsecured parking stalls were occupied at the start / end of the survey and are therefore not available for use as short-term parking stalls. The remaining 14 parking stalls were assumed to be available for short-term parking use.

300 Greenbank Road does not accommodate long term parking, as a result there was no need to account for the impact in the counts, and the peak periods were surveyed to capture a relevant data set.

Table 9 summarizes the parking supply and parking demand for the two sites as well as the calculated parking supply rate and parking demand rate. The exterior parking supply has been included. For 323 Coventry Road this supply has been calculated based on the number of parking stalls not in use for long-term parking.

As Dymon's business model makes use of an interior loading space, that can accommodate more vehicles than the defined parking stalls, the interior parking supply has been tabulated based on the maximum demand for interior parking observed at each site.

Table 9: Parking Survey Summary

| Site | GFA <br>  <br> Retail $\left(\mathbf{m}^{\mathbf{2}}\right)$ | Parking Supply <br> (Exterior) | Parking Supply <br> (Max Interior <br> Usage) | Parking <br> Demand | Parking <br> Demand Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{3 2 3}$ Coventry | 12,351 | 14 | 7 | 11 | $0.09 / 100 \mathrm{~m}^{2}$ |
| $\mathbf{3 0 0}$ Greenbank | 9,195 | 9 | 5 | 11 | $0.12 / 100 \mathrm{~m}^{2}$ |

Similar to the trip generation it was found that an increase in parking demand is not strongly correlated to an increase in gross floor area. Based on the proposed site plan for 5210 Innes Road the gross floor area, and parking stall provisions, the parking rate provided for the proposed development has been calculated. Table 10 summarizes the 5210 Innes Road parking provisions.

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| Use Table 10: 5210 Innes Road Parking Provisions - Dymon |  |  |  |
| :---: | :---: | :---: | :---: |
| UFA $\left(\mathbf{m}^{\mathbf{2}}\right)$ | Parking Provided | Parking Rate (Provided) |  |
| Self-Storage Warehouse, Reception \& Retail | 17,000 | 62 | $0.36 / 100 \mathrm{~m}^{2}$ |

It has been calculated that parking is proposed to be provided at a rate of 0.36 per each 100 square metres of gross floor area. While this is less than the parking rate requested by the City of Ottawa, this demand rate is much higher than the surveyed parking rates at comparable Dymon sites.

In addition to the above, patrons will utilize the interior loading space more efficiently than other areas of the site as they will park within the interior loading area to facilitate loading and unloading. On the surveyed sites more than $40 \%$ of all parked vehicles utilized the interior loading area for parking.

As a supplementary analysis, the number of vehicles entering the interior loading area, versus the rest of the site was counted. Table 11 summarizes the interior loading bay usage.

| Table 11: Interior Loading Bay Usage |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Site |  | Weekday |  | Saturday |  |  |
|  | Exterior\% | Interior\% | Exterior\% | Interior\% |  |  |
| 323 Coventry | $57 \%$ | $43 \%$ | $58 \%$ | $42 \%$ |  |  |
| 300 Greenbank | $42 \%$ | $58 \%$ | $54 \%$ | $46 \%$ |  |  |

As shown above the interior loading area is of critical importance to the parking operations of the site.

In summary the parking provisions for the Dymon self-storage use is adequate. Table 12 summarizes the total parking demand based on the proxy site surveys.

Table 12: Parking Requirement - Demand Approach

| Land Use | GFA (s.m.) | Parking Rate <br> (Required) | Parking Spaces <br> (Required) | Parking Spaces <br> (Provided) | Difference |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Self-Storage Warehouse, <br> Reception \& Retail | 17,000 | $0.12 / 100 \mathrm{~m}^{2}$ | 21 | 62 | 41 |

As shown above, the parking provided on the site will satisfy the projected parking demand, based on the proxy site surveys. Therefore, based on the provided interior and exterior parking the site will provide adequate parking to support the proposed use.

Among the 62 provided parking spaces, 1 has been designated as a Type ' $A$ ' accessible parking space in accordance with the Traffic and Parking By-law as shown in Table 13. Two extra Type 'B' accessible parking spaces will be provided beside the Type ' $A$ ' parking space.

Table 13: Accessible Parking Requirement

| Capacity of Public Parking <br> Area (Number of Parking <br> Spaces) | Minimum Number of <br> Spaces to be Reserved for <br> Persons with Disabilities | Accessible Parking Spaces <br> Provided | Difference |
| :---: | :---: | :---: | :---: |
| $20-99$ | 1 Type ' $A^{\prime}$ | 3 |  |
|  |  | 1 Type ' $A^{\prime}, 2$ Type ' $B^{\prime}$ ') | 2 |

### 6.2 Bicycle Parking

Bicycle parking requirements and provisions are summarized in Table 14.

| Table 14: Bicycle Parking Requirement-Zoning By-Law Approach |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | GFA (s.m.) | Parking Rate (Required) | Parking Spaces <br> (Required) | Parking Spaces <br> (Provided) | Difference |  |
| Self-Storage <br> Warehouse | 17,000 | 1 per 2000 square metres of <br> gross floor area | 9 | 10 | 1 |  |

As shown above, the zoning by-law requirement for bicycle parking are 9 spaces, where the bicycle parking provisions are 10 spaces exceeding the requirement.

## 7 Conclusion

Based on the key requirements of the agreed to scope, the following conclusions are made for this site:

- The trip generation analysis demonstrates that this site will not trigger the need for a TIS.
- Based on the proxy site parking surveys the provided parking will adequately serve the proposed Dymon self-storage facility.
- Truck turning templates have been performed to ensure that the site access and drive aisles can be navigated by the design vehicles for the site. All turning paths are accommodated by the proposed curbs and driveways.

Based on this Transportation and Parking Summary, the proposed development should be approved, from a transportation perspective.


Zhengxuan Lai, E.I.T.
289-834-0646
may.lai@cghtransportation.com


Mark Crockford, P. Eng.
905-251-4070
mark.crockford@cghtransportation.com

## Appendix A

TIA Screening Form and PM Certification Form

| City of Ottawa 2017 TIA Guidelines |  |
| :---: | :---: |
| Step 1 - Screening Form | Project Number: 2021-024 |
|  | Project Reference: Dymon 5210 Innes Road |
| 1.1 Description of Proposed Development |  |
| Municipal Address | 5210 Innes Road |
| Description of Location | Located at the southeast corner of Innes Road and Trim Road |
| Land Use Classification | RC[36r] |
| Development Size | 18,910 Square Metres |
| Accesses | One access on Trim Road and one access on Innes Road, both restricted to right-in / right-out |
| Phase of Development | Assumed 1 Phase for TIA |
| Buildout Year | 2023 |
| TIA Requirement | Design Review Component |

### 1.2 Trip Generation Trigger

| Land Use Type | Self-Storage Warehouse |  |
| :--- | :--- | :--- |
| Development Size | $18,910.00$ | G.F.A |

Trip Generation Trigger

Fewer than 60 total peak hour trips will be generated by the proposed development. The trip generation will be further discussed in detail as part of a Scoped TIA report.

| 1.3 Location Triggers |  |
| :--- | :--- |
| Does the development propose a new driveway to a boundary street that is <br> designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle <br> Networks? | Yes |
| Is the development in a Design Priority Area (DPA) or Transit-oriented <br> Development (TOD) zone? | No |
| Location Trigger | Yes |
| 1.4. Safety Triggers No <br> Are posted speed limits on a boundary street 80 km/hr or greater? No <br> Are there any horizontal/vertical curvatures on a boundary street limits sight <br> lines at a proposed driveway? Yes <br> Is the proposed driveway within the area of influence of an adjacent traffic <br> signal or roundabout (i.e. within 300 m of intersection in rural conditions, or <br> within 150 m of intersection in urban/ suburban conditions)? Yes <br> Is the proposed driveway within auxiliary lanes of an intersection? No <br> Does the proposed driveway make use of an existing median break that <br> serves an existing site? No <br> Is there is a documented history of traffic operations or safety concerns on <br> the boundary streets within 500 m of the development? No <br> Does the development include a drive-thru facility? Yes <br> Safety Trigger  |  |

## TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that $\mathrm{s} / \mathrm{he}$ meets the four criteria listed below.

## CERTIFICATION

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed ${ }^{1}$ or registered ${ }^{2}$ professional in good standing, whose field of expertise [check $\sqrt{ }$ appropriate field(s)] is either transportation engineering $\sqrt{ }$ or transportation planning $\square$.

1,2 License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

Dated at $\qquad$ this $\qquad$ 28 day of $\qquad$ , 2018. (City)

Name:
$\frac{\text { Mark Crockford }}{\text { (Please Print) }}$
(Please Print)
Professional Title: $\qquad$ Professional Engineer

Signature of Individual cerfifier that $\mathrm{s} /$ he meets the above four criteria

| Office Contact Information (Please Print) |
| :--- |
| Address: 628 Haines Road |
| City / Postal Code: Newmarket / L3Y 6V5 |
| Telephone / Extension: (905) 251-4070 |
| E-Mail Address: Mark.Crockford@CGHTransportation.com |



## Appendix B

Proxy Site Trip Generation Data and Site Plans


Turning Movement Count Summary, AM and PM Peak Hour

Flow Diagrams


Turning Movement Count Summary, AM and PM Peak Hour

Flow Diagrams



Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

## Coventry Road \& Dymon Storage (343 Coventry Road)



Turning Movement Count Summary, AM and PM Peak Hour

Flow Diagrams

## Lola Street \& Dymon Storage (343 Coventry Road)

Ottawa, ON


Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

## Coventry Road \& Dymon Storage (343 Coventry Road)



Turning Movement Count
Summary, AM and PM Peak Hour
Flow Diagrams

## Lola Street \& Dymon Storage (343 Coventry Road)

Ottawa, ON


Turning Movement Count Summary, OFF and PM Peak Hour Flow Diagrams

## Coventry Road \& Dymon Storage (343 Coventry Road)



Turning Movement Count
Summary, AM and PM Peak Hour
Flow Diagrams

## Lola Street \& Dymon Storage (343 Coventry Road)

Ottawa, ON



Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams


Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

## Greenbank Road \& Dymon Storage SOUTH (300 Greenbank Road)

Nepean, ON


Turning Movement Count Summary, OFF and PM Peak Hour Flow Diagrams

## Greenbank Road \& Dymon Storage NORTH (300 Greenbank Road)

Nepean, ON


Turning Movement Count Summary, OFF and PM Peak Hour Flow Diagrams

## Greenbank Road \& Dymon Storage SOUTH (300 Greenbank Road)

Nepean, ON


## Appendix C

ITE LUC 151 Mini Warehouse Description

## Land Use: 151 Mini-Warehouse

## Description

A mini-warehouse is a building in which a number of storage units or vaults are rented for the storage of goods. They are typically referred to as "self-storage" facilities. Each unit is physically separated from other units, and access is usually provided through an overhead door or other common access point.

## Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/ suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:30 and 11:30 a.m. and 1:15 and 2:15 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Colorado, Massachusetts, Minnesota, New Jersey, Texas, and Utah.

## Source Numbers

$212,403,551,568,642,708,724,850,868,876$

## Appendix D

Turning Template Drawings




clevr: Dymon Group of Companies

## AREHIECT:

5210 Innes Road
TTLE: Tuming Movement Analysis WB-20 Tuming Movements (2)
 2021-024

002


HSU Outbound Movement West Garbage Container



HSU Outbound Movemen West Garbage Container

HSU


## 

clevr: Dymon Group of Companies

| ARECHIECT: |  |  |
| :---: | :---: | :---: |
| SITE: 5210 Innes Road |  |  |
|  |  |  |
| TTLLE: Tuming Movement Analysis HSU Tuming Movements (1) |  |  |
| $\begin{gathered} \text { Scalle AT ATB: } \\ \text { NTS } \end{gathered}$ |  |  |
| Provect wo 2021-024 | DRAWING NO: $003$ | Revisons 06 |




## Appendix E

Proxy Site Parking Data


Dymon Storage - Coventry \& Lola

## Off-Street Parking Usage

## Dymon Storage - Off Street Parking Inventory

## Dymon Storage

## 323 Coventry Road, Ottawa, ON K1K 3X6


#### Abstract

Day: MONDAY Date: 10 June 2019 Survey Hours: Weather: Partly cloudy $+16 \mathrm{C} /$ Overcast Light Rain after $1900+23 C$ Surveyor (s):


| Time | Number of Parked Vehicles by Area |  |  |  |  |  |  | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| 0700 |  |  |  |  |  |  |  | Area 4 - west side parking area, one |
| 0730 | 0 | 0 | 1 | 3 | 3 | 15 | 2 | of the vehicles was a trailer parked for |
| 0800 | 1 | 0 | 0 | 3 | 3 | 15 | 2 | every time period. |
| 0830 | 1 | 0 | 2 | 3 | 3 | 15 | 2 |  |
| 0900 | 1 | 0 | 2 | 3 | 3 | 15 | 2 | Area 5 - one truck parked in middle |
| 0930 | 1 | 0 | 3 | 3 | 3 | 15 | 2 | Area 3-truck in loading dock |
| 1000 | 1 | 0 | 4 | 3 | 3 | 15 | 2 |  |
| 1030 | 2 | 0 | 0 | 5 | 3 | 15 | 2 |  |
| 1100 | 2 | 0 | 5 | 6 | 3 | 15 | 2 | Area 5 - landscaping truck in middle |
| 1130 | 2 | 0 | 6 | 5 | 3 | 14 | 2 |  |
| 1200 | 2 | 0 | 7 | 6 | 3 | 14 | 2 |  |
| 1230 | 1 | 0 | 7 | 4 | 3 | 14 | 2 |  |
| 1300 | 1 | 0 | 1 | 4 | 4 | 15 | 2 |  |
| 1330 | 0 | 0 | 1 | 3 | 3 | 15 | 2 |  |
| 1400 | 0 | 0 | 1 | 5 | 3 | 15 | 2 | Area 2- truck parked beside accessible spot |
| 1430 | 1 | 0 | 5 | 4 | 3 | 14 | 2 | Area 5 - truck parked in middle of lot |
| 1500 | 3 | 0 | 3 | 5 | 3 | 14 | 2 |  |
| 1530 | 4 | 0 | 1 | 4 | 4 | 14 | 2 | Area 3 - truck in loading dock |
| 1600 | 2 | 0 | 3 | 4 | 4 | 14 | 2 | Area 3 - truck in loading dock |
| 1630 | 1 | 0 | 1 | 4 | 3 | 16 | 2 |  |
| 1700 | 1 | 0 | 0 | 3 | 3 | 16 | 2 |  |
| 1730 | 2 | 0 | 1 | 3 | 3 | 16 | 2 |  |
| 1800 | 3 | 0 | 2 | 3 | 3 | 16 | 2 |  |
| 1830 | 3 | 0 | 3 | 4 | 3 | 16 | 2 |  |
| 1900 | 3 | 0 | 0 | 2 | 3 | 17 | 2 | Area 5 - pickup truck loading |
| 1930 | 2 | 0 | 1 | 2 | 3 | 16 | 2 | Area 6 - north side parking area. Although |
| 2000 | 3 | 0 | 1 | 2 | 3 | 16 | 2 | there are 30 spaces, parking is prohibited |
| 2030 | 3 | 0 | 1 | 2 | 3 | 16 | 2 | in 8 of them to permit tractor trailers to |
| 2100 | 3 | 0 | 0 | 2 | 3 | 16 | 2 | manoeuvre into the loading dock. |
| 2130 | 2 | 0 | 0 | 2 | 3 | 16 | 2 | Accordingly, only 22 spaces are available |
| Spaces $\Rightarrow$ | 4 | 1 | N/A | 11 | 4 | 22 | 2 | for long term parking. |



## Off-Street Parking Usage

## Dymon Storage - Off Street Parking Inventory

## Dymon Storage

## 323 Coventry Road, Ottawa, ON K1K 3X6

| Day: $\quad$ SATURDAY | Date: | 8 June 2019 | Survey Hours: | $0830-1830$ |
| :--- | :--- | ---: | :--- | ---: |
| Weather: | AM Clear $+10^{\circ} \mathrm{C}$ PM Clear $+23^{\circ} \mathrm{C}$ | Surveyor (s): | Morgan/Carmody |  |


|  | Number of Parked Vehicles by Area |  |  |  |  |  |  | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time |  |  |  |  |  |  |  |  |
| 0700 |  |  |  |  |  |  |  | Area 4 - west side parking area |
| 0730 |  |  |  |  |  |  |  | one of the vehicles was a trailer |
| 0800 |  |  |  |  |  |  |  | parked for every time period. |
| 0830 | 1 | 0 | 1 | 3 | 2 | 14 | 2 |  |
| 0900 | 2 | 0 | 4 | 2 | 3 | 14 | 2 | Area 5 - west side parking area |
| 0930 | 3 | 1 | 5 | 2 | 3 | 14 | 2 | at 1100 and at 1130, one of the |
| 1000 | 3 | 0 | 4 | 2 | 3 | 14 | 2 | vehicles was a tractor trailer in |
| 1030 | 3 | 0 | 4 | 3 | 3 | 14 | 2 | the loading dock. |
| 1100 | 3 | 0 | 2 | 3 | 4 | 14 | 2 |  |
| 1130 | 3 | 0 | 0 | 5 | 4 | 14 | 2 | Area 6 - north side parking area |
| 1200 | 4 | 0 | 1 | 5 | 3 | 14 | 2 | 2 vehicles were trailers from |
| 1230 | 4 | 0 | 1 | 2 | 3 | 14 | 2 | 0830-1500 and after 1500-1830 |
| 1300 | 3 | 0 | 2 | 2 | 3 | 14 | 2 | 3 of the vehicles were trailers. |
| 1330 | 2 | 0 | 1 | 2 | 3 | 14 | 2 |  |
| 1400 | 3 | 0 | 2 | 2 | 3 | 13 | 2 | Area 6 - north side parking area |
| 1430 | 4 | 0 | 1 | 3 | 3 | 14 | 2 | Although there are 30 spaces, |
| 1500 | 3 | 0 | 6 | 3 | 3 | 14 | 2 | parking is prohibited in 8 of |
| 1530 | 3 | 0 | 2 | 3 | 3 | 15 | 2 | them to permit tractor trailers |
| 1600 | 4 | 0 | 2 | 3 | 3 | 15 | 2 | to manoeuvre into the loading |
| 1630 | 3 | 0 | 2 | 3 | 3 | 15 | 2 | dock. Accordingly, only 22 |
| 1700 | 3 | 0 | 1 | 2 | 3 | 15 | 2 | spaces are available for long |
| 1730 | 4 | 0 | 1 | 2 | 3 | 15 | 2 | term parking. |
| 1800 | 3 | 0 | 3 | 2 | 3 | 15 | 2 |  |
| 1830 | 2 | 0 | 1 | 2 | 3 | 15 | 2 |  |
| 1900 |  |  |  |  |  |  |  |  |
| 1930 |  |  |  |  |  |  |  |  |
| 2000 |  |  |  |  |  |  |  |  |
| 2030 |  |  |  |  |  |  |  |  |
| 2100 |  |  |  |  |  |  |  |  |
| 2130 |  |  |  |  |  |  |  |  |
| Spaces ${ }^{\text {a }}$ | 4 | 1 | N/A | 11 | 4 | 22 | 2 |  |




Off-Street Parking Usage

## Dymon Storage - Off Street Parking Inventory

## Dymon Storage

300 Greenbank Road, Ottawa, ON K2H 0B6

| Day: | MONDAY | Date: | 10 June 2019 | Survey Hours: |
| :--- | :---: | :---: | :---: | :---: |
| Weather: | Partly Cloudy $+16 \mathrm{C} /$ Overcast Light Rain after $1900+23 C$ | Surveyor (s): | 0700-0900 \& 1600-1800 |  |
|  |  | Mousseau |  |  |


|  | Number of Parked Vehicles by Area |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time |  |  |  |  |  |  |  |
| 0700 | 0 | 0 | 0 | 0 | 0 |  |  |
| 0730 | 0 | 0 | 2 | 0 | 0 |  |  |
| 0800 | 0 | 0 | 3 | 1 | 0 |  |  |
| 0830 | 0 | 1 | 3 | 0 | 0 |  |  |
| 0900 | 0 | 1 | 3 | 0 | 0 |  |  |
| 0930 |  |  |  |  |  |  |  |
| 1000 |  |  |  |  |  |  |  |
| 1030 |  |  |  |  |  |  |  |
| 1100 |  |  |  |  |  |  |  |
| 1130 |  |  |  |  |  |  |  |
| 1200 |  |  |  |  |  |  |  |
| 1230 |  |  |  |  |  |  |  |
| 1300 |  |  |  |  |  |  |  |
| 1330 |  |  |  |  |  |  |  |
| 1400 |  |  |  |  |  |  |  |
| 1430 |  |  |  |  |  |  |  |
| 1500 |  |  |  |  |  |  |  |
| 1530 |  |  |  |  |  |  |  |
| 1600 | 1 | 2 | 2 | 0 | 0 |  |  |
| 1630 | 0 | 3 | 1 | 0 | 0 |  |  |
| 1700 | 0 | 2 | 1 | 0 | 0 |  |  |
| 1730 | 0 | 2 | 4 | 0 | 0 |  |  |
| 1800 | 1 | 3 | 4 | 0 | 0 |  |  |
| 1830 |  |  |  |  |  |  |  |
| 1900 |  |  |  |  |  |  |  |
| 1930 |  |  |  |  |  |  |  |
| 2000 |  |  |  |  |  |  |  |
| 2030 |  |  |  |  |  |  |  |
| 2100 |  |  |  |  |  |  |  |
| 2130 |  |  |  |  |  |  |  |

$\frac{\overline{\text { Accessible parking area is }}}{\text { located within the loading dock. }}$

Jordash van parked in fire lane
$\qquad$


## Off-Street Parking Usage

## Dymon Storage - Off Street Parking Inventory

## Dymon Storage

300 Greenbank Road, Ottawa, ON K2H 0B6

| Day: $\quad$ SATURDAY | Date: | 8 June 2019 | Survey Hours: | $1100-1600$ |
| :--- | :---: | :--- | :--- | :--- |
| Weather: | Clear $+10^{\circ} \mathrm{C}$ Clear $+23^{\circ} \mathrm{C}$ | Surveyor (s): | Mousseau |  |




