



Technical Memorandum

To: Mike Giampa – City of Ottawa Date: 2023-07-14

Cc: Mark Crockford – CGH Transportation

From: Viktoriya Zaytseva – CGH Transportation Project Number: 2023-012

Re: 360 Laurier Avenue TIA Step 1 Additional Information

CGH Transportation has been retained to address the transportation impacts of the proposed redevelopment of 360 Laurier Avenue West. As part of the TIA process a Step 1 Screening Form Memo has been prepared (see Attachment 1). The Screening Form identifies the need for a TIA based on the Trip Generation Trigger for a new development of this size and the Location Trigger. However, as this is a redevelopment conversion, which is proposing to retrofit the existing office use to allow for residential uses, the net difference in trips should be considered, not just the trips generated by the new land use. This memo has been prepared to discuss the triggers for the TIA requirements in general and illustrate the rationale for why they do not apply to this site and a full TIA is not required as well as to address any elements that are required.

Trip Generation Trigger

Currently 360 Laurier Avenue West includes high-rise office and ground floor commercial land uses, including a fast casual restaurant, a high-turnover sit-down restaurant, a nail salon, and a dentist office. The proposed redevelopment will include 139 residential units and 1,332 square feet of ground floor commercial space.

To understand the impact of the proposed redevelopment on the Study Area transportation network, the net trip generation was determined by comparing the trip generation of the existing and proposed land uses. The ITE Trip Generation Manual (11th Edition) and 2020 TRANS Generation Manual were used to determine auto trip generation of existing and proposed land uses. Table 1, Table 2, and Table 3 below describe the existing, proposed, and net trip generation at 360 Laurier Avenue West.

Table 1: Existing Auto Trip Generation

| Land Use | Units / GFA (sq. ft.) | AM Peak Hour | | | PM Peak Hour | | |
|----------------------------------|-----------------------|--------------|-----------|------------|--------------|------------|------------|
| | | In | Out | Total | In | Out | Total |
| General Office LUC 710 | 94,357 | 140 | 19 | 159 | 27 | 131 | 158 |
| Fast Casual Restaurant LUC 930 | 1,550 | 1 | 2 | 3 | 11 | 9 | 20 |
| High Turnover Restaurant LUC 932 | 1,550 | 10 | 9 | 19 | 11 | 7 | 18 |
| Hair Salon* LUC918 | 1,550 | 1 | 1 | 2 | 1 | 2 | 3 |
| Dentist Office LUC 720 | 1,550 | 7 | 2 | 9 | 4 | 8 | 12 |
| Total Auto Trips | | 159 | 33 | 192 | 54 | 157 | 211 |

* Note: Hair Salon LUC 918 was the closest ITE land use to the nail salon land use currently present at 360 Laurier Avenue West and is expected to have similar trip generation patterns as a nail salon

Table 2: Future Auto Trip Generation

| Land Use | Units / GFA (sq. ft.) | AM Peak Hour | | | PM Peak Hour | | |
|--|--------------------------|--------------|-----------|-----------|--------------|-----------|-----------|
| | | In | Out | Total | In | Out | Total |
| Residential Multi-Unit (High Rise) LUC 221 & 222 | 139 | 17 | 39 | 56 | 32 | 23 | 55 |
| Variety Store LUC 814 | 1,332 | 2 | 2 | 4 | 5 | 4 | 9 |
| Total Auto Trips | | 19 | 41 | 60 | 37 | 27 | 64 |

Table 3: Net Auto Trip Generation

| Land Use | Units / GFA (sq. ft.) | AM Peak Hour | | | PM Peak Hour | | |
|-----------------------------|--------------------------|--------------|----------|--------------------|--------------|-------------|--------------------|
| | | In | Out | Total | In | Out | Total |
| Existing | N/A | 159 | 33 | 192 | 54 | 157 | 211 |
| Proposed | N/A | 19 | 41 | 60 | 37 | 27 | 64 |
| Net Total Auto Trips | | -140 | 8 | -132 (-69%) | -17 | -130 | -147 (-70%) |

Table 3 above summarizes the existing and proposed trip generation and the net difference, showing that the trip generation of the proposed land uses would be significantly less than the previous use. Therefore, the proposed redevelopment would cause a net reduction in the number of site generated trips. Based on this reduction in person trips to the site, the trip generation trigger of the Step 1 Screening Form should not be considered to be met.

Safety Trigger

The Step 1 Screening form indicated that a Safety Trigger was met as the existing access to this building is within 150 metres of signalized intersections of Laurier Avenue at Kent Street to the west and Laurier Avenue at Bank Street. As shown previously the proposed reconfiguration of the existing building will produce a net reduction in trips by all modes from the site. The location and configuration of the existing access point will remain the same and will be a full movement access to the underground parking garage at the east side building. There are no auxiliary turning lanes along Laurier Avenue within the influence area of the site access. Based on the foregoing, the reconfiguration of this existing building will have no impacts on the nearby signalized intersections. Therefore, there is no need to undertake a TIA due to the safety trigger criteria.

Access and Frontage Review

The proposed site plan has been included as Attachment 2. The existing access width is 6 meters between the edge of pavement at Laurier Avenue and the building façade. The site access leads to the 6.69-meter covered laneway and the 4.5-meter wide underground parking ramp. Convex mirrors are provided throughout the drive aisles, starting from the laneway entrance at the building frontage, as indicated in the site plan. Six meters is typically the minimum ramp / laneway width for bidirectional traffic. However, as the previous office land use had functioned within the provided ramp width and given that widening this ramp would require significant structural changes to the building, the development should proceed with the existing underground ramp.

In the event where two oversized passenger vehicles may encounter one another at the opposite ends of the ramp, there are approximately 23 meters of stacking distance available within the covered laneway for inbound vehicles to wait for outbound vehicles to exit. This is equal to approximately three stacked vehicles. Based on arrivals forecasted as part of the trip generation above, a vehicle will enter the proposed redevelopment once every two minutes on average. Further, same time arrival of inbound and outbound vehicles will occur

infrequently, as the trips generated by a residential development are expected to be one-directional during the peak hours. During the AM peak period, the majority of the trips are expected to be outbound and during the PM peak period, most of the trips will be inbound. Thus, given that the occurrence of two oversized vehicles entering and exiting the ramp at the same time is expected to be infrequent, the available stacking distance, and the projected arrival rate, the existing 4.5-meter-wide ramp is acceptable, from a transportation perspective.

Loading

Several factors were considered to determine a preferred loading configuration for the subject redevelopment site. These include the constraints of the existing building being converted, predictability of vehicle arrivals, and the frequency and duration of loading. As a result, it was determined that waste collection will occur within the existing dedicated loading zone area along Laurier Avenue between the main building entrance and the entrance to the underground parking garage. The commercial and residential loading is proposed within the covered laneway close to the laneway entrance. A dedicated 360 Laurier Avenue staff member will navigate the truck out of the covered laneway when a backward movement occurs.

The waste collection is proposed along Laurier Avenue to prevent garbage trucks from reversing across the sidewalk and the bike lane along Laurier Avenue. In the proposed loading configuration, the waste collection vehicle will be parked parallel to the bike lane and the sidewalk, providing better visibility and longer reaction time for vulnerable road users when the loading occurs. Further, garbage pickup is expected to occur infrequently and outside of the peak hours, which will further minimize loading impacts on cyclists and pedestrians.

Unlike the waste collection, residential and commercial loading is lengthy and requires multiple rounds of transferring goods between the loading vehicle and the building. Additionally, residential and commercial loading times can be controlled by the building management by prohibiting loading during certain days and time periods, as well as dedicating building staff who will guide the vehicles reversing from the covered laneway to Laurier Avenue. Therefore, to avoid repeated crossings of the sidewalk and the bike lane when loading and given that additional safety measures can be implemented to accommodate residential and commercial loading, off-street loading along the covered laneway is recommended for this type of loading.

As loading within the covered laneway would temporarily restrict the laneway to one-way only, it is recommended that residential loading is prohibited on weekdays during AM and PM peak hours when trips in and out of the underground parking garage are most frequent. During the off-peak, bi-directional traffic to the underground parking garage is expected to be lower than the peak hour estimate of one vehicle per minute on average (see Table 2). Considering this in combination with low auto parking provisions on site, and other TDM measures discussed further in this memo, the same time arrival of vehicles highly unlikely during the off-peak hours. Additionally, a convex mirror was proposed across from western stair doors to enable drivers, cyclists, and pedestrians on site to anticipate traffic arriving and leaving the site when the loading is ongoing.

Parking Requirements

The auto parking requirements and provisions for the proposed development are summarized in Table 4.

Table 4: Auto Parking Provisions

| Land Use / Area | Requirement | Units / GFA | Parking Rate | Parking Required | Parking Provided |
|------------------------------|-------------|-------------|--|------------------|------------------|
| Dwelling Unit / Central Area | Minimum | 139 | 0 | 0 | 59 |
| | Visitor | | 0.1 per dwelling unit after first 12 units | 13 | |
| | Maximum | | 1.5 per dwelling unit (combined total of resident and visitor parking) | 209 | |
| Retail Store / Central Area | Minimum | 96.7 | 0 | 0 | 0 |
| | Maximum | | 1 per 100 m ² of gross floor area | 1 | |

Based on the City of Ottawa Zoning By-Law 2008-250, a minimum of 13 residential visitor parking spaces, a maximum of 209 residential parking spaces, and a maximum of 1 retail parking spaces are permitted at the proposed development. The proposed site plan includes 13 visitor parking spaces, and 46 resident parking spaces, out of which four are electric vehicle parking spaces. Thus, the City's Zoning By-Law requirements are met, with the proposed number of parking spaces equal to approximately one quarter of the maximum permitted parking spaces.

The bicycle parking requirements and provisions for the proposed development are summarized in Table 5.

Table 5: Bicycle Parking Provisions

| Land Use / Area | Requirement | Units / GFA | Parking Rate | Parking Required | Parking Provided |
|------------------------------|-------------|-------------|--|------------------|------------------|
| Dwelling Unit / Central Area | Minimum | 139 | 0.50 per dwelling unit | 70 | 77 |
| Retail Store / Central Area | Minimum | 131 | 1 per 250 m ² of gross floor area | 1 | 1 |

The City of Ottawa Zoning By-Law 2008-250 requires a minimum of 70 resident bicycle parking spaces and one retail bicycle parking space. The proposed site plan includes 77 resident bicycle parking spaces and one retail parking space. The majority of the resident bicycle parking spaces, 63 of the 77 provided, are conveniently located near common area washrooms at the ground floor level. The proposed ground floor bike storage area also includes a bike wash station. The retail bicycle parking is located in an easily accessible area to retail patrons, along the frontage of the proposed development.

Transportation Demand Management

The subject development is located within a 400-metre radius of Lyon LRT and Parliament LRT stations. As of April 2023, the closest conventional north-south transit route is the OC Transpo Route #6 along Bank Street. Additionally, a number of east-west STO transit routes run along Slater Avenue. There are sidewalks and protected bike lanes along both north and south sides of Laurier Avenue in the vicinity of the subject site.

The proposed redevelopment further encourages the use of sustainable modes. As previously mentioned, the proposed site plan includes nearly quarter of the maximum auto parking spaces allowed in Ottawa Central Area. Additionally, the majority of bicycle parking spaces are provided in a convenient location on the ground floor, with nearby public washrooms and a proposed bike wash station. Further, the separation of bicycle parking spaces

from auto parking prevents bicycles from accumulating dust and debris, requiring lower maintenance and as a result, further encouraging active trips.

The “suite of post occupancy TDM measures” has been summarized in the TDM checklist for the residential component of the proposed development. The checklist is provided in Attachment 3. The key TDM measures recommended include:

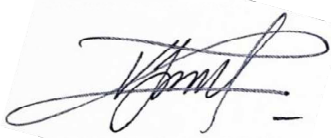
- Designate an internal coordinator, or contract with an external coordinator.
- Display local area maps with walking/cycling access routes and key destinations at major entrances.
- Display relevant transit schedules and route maps at entrances.
- Offer PRESTO cards preloaded with one monthly transit pass on residence purchase / move-in to encourage residents to use transit.
- Unbundle parking cost from monthly rent.
- Provide a multimodal travel option information package to new residents.

Conclusions

Based on the foregoing, no further Transportation Impact Analysis is required to support the proposed redevelopment of 360 Laurier Avenue. Therefore, this development should proceed as proposed, from a transportation perspective.

If you have any comments or questions, please do not hesitate to contact the undersigned.

Prepared by:



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Reviewed by:



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List of Attachments:

Attachment 1 – Step 1 Screening Form

Attachment 2 – Proposed Site Plan

Attachment 3 – TDM Checklist

Attachment 1

Step 1 Screening Form

City of Ottawa 2017 TIA Guidelines
Step 1 - Screening Form

Date:
Project Number:
Project Reference:

27-Jan-23

| 1.1 Description of Proposed Development | |
|---|--|
| Municipal Address | 360-103 Laurier Avenue West |
| Description of Location | Located in Ward 14 on the south side of Laurier Avenue West, 30 meters east of Laurier Avenue West and Kent Street intersection. |
| Land Use Classification | MD S25 |
| Development Size | 139 high-rise residential units and 1,550 square feet of ground floor retail space. |
| Accesses | One access into the parking garage from Laurier Avenue |
| Phase of Development | Assumed 1 Phase for TIA |
| Buildout Year | 2028 |
| TIA Requirement | Design Review Component |

| 1.2 Trip Generation Trigger | |
|-----------------------------|-------------------------|
| Land Use Type | Townhomes or apartments |
| Development Size | 139 Units |
| Trip Generation Trigger | No |

The subject site is a redevelopment of an existing office building with four ground floor commercial units. The preliminary trip generation indicates a net reduction in trip generation as a result of proposed redevelopment (see page 2 for details).

| 1.3 Location Triggers | |
|--|-----|
| Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks? | No |
| Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone? | Yes |
| Location Trigger | Yes |

| 1.4. Safety Triggers | | |
|---|-----|--|
| Are posted speed limits on a boundary street 80 km/hr or greater? | No | |
| Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway? | No | |
| Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)? | Yes | Although the access to 360 Laurier Avenue West is within 150 m of a signalized intersection, this is an existing access and will not be modified as part of the proposed redevelopment. Further, the impact of this access is expected to be minimized as the preliminary trip generation indicates a net reduction in auto trips. |
| Is the proposed driveway within auxiliary lanes of an intersection? | No | |
| Does the proposed driveway make use of an existing median break that serves an existing site? | No | |
| Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development? | No | |
| Does the development include a drive-thru facility? | No | |
| Safety Trigger | Yes | Please see notes above. |



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 s/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 licensed¹ or registered² professional in good standing, whose field of expertise [check appropriate field(s)] is either transportation engineering or transportation planning .

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.


City Of Ottawa
Infrastructure Services and Community
Sustainability
Planning and Growth Management
110 Laurier Avenue West, 4th fl.
Ottawa, ON K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

Ville d'Ottawa
Services d'infrastructure et Viabilité des
collectivités
Urbanisme et Gestion de la croissance
110, avenue Laurier Ouest
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Tél. : 613-580-2424
Télécopieur: 613-560-6006

Dated at Newmarket this 28 day of June, 2018.
(City)

Name: Mark Crockford
(Please Print)

Professional Title: Professional Engineer



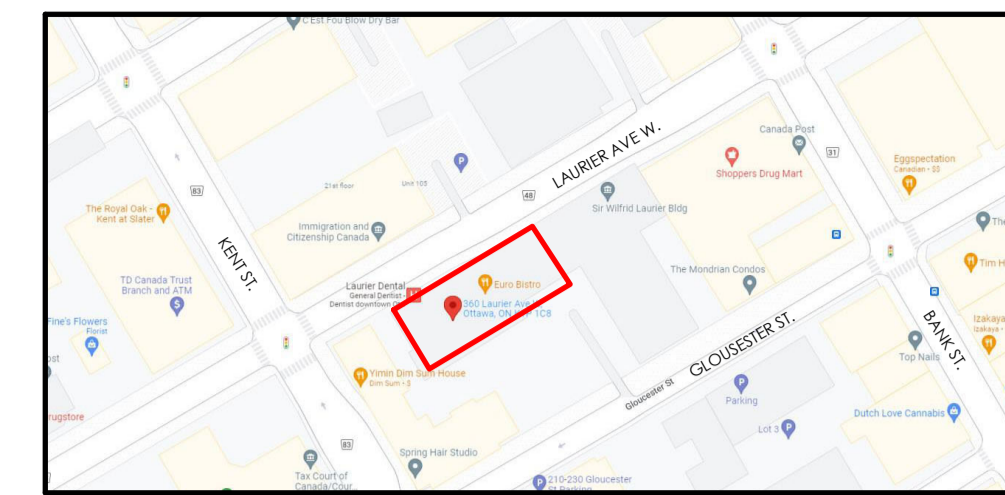
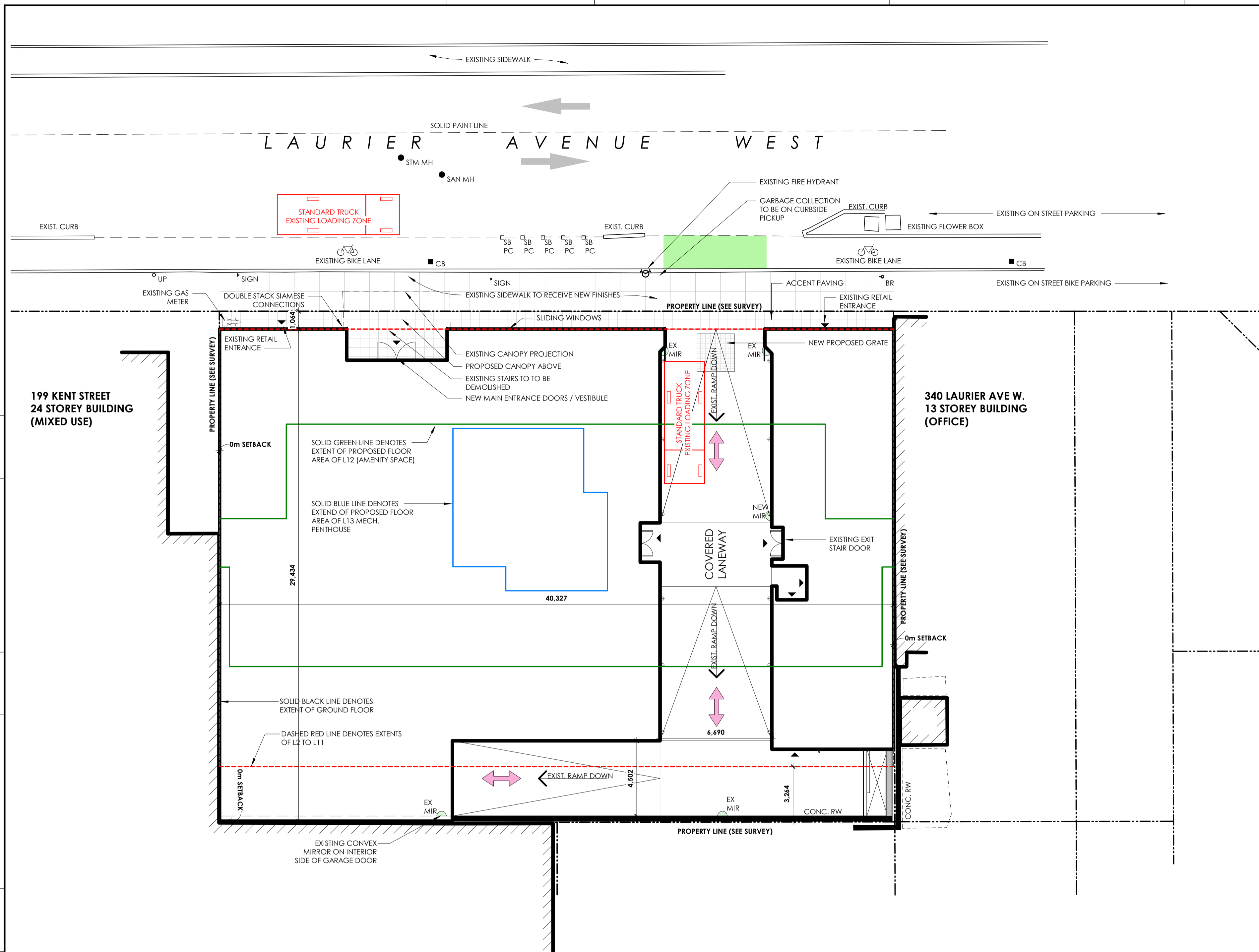
Signature of Individual certifier that s/he meets the above four criteria

| |
|--|
| 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 |



Attachment 2

Proposed Site Plan



KEY PLAN

LEGAL DESCRIPTION:
 PART OF LOTS 28 AND 29
 REGISTERED PLAN 2996
 CITY OF OTTAWA
 SURVEY REFERENCE:
 TECHNICAL INFORMATION GATHERED FROM
 SURVEY PREPARED BY CERTIFIED LAND
 SURVEYOR: FARLEY, J.D. BARNES LIMITED
 DATE: MARCH 10TH, 2023
 FILE # 23-10-013-00
 PLANNER CONTACT INFORMATION:
 NAME: C.M. FOX
 TEL: (613) 731-7244

SITE PLAN LEGEND

| | |
|----------|---|
| ■ CB | CATCH BASIN |
| ● SAN MH | SANITARY MAN HOLE |
| ▲ | BUILDING ENTRANCE |
| ○ UP | UTILITY POLE |
| * SIGN | TRAFFIC SIGN |
| ⦿ | FIRE HYDRANT |
| ⊙ BR | SINGLE BIKE RACK BOLLARD |
| ⊙ SB | COLLAPSABLE SAFETY BOLLARD 3'-0" - 5'-0" O.C. |
| ⊙ SB PC | COLLAPSABLE SAFETY BOLLARD 3'-0" - 5'-0" O.C. MOUNTED ON PIN CURB |
| 🚲 | BICYCLE LANE |
| ◡ MIR | EXISTING CONVEX MIRRORS |

VEHICLE PARKING PROVIDED (BY FLOOR)

| TYPE | COUNT |
|--------------------------|-----------|
| LEVEL P5 BASEMENT | |
| COMPACT (2438x5300) | 9 |
| STANDARD (2600x5200) | 6 |
| LEVEL P4 BASEMENT | |
| COMPACT (2438x5300) | 9 |
| STANDARD (2600x5200) | 4 |
| LEVEL P3 BASEMENT | |
| ACCESSIBLE (3400x5200) | 2 |
| COMPACT (2438x5300) | 7 |
| STANDARD (2600x5200) | 3 |
| LEVEL P2 BASEMENT | |
| COMPACT (2438x5300) | 6 |
| MOTORCYCLE (1200x2500) | 2 |
| STANDARD (2600x5200) | 3 |
| LEVEL P1 BASEMENT | |
| ACCESSIBLE (3400x5200) | 1 |
| COMPACT (2438x5300) | 5 |
| STANDARD (2600x5200) | 2 |
| GRAND TOTAL | 59 |

BICYCLE PARKING PROVIDED (BY FLOOR)

| TYPE | COUNT |
|---|-----------|
| LEVEL P4 BASEMENT | |
| HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE) | 8 |
| LEVEL P2 BASEMENT | |
| HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE) | 6 |
| LEVEL 01 | |
| HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE) | 54 |
| VERTICAL BICYCLE SPACE (SECURE) | 9 |
| GRAND TOTAL | 77 |
| REQUIRED | 70 |

BICYCLE PARKING (LOCKER @ PARKING STALL)

| LEVEL | COUNT |
|-------------------------------------|------------|
| P3 | 8 |
| P4 | 8 |
| P5 | 8 |
| TOTAL | 24 |
| GRAND TOTAL WITH ABOVE REQ'D | 101 |

1 SITE PLAN - PROPOSED
 1:150
 A0-200

GENERAL NOTES:
 UNLESS OTHERWISE NOTED:
 A. SITE DEMOLITION PLAN AND SITE PLAN TO BE READ IN CONJUNCTION WITH LANDSCAPE AND CIVIL PACKAGE DRAWINGS.
 B. ALL CONSTRUCTED ELEMENTS ARE TO BE RETAINED.
 C. PROTECTION MEASURES ARE TO BE TAKEN TO PREVENT DAMAGE TO EXISTING STRUCTURES OR LANDSCAPE FROM OCCURRING.
 D. ANY PARKING SIGNAGE MOVED OR REMOVED DURING CONSTRUCTION WILL BE REINSTATED.
 E. SIDEWALK/CURB TO BE REINSTATED WHERE PRIVATE DRIVEWAYS HAVE BEEN DEMOLISHED OR WHERE DAMAGED THROUGH CONSTRUCTION PROCESS.

RESIDENTIAL SUITE COUNTS

| TYPE | COUNT |
|---------------------|------------|
| 1 BDRM | 1 |
| 1 BDRM (B.F.) | 19 |
| 1 BDRM (B.F.) + DEN | 1 |
| 1 BDRM + DEN | 19 |
| 2 BDRM | 30 |
| 2 BDRM (B.F.) | 10 |
| 2 BDRM + DEN | 19 |
| STUDIO | 40 |
| TOTAL | 139 |

GFA AREA SCHEDULE

| LEVEL | EXISTING AREA | PROPOSED AREA | DIFFERENCE |
|-------------------------------------|---------------------|---------------------|------------------|
| P5-BASEMENT (PARK./MECH.) | - | - | - |
| P3-P4 BASEMENT (PARK./MECH.) | - | - | - |
| P1-P2 BASEMENT (PARK./MECH.) | - | - | - |
| LEVEL 01 (RETAIL/AMANTY.) | 728.31 m² | 704.53 m² | -23.78 m² |
| LEVEL 02 (RESIDENTIAL) | 831.90 m² | 807.53 m² | -24.37 m² |
| LEVEL 03 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 04 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 05 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 06 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 07 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 08 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 09 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 10 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 11 (RESIDENTIAL) | 916.17 m² | 893.20 m² | -22.97 m² |
| LEVEL 11 (MECH.) | 293.40 m² | 460.23 m² | 166.83 m² |
| LEVEL 13 (MECH.) | - | - | - |
| TOTAL | 10,099.12 m² | 10,011.13 m² | -87.99 m² |

RESIDENTIAL SUITE AREAS

| TYPE | AREA (SQ.M) | AREA (SF) |
|---------------------------------------|--------------------|----------------------|
| LEVEL 02 | | |
| SUITE 01 1 BDRM (B.F.) + DEN | 54.72 m² | 588.96 ff² |
| SUITE 03 2 BDRM | 65.54 m² | 705.50 ff² |
| SUITE 04 2 BDRM (B.F.) | 62.54 m² | 673.13 ff² |
| SUITE 05 STUDIO | 45.26 m² | 487.16 ff² |
| SUITE 06 STUDIO | 38.93 m² | 419.04 ff² |
| SUITE 07 1 BDRM | 47.52 m² | 511.49 ff² |
| SUITE 08 1 BDRM + DEN | 59.15 m² | 636.69 ff² |
| SUITE 09 STUDIO | 38.95 m² | 419.30 ff² |
| SUITE 10 STUDIO | 45.05 m² | 484.91 ff² |
| SUITE 11 2 BDRM | 62.71 m² | 675.05 ff² |
| SUITE 12 2 BDRM | 70.20 m² | 755.58 ff² |
| SUITE 13 2 BDRM + DEN | 72.25 m² | 777.67 ff² |
| SUITE 14 1 BDRM (B.F.) | 52.31 m² | 563.11 ff² |
| LEVEL 03 TO LEVEL 11 (TYPICAL) | | |
| SUITE 01 1 BDRM (B.F.) | 52.55 m² | 565.64 ff² |
| SUITE 02 2 BDRM + DEN | 72.20 m² | 777.17 ff² |
| SUITE 03 2 BDRM | 70.51 m² | 759.00 ff² |
| SUITE 04 2 BDRM (B.F.) | 62.54 m² | 673.13 ff² |
| SUITE 05 STUDIO | 45.26 m² | 487.16 ff² |
| SUITE 06 STUDIO | 38.93 m² | 419.04 ff² |
| SUITE 07 1 BDRM + DEN | 56.87 m² | 612.12 ff² |
| SUITE 08 1 BDRM + DEN | 56.62 m² | 609.44 ff² |
| SUITE 09 STUDIO | 38.97 m² | 419.42 ff² |
| SUITE 10 STUDIO | 44.26 m² | 476.41 ff² |
| SUITE 11 2 BDRM | 63.92 m² | 688.08 ff² |
| SUITE 12 2 BDRM | 70.48 m² | 758.65 ff² |
| SUITE 13 2 BDRM + DEN | 72.55 m² | 780.87 ff² |
| SUITE 14 1 BDRM (B.F.) | 52.59 m² | 566.07 ff² |
| TOTAL | 8,232.44 m² | 88,613.24 ff² |

ZONING MATRIX

| ITEM | FIELD | DATA | ITEM | FIELD | DATA |
|------|--------------------------------|---|------|------------------|--|
| 1 | LEGAL DESCRIPTION | LOTS 28 AND 29 REGISTERED PLAN 2996 | 9 | LOADING ZONE | REQUIRED: PROPOSED: RESIDENTIAL: 0 spaces (min) 1 SHARED LOADING ZONE |
| 2 | CURRENT ZONING PERMITTED USES: | MD S25 APARTMENT DWELLINGS (HIGH RISE), RESTAURANT (CONDITIONAL), OFFICE (CURRENT EXCEPTION). | 10 | PARKING | REQUIRED: PROPOSED: RESIDENTIAL: 0 MAXIMUM: 1.5 PER UNIT = 209 spots VISITOR: 0.1 PER SUITE AFTER FIRST 12 UNITS = 13 spots TOTAL: 13 |
| 3 | LOT AREA | 1,233.35 m² (EXISTING UNCHANGED) | 11 | BICYCLE PARKING | REQUIRED: PROPOSED: RESIDENTIAL: 0.5 / UNIT = 70 SPACES TOTAL: 70 SPACES + 1 RETAIL SPACES (REFER TO SITE PLAN) TOTAL: 77 |
| 4 | LOT FRONTAGE | 40.32 m (EXISTING UNCHANGED) | 12 | LANDSCAPED AREAS | REQUIRED: PROPOSED: NONE NOTED FOR THIS SITE |
| 5 | BUILDING AREA | 1,057.83 m² (EXISTING UNCHANGED) | 13 | DRIVE AISLES | REQUIRED: PROPOSED: SEE PLANS SINGLE TRAFFIC LANE: 3m DOUBLE TRAFFIC LANE: MINIMUM: 6m; MAXIMUM: 3.6m FOR LESS THAN 20 PARKING SPACES, 6.7m FOR 20 OR MORE PARKING SPACES |
| 6 | BUILDING SETBACKS | FRONT YARD REQUIRED: NO MINIMUM FRONT YARD (EXISTING): 1.02m REAR YARD (REQUIRED): NO MINIMUM REAR YARD (EXISTING): 0m INTERIOR SIDE YARD (REQUIRED): NO MINIMUM INTERIOR SIDE YARD (EXISTING): 0m | | | |
| 7 | AMENITY SPACE | REQUIRED: PROPOSED COMMUNAL AMENITY: 6m² x 139 DWELLING UNITS = 834 m² GROUND LEVEL INTERIOR: 245.4 m² L12, INTERIOR: 341.7 m² L12, EXTERIOR: 406.0 m² TOTAL: 993.1 m² | | | |
| 8 | BUILDING HEIGHT | HEIGHTS: PROPOSED CHANGE TO USE AS FOLLOWS: 36.39 m TO TOP OF MAIN ROOF AMENITY 40.26 m TO TOP OF AMENITY PENTHOUSE (L12) 44.75 m TO TOP OF MECHANICAL PENTHOUSE (L13) | | | |

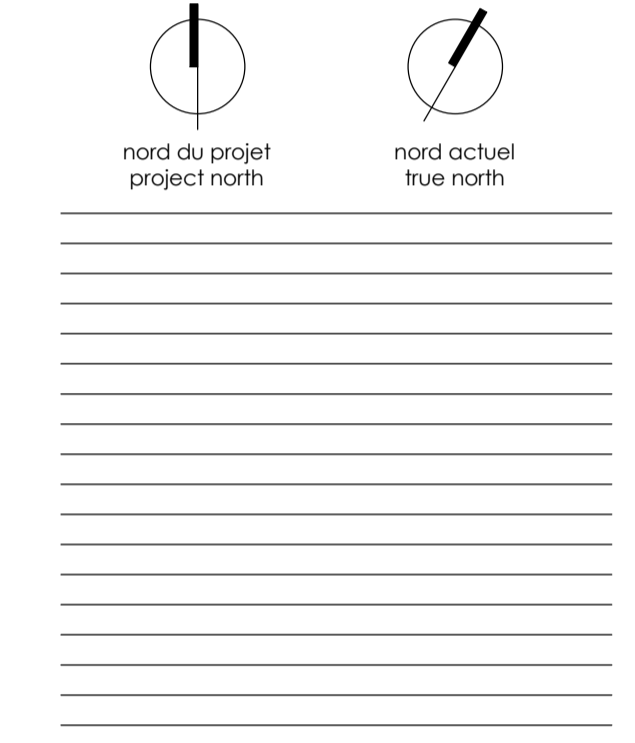
CLV GROUP DEVELOPMENTS
 485 BANK STREET, SUITE 200, OTTAWA K2P 1Z2
 client | client

CLELAND JARDINE ENGINEERING LTD.
 structural engineers | ingénieur structure

Smith + Andersen
 MEP engineers | ingénieur MEP

LRL ENGINEERING INC.
 civil engineers | ingénieur civil

C SW
 landscape architect | architecte paysagiste



| | |
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| 2 REV. FOR SPC COMMENTS | 230714 |
| 1 ISSUED FOR SITE PLAN CONTROL | 230504 |
| no revisions | date |

stamp | timbre

architect | architecte

linebox STUDIO

general notes | note générale

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 2. DO NOT SCALE THE DRAWINGS.
 3. NOT FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT.

project title

360 LAURIER AVE W
 PROPOSED MIXED-USE RENOVATION

360 LAURIER AVE W | OTTAWA | ON | K1P 1C8

drawing title | titre du dessin

SITE PLAN

project number | numéro du projet **2225**

drawn | dessiné **JH**

checked | vérifié **JAP / MAR / AR**

date | date **12/08/22**

scale | échelle **As indicated**

drawing number | numéro du dessin **A0-801**

D07-12-23-0055

#XXXXX

| VEHICLE PARKING PROVIDED (BY FLOOR) | |
|-------------------------------------|-----------|
| TYPE | COUNT |
| LEVEL P5 BASEMENT | |
| COMPACT (2438x5300) | 9 |
| STANDARD (2600x5200) | 6 |
| LEVEL P4 BASEMENT | |
| COMPACT (2438x5300) | 9 |
| STANDARD (2600x5200) | 4 |
| LEVEL P3 BASEMENT | |
| ACCESSIBLE (3400x5200) | 2 |
| COMPACT (2438x5300) | 7 |
| STANDARD (2600x5200) | 3 |
| LEVEL P2 BASEMENT | |
| COMPACT (2438x5300) | 6 |
| MOTORCYCLE (1200x2500) | 2 |
| STANDARD (2600x5200) | 3 |
| LEVEL P1 BASEMENT | |
| ACCESSIBLE (3400x5200) | 1 |
| COMPACT (2438x5300) | 5 |
| STANDARD (2600x5200) | 2 |
| GRAND TOTAL | 59 |

| BICYCLE PARKING PROVIDED (BY FLOOR) | |
|-------------------------------------|-----------|
| TYPE | COUNT |
| LEVEL P4 BASEMENT | |
| HORIZONTAL DBL STACKED | 8 |
| BICYCLE SPACE (SECURE) | |
| LEVEL P2 BASEMENT | |
| HORIZONTAL DBL STACKED | 6 |
| BICYCLE SPACE (SECURE) | |
| LEVEL 01 | |
| HORIZONTAL DBL STACKED | 54 |
| BICYCLE SPACE (SECURE) | |
| VERTICAL BICYCLE SPACE (SECURE) | 9 |
| GRAND TOTAL | 77 |
| REQUIRED | 70 |

| BICYCLE PARKING (LOCKER @ PARKING STALL) | |
|--|------------|
| LEVEL | COUNT |
| P3 | 8 |
| P4 | 8 |
| P5 | 8 |
| TOTAL | 24 |
| GRAND TOTAL WITH ABOVE REQD | 101 |

| RESIDENTIAL LOCKERS SCHEDULE (BY TYPE) | |
|--|------------|
| TYPE | COUNT |
| RESIDENTIAL STORAGE LOCKER | |
| GROUND FLOOR - 36"Wx48"Dx80"H | 18 |
| PARKING - 36"Wx48"Dx80" | 24 |
| TYPICAL FLOORS - 36"Wx48"Dx80" | 78 |
| TYPICAL FLOORS - 36"Wx57"Dx80" | 10 |
| TYPICAL FLOORS - 86"Wx40"Dx80" | 10 |
| GRAND TOTAL | 140 |

CLV GROUP DEVELOPMENTS
485 BANK STREET, SUITE 200, OTTAWA K2P 1Z2
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Smith + Andersen
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LRL
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet / project north
nord actuel / true north

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stamp | timbre

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LICENCE 6464

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linebox
STUDIO

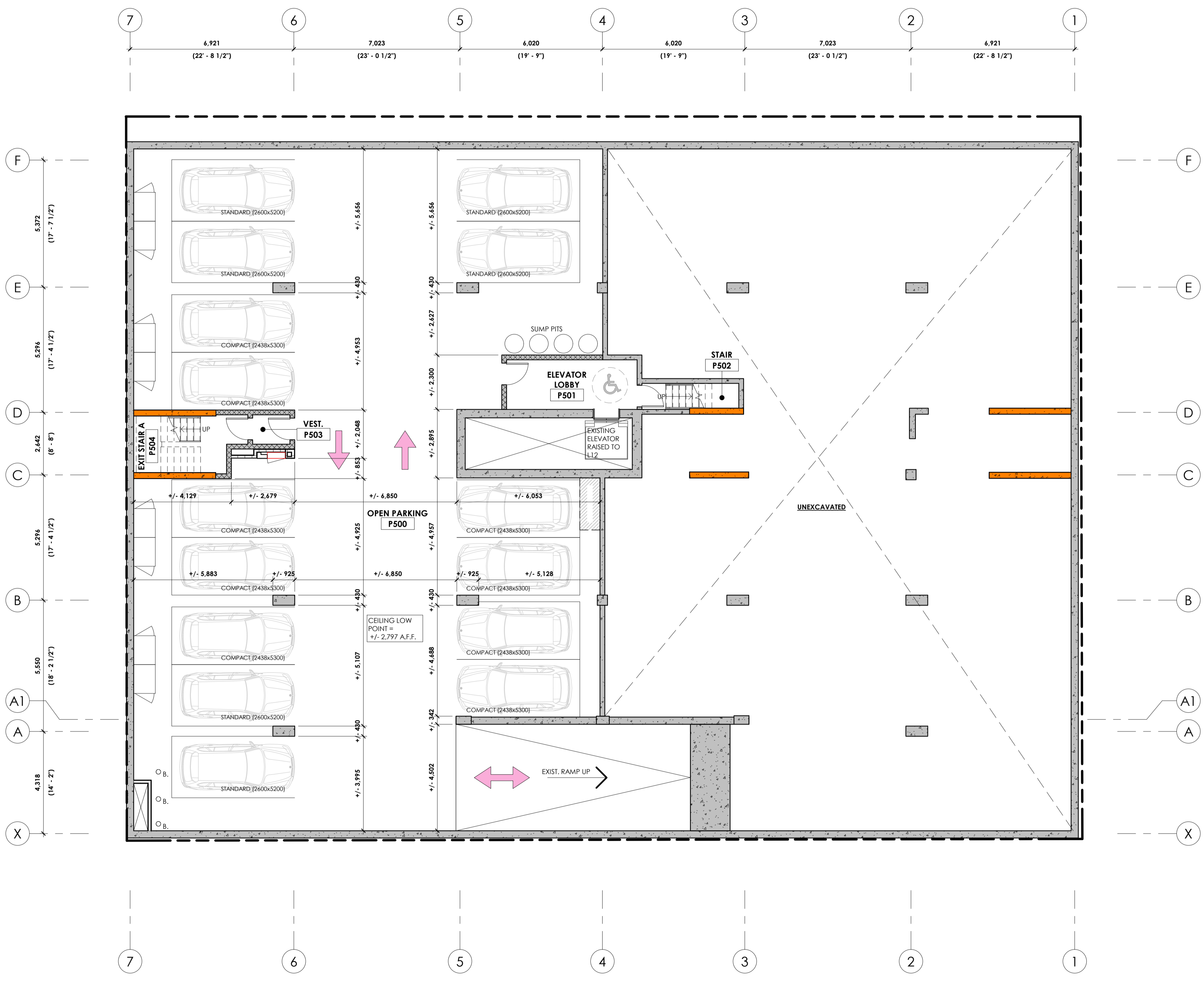
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360 LAURIER AVE W
PROPOSED MIXED-USE RENOVATION
360 LAURIER AVE W | OTTAWA | ON | K1P 1C8
drawing title | titre du dessin

P5 BASEMENT FLOOR PLAN

project number | numéro du projet 2225
drawn | dessiné JH
checked | vérifié JAP / MAR / AR
date | date 11/28/22
scale | échelle As indicated
0 m 2 m 4 m

drawing number | numéro du dessin
A2-098
#xxxxx



EXISTING TO REMAIN
NEW (PROPOSED)

| VEHICLE PARKING PROVIDED (BY FLOOR) | |
|-------------------------------------|-----------|
| TYPE | COUNT |
| LEVEL P5 BASEMENT | |
| COMPACT (2438x5300) | 9 |
| STANDARD (2600x5200) | 6 |
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| BICYCLE PARKING PROVIDED (BY FLOOR) | |
|---|-----------|
| TYPE | COUNT |
| LEVEL P4 BASEMENT | |
| HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE) | 8 |
| LEVEL P2 BASEMENT | |
| HORIZONTAL DBL STACKED BICYCLE SPACE (SECURE) | 6 |
| LEVEL 01 | |
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| BICYCLE PARKING (LOCKER @ PARKING STALL) | |
|--|------------|
| LEVEL | COUNT |
| P3 | 8 |
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CLV GROUP DEVELOPMENTS
485 BANK STREET, SUITE 200, OTTAWA K2P 1Z2
client | client

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Smith + Andersen
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stamp | timbre

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LICENCE 6464

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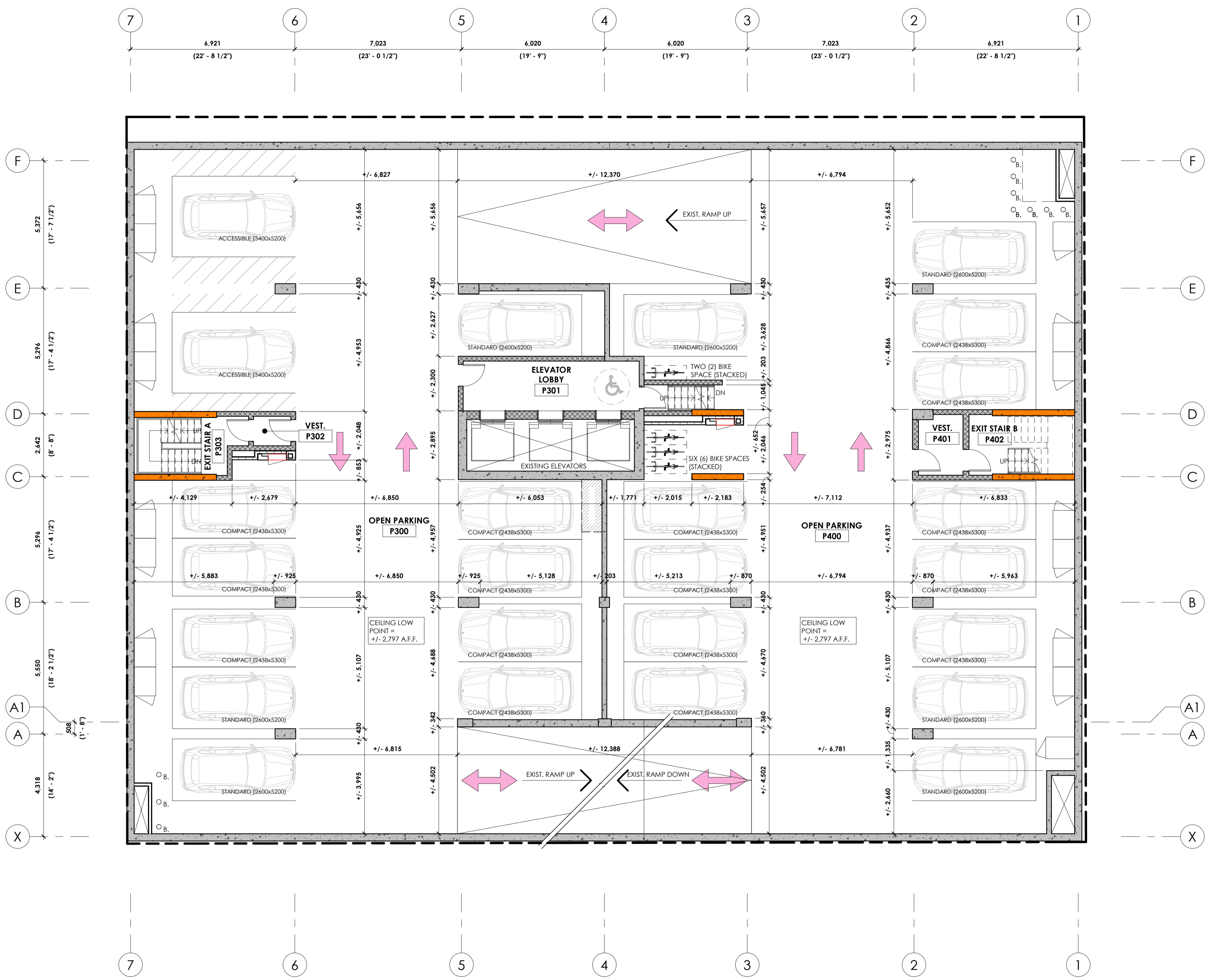
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project title
360 LAURIER AVE W
PROPOSED MIXED-USE RENOVATION

360 LAURIER AVE W | OTTAWA | ON | K1P 1C8
drawing title | titre du dessin
P3 AND P4 BASEMENT FLOOR PLAN

project number | numéro du projet 2225
drawn | dessiné JH
checked | vérifié JAP / MAR / AR
date | date 11/28/22
scale | échelle As indicated

drawing number | numéro du dessin
A2-099



EXISTING TO REMAIN
NEW (PROPOSED)

| VEHICLE PARKING PROVIDED (BY FLOOR) | |
|-------------------------------------|-----------|
| TYPE | COUNT |
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|--|------------|
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| P4 | 8 |
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no revisions date

stamp | timbre

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LICENCE 6464

architect | architecte

linebox
STUDIO

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360 LAURIER AVE W
PROPOSED MIXED-USE RENOVATION

360 LAURIER AVE W | OTTAWA | ON | K1P 1C8

drawing title | titre du dessin

P1 AND P2 BASEMENT FLOOR PLAN

project number | numéro du projet 2225
drawn | dessiné JH
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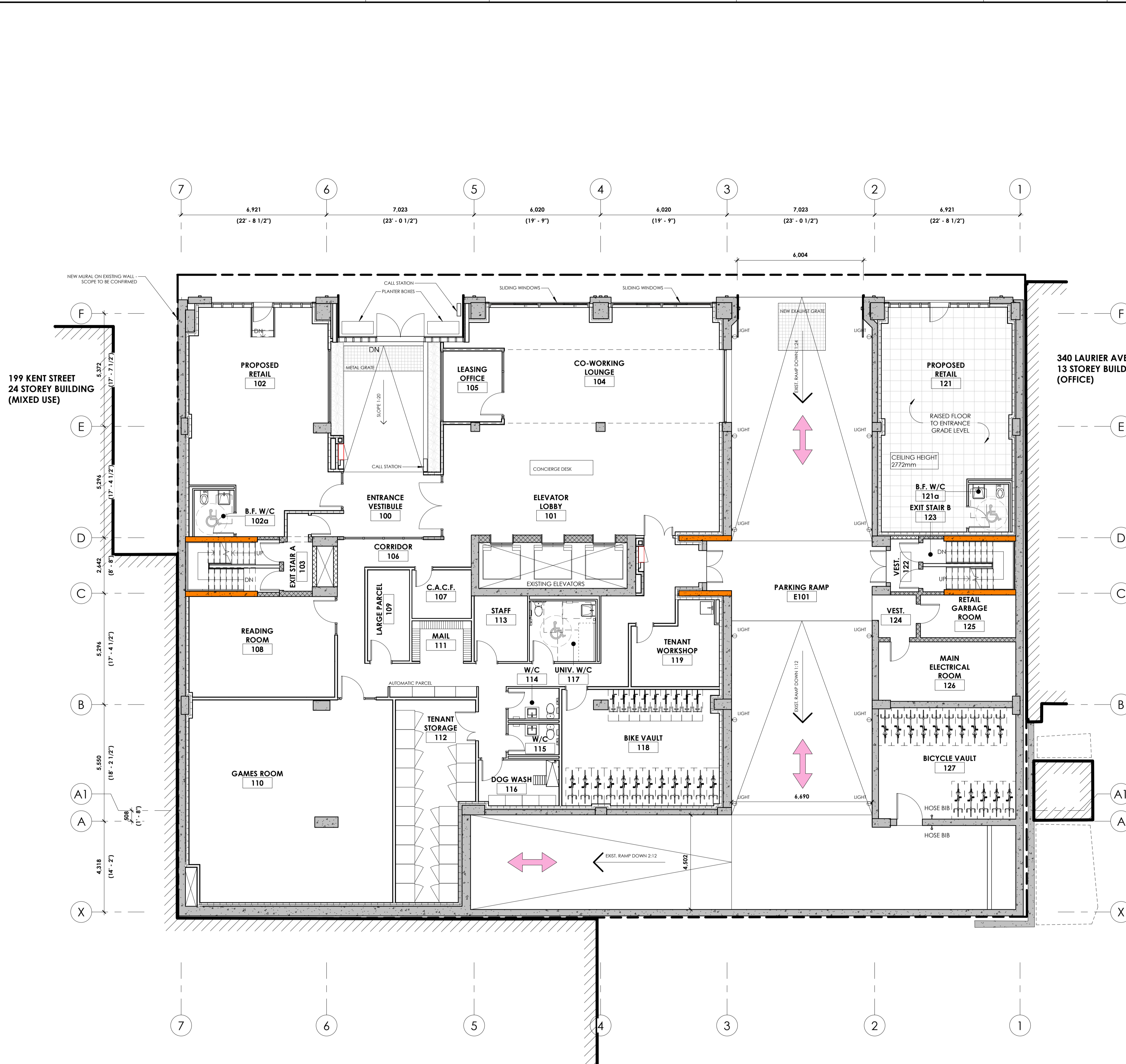
drawing number | numéro du dessin

A2-100



EXISTING TO REMAIN

NEW (PROPOSED)



| BICYCLE PARKING PROVIDED (BY FLOOR) | |
|---|-----------|
| TYPE | COUNT |
| LEVEL P4 BASEMENT | |
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| BICYCLE PARKING (LOCKER @ PARKING STALL) | |
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|--|------------|
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CLV GROUP DEVELOPMENTS
485 BANK STREET, SUITE 200, OTTAWA K2P 1Z2
client | client

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Smith + Andersen
MEP engineers | ingénieur MEP

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C S W
landscape architect | architecte paysagiste

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nord actuel / true north

2 REV. FOR SPC COMMENTS 230714
1 ISSUED FOR SITE PLAN CONTROL 230504
no revisions date

stamp | timbre

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linebox STUDIO

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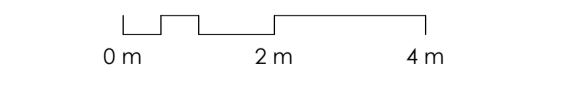
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360 LAURIER AVE W
PROPOSED MIXED-USE RENOVATION

360 LAURIER AVE W | OTTAWA | ON | K1P 1C8
drawing title | titre du dessin

LEVEL 01 FLOOR PLAN

project number | numéro du projet 2225
drawn | dessiné JH
checked | vérifié JAP / MAR / AR
date | date 11/28/22
scale | échelle As indicated



drawing number | numéro du dessin
A2-101

1 LEVEL 01 FLOOR PLAN
A2-101 1:100
AQ-200

#xxxxx

D07-12-23-0055

Attachment 3

TDM Checklist

Introduction

The City of Ottawa's *Transportation Impact Assessment (TIA) Guidelines* (specifically Module 4.3—Transportation Demand Management) requires proponents of qualifying developments to assess the context, need and opportunity for transportation demand management (TDM) measures at their development. The guidelines require that proponents complete the City's **TDM Measures Checklist**, at a minimum, to identify any TDM measures being proposed.

The remaining sections of this document are:

- Using the Checklist
- Glossary
- TDM Measures Checklist: Non-Residential Developments
- TDM Measures Checklist: Residential developments

Readers are encouraged to contact the City of Ottawa's TDM Officer for any guidance and assistance they require to complete this checklist.

Using the Checklist

The City's *TIA Guidelines* are designed so that *Module 3.1—Development-Generated Travel Demand*, *Module 4.1—Development Design*, and *Module 4.2—Parking* are complete before a proponent begins *Module 4.3—Transportation Demand Management*.

Within Module 4.3, *Element 4.3.1—Context for TDM* and *Element 4.3.2—Need and Opportunity* are intended to create an understanding of the need for any TDM measures, and of the results they are expected to achieve or support. Once those two elements are complete, proponents begin *Element 4.3.3—TDM Program* that requires proponents to identify proposed TDM measures using the **TDM Measures Checklist**, at a minimum. The *TIA Guidelines* note that the City may require additional analysis for large or complex development proposals, or those that represent a higher degree of performance risk; as well, proponents proposing TDM measures for a new development must also propose an implementation plan that addresses planning and coordination, funding and human resources, timelines for action, performance targets and monitoring requirements.

This **TDM Measures Checklist** document includes two actual checklists, one for non-residential developments (office, institutional, retail or industrial) and one for residential developments (multi-family, condominium or subdivision). Readers may download the applicable checklist in electronic format and complete it electronically, or print it out and complete it by hand. As an alternative, they may create a freestanding document that lists the TDM measures being proposed and provides additional detail on them, including an implementation plan as required by the City's *TIA Guidelines*.

Each measure in the checklist is numbered for easy reference. Each measure is also flagged as:

- **BASIC** —The measure is generally feasible and effective, and in most cases would benefit the development and its users.
- **BETTER** —The measure could maximize support for users of sustainable modes, and optimize development performance.
- **★** —The measure is one of the most dependably effective tools to encourage the use of sustainable modes.

Glossary

This glossary defines and describes the following measures that are identified in the **TDM Measures Checklist**:

TDM program management

- Program coordinator
- Travel surveys

Parking

- Priced parking

Walking & cycling

- Information on walking/cycling routes & destinations
- Bicycle skills training
- Valet bike parking

Transit

- Transit information
- Transit fare incentives
- Enhanced public transit service
- Private transit service

Ridesharing

- Ridematching service
- Carpool parking price incentives
- Vanpool service

Carsharing & bikesharing

- Bikeshare stations & memberships
- Carshare vehicles & memberships

TDM marketing & communications

- Multimodal travel information
- Personalized trip planning
- Promotions

Other incentives & amenities

- Emergency ride home
- Alternative work arrangements
- Local business travel options
- Commuter incentives
- On-site amenities

For further information on selecting and implementing TDM measures (particularly as they apply to non-residential developments, with a focus on workplaces), readers may find it helpful to consult Transport Canada's *Workplace Travel Plans: Guidance for Canadian Employers*, which can be downloaded in English and French from the ACT Canada website at www.actcanada.com/resources/act-resources.

► ***TDM program management***

While some TDM measures can be implemented with a minimum of effort through routine channels (e.g. parking or human resources), more complex measures or a larger development site may warrant assigning responsibility for TDM program coordination to a designated person either inside or outside the implementing organization. Similarly, some TDM measures are more effective if they are targeted or customized for specific audiences, and would benefit from the collection of related information.

Program coordinator. This person is charged with day-to-day TDM program development and implementation. Only in very large employers with thousands of workers is this likely to be a full-time, dedicated position. Usually, it is added to an existing role in parking, real estate, human resources or environmental management. In practice, this role may be called TDM coordinator, commute trip reduction coordinator or employee transportation coordinator. The City of Ottawa can identify external resources (e.g. non-profit organizations or consultants) that could provide these services.

Travel surveys. Travel surveys are most commonly conducted at workplaces, but can be helpful in other settings. They identify how and why people travel the way they do, and what barriers and opportunities exist for different behaviours. They usually capture the following information:

- *Personal data* including home address or postal code, destination, job type or function, employment status (full-time, part-time and/or teleworker), gender, age and hours of work
- *Commute information* including distance or time for the trip between home and work, usual methods of commuting, and reasons for choosing them
- *Barriers and opportunities* including why other commuting methods are unattractive, willingness to consider other options, and what improvements to other options could make them more attractive

► ***Parking***

Priced parking. Charging for parking is typically among the most effective ways of getting drivers to consider other travel options. While drivers may not support parking fees, they can be more accepting if the revenues are used to improve other travel options (e.g. new showers and change rooms, improved bicycle parking or subsidized transit passes). At workplaces or daytime destinations, parking discounts (e.g. early bird specials, daily passes that cost significantly less than the equivalent hourly charge, monthly passes that cost significantly less than the equivalent daily charge) encourage long-term parking and discourage the use of other travel options. For residential uses, unbundling parking costs from dwelling purchase, lease or rental costs provides an incentive for residents to own fewer cars, and can reduce car use and the costs of parking provision.

► **Walking & cycling**

Active transportation options like cycling and walking are particularly attractive for short trips (typically up to 5 km and 2 km, respectively). Other supportive factors include an active, health-conscious audience, and development proximity to high-quality walking and cycling networks. Common challenges to active transportation include rain, darkness, snowy or icy conditions, personal safety concerns, the potential for bicycle theft, and a lack of shower and change facilities for those making longer trips.

Information on walking/cycling routes & destinations. Ottawa, Gatineau and the National Capital Commission all publish maps to help people identify the most convenient and comfortable walking or cycling routes.

Bicycle skills training. Potential cyclists can be intimidated by the need to ride on roads shared with motor vehicles. This barrier can be reduced or eliminated by offering cycling skills training to interested cyclists (e.g. CAN-BIKE certification courses).

Valet bike parking. For large events, temporary “valet parking” areas can be easily set up to maximize convenience and security for cyclists. Experienced local non-profit groups can help.

► **Transit**

Transit information. Difficulty in finding or understanding basic information on transit fares, routes and schedules can prevent people from trying transit. Employers can help by providing online links to OC Transpo and STO websites. Transit users also appreciate visible maps and schedules of transit routes that serve the site; even better, a screen that shows real-time transit arrival information is particularly useful at sites with many transit users and an adjacent transit stop or station.

Transit fare incentives. Free or subsidized transit fares are an attractive incentive for non-transit riders to try transit. Many non-users are unsure of how to pay a fare, and providing tickets or a preloaded PRESTO card (or, for special events, pre-arranging with OC Transpo that transit fares are included with event tickets) overcome that barrier.

Enhanced public transit service. OC Transpo may adjust transit routes, stop locations, service hours or frequencies for an agreed fee under contract, or at no cost where warranted by the potential ridership increase. Information provided by a survey of people who travel to a given development can support these decisions.

Private transit service. At remote suburban or rural workplaces, a poor transit connection to the nearest rapid transit station can be an obstacle for potential transit users, and an employer in this situation could initiate a private shuttle service to make transit use more feasible or attractive. Other circumstances where a shuttle makes sense include large special events, or a residential development for people with limited independent mobility who still require regular access to shops and services.

► **Ridesharing**

Ridesharing's potential is greatest in situations where transit ridership is low, where parking costs are high, and/or where large numbers of car commuters (e.g. employees or full-time students) live reasonably far from the workplace.

Ridematching service. Potential carpoolers in Ottawa are served by www.OttawaRideMatch.com, an online service to help people find carpool partners. Employers can arrange for a dedicated portal where their employees can search for potential carpool partners only among their colleagues, if they desire. Some very large employers may establish internal ridematching services, to maximize employee uptake and corporate control. Ridematching service providers typically include a waiver to relieve employers of liability when their employees start carpooling through a ridematching service. Ridesharing with co-workers also tends to eliminate security concerns.

Carpool parking price incentives. Discounted parking fees for carpools can be an extra incentive to rideshare.

Vanpool service. Vanpools operate in the Toronto and Vancouver metropolitan areas, where vans that carry up to about ten occupants are driven by one of the vanpool members. Vanpools tend to operate on a cost-recovery basis, and are most practical for long-distance commutes where transit is not an option. Current legislation in Ontario does not permit third-party (i.e. private or non-profit) vanpool services, but does permit employers to operate internal vanpools.

► **Carsharing & bikesharing**

Bikeshare station & memberships. VeloGO Bike Share and Right Bike both operate bikesharing services in Ottawa. Developments that would benefit from having a bikeshare station installed at or near their development may negotiate directly with either service provider.

Carshare vehicles & memberships. VRTUCAR and Zipcar both operate carsharing services in Ottawa, for use by the general public or by businesses as an alternative to corporate fleets. Carsharing services offer 24-hour access, self-serve reservation systems, itemized monthly billings, and outsourcing of all financing, insurance, maintenance and administrative responsibilities.

► **TDM marketing & communications**

Multimodal travel information. Aside from mode-specific information discussed elsewhere in this document, multimodal information that identifies and explains the full range of travel options available to people can be very influential—especially when provided at times and locations where individuals are actively choosing among those options. Examples include: employees when their employer is relocating, or when they are joining a new employer; students when they are starting a program at a new institution; visitors or customers travelling to an unfamiliar destination, or when faced with new options (e.g. shuttle services or parking restrictions); and residents when they purchase or occupy a residence that is new to them.

Personalized trip planning. As an extension to the simple provision of information, this technique (also known as *individualized marketing*) is effective in helping people make more sustainable travel choices. The approach involves identifying who is most likely to change their travel choices (notably relocating employees, students or residents) giving them customized information, training and incentives to support them in making that change. It may be conducted with assistance from an external service provider with the necessary skills, and delivered in a variety of settings including workplaces and homes.

Promotions. Special events and incentives can raise awareness and encourage individuals to examine and try new travel options.

- *Special events* can help attract attention, build participation and celebrate successes. Events that have been held in Ottawa include Earth Day (in April) Bike to Work Month (in May), Environment Week (early June), International Car Free Day (September 22), and Canadian Ridesharing Week (October). At workplaces or educational institutions, similarly effective internal events could include workshops, lunch-and-learns, inter-departmental challenges, pancake breakfasts, and so on.
- *Incentives* can encourage trial of sustainable modes, and might include loyalty rewards for duration or consistency of activity (e.g. 1,000 km commuted by bicycle), participation prizes (e.g. for completing a survey or joining a special event), or personal recognition that highlights individual accomplishments.

► **Other incentives & amenities**

Emergency ride home. This measure assures non-driving commuters that they will be able to get home quickly and conveniently in case of family emergency (or in some workplaces, in case of unexpected overtime, severe weather conditions, or the early departure of a carpool driver) by offering a chit or reimbursement for taxi, carshare or rental car usage. Limits on annual usage or cost per employee may be set, although across North America the actual rates of usage are typically very low.

Alternative work arrangements. A number of alternatives to the standard 9-to-5, Monday-to-Friday workweek can support sustainable commuting (and work-life balance) at workplaces:

- *Flexible working hours* allow transit commuters to take advantage of the fastest and most convenient transit services, and allow potential carpoolers to include people who work slightly different schedules in their search for carpool partners. They also allow active commuters to travel at least one direction in daylight, either in the morning or the afternoon, during the winter.
- *Compressed workweeks* allow employees to work their required hours over fewer days (e.g. five days in four, or ten days in nine), eliminating the need to commute on certain days. For employees, this can promote work-life balance and gives flexibility for appointments. For employers, this can permit extended service hours as well as reduced parking demands if employees stagger their days off.
- *Telework* is a normal part of many workplaces. It helps reduce commuting activity, and can lead to significant cost savings through workspace sharing. Telework initiatives involve many stakeholders, and may face as much resistance as support within an organization. Consultation, education and training are helpful.

Local business travel options. A common obstacle for people who might prefer to not drive to work is that their employer requires them to bring a car to work so they can make business trips during the day. Giving employees convenient alternatives to private cars for local business travel during the workday makes walking, cycling, transit or carpooling in someone else's car more practical.

- *Walking and cycling*—Active transportation can be a convenient and enjoyable way to make short business trips. They can also reduce employer expenses, although they may require extra travel time. Providing a fleet of shared bikes, or reimbursing cyclists for the kilometres they ride, are inexpensive ways to validate their choice.
- *Public transit*—Transit can be convenient and inexpensive compared to driving. OC Transpo's PRESTO cards are transferable among employees and automatically reloadable, making them the perfect tool for enabling transit use during the day.
- *Ridesharing*—When multiple employees attend the same off-site meeting or event, they can be reminded to carpool whenever possible.
- *Taxis or ride-hailing*—Taxis and ride-hailing can eliminate parking costs, save time and eliminate collision liability concerns. Taxi chits eliminate cash transactions and minimize paperwork.
 - *Fleet vehicles or carsharing*—Fleet vehicles can be cost-effective for high travel volumes, while carsharing is a great option for less frequent trips.
 - *Interoffice shuttles*—Employers with multiple worksites in the region could use a shuttle service to move people as well as mail or supplies.
 - *Videoconferencing*—New technologies mean that staying in the office to hold meetings electronically is more viable, affordable and productive than ever.

Commuter incentives. Financial incentives can help create a level playing field and support commuting by sustainable modes. A “commuting allowance” given to all employees as a taxable benefit is one such incentive; employees who choose to drive could then be charged for parking, while other employees could use the allowance for transit fares or cycling equipment, or for spending or saving. (Note that in the United States this practice is known as “parking cash-out,” and is popular because commuting allowances are not taxable up to a certain limit). Alternatively, a monthly commuting allowance for non-driving employees would give drivers an incentive to choose a different commuting mode. Another practical incentive for active commuters or transit users is to offer them discounted “rainy day” parking passes for a small number of days each month.

On-site amenities. Developments that offer services to limit employees' need for a car during their commute (e.g. to drop off clothing at the dry cleaners) or during their workday (e.g. to buy lunch) can free employees to make the commuting decision that otherwise works best for them.

| TDM measures: <i>Non-residential developments</i> | | Check if proposed & add descriptions |
|---|---|--------------------------------------|
| 7. TDM MARKETING & COMMUNICATIONS | | |
| 7.1 Multimodal travel information | | |
| <i>Commuter travel</i> | | |
| BASIC ★ | 7.1.1 Provide a multimodal travel option information package to new/relocating employees and students | <input type="checkbox"/> |
| <i>Visitor travel</i> | | |
| BETTER ★ | 7.1.2 Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games) | <input type="checkbox"/> |
| 7.2 Personalized trip planning | | |
| <i>Commuter travel</i> | | |
| BETTER ★ | 7.2.1 Offer personalized trip planning to new/relocating employees | <input type="checkbox"/> |
| 7.3 Promotions | | |
| <i>Commuter travel</i> | | |
| BETTER | 7.3.1 Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes | <input type="checkbox"/> |
| 8. OTHER INCENTIVES & AMENITIES | | |
| 8.1 Emergency ride home | | |
| <i>Commuter travel</i> | | |
| BETTER ★ | 8.1.1 Provide emergency ride home service to non-driving commuters | <input type="checkbox"/> |
| 8.2 Alternative work arrangements | | |
| <i>Commuter travel</i> | | |
| BASIC ★ | 8.2.1 Encourage flexible work hours | <input type="checkbox"/> |
| BETTER | 8.2.2 Encourage compressed workweeks | <input type="checkbox"/> |
| BETTER ★ | 8.2.3 Encourage telework | <input type="checkbox"/> |
| 8.3 Local business travel options | | |
| <i>Commuter travel</i> | | |
| BASIC ★ | 8.3.1 Provide local business travel options that minimize the need for employees to bring a personal car to work | <input type="checkbox"/> |
| 8.4 Commuter incentives | | |
| <i>Commuter travel</i> | | |
| BETTER | 8.4.1 Offer employees a taxable, mode-neutral commuting allowance | <input type="checkbox"/> |
| 8.5 On-site amenities | | |
| <i>Commuter travel</i> | | |
| BETTER | 8.5.1 Provide on-site amenities/services to minimize mid-day or mid-commute errands | <input type="checkbox"/> |

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

| Legend | |
|---------------|--|
| BASIC | The measure is generally feasible and effective, and in most cases would benefit the development and its users |
| BETTER | The measure could maximize support for users of sustainable modes, and optimize development performance |
| ★ | The measure is one of the most dependably effective tools to encourage the use of sustainable modes |

| TDM measures: Residential developments | | Check if proposed & add descriptions |
|---|---|---|
| 1. TDM PROGRAM MANAGEMENT | | |
| 1.1 Program coordinator | | |
| BASIC | ★ 1.1.1 Designate an internal coordinator, or contract with an external coordinator | <input checked="" type="checkbox"/> |
| 1.2 Travel surveys | | |
| BETTER | 1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress | <input type="checkbox"/> |
| 2. WALKING AND CYCLING | | |
| 2.1 Information on walking/cycling routes & destinations | | |
| BASIC | 2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances (<i>multi-family, condominium</i>) | <input checked="" type="checkbox"/> |
| 2.2 Bicycle skills training | | |
| BETTER | 2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses | <input type="checkbox"/> |

| TDM measures: <i>Residential developments</i> | | Check if proposed & add descriptions |
|---|--|--------------------------------------|
| 3. TRANSIT | | |
| 3.1 Transit information | | |
| BASIC | 3.1.1 Display relevant transit schedules and route maps at entrances (<i>multi-family, condominium</i>) | <input checked="" type="checkbox"/> |
| BETTER | 3.1.2 Provide real-time arrival information display at entrances (<i>multi-family, condominium</i>) | <input type="checkbox"/> |
| 3.2 Transit fare incentives | | |
| BASIC ★ | 3.2.1 Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit | <input checked="" type="checkbox"/> |
| BETTER | 3.2.2 Offer at least one year of free monthly transit passes on residence purchase/move-in | <input type="checkbox"/> |
| 3.3 Enhanced public transit service | | |
| BETTER ★ | 3.3.1 Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels (<i>subdivision</i>) | <input type="checkbox"/> |
| 3.4 Private transit service | | |
| BETTER | 3.4.1 Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs) | <input type="checkbox"/> |
| 4. CARSHARING & BIKESHARING | | |
| 4.1 Bikeshare stations & memberships | | |
| BETTER | 4.1.1 Contract with provider to install on-site bikeshare station (<i>multi-family</i>) | <input type="checkbox"/> |
| BETTER | 4.1.2 Provide residents with bikeshare memberships, either free or subsidized (<i>multi-family</i>) | <input type="checkbox"/> |
| 4.2 Carshare vehicles & memberships | | |
| BETTER | 4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents | <input type="checkbox"/> |
| BETTER | 4.2.2 Provide residents with carshare memberships, either free or subsidized | <input type="checkbox"/> |
| 5. PARKING | | |
| 5.1 Priced parking | | |
| BASIC ★ | 5.1.1 Unbundle parking cost from purchase price (<i>condominium</i>) | <input type="checkbox"/> |
| BASIC ★ | 5.1.2 Unbundle parking cost from monthly rent (<i>multi-family</i>) | <input checked="" type="checkbox"/> |

| TDM measures: <i>Residential developments</i> | | Check if proposed & add descriptions |
|---|---|--------------------------------------|
| 6. TDM MARKETING & COMMUNICATIONS | | |
| 6.1 Multimodal travel information | | |
| BASIC ★ | 6.1.1 Provide a multimodal travel option information package to new residents | <input checked="" type="checkbox"/> |
| 6.2 Personalized trip planning | | |
| BETTER ★ | 6.2.1 Offer personalized trip planning to new residents | <input type="checkbox"/> |