Urban and Village Area Boundary Expansion – Infrastructure Capacity Assessment

Terms of Reference

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1. Description

Infrastructure Capacity Assessment has two components.

A. **Servicing capacity assessment**: This assessment includes two steps.
   1. The first step determines if planned capacities, based on the in-force Infrastructure Master Plan (IMP), at the time of the application, are sufficient to service the subject lands in addition to existing and planned development.
   2. If sufficient capacities do not, or will not exist, the second step would be required and would involve identification of off-site works and associated costs to create the required capacity.

B. **Transportation capacity assessment:** Assessing transportation availability and capacity involves evaluating whether the existing and planned transportation infrastructure, such as roads and public transit, can support the proposed development. Planned infrastructure is based on the Affordable Network of the in-force Transportation Master Plan (TMP), at the time of the application. Where existing and planned capacity is insufficient, the developer may enter into an agreement with the City to provide the required infrastructure.

2. Authority To Request

- Provincial Planning Statement (2024 PPS)
  - ability for applicants to apply to municipalities to expand urban and village area boundaries.

3. When Required

- Outside of a City-initiated growth projections update and lands need review.

4. Contents

Consideration of residual planned capacity in the 2024 IMP and 2013 TMP as required in the 2024 PPS.

A. **Servicing capacity assessment**: report that confirms planned capacity in the in-force IMP at the time of the application is sufficient to service the subject lands in addition to existing and future planned development within the existing urban or village area. Completion of the report will require staff input to assess the off-site water and sewer network capacity that would be required to support the subject lands and need for any off-site works to create the required capacity, as well as associated costs. In the case of privately serviced villages, studies will be required to verify sufficient aquifer yield and current groundwater quality, and sewage disposal attenuation capacity.

B. **Transportation capacity assessment**: report that confirms existing or planned capacity in the in-force TMP at the time of the application is sufficient to accommodate the travel demand associated with the subject lands. Completion of the report will require staff time to complete the assessment in relation to the off-site network capacity that the subject lands connect to.

5. Servicing Evaluation Criteria

Urban Area Expansion Proposals

To assess the availability of sufficient servicing capacity, the City will review and update the current relevant planning models of the water and sewer systems and add elements to these models to represent the proposed expansion area. Simulations of design operating scenarios will be carried out to determine if the system design criteria established in the current Water and Wastewater Master Plans, and levels of service as identified in the City's design guidelines, can be met. These simulations will be carried out based on implementation of all projects identified in the in-force IMP, assuming that the growth projected for the current Official Planning horizon has occurred. If these criteria and service levels can be met under these conditions, then no off-site works would be required to accommodate the expansion area.

If the system design criteria and service levels cannot be met under the conditions described above, then various system upgrade alternatives will be identified and tested using the model. These alternatives will be refined as needed, costed (Class D estimate) and evaluated. The evaluation will consider life cycle costs, in accordance with Official Plan and IMP policies. As part of this work, consideration will need to be given to other potential expansion area proposals that could affect the project scope and sizing. The evaluation will also need to consider the timing and role of other specific IMP projects that could be required in advance of the new projects identified to meet the needs of the proposed expansion area. A preferred

alternative (which could comprise of several individual projects) will be identified for both the water and wastewater systems, in addition to funding, financing, and implementation requirements.

Rural Village Expansion Proposals

Rural villages can be municipally serviced, or privately serviced. In the case of municipal services, the assessment will follow the same process as for urban expansion proposals. For privately serviced villages, review is required to assess capacity for aquifer and sewage disposal capacity.

In the case of individual private services or decentralized municipal water and/or wastewater systems (i.e. municipal well and/or local municipal sewage treatment facility), the City will prepare new, or review and update existing groundwater characterization and cumulative septic impact studies to ensure that there is sufficient aquifer capacity to accommodate the proposed expansion.

Village expansions will not be considered where nitrate concentrations have already been shown to be at risk of exceeding the drinking water standard limit, considering areas already approved for development.

City order of preference for village expansion is as follows:

- Villages that are already on municipal water and sewer services, where these services are connected to the City's central water and wastewater systems
- Villages fully on individual private services
- Villages that are already on municipal water and sewer services, where the water service is provided by a municipal well system, and the sanitary service is provided by connection to the City's central wastewater system
- Villages that are already on municipal water and sewer services, where the water service is provided by a municipal well system or a connection to the City's central water system, and the wastewater service is provided by a decentralized municipal wastewater system
- Proposed Village expansions based solely on private communal services will not be contemplated

6. Transportation Evaluation Criteria

General

Assessing the availability and capacity of transportation infrastructure involves evaluating whether the existing and planned infrastructure, such as roads and public transit, can support the proposed development. To demonstrate that the necessary infrastructure is either available or planned, the following must be submitted to the City's satisfaction. The City will provide supporting inputs as required, such as 2046 population and employment forecasts, and TRANS model files.

1. Develop population, residential dwelling, and employment scenarios and projections for the subject lands to assess future travel demand.
2. Establish mode share targets for walking, cycling, transit, car-pooling, and driving. The mode share targets must meet or exceed mode share targets from the nearest existing TRANS district within the urban boundary.
3. Prepare a full Transportation Impact Assessment (TIA) submission with an enhanced focus on developing and analyzing structuring transportation networks, including but not limited to Module 4.8 of the 2017 TIA Guidelines or its successor.
4. Conduct all analyses with a long-term outlook, considering the 2046 population and employment forecast to assess future infrastructure needs and capacity.
5. Forecast future travel demand generated by the development and total future demand including background traffic growth and demand from other planned developments. The forecasts should be prepared using accepted forecasting methodologies, including the TIA Guidelines and the use of the most recent TRANS Trip Generation Manual.

Rapid Transit for Urban Area (not Villages)

6. Assess rapid transit availability for properties that are adjacent to the urban boundary. Where transit is not available, no further assessment is required. This assessment is not required for properties that are contiguous to village boundaries. Assess the availability of transit based on the following table:

	Proximity to Property's Centroid from the nearest station		
Transit Infrastructure Availability	**≤ 600m radius**	**> 600m radius and contiguous with existing urban area**	**> 600m radius and not contiguous with existing urban area**

Higher order transit or equivalent available now (including Stage 2)	Available	Transit Infrastructure and Service Agreement required per Policy 7	Not Available
Higher order transit or equivalent included in the 2013 TMP Affordable Network Plan or its successor.	Available	Transit Infrastructure and Service Agreement required per Policy 7	Not Available
Higher order transit or equivalent not available now and not included in the 2013 TMP Affordable Network Plan or its successor.	Not Available	Not Available	Not Available

The City of Ottawa's Long Range Financial Plan does not identify any capital or operating funding to serve new transit demand from additional lands being added to the Urban Transit Area. This is reflected in Policy 7 below.

7. Enter into a Transit Infrastructure and Service Agreement with the City for the provision of bus transit infrastructure and service to accommodate the forecasted level of demand for contiguous expansion areas with a centroid beyond 600 metres from an existing or planned higher order transit station identified in the in-force TMP Affordable Network. Bus transit service must either be operational at the time of development approval or have sufficient funding secured for its implementation. The Transit Infrastructure and Service Agreement will establish the terms of extending bus transit service, and will include:
    a. The provision or extension of higher order transit infrastructure, if appropriate based on the scale and context of the development.
        - In establishing the cost of transit infrastructure, consideration should be given to, but not limited to, property acquisition or right-of-way conveyance, engineering, utilities, design, construction, and contingency.
        - The design of the infrastructure extension will be established by the City of Ottawa.
    b. Protection of a right-of-way that extends the planned terminus of the adjacent higher order transit line in-force TMP – Ultimate Network through the expansion area.

c. That the City undertakes to operate the transit service for the boundary expansion area as part of the regular OC Transpo system, with regular OC Transpo fares applying.
d. A definition of the service level to be provided at “Day One” of the development. This will be based on the service levels required to meet or exceed the transit mode share target.
e. A definition of the triggers for service level increases as development continues.
f. An undertaking by the proponent to fund at “Day One” 100 percent of operating and capital costs of the agreed service, less the share of operating costs covered by customers’ fares and the share of capital costs covered from other sources.
g. Operating Costs include staffing, maintenance, fuel, customer service costs, and other routine costs.
h. Capital costs will include the purchase of new and replacement buses, the construction of maintenance facility space, the installation of charging stations supporting infrastructure, and other routine costs.
i. The threshold to reduce over time the initial 100 percent funding by the proponent to a long-term future stable-state where the operating and capital costs of the service from the expansion area will be covered by customers’ fares, property taxes, and contributions from senior levels of government in the same way as all other transit services in the City.
j. The threshold will be based on a cost-recovery ratio identified in the Transit Service Agreement from the above noted sources of revenue as measured over a twelve-month period.

8. Assess the impacts of the development on the higher order transit network's performance. This analysis should use the TRANS model to project the impact of transit trips generated by the development on the existing and planned higher order transit network from the in-force TMP Affordable Network, considering the 2046 population and employment forecast. This analysis will identify any downstream transit capacity deficiencies that may be triggered or made worse by the proposed development, in order to confirm the viability of adding the subject lands to the urban boundary. .

Roads

In evaluating whether the road infrastructure is sufficient to support the proposed development, it is important to assess the availability and capacity of both vehicular and active transportation (AT) infrastructure, at both the community scale and the regional scale. This analysis should include the following:

9. Complete a full TIA submission to assess community transportation impacts, including the items listed below, with an enhanced focus on Module 4.8 of the 2017 TIA Guidelines. Evaluate the impacts on the transportation network's performance due to the trips generated by the development within a 5km radius.
    a. Consider background growth, trips generated by the development, and trips generated by other known developments within the urban boundary and within a 5km radius, including undeveloped greenfield lands.
    b. Assess the AM and PM peak hour volume-to-capacity ratio (V/C) for roads and intersections within a 5km radius, to identify capacity deficiencies that are triggered or made worse by the new development.
    c. Forecasting shall be based on 10 years of background traffic growth and a 2046 development horizon.
10. For developments generating more than 100 trips per hour in the peak direction, conduct a 2046 screenline analysis using the TRANS model to measure regional transportation impacts.
    a. Analysis shall be based on a 2046 planning horizon, using the AM peak period and peak direction.
    b. Screenlines will be identified on a case-by-case basis and in consultation with City staff, using standard screenlines where available or custom screenlines specific to the development.
11. Enter into an agreement with the City to provide the necessary infrastructure for the forecast level of vehicular demand where capacity is insufficient and where land is contiguous with existing urban areas. The infrastructure must either be operational at the time of development approval or have sufficient funding secured for implementation. In establishing the cost, consideration should be given to, but not limited to, property acquisition or right-of-way conveyance, engineering, utilities, design, construction, and contingency.
12. Assess whether the development has direct access to an existing urban arterial road or to a planned urban arterial road identified in the in-force TMP Affordable Network. Urban arterial roads are essential to AT infrastructure availability, capacity, and connectivity. They are critical for providing the capacity to handle traffic generated by the development and meet requirements for safe and accessible 15-minute neighbourhoods.
    a. If a planned urban arterial road could provide access to the proposed development but has yet to be built, assess the timelines for its construction and ensure that it will be available by the time the first elements of the development are completed. This involves ensuring that necessary approvals and funding are secured for implementation.

b. Where there is no existing or planned urban arterial road, the developer must enter into an agreement with the City to extend the AT network and connect it to the site. The AT infrastructure must either be available at the time of development approval or have sufficient funding for implementation. In establishing the cost, consideration should be given to, but not limited to, property acquisition or right-of-way conveyance, engineering, utilities, design, construction, and contingency.

7. Roles and Responsibilities / Qualifications

General

Urban and village expansion applications to add lands not considered by the approved IMP and in-force TMP are expected to require infrastructure and transportation projects and services, the costs of which may or may not scale with the size of the application and/or number of applications. The City would need to review its approach and financial mechanisms to ensure that this unplanned growth pays for the associated infrastructure and services.

Off-site projects needed to service individual urban and village expansion applications are unlikely to be cost-effective if they are not scoped in consideration of other potential expansion areas that could benefit from these projects.

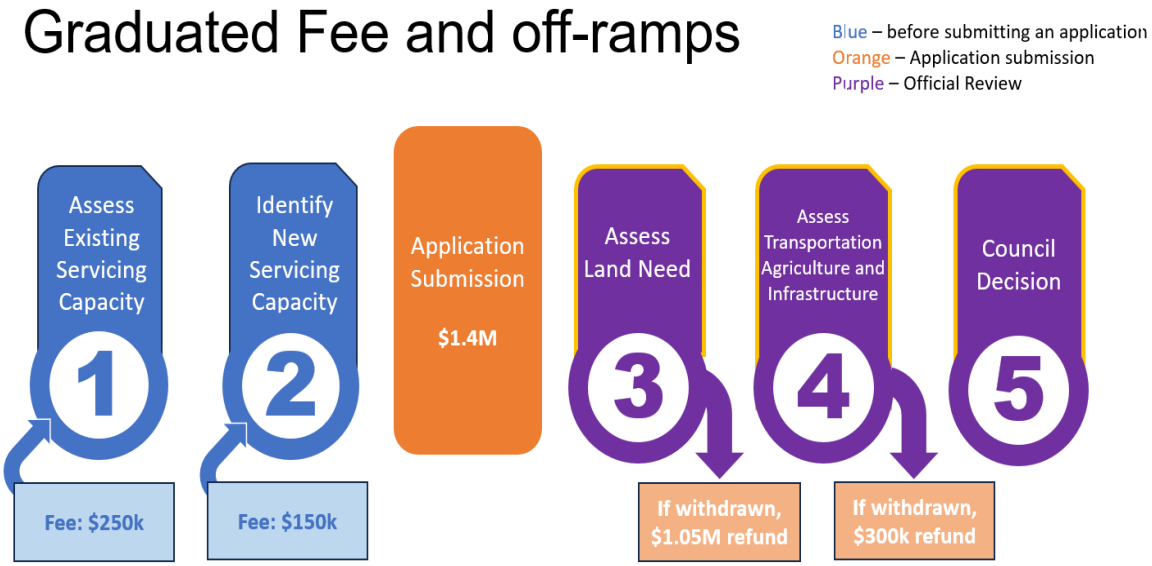
As applicants do not have access to sufficient off-site infrastructure information or models relating to the City's drinking water and sanitary sewer networks, applicants will require assistance from City staff to determine if sufficient planned capacity exists in the relevant master plan. As the in-force IMP would not have considered any proposed expansions following adoption of the 2024 PPS, it is expected that sufficient capacity would typically not exist, and therefore the assessment would include identification, and costing of off-site works required to accommodate the expansion.

The applicant wishing to obtain Servicing information, and an assessment of required infrastructure for their proposal, would be required to share their expected servicing needs with the City (requirements outlined in section 8), so that staff may determine whether there is existing or planned capacity to service the subject lands. Staff time will be required to complete the assessment in relation to the off-site network capacity to accommodate the subject lands.

Staff may retain consultants to identify infrastructure upgrades and estimated costs should those lands be added to the urban or village boundary in the future.

This “Servicing Capacity Assessment Request” to the City supports the development of a complete planning application for Urban Expansion under the Planning Act. It is possible that certain applicants will have the upstream servicing analysis already from having engaged with the City on recent development applications and may not necessitate this touch base with the City.

Process for Urban and Village Area Boundary Expansion Official Plan Amendment Applications



The figure above illustrates the five steps of the Urban Boundary Expansion process.

The Infrastructure Capacity Assessment is one of the items required for a complete Urban and Village Area Boundary Expansion Official Plan Amendment application. The Infrastructure Capacity Assessment is composed of two parts: the **Servicing Capacity Assessment**, and the **Transportation Capacity Assessment**. It is submitted by the applicant with the Land Need Analysis before Step 3 above.

Steps 1 and 2

The **Servicing Capacity Assessment** component of the Infrastructure Capacity Assessment is completed by the City, at the request of applicants, in steps 1 and 2 of the process. It identifies whether there is sufficient residual planned capacity, or whether new capacity is required to be funded by applicants, to service the addition of the lands to the urban or village developable area. Should capacity be identified,

the applicant can then finalize the balance of the required documents and submit a complete planning submission before step 3.

Step 3

Following submission of a completed application, the City will review the Land Needs Assessment and render a draft recommendation to the applicant as to whether additional urban or village area lands are needed to meet the PPS requirement of a 15-year land supply. Should the applicant select to withdraw at this stage and there is no outstanding right to appeal, a partial refund, as per the Planning Fee By-law, would be administered. Should staff provide a draft recommendation that lands are needed to meet the PPS requirement, the applicant may choose to proceed to step 4.

Step 4

At the beginning of step 4, Staff will review the **Transportation Capacity Assessment** portion of the Infrastructure Capacity Assessment. It identifies whether there is sufficient residual planned capacity, or whether new capacity is required to be funded by applicants, to support the addition of the lands to the settlement area. In the instance that new projects are required and applicants agree to fund them, or should there be residual capacity identified, staff would proceed to undertake the SAPA and complete a comparative parcel analysis.

Staff would ensure that the 2024 PPS, OP and criteria within this terms of reference are adhered to, while ensuring that any lands that would be added are the best lands for the long-term interest of the City. Staff will provide a draft recommendation to the applicant, stating the staff position on the lands in comparison to other candidate lands.

Should the applicant select to withdraw at the end of step 4 and there is no outstanding right to appeal, a partial refund to the planning application would be administered.

Application Sequencing

Applicants will not be permitted to submit an Urban and Village Area Boundary Expansion Official Plan Amendment application concurrently with any other development application.

To be deemed complete, applications other than the Urban and Village Expansion Official Plan Amendment application must already have the subject lands included in the Urban Boundary. Within the urban area, a Future Neighbourhood overlay will

apply along with the corresponding requirements for a secondary plan process. If lands are added to either for the urban or village areas through an Urban and Village Area Boundary Expansion Official Plan Amendment, a separate local planning process as per Section 12 of the Official Plan can begin for the subject lands.

8. Submission Requirements and Funding of New Infrastructure

A. Submission Requirement: Servicing

To support the off-site servicing evaluation by the City, the following must be submitted to the City's satisfaction:

1. GIS file that includes delineation of gross development area and approximate net developable area
2. Estimated build-out population, employment, and dwelling counts by type
3. For expansions involving build-out populations of less than 3,000, proponent shall provide spreadsheet with design water and sanitary demands based on City design guidelines.
4. For expansion areas involving populations greater than 3,000, the City will provide the proponent with the parameters necessary to generate spreadsheet with design water and sanitary demands.

A request for information can be submitted to the City on the above, by filling out the form.

If through Step 1 it is determined that excess planned capacity is available to support the proposed expansion, the total approximate area outside the urban boundary that could potentially be serviced by this same excess planned capacity will be delineated by the City. Similarly, if upgrades are required as identified through Step 2, the total approximate area that would be serviceable based on these same upgrades would be identified. The area identified in either steps 1 or 2 (detailed in step 7) will inform the comparative analysis that will take place in Step 4 of the Boundary Expansion process (SAPA).

B. Submission Requirement: Transportation

For the Transportation Capacity Assessment, the proponent shall submit material, as described in section 6, to evaluate the availability and capacity of transportation infrastructure to support the proposed development as per the serviceable capacity area identified in the Servicing Capacity Assessment. Staff will review, provide input on the submitted materials to accommodate the subject lands.

C. Funding of New Infrastructure

Where new capacity is required, and the applicant agrees to fund local infrastructure as a condition of proceeding with the application, the applicant will enter into a Memorandum of Understanding that details the required new infrastructure capital costs to be borne by the landowner's group (as per new Official Plan Section 11.11).

Through this process, consideration would be given to the value of oversizing the infrastructure to allow for potential future applications in the same area, including the associated funding and financing options.

If the proposed expansion area triggers certain types of major servicing or transportation system upgrades, the City may not consider the application outside of a comprehensive Official Planning process.

The following categories of upgrades would not be supportable in the context of an individual application:

- Any new or upgraded infrastructure that would be located inside the NCC Greenbelt
- Any new or expanded drinking water storage facilities
- Creation of a new drinking water pressure zone (this would involving new and/or upgraded water pumping stations and/or reconfiguration of existing pressure zones)

9. Resources / Background

- Water By-law (2019-74)
- Transportation Impact Assessment (TIA) Guidelines
- TRANS Trip Generation Manual
- Transportation Master Plan (TMP)
- Infrastructure Master Plan (IMP)