NOVATECH
Engineers, Planners & Landscape Architects

April 29, 2020

City of Ottawa
Planning, Infrastructure and Economic Development Department
Planning and Infrastructure Approvals
110 Laurier Street West, 4th Floor
Ottawa, ON, K1P 1J1

**Attention:** **Mr. Jean-Charles Renaud**

Dear Sir:

**Reference:** **Minor Site Plan Revisions to Hunt Club Development**
**Impact on Servicing and Stormwater Management Design Summary**
**Our File No. 117036**

This letter is in support of the revised site plan drawings due to minor revisions to the site plan for the proposed Hunt Club Development in the City of Ottawa. It will address any impacts to the servicing related approvals given to the site.

Notable revisions to the site plan include:

- Hotel will now be a rental building;
- Commercial area has been removed;
- 73 units have been removed;
- Revisions to building statistics are noted in **Table 1** below:

**Table 1 - Building Statistics Comparison**

| Statistic | Previous Site Plan (Apr 2018) | Current Site Plan (Apr 2020) | Change |
|---|---|---|---|
| 1-bedroom Units | 75 | 40 | - 35 Units |
| 2-bedroom Units | 75 | 37 | - 38 Units |
| Commercial Area Units | 25 | 0 | - 25 Units |
| Underground Parking Spaces | 121 | 41 | - 80 Spaces |
| Ground Floor Parking Spaces | 17 | 37 | + 20 Spaces |

Relevant changes to the City of Ottawa's Sewer Design Guidelines by technical bulletins include:

- Average Residential Wastewater Flow decreased from 350 L/c/day to 280 L/c/day;
- Correction Factor for Harmon Equation (Residential Peak Factor) changed from 1.0 to 0.8;
- Infiltration allowance changed from 0.28 L/s/effective gross ha to 0.33 L/s/effective gross ha (for all areas).

No changes to the proposed sanitary, storm or water services are proposed, other than alignment. Refer to the previous Servicing Design Report [1] for details.

## Sanitary Sewer

The theoretical sanitary flows for the previous site plan and current site plan are presented in **Table 2** below.

**Table 2 – Sanitary Flow Comparison**

| Design Criteria / Flow | Previous Site Plan (Apr 2018) | Current Site Plan (Apr 2020) |
|---|---|---|
| **Residential Condominium** | | |
| Design population | 75 1-bdrm units x 1.4 pers/ unit + 75 2-bdrm units x 2.1 unit = 263 people | 40 1-bdrm units x 1.4 pers/unit + 37 2-bdrm units x 2.1 pers/unit = 134 people |
| Average Res. Flow | 263 people x 350 L/c/day = 1.07 L/s | 134 people x 280 L/c/day = 0.44 L/s |
| Peaking Factor | $1+\left(\frac{14}{4+\left(\frac{263}{1000}\right)^{1/2}}\right)$ * 1.0= 4.10 ∴ Use 4.0 ⇒ Max | $1+\left(\frac{14}{4+\left(\frac{134}{1000}\right)^{1/2}}\right)$ * 0.8 = 3.57 |
| Peak Res. Flow | 1.07 L/s x 4.0 = 4.28 L/s | 0.44 L/s x 3.57 = 1.57 L/s |
| **Commercial Podium** | | |
| Average Com. Flow | 25 ppl x 70 L/cap/d = 0.02 L/s | None (no commercial area) |
| Peak Comm. Flow | = 0.02 L/s x 1.5 (PF) = 0.03 L/s | |
| **Infiltration Allowance** | | |
| Total I/I | 0.28 L/s/ha x 0.926 ha = 0.26 L/s | 0.33 L/s/ha x 0.926 ha = 0.31 L/s |
| **Total** | | |
| Total Average Flow | 1.35 L/s | 0.75 L/s |
| Total Peak Flow | 4.57 L/s | 1.88 L/s |

The theoretical total peak sanitary flow for the revised site plan (current site plan) is 2.69 L/s less than the theoretical total peak sanitary flow for the previous site plan. Therefore, there is no increase to sanitary design flows for the proposed development.

[1] 'Riverstone Retirement Community, Hunt Club Road Development – Site Servicing and Stormwater Management Report' (R-2017-058) by Novatech dated April 4, 2018.

## Watermain

Domestic Water Demand

The theoretical water demands for the previous site plan and current site plan for the proposed development are given in **Table 3.**

**Table 3 – Domestic Water Demand Comparison**

| Condition | Previous Site Plan (Apr 2018) | Current Site Plan (Apr 2020) |
|---|---|---|
| **Average Day Demand** | | |
| Residential | 263 people x 350 L/c/day = 1.07 L/s | 134 people x 350 L/c/day = 0.55 L/s |
| Commercial | 25 ppl x 70 L/cap/d = 0.02 L/s | N/A |
| Total | 1.09 L/s | 0.55 L/s |
| **Maximum Day Demand** | | |
| Residential | Av. Day Res. x 2.5 = 2.68 L/s | Av. Day Res. x 2.5= 1.38 L/s |
| Commercial | Av. Day Comm. x 1.5 = 0.03 L/s | N/A |
| Total | 2.71 L/s | 1.38 L/s |
| **Maximum Hour Demand** | | |
| Residential | Max. Day Res. x 2.2 = 5.90 L/s | Max. Day Res. x 2.2 = 3.04 L/s |
| Commercial | Max. Day Comm. x 1.8 = 0.06 L/s | N/A |
| Total | 5.96 L/s | 3.04 L/s |

The theoretical Maximum Hour Demand decreases from 5.96 L/s to 3.04 L/s, a decrease of 2.92 L/s. Refer to the revised General Plan of Services.

Based on watermain data previously provided by the City, the existing watermain on Hunt Club Road can deliver the 83 L/sec fire flow. Refer to the previous Servicing Design Brief (1) for a copy of the watermain data. Based on this information, the existing watermains in the area remain adequate to service the proposed development.

Fire Demand

Fire demand and availability remains as per the approved plan.

## Stormwater

A Stormwater Management section was prepared for the previous site plan.

The revised building roof is still directed uncontrolled to the storm tank. Also, the podium drain and area drains/CB at the back are also directed to the storm tank. This is consistent with the original design.

We anticipate that there is no effect on the stormwater management for the site.

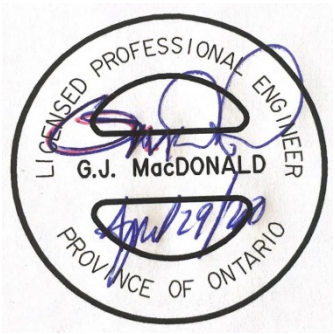
## Conclusions

Based on the above, these minor revisions have minimal impact on the approved servicing and stormwater management design for the proposed development.

Trusting this is satisfactory. Should you have any questions or require additional information, please contact the undersigned.

Yours truly,

**NOVATECH**

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Project Manager | Land Development Engineering

Attachments:

- Revised General Plan of Services – Phase II (117036-GP2, Rev 14);
- Revised Grading and Erosion Sediment Control Plan – Phase II (117036-GR2, Rev 09).