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Memorandum

To/Attention	Mike Giampa, P.Eng. Senior Engineer, Infrastructure Approvals Planning, Infrastructure & Economic Development Department City of Ottawa 110 Laurier Avenue West Ottawa, ON K1P-1J1	Date	April 23, 2021
From	David Hook, P.Eng.	Project No	39124
cc	Vincent Li – Formasian Development Corp.		
Subject	1919 Maple Grove Road - Transportation Impact Assessment - Addendum 1		

Introduction

A Transportation Impact Assessment (TIA) was prepared in support of an ongoing Plan of Subdivision application for the proposed residential development at 1919 Maple Grove Road and was submitted to the City of Ottawa on April 23, 2019. Since the submission of this TIA, the Draft Plan of Subdivision has been revised based on circulation comments received from the City of Ottawa on October 18, 2019. A response to the transportation-related comments is provided in **Appendix A**.

The purpose of this memorandum is to summarize the key changes to the Draft Plan of Subdivision from a transportation perspective and the impact these changes may have on the overall conclusions of the TIA.

Revision to Draft Plan of Subdivision

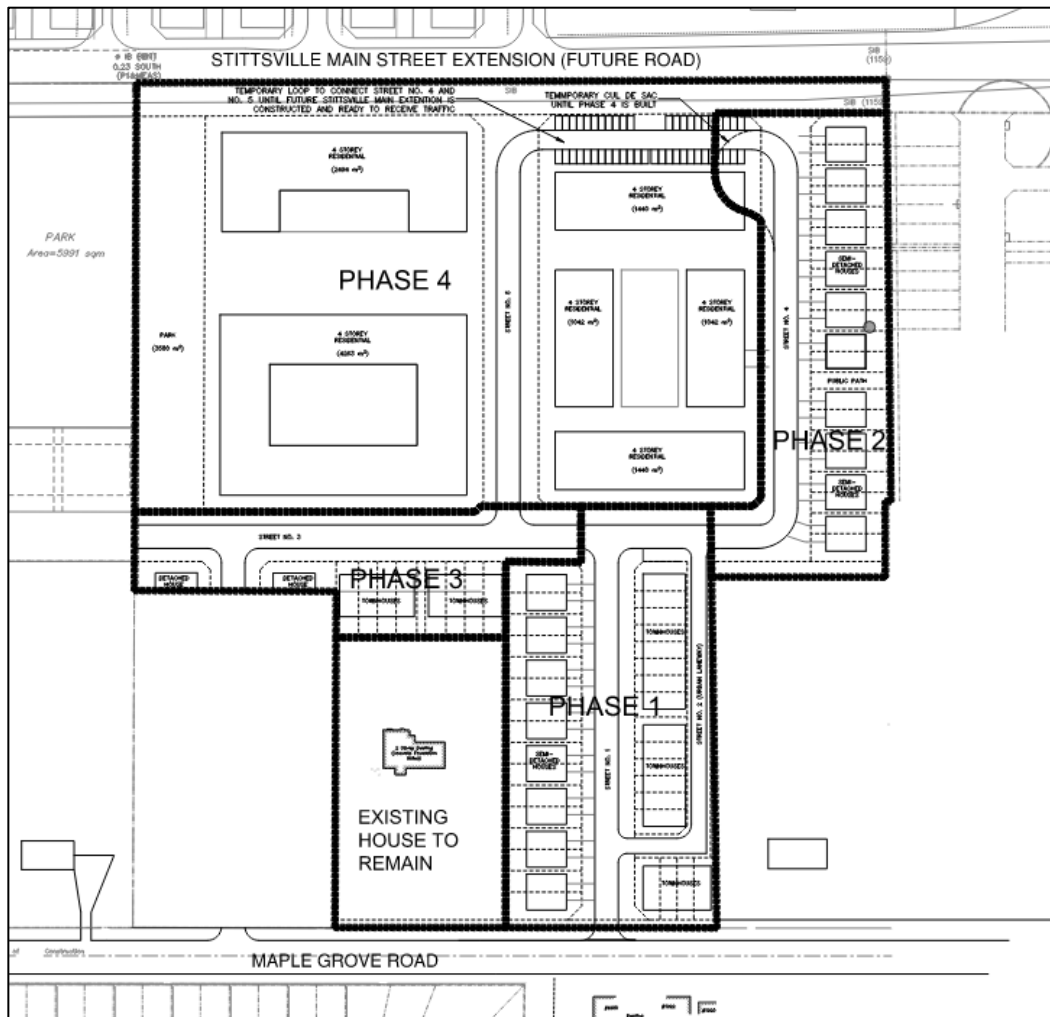
The revised Draft Plan of Subdivision has been provided in **Appendix B**. Since the TIA was submitted, the following revisions were made to the Draft Plan:

- The right-of-way for Street No. 1 has been increased from 18.0m to 19.2m to permit a multi-use path (MUP) through the site that will provide an active transportation corridor between the Johnwoods MUP and the 'major park' planned within the 195 Huntmar Drive development to the north;
- A reduction in the number of low-density residential units (i.e. single-detached, townhome, semi-detached dwellings) from 79 to 64 units;
- A rearrangement of the four-storey apartment blocks proposed on the northern half of the site and a slight increase in the overall unit count for the apartment land use from 440 to 450 units;

- The phasing for the subject site is now expected to occur over a 10-year period as opposed to the more conservative 5 years assumed in the TIA, as shown in **Figure 1**; and
- Site access connections to the north will only be established once the Stittsville Main Street Extension is fully implemented, which will help to mitigate the potential for cut-through traffic within the subject site. In the interim, either temporary turning circles or a connection 'loop' between Streets 4 and 5 will help facilitate site circulation in the final phases of development prior to the connection of these streets to Stittsville Main Street.

Despite the slight increase in the number apartment dwelling units, it should be emphasized that the overall unit count for the proposed development has decreased by 5 units, representing an approximate 1% reduction in comparison to the previous Draft Plan. This reduction is expected to result in a minor decrease in site-generated traffic and therefore bears no consequence the intersection capacity analyses or the overall conclusions of the TIA. Further, with the increase in the expected development phasing from 5 to 10 years, the traffic analysis conducted for the TIA now represents a worst-case scenario. The phasing of the development and interim site configuration will allow more time for the surrounding road network to mature while mitigating potential impacts to the community by restricting cut-through traffic.

Figure 1 – Proposed 1919 Maple Grove Phasing



Updated Adjacent Developments

The following adjacent development applications have either been initiated, re-activated or become inactive since the latest submission of the TIA in April 2019:

130 Huntmar TIA (Dillon, 2020)

This mixed-use development includes 742 residential dwelling units, approximately 2,790 square metres of commercial uses and an elementary school. The site is expected to be fully built out by 2024.

195 Huntmar TIA (CGH, 2019)

This mixed-use development includes 573 residential dwelling units, approximately 63,695 square metres of commercial uses. The site is expected to be fully built out by 2024.

1869 Maple Grove TIA (EXP, 2020)

This small residential development consists of just 18 townhome units and is expected to generate a negligible increase in traffic on Maple Grove Road. The site is expected to be fully built out by the end of 2021.

173 Huntmar CTS (Parsons, 2014)

A Community Transportation Study (CTS) was conducted in 2014 support of the proposed development at 173 Huntmar Drive. According to DevApps, this application is no longer active and build-out of the site is not expected to occur within the timeframe of the subject development, as discussed in the recently completed TIA for 130 Huntmar Drive.

1981 Maple Grove TIA Addendum 1 (IBI, 2021)

A residential development immediately west of the subject site consisting of 211 townhome units. The Draft Plan is currently in the final stages of approval.

Road Network Timing

In May 2020, the City of Ottawa initiated a joint environmental assessment (EA) for the Stittsville Main Street Extension and Huntmar Drive Widening. The timeline for the completion of this EA study and the implementation of a preferred design, however, has yet to be determined. Consistent with the assumptions presented in the TIA in support of the subject development as well as more recent studies for the adjacent developments described above, it is conservatively assumed that these modifications will not be in place within the horizon year of this study.

Maple Grove & Huntmar Intersection Upgrades

According to City staff, funding has now been secured for upgrades to the Maple Grove & Huntmar intersection. The detailed design of this intersection is presently underway and implementation is targeted for the latter half of 2021. These upgrades will include additional auxiliary lanes on each approach, consistent with the recommendations presented in the TIA for 1919 Maple Grove, as well as a 'protected intersection' configuration to help support future multi-modal travel demands within the study area.

Maple Grove Extension

In conjunction with the 1981 Maple Grove development to the west of the subject site, a Roadway Modification Application (RMA-2018-TPD-046) functional design was developed for the Maple Grove extension/ urbanization from Stittsville Main Street to the multi-use path (formerly Johnwoods Street). It should be noted that this RMA was based on a 23m cross-section, rather than a 26m cross-section, to maintain a relative alignment with the existing segment of Maple Grove further east. The proposed cross-section includes a multi-use path, 3.5m wide vehicular lanes, a 2.5m wide parking bay, bus stops and concrete sidewalk. The design also includes Pedestrian Crossovers (PXOs) to establish connectivity with existing active transportation infrastructure. The westbound approach to Stittsville Main Street flares to 11m pavement width to provision for a future auxiliary turning lane once Stittsville Main Street is extended to the north.

Given the close proximity of the eastern limit of the RMA relative to the proposed site access intersection on Maple Grove Road, the design of this intersection will be coordinated with the functional design established for Maple Grove Road.

Traffic Calming Strategy

In December 2019, Ottawa City Council approved a Strategic Road Safety Action Safety Plan which established that all new local residential streets, constructed within new developments be designed for a 30km/h operating speed. Following the approval of this plan, the City of Ottawa is now in the process of finalizing the Local Residential Streets 30km/h Design Toolbox, which provides more specific guidance on how to achieve these reduced operating speeds. In accordance with these new guidelines, a conceptual-level traffic calming was developed for the proposed development and is provided in **Appendix C**.

Conclusion

The revised Draft Plan of Subdivision and the timing of key infrastructure projects within the study area were reviewed to determine the potential impact these changes would have on the conclusions of the April 2019 TIA. These changes are expected to have a negligible impact on site-generated traffic volumes. Further, the redesign of the Maple Grove & Huntmar intersection is slated for construction in 2021 and includes geometric modifications which are consistent with recommendations in previous submissions of the TIA. As such, the overall conclusions and recommendations of the April 2019 TIA remain valid.

Prepared By:

A handwritten signature in black ink, appearing to read "D Hook", with a long horizontal line extending to the right.

David Hook, P.Eng.
Transportation Engineer

Appendix A – Response to Circulation Comments (Transportation)

Step 4 Submission (Analysis) – Circulation Comments & Response

Report Submitted: April 23, 2019

Comments Received: October 18, 2019

Transportation Project Manager: Mike Giampa

Traffic Signal Operations

1. Synchro analysis cannot have a lagging EB left-turn arrow, as this will introduce a WB left-turn trap.
 - **IBI Response: The use of a 'Lagging' phase was limited to 2026 total traffic conditions under weekday morning peak hours and was consistent with the analysis completed for the 1981 Maple Grove TIA. Further analysis indicates that changing the EBL turn phase from 'Lagging' to 'Leading' does not change the overall Synchro result. It is still possible to achieve the same overall critical v/c ratio of 0.89.**
2. Minimum left-turn storage length is 35 metres. Revise recommendations.
 - **IBI Response: Acknowledged. The westbound left-turn lane and southbound left-turn lane storage lengths were based on the highest 95th% queue length in the ultimate 2026 total planning horizon, and thus were recorded as being less than 35m to show the minimum storage lengths required to accommodate future traffic demand in 2026. These storage lengths do not include deceleration or taper, which were considered in the 'protected intersection' design of Maple Grove & Huntmar completed by Novatech in October 2019.**

Traffic Signal Design

1. No comments to this TIA for this circulation.
 - **IBI Response: Noted.**
2. Traffic Signal Design and Specification reserves the right to make future comments based on subsequent submissions.
 - **IBI Response: Noted.**
3. Future Considerations:
 - a) If there are any future proposed changes in the existing roadway geometry for the purpose of construction of a new TCS(s) or modifications to existing TCS(s) the City of Ottawa Traffic Signal Design and Specification Unit is required to complete a review for traffic signal plant re-design and provide the actual re-design;
 - b) If the proposed traffic signals are warranted / approved for installation or modifications to existing TCS are approved, and RMA approved, please forward an approved geometry detail design drawings (.dwg digital format in NAD 83 coordinates) including base mapping, existing and new underground utilities / sewers, new / existing catch basins locations, Turn-Radius Modeling

and approved pavement markings drawings in separate files for detail traffic plant design layout;
and

c) Please send all digital (CADD) design files to peter.grajcar@ottawa.ca, 613-580-2424 x23035.

➤ **IBI Response: Noted.**

Street Lighting

1. No comments with initial TIA for this circulation. Street Lighting reserves the right to make future comments based on subsequent submissions.

➤ **IBI Response: Noted.**

Transit Services

1. No comment regarding this TIA circulation. Transit service will be extended via Route 261 on extension of Stittsville Main Street in scope of 195 Huntmar Drive subdivision.

➤ **IBI Response: Noted.**

Development Review – Transportation Engineering Services

1. PM&S dwg: coordinate with 1981 Maple Grove for geometry of Street 4, regarding sidewalk locations.

➤ **IBI Response: Noted. The potential sidewalk is now shown on the north side of Street 3 (formerly Street 4) in the conceptual traffic calming plan, and will be included on the PM&S drawing following Draft Plan approval.**

2. PM&D: provide ultimate PM&S drawings in addition to the interim provided in the event Stittsville Main Street extension is constructed in time.

➤ **IBI Response: Acknowledged. 15m-radius temporary asphalt turning circles have been added to phasing plan as an interim measure until such time Stittsville Main Street is constructed. Geometric Road Design Drawings (GRDD) will be prepared following draft approval and will consider the ultimate configuration of the site, including traffic-calming measures targeting a 30km/h operating speed.**

3. PM&S: Temporary cul-de-sac min radius is 15 metres. Design to conform to OPSD 500.020. Easement and agreement required if cul-de-sacs are on neighbour's property.

➤ **IBI Response: Temporary cul-de-sacs will be provided within the property limits. As these are temporary, they will be constructed without curbs per OPSD 500.010.**

4. PM&S: indicate on the drawing at the access to MG that the design and PM&S to be constructed as per RMA form 1981 MG.
 - **IBI Response: Acknowledged. A note has been added to the site plan, indicating "Future access design to be coordinated with RMA-2018-TPD-046 (by others)".**
5. PM&S: PXO or a controlled crossing to be included on Street 4 at the intersections of Street 1 and Street 3. Curb ramp and TWSIs required on north side. One crossing per intersection. Crossing at Street 3 should be on side furthest away from corner.
 - **Noted. A PXO will be added to the Pavement Marking, Signage and Roadway Geometry Drawings (now referred to by the City as GRDD plans) and will be submitted following Draft Plan approval.**
6. Coordinate with 195 Huntmar Drive for the design of the Stittsville Main Street extension. Street 5 may be required to be restricted to RIRO due to RAB geometry.
 - **IBI Response: The EA process for the Stittsville Main Street extension has only just begun and there are no designs available as of yet. The potential right-In/right-Out restriction on Street 5 is noted.**
7. Identify corner triangle sizes.
 - **IBI Response: All site corner triangles for local-to-local intersections have been designed with 3x3, while all other intersections have 5x5 daylighting triangles.**
8. Cost sharing agreement will be required with 1981 MG for the design and reconstruction of MG.
 - **IBI Response: Noted.**

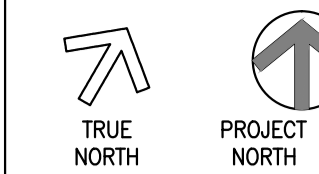
Councillor Comments

1. The current intersection of Huntmar - Maple Grove is overloaded and cannot support additional traffic from this development. Approval should not be granted until the intersection is upgraded.
 - **IBI Response: The City has included the reconstruction of this intersection in the 2021 draft budget for construction. The proposed upgrades will be sufficient to accommodate the future projected traffic volumes relating to the subject development, as well as redirected traffic induced by the extension of Maple Grove Road. Recent analysis conducted in support of a proposed development at 130 Huntmar indicated that the planned intersection modifications will be able to support the projected traffic growth in the area, which includes traffic generated by this development. As noted previously, the full build-out of the 1919 Maple Grove development is expected to occur over a period of 5-10 years, allowing more time for improvements to the surrounding road network (i.e. Stittsville Main Street extension and Robert Grant Avenue extension).**

2. This application should not proceed until the full north extension of Stittsville Main Street is completed to Robert Grant Avenue, and Maple Grove connects to Stittsville Main Street.
 - **IBI Response: The TIA completed for 1919 Maple Grove indicates that the road network will be capable of accommodating the anticipated traffic generation of this site, subject to the implementation of traffic signal modifications at the Maple Grove & Huntmar intersection.**

3. There is a significant need for traffic calming on Maple Grove Road, and this development will impact existing homes and streets. We will need funds from this developer to help improve safety - PXO, speed boards, bulb-outs / chicanes, speed cushions, etc. - to mitigate the impact that additional traffic from this development will have on the community.
 - **IBI Response: Traffic calming elements are being considered as part of the Maple Grove extension west of Johnwoods (RMA by others). In addition to this, physical traffic calming measures are under consideration for the internal roads within the 1919 Maple Grove development. The third consideration is that the connection of this development to Stittsville Main Extension is long-term and will not likely occur until after the area road network is complete, thereby mitigating any cut-through concerns. Ultimately, the majority of site-generated traffic will directly access the future Stittsville Main Street extension to the north and contribute minimal traffic to Maple Grove Road.**

Appendix B - Draft Plan of Subdivision



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KEY PLAN:

110 ARCHITECTS INC.

ARCHITECTURE + URBAN DESIGN

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SEAL AND SIGNATURE:

CLIENT:
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1919 MAPLE GROVE ROAD
STITTSVILLE, ONTARIO K2S 1B9

TEL: (613) 836-9453
E-MAIL: vinceli@formasian.ca

PROJECT: 1919 MAPLE GROVE MASTER PLAN

1919 Maple Grove Road

DATE ISSUED	REV.	DESCRIPTION	FOR SUBMISSION	BY
2021-04-06	5	DRAFT		
2021-02-11	4	COORDINATION		
2020-03-02	3	COORDINATION		
2020-02-26	2	CLIENT CHANGES		
2020-02-05	1	COORDINATION		

TITLE: Site Plan

SCALE: AS NOTED

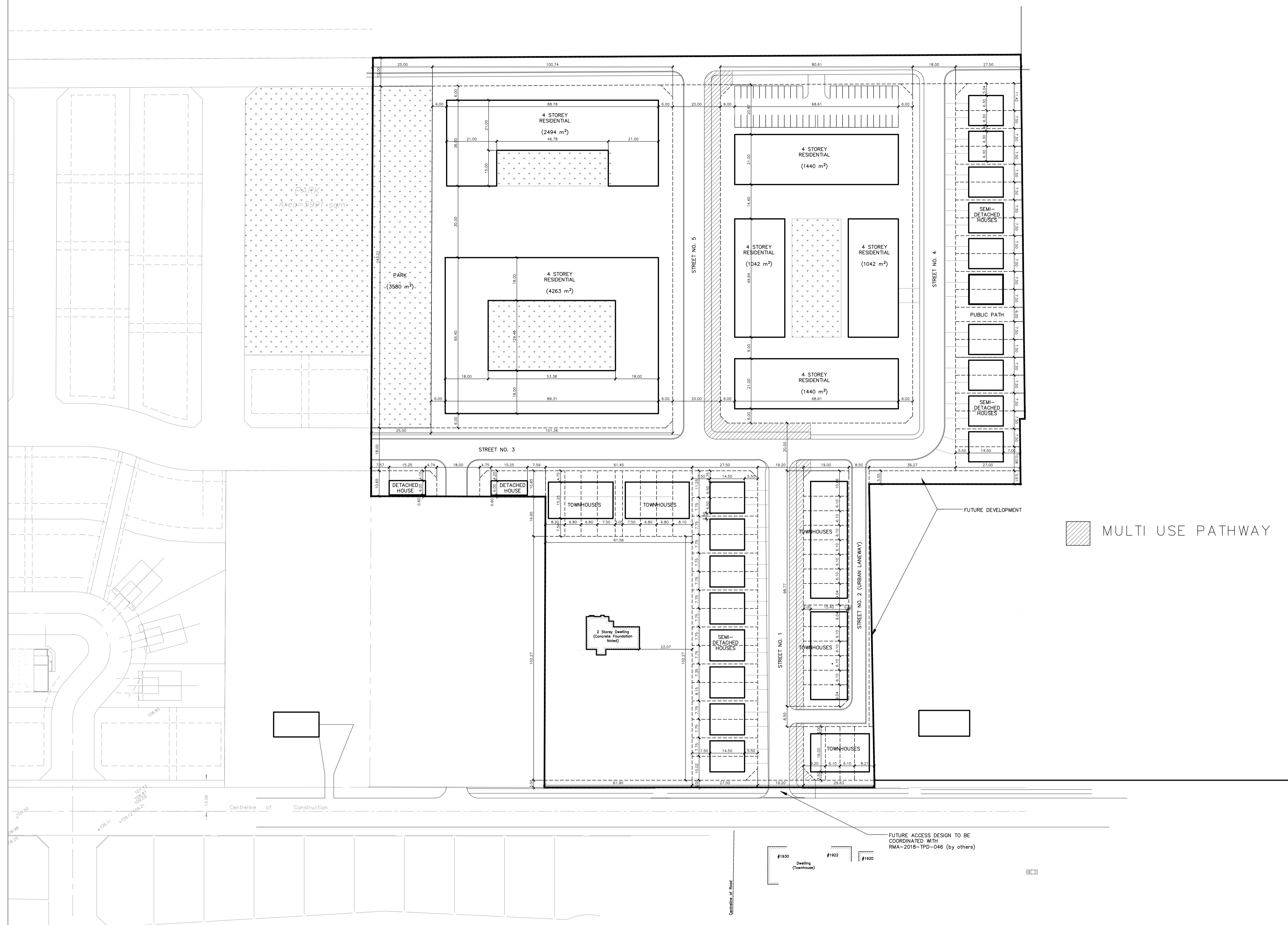
PROJECT No.: 010

DATE: DEC 31, 2019

APPROVED BY: JG

DRAWN BY: JG

A-001



1919 MAPLE GROVE ROAD

DEVELOPMENT CONCEPT PLAN

0 10 20 30 40 50 100 metres
SCALE : 1 : 750
DATE : 2016-02-20

Appendix C – Conceptual Traffic Calming Plan



Stittsville Main Street Extension (Future Road)

