

August 27, 2026

Fabian Serra
Planner
Norfolk County
60 Colborne Street South
Simcoe, Ontario N3Y 4H3

Dear Fabian:

**Re: Application for Site Plan Control 60 Pond Street
Norfolk County
File: 150**

Nethery Planning is the planning consultant representing Mr. Mark Bristoll on behalf of Ollie Switch Developments. A Site Plan Control application for 60 Pond Street was submitted to Norfolk County in 2024. Comments were received on August 11, 2025.

The plans and supporting materials have been further revised and are now resubmitted as a complete package for the County's review and approval.

As part of this resubmission, several revisions have been made to the building concept to improve construction efficiency. The principal changes include the following:

- The number of residential units remains unchanged at 67 units;
- Parking has been reduced from 63 spaces to 59 spaces;
- The building height has been reduced from 7 storeys to 6 storeys; and
- The building length has increased from approximately 38.5 metres (120.3 feet) to 45.06 metres (147.9 feet).

Notwithstanding the increase in building length, the revised building envelope continues to be located entirely outside of the floodplain.

Please find included in the resubmission package the following:

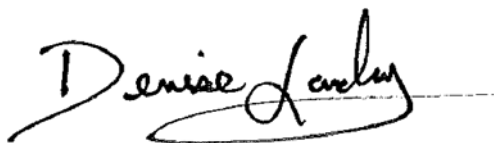
Information	Consultant
Covering Letter	Nethery Planning
Site Plan	GB Architects Inc

Landscape Plan & Cost Estimates	Aboud & Associates Inc
Lighting Photometric	Integrated Engineering
Sight Line Analysis Memo & TIS	RC Spencer Associates
Civil Site Plan, Servicing Plan	MC Engineering
RSC & Acknowledgement	NA
Stormwater Management Brief & Calculations	MC Engineering
Securities & Construction Estimates	MC Engineering

Please circulate the attached material to internal departments and applicable agencies for review.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours sincerely,



Denise Landry, MCIP, RPP
Principal Planner
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denise@netheryplanning.ca

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Comment	Response	Assigned Consultant
Planning		
1) Record of Site Condition (RSC) required as a condition of site plan approval.	Completed – see attachments	Denise/ Mark
2) Snow storage required to be shown on site plan.	Identified on plan – additional snow to be removed by private service (if needed)	GB Architects Inc.
3) Exterior lighting to be shown on site plan. This includes both exterior lighting on the building and in the parking lot (post lights/streetlights)	Revised to show	GB Architects Inc.
4) Proposed garbage pickup location? Must be shown on site plan along with path of travel delineated on plan.	Identified on site plan	GB Architects Inc.
5) Provide fencing along west side of property to provide further separation between the Brick parking lot, as well as the adjacent 68 Pond Street (Dance studio/ Plumbing World building) and the 7 storey apartment building. To be delineated on Site Plan.	1.8 metre high pressure treated wood fence added	GB Architects Inc.
6) The Holding Provision on the subject lands is required to be lifted.	Fabian – what is the County’s process for removing?	Denise
7) Satisfied with landscaping plan and landscaping amounts provided within the security schedule.	Noted.	Landscape Architect
8) Security schedule update - Signage amount on security schedule needs to be updated	Security Schedule has been updated	MC Engineering
Agreement Coordinator		
I am looking forward to working with you on	Annette – can you please provide the ‘required	NA

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your site plan agreement. As part of your conditional site plan approval, you are required to register an agreement on title. To fulfill this condition please provide the information and user fees as outlined in the attached "Required Information 2025". In order to streamline this process and reduce review times, please provide a complete submission package. A payment slip and deposit instructions will be provided when the user fees and performance securities have been determined. Thank you and all the best. Annette Helmig, Agreement and Development Coordinator Annette.helmig@norfolkcounty.ca	information 2025' document	
Zoning		
Reviewed. No comments.	Noted	NA
Enbridge		
Thank you for your correspondence regarding the proposed Site Plan Application. Enbridge Gas Inc. (Enbridge Gas), does have service lines running within the area which may or may not be affected by the proposed Site Plan. Should the proposed site plan impact these services, it may be necessary to terminate the gas service and relocate the line according to the new property boundaries. Any service relocation required would be at the cost of the property owner. If there is any work (i.e. underground infrastructure rebuild or	Noted	Owner

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grading changes...) at our easement and on/near any of our existing facilities, please contact us as early as possible (minimum 1 month in advance) so we can exercise engineering assessment of your work to ensure the integrity of our main is maintained and protected. Confirmation of our natural gas pipeline location should be made through Ontario One Call 1-800-400-2255 prior to any activity. We trust the foregoing is satisfactory.		
Canada Post		
Please be advised that Canada Post does not have any further comments on this application for a 67 unit apartment building. This development will need to install a mail panel in the lobby for mail delivery.	Noted.	GB Architects
Norfolk GIS		
Please contact NorfolkGIS for new civic addresses when building. You can apply for a new civic address here. If a green sign is required in order to issue you an address (generally anywhere outside of an urban area) you will have to call Norfolk County Customer Service after applying to make payment before the address is issued (519-426-5870 or 226-NORFOLK). If you would like to apply for a new Civic Address because you are planning to build on a vacant parcel of land, this is dealt with as part of the building	Noted.	Owner

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permit process. The building inspector can provide you with a copy of a Civic Address Request Form or it can be downloaded below. On the form there are several areas that need to be filled out with information, and a sketch showing the lot layout of the property for which the Civic Address is being requested. A sample sketch will be included with the form.		
Fire		
Ensure there is adequate space for the function of the fire department connection	Connection identified as #13 on plan	GB Architects Inc.
Adequate fire access route to be provided, fire access route and signage plan to be submitted to FPO for review and approval	Fire access route shown. Fabian – do we send the signage plan separately to fire?	GB Architects Inc.
Fire Safety Plan to be developed and submitted to the FPO for review and approval prior to occupancy		Owner
If battery storage (Tesla wall, etc.) or electric vehicle charging infrastructure is provided please notify NCFD	Noted.	NA
Paramedic Services		
Reviewed. No comments.	Noted.	NA
Cambium/ Source Water Protection		
The above noted property is not located within a wellhead protection area or intake protection zone. As such, policies in the Long Point Region Source Protection Plan will not apply to this property.	Noted.	NA
Hydro One		
Reviewed. No comments.		

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Long Point Region Conservation Authority (LPRCA)		
Long Point Region Conservation Authority (LPRCA) staff have had an opportunity to review the application SPPL2024077- 2nd submission and can provide the following comments based on LPRCA's various plan review responsibilities for Norfolk County's consideration. It is staff's understanding that the submitted application will permit a 7-storey apartment building with 67 parking spaces. Comments: 1) LPRCA staff are satisfied with the Stormwater Management Plan.	Noted.	NA
2) The detailed grading plan needs to remove any reference to GRCA, it is noted in a comment box on drawing SP1 Rev. No.2. Also, the vertical datum needs to be added to the drawing.	References to GRCA have been removed. Vertical Datum has been identified on Grading Plan (General note 15)	MC Engineering
3) The floodplain delineation map needs to remove any reference to GRCA and the vertical datum needs to be added to the drawing.	References to GRCA have been removed. Vertical Datum has been identified on Grading Plan, (dwg. SP1, general note 15)	MC Engineering
Conditions for Site plan To be Satisfied Prior to Site Plan Agreement:	Detailed Grading Plan including existing and proposed	MC Engineering

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AND FURTHER THAT prior to final plan approval, the Owner shall complete, submit and carry out the recommendations and any necessary mitigation to the satisfaction of the Long Point Region Conservation Authority from the following reports and plans: a. A detailed Stormwater Management Plan; 1. A detailed Grading Plan; 2. Floodplain delineation map; i. Needs to use the topographic survey to plot the flood elevation. To Be Satisfied Prior to Grading: AND FURTHER THAT the Owner shall, prior to any site alteration, secure any permits required under the Conservation Authorities Act, R.S.O. 1990, c. C.27, from the Long Point Region Conservation Authority.	topography, and floodplain delineation information has been provided (dwg. SP1)	
Development Engineering		
General Comments: 1. There was NO response matrix submitted with the 2nd submission. As a result, Norfolk County had difficulty determining how or IF comments were addressed. Several of the comments below are repeated as Norfolk County cannot identify that adequate changes were made to	Noted.	NA

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address our concerns. Several of the comments below are identified as comments not addressed from first submission.		
2. A Security schedule was provided in Norfolk County's Schedule H template. Final approval will be given once the plans are finalized. During this review Norfolk County did not recognize items for the reconstruction of the Brick Parking lot. Please note that all Storm sewer work on neighboring property is to be shown at 100% as the County will require full securities unless an agreement between 2 landowners is provided.	Security Schedule has been updated to include Brick Parking Lot.	Owner and Nethery Planning
3. Not addressed from 1st submission - At the time OPA and ZBA application stage, the complete Drawing set included several drawings not included in this submission. Development Engineering requests a full set of drawings be submitted in your next submission. With no response matrix it is difficult to understand how this submission has met our previous comments. NOTE: Some drawings have been renamed and renumbered from 1st submission	Complete Revised Drawing Set Consists of: A.1.1 - Architectural Site Plan page 1 A.1.2 - Architectural Site Plan page 2 SP1 - Grading and Drainage Plan & ESC Plan SP2 - Site Servicing Plan SP3 - Demolition Plan (& existing site conditions) SWM Brief (Landscape Plan and other required documents by others)	MC Engineering
Site Plan (Dwg. No. A1.1 and A1.2 gb architect inc.):	Items on originally submitted site plan have now been added to Architectural Site Plans.	MC Engineering and GB Architects

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Previously this drawing was included in the Civil drawings from MC Engineering. This is now part of the Architectural drawings by gb architect inc. 4. The previous MC Engineering Site Plan drawing identified several items that have not been included in the gb drawings. The site plan drawings is to be reviewed and will include the following information in the next submission: i. Identify the criteria of Standard Duty asphalt and Heavy-Duty Asphalt. ii. Please add a note regarding Commercial Driveway entrance “All work within the Municipal Right of Way to be completed to the satisfaction of Norfolk County and OPSD 350.010” OR add this to one of the Civil drawings.	All other information is listed on SP1 & Sp2. Note added to SP2, general note 14: “All work within the Municipal Right of Way to be completed to the satisfaction of Norfolk County and OPSD 350.010	
Grading Plan / Drainage Plan & Siltation and Erosion Control Plan (Dwg. No. SP1): 5. This drawing is to include all requirements identified in Section 16.4.02 of Norfolk County Design Criteria. The drawing must also follow Section 11.	Additional information has been listed on drawing SP2 (Grading Plan & ESC Plan) in accordance with request.	MC Engineering
6. Silt Fence has only been shown on this plan surrounding “The Brick” Parking lot. In your next submission please include the	Location of Silt Fence has been expanded. Drawing has been updated.	MC Engineering/ GB Architects

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Silt Fence around all sites to be under construction. Silt fence and erosion control measures are required on the larger Apartment site as well.		
7. Please label driveway width for entrance on to Pond Street.	Driveway widths now indicated	GB Architects
8. This submission proposes to have the south portion of the parking lot directly discharge overland flow by asphalt swale across an existing sidewalk. This is not preferred by Norfolk County as during winter months melting snow on the parking lot can flow over and freeze on the sidewalk and road. It is preferred to have Sites contain their own internal flows without flowing across municipal sidewalks.	A Catch Basin (Trench Drain) has been added to eliminate runoff from crossing over sidewalk	MC Engineering
9. Please add the road restoration “Hatching” to the location of the Sanitary and water servicing, New Hydrant location, New storm connection for Apartment site and all service location for decommissioned services on Pond Street.	Hatching has been added as requested	MC Engineering
10. Please provide a Road Restoration detail. This was shown previously on a drawing labeled SP4 in June 2019. That drawing has not been included in this set. The minimum standards for Road Restoration are 40mm - HL3, 50mm – HL8, 150mm Gran A, 300mm Gran B)	Road restoration detail has been shown on SP1	MC Engineering
Site Servicing Plan (Dwg. No. SP3) 11. All manholes, catchbasins, sidewalks,	Items requested have been more thoroughly and clearly	MC Engineering

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walkways, valves, curb stops, parking space line painting, etc. to be labelled or shown in legend with existing or proposed identification (labels, line types, etc.); This comment is not addressed from 1st submission. All new and existing WM, San and STM line types are the same. No difference between Existing and Proposed.	labelled,	
12. Not addressed from 1st submission - Match line types shown in the legend to those shown in the drawing. i. Storm and Water still do not match.	Line types now match legend	MC Engineering
13. Not addressed from 1st submission - Provide unique line types for proposed and existing pipes	As per discussion with County, instead of providing unique linetypes, all services / linetypes are clearly labelled as existing or proposed on dwg. SP3	MC Engineering
14. Not addressed from 1st submission - Provide crossing details for all proposed crossings in Sydenham Street. As this comment was not addressed, Development Engineering has made some effort to explain our potential concerns further. We have the following information for the Engineer to review and comment on: i. As shown the proposed Sanitary invert of 200mm is 207.80 (Obv = 208.00). A reasonable estimate for top of WM is $209.59 - 1.7 = 270.89$. Norfolk County is concerned that the proposed Sanitary	Crossing details have been added to all required crossings. All existing sanitary and storm sewers in Sydenham Street up to Pond Street have been field measured and verified. In some cases inverts and pipe slopes have been adjusted on drawing set to demonstrate compatibility. In all cases Watermain depth is assumed to be 1.5m. Should this not turn out to be the case, A note has been	MC Engineering

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ii. For the proposed Storm sewer to new Brick parking lot, invert of 300mm Storm sewer at WM crossing is estimated at 208.50 (Obv=208.80). Estimated top of watermain is $209.76 - 1.7 = 208.06$. At this estimate the separation is less than 0.5m. It is also recognized that the Storm sewer within the ROW has less than 1.0m cover. The Engineer is to review and confirm all assumptions and provide response. A reminder that any Sewer or Watermain without sufficient depth is to be insulated. Adequate details and notes are to be included for Insulation details as per Norfolk County standards. iii. For the proposed Storm Sewer to the new Apt parking lot, the estimated invert of 300mm Storm sewer at	service will conflict with the watermain. The Engineer is to review and provide adequate details and notes to address this concern. added to SP3 indicating that owner/contractor is responsible for any required relocations of water services in the ROW and on subject property. Insulation Note is added to SP3.	
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watermain crossing is 208.00 (Obv=208.30). Estimated top of Watermain $209.32 - 1.7 = 207.62$. At this estimate the separation distance is less than 0.5m. It is again recognized that the storm sewer has less than 1.0m cover. The Engineer is to review and confirm all assumptions and provide response. A reminder that any Sewer or Watermain without sufficient depth is to be insulated. Adequate details and notes are to be included for Insulation details as per Norfolk County standards. iv. Norfolk County recommends in your next submission that you provide Plan and Profile of each service and clearly show horizontal and vertical separations. Plan and Profile drawings are required as per Section 16.4.03 of Norfolk County Design Criteria.		
15. Not addressed from 1st submission - For the proposed watermain/services, label all appurtenances.	Watermains and appurtenances have now been clearly labelled	MC Engineering
16. Not addressed from 1st submission - As		MC Engineering

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per Section 7.12.02, with respect to Storm connections – “All connections shall have an inspection manhole constructed on the municipal right of way within 1.5m of the property line.” In your next submission please add this Inspection manhole	Inspection manhole has been installed on storm sewer for apartment lot. As discussed with County Staff, an inspection manhole on the Brick Parking Lot storm sewer is not required.	
17. Not addressed from 1st submission - Label all existing storm pipes on Sydenham Street and provide storm design sheet. Refer to SWM Report comments regarding existing capacity and HGL calculations. While it has been agreed by both Norfolk County and LPRCA that Quantity Control for the site is not required in a typical Stormwater management Plan, the County remains concerned as to whether the existing Storm is undersized. With the proposal of a connected roof top collection system this will add new pressure to what is already an undersized system. This could create unwanted pressure on the downstream sewers. Norfolk County still requires justification that the proposed discharge from the site is appropriate for the capacity of the municipal system. It must be noted that ALL new connections to existing Storm sewers must follow the MECP Design Criteria identified in Norfolk County’s Consolidated Liner Infrastructure - Environmental Compliance Approval (CLI-	As per discussions with County Staff, a detailed analysis of the existing capacity of the storm sewer at Sydenham street is not required. Instead the revised drawings and SWM Brief indicate information and proposed measures taken to ensure there are no impacts to County infrastructure, including: -careful analysis of existing drainage patterns show a decrease in net imperviousness coefficient and a decrease in post development flow to the storm sewer in the ROW. -retention has been provided in Brick parking Lot to further reduce flows over pre development conditions -a reduced runoff rate from the building roof has been provided to further reduce flows. -this info has been added to drawing set and SWM Report.	MC Engineering

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ECA)		
18. Not addressed from 1st submission - On Sydenham Street the 250mm STM changes at Pond Street changes to 300mm and goes to Lynn River. See attached As-built S-0498.	The Storm Sewer was inspected. The pipe size on Sydenham in fact changes from a 300mm to a 375mm pipe at the existing Storm MH at Pond Street.	MC Engineering
19. Not addressed from 1st submission - On Pond Street there are existing Sanitary and Water services to existing 56 Pond St that are not shown on this drawing. See attached As-built S-0699 for locations. Please add these existing services to the drawing in your next submission. These water and Sanitary services are to be permanently disconnected at the main. A note on the Drawing must identify that prior to any disconnections a Permit must be obtained from Norfolk County Environmental Services department	Services are now shown, as well as disconnection notes. Drawing now identifies that prior to any disconnections a Permit must be obtained from Norfolk County Environmental Services department	MC Engineering
20. Not addressed from 1st submission - On Pond Street the drawing identifies 2 water services for 62 and 64 Pond Street. According to Norfolk County records each of these properties also have an existing Sanitary lateral that must be shown on the drawings and permanently disconnected at the main. Unfortunately, Norfolk County does not have an Asbuilt drawing of these lateral locations however, I am including the most recent CCTV reports of the sewer to reference the location of the Tees. Please	Notes have been added to drawings indicating that existing services are to be disconnected at the main, and that exact Locations of Existing water services are to be determined by contractor prior to commencement of site work. Hatching has been added to show road restoration	MC Engineering

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reference file 48- 432-139 and 48-432-140. For reference the manholes in the reports are located as the following: • Manhole B016 – Intersection of Sydenham and Pond St • Manhole B015 – Infront of 62 and 64 Pond St • Manhole B020 – Located on Water St The Developer will have to get locates so all servicing is verified in the field.		
21.It is noted that according to the CCTV reports there is infiltration identified. Any contractor working on the decommissioning should be aware of the presence of ground water and plan work accordingly. The County does not have soils reports in this area to identify where the ground water is located. NOTE: this was a comment from 1st submission and with No response matrix Norfolk County cannot confirm if the Engineer has acknowledged the comment	Noted. Note has been added on SP2	MC Engineering
22.Not addressed from 1st submission - All existing pipe materials for the existing mains are to be labeled in your next submission.	Pipe materials are now labelled	MC Engineering
23.Not addressed from 1st submission - The separation distance between the 200mm SAN Service and the 150 mm Fire Service has to be labelled on the drawing. The 1.0 m separation distance for the fire	Separation requirements are no listed on SP2 (noted on building near servicing location)	MC Engineering

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service and the domestic service has to be labelled. The connection of the fire water service at the main for a size-on-size connection requires authorization under the Water By-law 2013-65.		
24. Not addressed from 1st submission - Norfolk County Environmental Services Department has requested that the existing water, sanitary, and storm servicing to the existing Brick building be shown on the drawing. Please refer to As-built S-0292 for information.	Existing service info for the Brick has been added.	MC Engineering
25. Not addressed from 1st submission - In the servicing specifications Watermain/Fire main: INSTALL A REDUCED PRESSURE DOUBLE BACKFLOW PREVENTER (RPZ) should read REDUCED PRESSURE FLOW ASSEMBLY.	Corrected as per comment.	MC Engineering
26. The proposed new 7 story apartment building will require the developer to acquire 50mm water meter and radio transmitter unit which meets Norfolk County approval. A developer will require a Reduced Pressure Flow Assembly after the water meter which meets OBC regulations. The RPZ has to be tested on-site and the documentation sent to the Environmental Services Division on an annual basis. NOTE: this was a comment from 1st submission and with No response matrix Norfolk County cannot confirm if the	Acknowledged, Note has been placed on SP2 and information to also be listed on mechanical permit drawings.	MC Engineering

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Engineer has acknowledged the comment		
27. Not addressed from 1st submission - Attached is the Norfolk County Restraint Table which should be on the drawings. Attached is the insulation specification drawing. There should be note that all materials and installations shall meet Norfolk County Design Criteria and Approved Material Lists.	Restraint table has been added.	MC Engineering
28. According to General Note 11, insulation is required for all storm sewers without 1.2m cover. It appears all storm sewers on this site have less than 1.2m of cover. It is recommended that each pipe be labeled "to be insulated". This was a comment at 1st submission and Norfolk County has not recognized where this was completed?	Each pipe is now labelled as insulated.	MC Engineering
29. Please show Road restoration limits around the new Hydrant lead in the ROW	Road restoration limits have been corrected/revised.	MC Engineering
30. Please show Road restoration limits around the new Storm connection at Sydenham and Pond St.	Road restoration limits have been corrected/revised.	MC Engineering
31. Please show Road restoration limits around all decommissioned services along Pond Street.	Road restoration limits have been corrected/revised.	MC Engineering
Site Details Plan (Dwg. No. ?) not included: 32. Not addressed from 1st submission - Not Included – Please include this drawing in your next submission.	All relevant details are now included on the revised drawing set. Including additional details added to A.1.1 & A.1.2	GB Architects/ MC Engineering
33. Not addressed from 1st submission -		GB Architects/ MC

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This drawing was submitted at the OPA / ZBA stage, stamped March 22/21 and contained many details required for Site Plan approval.	All relevant details are now included on the revised drawing set. Including additional details added to A.1.1 & A.1.2	Engineering
EXISTING SITE CONDITION / DEMO PLAN (Dwg. No. SP3): 34.This plan shows several trees not scheduled for removal that are not shown on any other plans. Please show tree protection fence where needed.	All existing trees are to be removed	MC Engineering
Transportation Circulation Plan (Dwg. No. SP5) not included: 35.From our review at 2nd submission our previous comments for this drawing were not addressed on the Civil drawings. However, it appears they may have been included in the Arch plans. Typically Development Engineering does not review Architectural plans and were happy with the previous drawing arrangement submitted at OPA/ ZBA stage, stamped March 22/21. This drawing contained many details required for Site Plan approval.	Transportation Circulation is listed on Architectural Site plan (i.e. fire route). Truck Deliveries will use the same route. Previously omitted details have been added to Architectural Site plan drawings. All other required details and notes which are still relevant under the present proposal are listed on in the revised drawing set.	MC Engineering
Stormwater Management Brief (Proposed Residential Development, 60 Pond Street, Simcoe On, Prepared by MC Engineering, Revision 1 – May 15, 2025: 36.Given the site's legal outlet utilizes a	As per discussion with County Staff we are showing a net improvement to runoff quality, therefore no quality controls are required / provided. The current proposal / SWM Report shows an increase in	MC Engineering

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County owned asset, applicant to provide quality control in order to meet overall stormwater performance criteria in accordance with the latest MECP CLI ECA documentation (Section 4.1.3 & Appendix A – Water Quality). For suspended solids, controls 90th percentile storm event with enhanced level of protection (80%). Note, the TSS removal attributed to OGS devices will only be credited up to 50%. As such, please demonstrate a treatment train approach to achieve the remaining TSS removal. Note: This comment was made in the first submission comments and does not appear to have been included in the new revised SWM Brief and drawings. Please review and revise in your next submission.	green space and a substantial reduction in asphalt. Therefore no additional quality controls are required. A section has been added to the SWM Brief.	
37.Confirm if the existing storm sewer system has adequate capacity to accept uncontrolled flows. Also reference Comment 18 above.	As per discussions with County Staff, a detailed analysis of the existing capacity of the storm sewer at Sydenham street is not required. Instead the revised drawings and SWM report indicate information and proposed measures taken to ensure there are no impacts to County infrastructure, including: -careful analysis of existing drainage patterns show a decrease in net imperviousness coefficient and a decrease in post development flow to the storm sewer in the ROW.	MC Engineering

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	-retention has been provided in Brick parking Lot to further reduce flows over pre development conditions -a reduced runoff rate from the building roof, & roof top storage has been provided to further reduce flows. -this info has been added to drawing set and SWM Report.	
Traffic Impact Study (TIS) Pond Street Condominiums, Simcoe, Ontario (FN# 20-969), Prepared by RC Spencer Associates Inc., February 2020 Memo regarding Implications on the previous Traffic Study's Conclusions, 48 Sydenham / 60 Pond Place Residential, Simcoe (FN# 24-1548), Prepared by RC Spencer Associates Inc., January 19, 2024 38. The report notes that for the proposed egress onto Pond Street, it is noted that a number of trees may interfere with the available site lines; the developer should ensure that all boulevard areas within the right-of-way are clear of vegetation, particularly if they are in conflict with the required site distance for safe traffic operations. i. Review of sight lines and report commentary is to be updated to reflect the proposed landscaping design	Site Line Analysis Memo prepared by RC Spencer Associates Inc.	RC Spencer

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and tree preservation plan ii. Also, Figure No. 9B shows that the site distance for the proposed Pond Street egress, left turn from stop is impacted by existing trees located south of the site at the intersection of Pond Street and Water Street. It is anticipated that these trees will remain on the neighboring site and the report is to include commentary on their impact if they are to remain, as well as recommendations for any mitigation or movements restrictions to/from the site NOTE: This was a comment from 1st submission and with No response matrix Norfolk County cannot confirm if the Engineer has acknowledged the comment nor can we confirm how the concerns in the TIS are being managed through the design. Please provide a detailed response in the Matrix in your next submission. Confirm if the trees are being removed. How will sight lines be met.		
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Modified Rational Method - Brick Parking Lot, Sydenham Street, Simcoe, Norfolk C

Q= 0.00278CIA

Area (ha)	Time of Concentration (min)	Time Increments (min)	Pre Development Runoff Coefficient
0.24	10	5	0.5

SWM Pond Design Input - drainage area #2 - outflow

Storm (yrs)	A	B	C	Allowable Outflow (m3/s)	Post-Development Runoff Coefficient
2	529.711	4.501	0.745	0.033	0.9
5	583.017	3.007	0.703	0.033	0.9
10	670.324	3.007	0.698	0.033	0.9
25	721.533	2.253	0.679	0.033	0.9
50	766.038	1.898	0.668	0.033	0.9
100	801.041	1.501	0.657	0.033	0.9

Time (min)	Intensity mm/hr	2 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³	Difference
5	98.99	0.059	0.033	2.98	3.25
10	72.24	0.043	0.033	6.23	0.33
15	57.94	0.035	0.033	6.56	-6.56
20	48.88	0.029	0.000	0.00	0.00
25	42.56	0.026	0.000	0.00	0.00
30	37.88	0.023	0.000	0.00	0.00
35	34.24	0.021	0.000	0.00	0.00
40	31.33	0.019	0.000	0.00	0.00
45	28.94	0.017	0.000	0.00	0.00
50	26.94	0.016	0.000	0.00	0.00
55	25.24	0.015	0.000	0.00	0.00
60	23.76	0.014	0.000	0.00	0.00
65	22.48	0.013	0.000	0.00	0.00
70	21.34	0.013	0.000	0.00	0.00
75	20.34	0.012	0.000	0.00	0.00
80	19.43	0.012	0.000	0.00	0.00
85	18.62	0.011	0.000	0.00	0.00
90	17.88	0.011	0.000	0.00	0.00
95	17.21	0.010	0.000	0.00	0.00
100	16.59	0.010	0.000	0.00	0.00
105	16.02	0.010	0.000	0.00	0.00
110	15.50	0.009	0.000	0.00	0.00

115	15.01	0.009	0.000	0.00	0.00
120	14.56	0.009	0.000	0.00	0.00
125	14.14	0.008	0.000	0.00	0.00
130	13.74	0.008	0.000	0.00	0.00
135	13.38	0.008	0.000	0.00	0.00
140	13.03	0.008	0.000	0.00	0.00
145	12.70	0.008	0.000	0.00	0.00
150	12.40	0.007	0.000	0.00	0.00
155	12.11	0.007	0.000	0.00	0.00
160	11.83	0.007	0.000	0.00	0.00
165	11.57	0.007	0.000	0.00	0.00
170	11.32	0.007	0.000	0.00	0.00
175	11.09	0.007	0.000	0.00	0.00
180	10.86	0.007	0.000	0.00	#REF!

County

Revised - June 18 2026

Development Runoff Coefficient
0.9

Pre-Development Ru

	2 Year	5 Year
C	0.5	0.5
I	98	135
A	0.24	0.24
Q	0.033	0.045

Results

Storm	Storage	Time
	m ³	min
2		
5		
10		
25		
50		
100	51.00	35

IDF data - Norfolk Cou

Intensity mm/hr	5 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³	Difference	Intensity mm/hr	10 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³
135.06	0.081	0.033	9.46	5.31	156.91	0.094	0.033	13.39
96.03	0.058	0.033	14.77	1.74	111.84	0.067	0.033	20.46
76.40	0.046	0.033	16.51	0.10	89.12	0.053	0.033	23.38
64.31	0.039	0.033	16.60	-0.85	75.11	0.045	0.033	24.38
56.01	0.034	0.033	15.76	-15.76	65.48	0.039	0.033	24.28
49.90	0.030	0	0.00	0.00	58.38	0.035	0.033	23.46
45.19	0.027	0	0.00	0.00	52.91	0.032	0	0.00
41.43	0.025	0	0.00	0.00	48.54	0.029	0	0.00
38.35	0.023	0	0.00	0.00	44.95	0.027	0	0.00
35.77	0.021	0	0.00	0.00	41.95	0.025	0	0.00
33.57	0.020	0	0.00	0.00	39.39	0.024	0	0.00
31.67	0.019	0	0.00	0.00	37.18	0.022	0	0.00
30.02	0.018	0	0.00	0.00	35.25	0.021	0	0.00
28.56	0.017	0	0.00	0.00	33.55	0.020	0	0.00
27.26	0.016	0	0.00	0.00	32.03	0.019	0	0.00
26.09	0.016	0	0.00	0.00	30.67	0.018	0	0.00
25.04	0.015	0	0.00	0.00	29.45	0.018	0	0.00
24.09	0.014	0	0.00	0.00	28.33	0.017	0	0.00
23.22	0.014	0	0.00	0.00	27.31	0.016	0	0.00
22.42	0.013	0	0.00	0.00	26.38	0.016	0	0.00
21.69	0.013	0	0.00	0.00	25.52	0.015	0	0.00
21.01	0.013	0	0.00	0.00	24.73	0.015	0	0.00

20.38	0.012	0	0.00	0.00	23.99	0.014	0	0.00
19.79	0.012	0	0.00	0.00	23.31	0.014	0	0.00
19.24	0.012	0	0.00	0.00	22.67	0.014	0	0.00
18.73	0.011	0	0.00	0.00	22.07	0.013	0	0.00
18.25	0.011	0	0.00	0.00	21.51	0.013	0	0.00
17.80	0.011	0	0.00	0.00	20.98	0.013	0	0.00
17.38	0.010	0	0.00	0.00	20.48	0.012	0	0.00
16.98	0.010	0	0.00	0.00	20.02	0.012	0	0.00
16.60	0.010	0	0.00	0.00	19.57	0.012	0	0.00
16.24	0.010	0	0.00	0.00	19.15	0.011	0	0.00
15.90	0.010	0	0.00	0.00	18.75	0.011	0	0.00
15.57	0.009	0	0.00	0.00	18.37	0.011	0	0.00
15.26	0.009	0	0.00	0.00	18.01	0.011	0	0.00
14.97	0.009	0	0.00	#REF!	17.66	0.011	0	0.00

noff Rate(10 MIN)

10 Year	25 Year	50 Year	100 Year
0.5	0.5	0.5	0.5
156	187	210	234
0.24	0.24	0.24	0.24
0.052	0.062	0.070	0.078

APPENDIX A - BRIC

Inty Design Criteria Section 7.8.02

Calculate Storage
Volume

Difference	Intensity mm/hr	25 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³	Difference	Intensity mm/hr	50 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³
7.07	187.92	0.113	0.0330	18.97	8.61	210.85	0.127	0.033	23.10
2.91	131.63	0.079	0.0330	27.59	4.01	146.50	0.088	0.033	32.94
1.00	104.33	0.063	0.0330	31.59	1.91	115.89	0.070	0.033	37.83
-0.10	87.78	0.053	0.0330	33.50	0.69	97.47	0.058	0.033	40.48
-0.82	76.49	0.046	0.0330	34.19	-0.11	84.96	0.051	0.033	41.81
-23.46	68.22	0.041	0.0330	34.08	-0.68	75.81	0.045	0.033	42.28
0.00	61.86	0.037	0.0330	33.40	-1.12	68.78	0.041	0.033	42.12
0.00	56.79	0.034	0.0330	32.28	-32.28	63.19	0.038	0.033	41.49
0.00	52.64	0.032	0.0000	0.00	0.00	58.60	0.035	0.033	40.49
0.00	49.17	0.029	0.0000	0.00	0.00	54.77	0.033	0.000	0.00
0.00	46.21	0.028	0.0000	0.00	0.00	51.50	0.031	0.000	0.00
0.00	43.65	0.026	0.0000	0.00	0.00	48.69	0.029	0.000	0.00
0.00	41.42	0.025	0.0000	0.00	0.00	46.22	0.028	0.000	0.00
0.00	39.45	0.024	0.0000	0.00	0.00	44.05	0.026	0.000	0.00
0.00	37.70	0.023	0.0000	0.00	0.00	42.12	0.025	0.000	0.00
0.00	36.13	0.022	0.0000	0.00	0.00	40.38	0.024	0.000	0.00
0.00	34.71	0.021	0.0000	0.00	0.00	38.81	0.023	0.000	0.00
0.00	33.42	0.020	0.0000	0.00	0.00	37.39	0.022	0.000	0.00
0.00	32.25	0.019	0.0000	0.00	0.00	36.09	0.022	0.000	0.00
0.00	31.17	0.019	0.0000	0.00	0.00	34.90	0.021	0.000	0.00
0.00	30.17	0.018	0.0000	0.00	0.00	33.80	0.020	0.000	0.00
0.00	29.25	0.018	0.0000	0.00	0.00	32.78	0.020	0.000	0.00

0.00	28.40	0.017	0.0000	0.00	0.00	31.84	0.019	0.000	0.00
0.00	27.61	0.017	0.0000	0.00	0.00	30.96	0.019	0.000	0.00
0.00	26.86	0.016	0.0000	0.00	0.00	30.14	0.018	0.000	0.00
0.00	26.17	0.016	0.0000	0.00	0.00	29.37	0.018	0.000	0.00
0.00	25.52	0.015	0.0000	0.00	0.00	28.65	0.017	0.000	0.00
0.00	24.91	0.015	0.0000	0.00	0.00	27.97	0.017	0.000	0.00
0.00	24.33	0.015	0.0000	0.00	0.00	27.33	0.016	0.000	0.00
0.00	23.78	0.014	0.0000	0.00	0.00	26.73	0.016	0.000	0.00
0.00	23.27	0.014	0.0000	0.00	0.00	26.16	0.016	0.000	0.00
0.00	22.78	0.014	0.0000	0.00	0.00	25.61	0.015	0.000	0.00
0.00	22.31	0.013	0.0000	0.00	0.00	25.10	0.015	0.000	0.00
0.00	21.87	0.013	0.0000	0.00	0.00	24.61	0.015	0.000	0.00
0.00	21.45	0.013	0.0000	0.00	0.00	24.14	0.014	0.000	0.00
#REF!	21.05	0.013	0.0000	0.00	#REF!	23.70	0.014	0.000	0.00

CK PARKING LOT

Difference	100 Year				Difference
	Intensity mm/hr	Inflow m ³ /s	Outflow m ³ /s	Storage m ³	
9.84	234.17	0.141	0.033	27.300	10.85
4.89	160.97	0.097	0.033	38.150	5.67
2.64	126.98	0.076	0.033	43.822	3.31
1.33	106.72	0.064	0.033	47.135	1.93
0.47	93.02	0.056	0.033	49.067	1.01
-0.16	83.03	0.050	0.033	50.077	0.34
-0.63	75.37	0.045	0.033	50.421	-0.16
-1.00	69.28	0.042	0.033	50.259	-0.56
-40.49	64.29	0.039	0.033	49.697	-0.89
0.00	60.12	0.036	0.033	48.809	-1.16
0.00	56.5658	0.033939	0.033	47.6502663	-47.65
0.00	53.50	0.032	0.000	0.000	0.00
0.00	50.82	0.030	0.000	0.000	0.00
0.00	48.46	0.029	0.000	0.000	0.00
0.00	46.35	0.028	0.000	0.000	0.00
0.00	44.47	0.027	0.000	0.000	0.00
0.00	42.76	0.026	0.000	0.000	0.00
0.00	41.21	0.025	0.000	0.000	0.00
0.00	39.79	0.024	0.000	0.000	0.00
0.00	38.49	0.023	0.000	0.000	0.00
0.00	37.30	0.022	0.000	0.000	0.00
0.00	36.19	0.022	0.000	0.000	0.00

0.00	35.16	0.021	0.000	0.000	0.00
0.00	34.20	0.021	0.000	0.000	0.00
0.00	33.31	0.020	0.000	0.000	0.00
0.00	32.47	0.019	0.000	0.000	0.00
0.00	31.69	0.019	0.000	0.000	0.00
0.00	30.95	0.019	0.000	0.000	0.00
0.00	30.25	0.018	0.000	0.000	0.00
0.00	29.59	0.018	0.000	0.000	0.00
0.00	28.96	0.017	0.000	0.000	0.00
0.00	28.37	0.017	0.000	0.000	0.00
0.00	27.81	0.017	0.000	0.000	0.00
0.00	27.27	0.016	0.000	0.000	0.00
0.00	26.76	0.016	0.000	0.000	0.00
#REF!	26.28	0.016	0.000	0.000	#REF!

Modified Rational Method - New Apartment Bldg - Sydenham Street, Simcoe, Norfolk

Q= 0.00278CIA

Area (ha)	Time of Concentration (min)	Time Increments (min)	Pre Development Runoff Coefficient
0.45	10	5	0.5

SWM Pond Design Input - drainage area #2 - outflow

Storm (yrs)	A	B	C	Allowable Outflow (m3/s)	Post-Development Runoff Coefficient
2	529.711	4.501	0.745	0.061	0.79
5	583.017	3.007	0.703	0.061	0.79
10	670.324	3.007	0.698	0.061	0.79
25	721.533	2.253	0.679	0.061	0.79
50	766.038	1.898	0.668	0.061	0.79
100	801.041	1.501	0.657	0.061	0.79

Time (min)	Intensity mm/hr	2 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³	Difference
5	98.99	0.098	0.061	1.90	4.34
10	72.24	0.071	0.061	6.24	-6.24
15	57.94	0.057	0.000	0.00	0.00
20	48.88	0.048	0.000	0.00	0.00
25	42.56	0.042	0.000	0.00	0.00
30	37.88	0.037	0.000	0.00	0.00
35	34.24	0.034	0.000	0.00	0.00
40	31.33	0.031	0.000	0.00	0.00
45	28.94	0.029	0.000	0.00	0.00
50	26.94	0.027	0.000	0.00	0.00
55	25.24	0.025	0.000	0.00	0.00
60	23.76	0.023	0.000	0.00	0.00
65	22.48	0.022	0.000	0.00	0.00
70	21.34	0.021	0.000	0.00	0.00
75	20.34	0.020	0.000	0.00	0.00
80	19.43	0.019	0.000	0.00	0.00
85	18.62	0.018	0.000	0.00	0.00
90	17.88	0.018	0.000	0.00	0.00
95	17.21	0.017	0.000	0.00	0.00
100	16.59	0.016	0.000	0.00	0.00
105	16.02	0.016	0.000	0.00	0.00
110	15.50	0.015	0.000	0.00	0.00

115	15.01	0.015	0.000	0.00	0.00
120	14.56	0.014	0.000	0.00	0.00
125	14.14	0.014	0.000	0.00	0.00
130	13.74	0.014	0.000	0.00	0.00
135	13.38	0.013	0.000	0.00	0.00
140	13.03	0.013	0.000	0.00	0.00
145	12.70	0.013	0.000	0.00	0.00
150	12.40	0.012	0.000	0.00	0.00
155	12.11	0.012	0.000	0.00	0.00
160	11.83	0.012	0.000	0.00	0.00
165	11.57	0.011	0.000	0.00	0.00
170	11.32	0.011	0.000	0.00	0.00
175	11.09	0.011	0.000	0.00	0.00
180	10.86	0.011	0.000	0.00	#REF!

olk County

Revised - June 18 2026

Development Runoff Coefficient
0.79

Pre-Development Ru

	2 Year	5 Year
C	0.5	0.5
I	98	135
A	0.45	0.45
Q	0.061	0.084

Results

Storm	Storage	Time
	m ³	min
2		
5		
10		
25		
50		
100	75.00	30

IDF data - Norfolk Cou

Intensity mm/hr	5 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³	Difference	Intensity mm/hr	10 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³
135.06	0.133	0.061	12.56	7.74	156.91	0.155	0.061	19.04
96.03	0.095	0.061	20.30	1.85	111.84	0.110	0.061	29.66
76.40	0.075	0.061	22.15	-0.84	89.12	0.088	0.061	33.46
64.31	0.064	0.061	21.31	-21.31	75.11	0.074	0.061	34.11
56.01	0.055	0	0.00	0.00	65.48	0.065	0.061	32.94
49.90	0.049	0	0.00	0.00	58.38	0.058	0	0.00
45.19	0.045	0	0.00	0.00	52.91	0.052	0	0.00
41.43	0.041	0	0.00	0.00	48.54	0.048	0	0.00
38.35	0.038	0	0.00	0.00	44.95	0.044	0	0.00
35.77	0.035	0	0.00	0.00	41.95	0.041	0	0.00
33.57	0.033	0	0.00	0.00	39.39	0.039	0	0.00
31.67	0.031	0	0.00	0.00	37.18	0.037	0	0.00
30.02	0.030	0	0.00	0.00	35.25	0.035	0	0.00
28.56	0.028	0	0.00	0.00	33.55	0.033	0	0.00
27.26	0.027	0	0.00	0.00	32.03	0.032	0	0.00
26.09	0.026	0	0.00	0.00	30.67	0.030	0	0.00
25.04	0.025	0	0.00	0.00	29.45	0.029	0	0.00
24.09	0.024	0	0.00	0.00	28.33	0.028	0	0.00
23.22	0.023	0	0.00	0.00	27.31	0.027	0	0.00
22.42	0.022	0	0.00	0.00	26.38	0.026	0	0.00
21.69	0.021	0	0.00	0.00	25.52	0.025	0	0.00
21.01	0.021	0	0.00	0.00	24.73	0.024	0	0.00

20.38	0.020	0	0.00	0.00	23.99	0.024	0	0.00
19.79	0.020	0	0.00	0.00	23.31	0.023	0	0.00
19.24	0.019	0	0.00	0.00	22.67	0.022	0	0.00
18.73	0.018	0	0.00	0.00	22.07	0.022	0	0.00
18.25	0.018	0	0.00	0.00	21.51	0.021	0	0.00
17.80	0.018	0	0.00	0.00	20.98	0.021	0	0.00
17.38	0.017	0	0.00	0.00	20.48	0.020	0	0.00
16.98	0.017	0	0.00	0.00	20.02	0.020	0	0.00
16.60	0.016	0	0.00	0.00	19.57	0.019	0	0.00
16.24	0.016	0	0.00	0.00	19.15	0.019	0	0.00
15.90	0.016	0	0.00	0.00	18.75	0.019	0	0.00
15.57	0.015	0	0.00	0.00	18.37	0.018	0	0.00
15.26	0.015	0	0.00	0.00	18.01	0.018	0	0.00
14.97	0.015	0	0.00	#REF!	17.66	0.017	0	0.00

noff Rate(10 MIN)

10 Year	25 Year	50 Year	100 Year
0.5	0.5	0.5	0.5
156	187	210	234
0.45	0.45	0.45	0.45
0.098	0.117	0.131	0.146

APPENDIX B - APA

Inty Design Criteria Section 7.8.02

Calculate Storage
Volume

Difference	Intensity mm/hr	25 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³	Difference	Intensity mm/hr	50 Year Inflow m ³ /s	Outflow m ³ /s	Storage m ³
10.63	187.92	0.186	0.0610	28.22	13.17	210.85	0.208	0.061	35.02
3.79	131.63	0.130	0.0610	41.39	5.59	146.50	0.145	0.061	50.20
0.65	104.33	0.103	0.0610	46.98	2.14	115.89	0.114	0.061	57.25
-1.17	87.78	0.087	0.0610	49.12	0.14	97.47	0.096	0.061	60.60
-32.94	76.49	0.076	0.0610	49.25	-1.18	84.96	0.084	0.061	61.79
0.00	68.22	0.067	0.0610	48.07	-2.13	75.81	0.075	0.061	61.56
0.00	61.86	0.061	0.0610	45.94	-45.94	68.78	0.068	0.061	60.29
0.00	56.79	0.056	0.0000	0.00	0.00	63.19	0.062	0.061	58.25
0.00	52.64	0.052	0.0000	0.00	0.00	58.60	0.058	0.000	0.00
0.00	49.17	0.049	0.0000	0.00	0.00	54.77	0.054	0.000	0.00
0.00	46.21	0.046	0.0000	0.00	0.00	51.50	0.051	0.000	0.00
0.00	43.65	0.043	0.0000	0.00	0.00	48.69	0.048	0.000	0.00
0.00	41.42	0.041	0.0000	0.00	0.00	46.22	0.046	0.000	0.00
0.00	39.45	0.039	0.0000	0.00	0.00	44.05	0.044	0.000	0.00
0.00	37.70	0.037	0.0000	0.00	0.00	42.12	0.042	0.000	0.00
0.00	36.13	0.036	0.0000	0.00	0.00	40.38	0.040	0.000	0.00
0.00	34.71	0.034	0.0000	0.00	0.00	38.81	0.038	0.000	0.00
0.00	33.42	0.033	0.0000	0.00	0.00	37.39	0.037	0.000	0.00
0.00	32.25	0.032	0.0000	0.00	0.00	36.09	0.036	0.000	0.00
0.00	31.17	0.031	0.0000	0.00	0.00	34.90	0.034	0.000	0.00
0.00	30.17	0.030	0.0000	0.00	0.00	33.80	0.033	0.000	0.00
0.00	29.25	0.029	0.0000	0.00	0.00	32.78	0.032	0.000	0.00

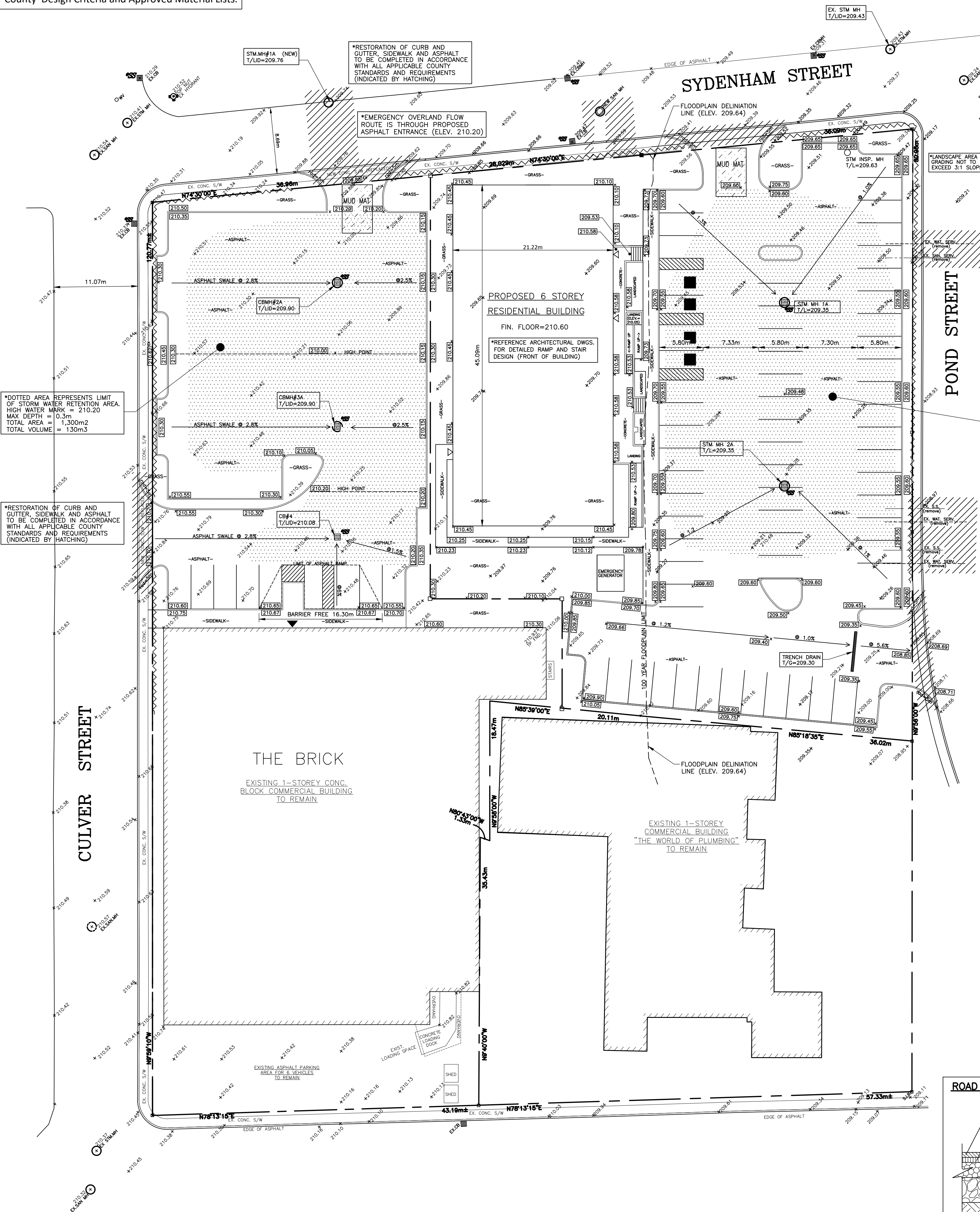
0.00	28.40	0.028	0.0000	0.00	0.00	31.84	0.031	0.000	0.00
0.00	27.61	0.027	0.0000	0.00	0.00	30.96	0.031	0.000	0.00
0.00	26.86	0.027	0.0000	0.00	0.00	30.14	0.030	0.000	0.00
0.00	26.17	0.026	0.0000	0.00	0.00	29.37	0.029	0.000	0.00
0.00	25.52	0.025	0.0000	0.00	0.00	28.65	0.028	0.000	0.00
0.00	24.91	0.025	0.0000	0.00	0.00	27.97	0.028	0.000	0.00
0.00	24.33	0.024	0.0000	0.00	0.00	27.33	0.027	0.000	0.00
0.00	23.78	0.023	0.0000	0.00	0.00	26.73	0.026	0.000	0.00
0.00	23.27	0.023	0.0000	0.00	0.00	26.16	0.026	0.000	0.00
0.00	22.78	0.022	0.0000	0.00	0.00	25.61	0.025	0.000	0.00
0.00	22.31	0.022	0.0000	0.00	0.00	25.10	0.025	0.000	0.00
0.00	21.87	0.022	0.0000	0.00	0.00	24.61	0.024	0.000	0.00
0.00	21.45	0.021	0.0000	0.00	0.00	24.14	0.024	0.000	0.00
#REF!	21.05	0.021	0.0000	0.00	#REF!	23.70	0.023	0.000	0.00

ARTMENT BUILDING

Difference	100 Year				Difference
	Intensity mm/hr	Inflow m ³ /s	Outflow m ³ /s	Storage m ³	
15.18	234.17	0.231	0.061	41.922	16.85
7.05	160.97	0.159	0.061	58.776	8.33
3.35	126.98	0.125	0.061	67.107	4.45
1.19	106.72	0.105	0.061	71.558	2.18
-0.24	93.02	0.092	0.061	73.734	0.66
-1.26	83.03	0.082	0.061	74.393	-0.44
-2.04	75.37	0.074	0.061	73.956	-1.27
-58.25	69.28	0.068	0.061	72.687	-1.93
0.00	64.29	0.063	0.061	70.759	-70.76
0.00	60.12	0.059	0.000	0.000	0.00
0.00	56.5658	0.055859	0	0	0.00
0.00	53.50	0.053	0.000	0.000	0.00
0.00	50.82	0.050	0.000	0.000	0.00
0.00	48.46	0.048	0.000	0.000	0.00
0.00	46.35	0.046	0.000	0.000	0.00
0.00	44.47	0.044	0.000	0.000	0.00
0.00	42.76	0.042	0.000	0.000	0.00
0.00	41.21	0.041	0.000	0.000	0.00
0.00	39.79	0.039	0.000	0.000	0.00
0.00	38.49	0.038	0.000	0.000	0.00
0.00	37.30	0.037	0.000	0.000	0.00
0.00	36.19	0.036	0.000	0.000	0.00

0.00	35.16	0.035	0.000	0.000	0.00
0.00	34.20	0.034	0.000	0.000	0.00
0.00	33.31	0.033	0.000	0.000	0.00
0.00	32.47	0.032	0.000	0.000	0.00
0.00	31.69	0.031	0.000	0.000	0.00
0.00	30.95	0.031	0.000	0.000	0.00
0.00	30.25	0.030	0.000	0.000	0.00
0.00	29.59	0.029	0.000	0.000	0.00
0.00	28.96	0.029	0.000	0.000	0.00
0.00	28.37	0.028	0.000	0.000	0.00
0.00	27.81	0.027	0.000	0.000	0.00
0.00	27.27	0.027	0.000	0.000	0.00
0.00	26.76	0.026	0.000	0.000	0.00
#REF!	26.28	0.026	0.000	0.000	#REF!

*All materials, installations shall meet Norfolk County Design Criteria and Approved Material Lists.



CONSTRUCTION ENTRANCE/ MUD MAT NOTES:

1. USE CLEAN STONE WITH GRADATION BETWEEN 50mm AND 400mm.
2. LENGTH - 8m (MIN)
3. THICKNESS - 450mm OF 75mm CRUSHED STONE
4. WIDTH - 5m (MIN)
5. GEOTEXTILE UNDER STONE WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.
7. DRAINAGE PIPES SHALL BE SIZED WITH CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN WASHING OF VEHICLE IS NECESSARY, IT SHALL BE DONE ON STONE AREA DRAINING INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. TO BE INSPECTED EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.



LEGEND

- PROPERTY LINE
- STORM SEWER
- SANITARY SEWER
- WATER SERVICE / WATER MAIN
- SILT FENCE, REQUIRED LOCATION
- PROPOSED GRADE ELEVATION
- EXISTING GRADE ELEVATION
- FIRE HYDRANT
- WATER VALVE
- MANHOLE
- CATCH BASIN
- SILT SACK (IN CB)
- MAIN ENTRANCE
- LIGHT POLE

ROADWAY RESTORATION NOTES:

1. CONTRACTOR TO OBTAIN ALL NECESSARY ROAD CUT PERMITS PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO MAINTAIN A MINIMUM OF ONE LANE OF TRAFFIC AT ALL TIMES. IF TEMPORARY ROAD CLOSURES ARE NECESSARY, THEN CONTRACTOR SHALL MAKE AS ALL NECESSARY ARRANGEMENTS WITH NORFOLK COUNTY.
3. CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES.
4. ALL CUTS TO EXISTING ASPHALT AND CONCRETE SHALL BE CLEAN SAW CUTS ONLY.
5. BACKFILL FOR ALL SERVICE TRENCHES FROM EDGE OF ASPHALT TO BACK OF SIDEWALK SHALL BE GRANULAR 'B'
6. BACKFILL FOR ALL SERVICE TRENCHES FROM BACK OF SIDEWALK TO STREET LINE SHALL BE SELECT NATIVE MATERIAL.
7. ALL BEDDING AND BACKFILL SHALL BE COMPACTED TO MIN. 98% SPMD
8. CURBS AND SUBRAINS SHALL BE RESTORED TO MATCH EXISTING CONDITIONS TO THE SATISFACTION OF NORFOLK COUNTY.
9. BOULEVARDS, SHALL BE RESTORED WITH NO.1 NURSERY SOD ON MINIMUM 100mm IMPORTED TOPSOIL TO THE SATISFACTION OF NORFOLK COUNTY.

FROST PROTECTION:

RIGID INSULATION (2 LAYERS OF 1" STYROFOAM) IS TO BE PROVIDED OVER ALL NEW STORM PIPE WHERE COVER DOES NOT EXCEED 1.2m.

TEMPORARY SILT SACKS:

TEMPORARY SILTATION CONTROL MEASURES, BY WAY OF SILT SACKS, ARE REQUIRED TO BE INSTALLED IN ALL CATCH BASINS & DRYWELLS. REFER TO GENERAL EROSION AND SEDIMENT CONTROL NOTES THIS PAGE AND SILT SACK DETAIL 2 ON SP2.

ROAD RESTORATION:

ALL WORK WITHIN THE MUNICIPAL RIGHT-OF-WAY TO BE COMPLETED TO THE SATISFACTION OF NORFOLK COUNTY. MAKE GOOD ALL DAMAGED, DISTURBED AREAS, HARD SURFACES AND EQUIPMENT TO MATCH ORIGINAL. CAP OR REMOVE ALL DISCONTINUED EXISTING UNDERGROUND SITE SERVICES AS REQUIRED. MATCH EXISTING GRADES AT EXISTING BOULEVARDS, SIDEWALKS, CURBS AND ROAD PAVEMENT. NEW DRIVEWAY CONSTRUCTION TO CONFORM TO NORFOLK COUNTY PROCEDURES AND STANDARDS AND O.P.S.D. 350.010

EXISTING INFRASTRUCTURE:

M.C. ENGINEERING ASSUMES NO RESPONSIBILITY FOR THE USE OF, OR RELIANCE ON, ALL DATA OR INFORMATION PERTAINING TO EXISTING INFRASTRUCTURE AND SERVICES SHOWN (OR NOT SHOWN) WITHIN THE MUNICIPAL RIGHT-OF-WAY, ON THIS DRAWING, INCLUDING BUT NOT LIMITED TO, UNDERGROUND SEWERS, & CONDUIT, STRUCTURES AND EQUIPMENT AND OVERHEAD UTILITIES. CONTRACTOR TO VERIFY LOCATIONS, INVERTS, HEIGHTS AND EXISTING CONDITIONS OF SAME PRIOR TO CONSTRUCTION.

*STORMWATER MANAGEMENT:

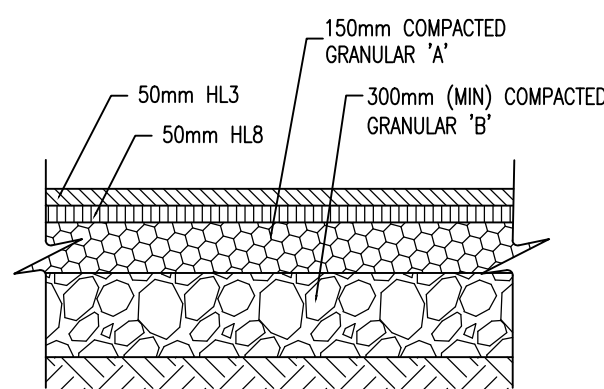
DUE TO THE PROXIMITY OF THE DOWNSTREAM RECEIVING WATERSHED (LYNN RIVER), NO QUANTITY CONTROLS ARE REQUIRED.

HOWEVER, TO MITIGATE THE IMPACT OF RUNOFF TO THE SYDENHAM STREET STORM SEWER, QUANTITY CONTROLS HAVE BEEN PROVIDED.

BRICK PARKING LOT:
STORM WATER WILL BE RETAINED ABOVE GROUND AND RUNOFF WILL BE RESTRICTED.

APARTMENT BUILDING:
STORM WATER RUNOFF FROM ROOF WILL BE RESTRICTED, PONDING TO TAKE PLACE ON ROOF TOP.

ROAD RESTORATION DETAIL

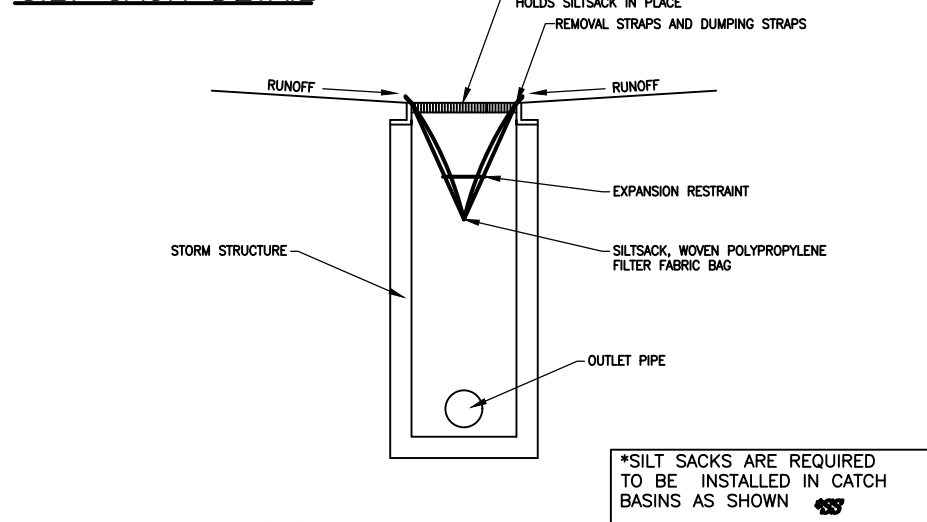


*AREAS OF REQUIRED ROAD RESTORATION INDICATED BY HATCHING

GENERAL NOTES:

1. PRIMARY UNITS ARE METRIC. DIMENSIONS ARE METERS.
2. PROPER SILTATION MEASURES TO TAKE PLACE. SILT CONTROLS, I.E. SILT FENCING AROUND ALL CONSTRUCTION AREAS ARE TO BE IN PLACE PRIOR TO THE START OF SITE WORKS, AND BE MAINTAINED FOR THE DURATION OF CONSTRUCTION (SILT FENCING TO BE PROPERLY SECURED C/W T BAR POSTS IN GROUND & C/W FILTER FABRIC) FENCING TO BE INSTALLED AROUND ALL CONSTRUCTION AREAS. [REFER TO OPSD 219.130].
3. ANY DISCREPANCY(S) BETWEEN INFORMATION ON THIS SITE DRAWING AND ACTUAL FIELD CONDITIONS, WHICH MAY IMPACT ON THE PROPOSED DEVELOPMENT, ARE TO BE REPORTED TO THE SENIOR CONSULTANT / P.ENG.
4. REQUIRED SERVICES & SERVICE CONNECTIONS NOT SHOWN ON DRAWING TO BE THE RESPONSIBILITY OF THE CONTRACTOR/OWNER.
5. ALL NECESSARY RELOCATIONS OR REMOVALS OF EXISTING PHYSICAL SITE FEATURES INCLUDING U/G SERVICES TO BE THE RESPONSIBILITY OF THE CONTRACTOR/OWNER.
6. EXACT LOCATIONS & ELEVATIONS OF ALL EXISTING SERVICES (SANITARY SEWER, WATER, GAS, BELL, ETC.), GRADES, MATERIAL LENGTHS, ELEVATIONS, INVERTS, ETC. TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY SITEWORK.
7. ANY FILL PLACED ON SITE MUST BE COMPACTED TO A MIN. 98% STANDARD PROCTOR DENSITY.
8. ALL DISTURBED LANDSCAPE AREAS ARE TO BE RE-SEED
9. THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S BONDED CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS/APPROVALS NORMALLY REQUIRED TO COMPLETE A CONSTRUCTION PROJECT, SUCH AS, BUT NOT LIMITED TO THE FOLLOWING:
 - ROAD CUT PERMITS
 - SEWER PERMITS
 - RELOCATION OF SERVICES
10. THIS DRAWING TO BE READ IN CONJUNCTION WITH ANY AND ALL OTHER DOCUMENTS SUBMITTED FOR MUNICIPAL APPROVAL(S).
11. RIGID INSULATION (2 LAYERS OF 1" STYROFOAM) IS TO BE PROVIDED OVER ALL NEW STORM PIPE WHERE COVER DOES NOT EXCEED 1.2m.
12. ALL EXCESS EXCAVATED MATERIAL WILL BE REMOVED FROM THE SITE.
13. THE EXISTING DRAINAGE PATTERN WILL BE MAINTAINED EXCEPT WHERE NOTED. PROPOSED ELEVATIONS SHOW GENERAL INTENT OF GRADING PLAN.
14. ALL WORK WITHIN THE MUNICIPAL RIGHT-OF-WAY TO BE COMPLETED TO THE SATISFACTION OF THE COUNTY OF NORFOLK.
15. VERTICAL DATUM REFERS TO CGVD 2013

SILT SACK DETAIL



- INSPECT EVERY WEEK (MIN)
- SILT SACK SHOULD NEVER BE OVER HALF FULL
- FILL BAG CAN BE REMOVED, DUMPED, CLEANED AND REUSED (TO REMOVE INSERT 25mm REBAR INTO FLAP POCKETS)
- (TO DUMP INSERT 25mm REBAR INTO BOTH DUMPING STRAPS)

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICE WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF M.C. ENGINEERING.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
3. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES (DURING DURATION OF CONSTRUCTION).
4. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
5. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
6. ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED AND MAINTAINED TO THE SATISFACTION AND TO THE REQUIREMENTS OF M.C. ENGINEERING.
7. ALL AREAS OF WORK WHICH WILL REMAIN DISTURBED FOR A PERIOD OF THIRTY DAYS OR MORE MUST BE STABILIZED TO THE SATISFACTION OF M.C. ENGINEERING.
8. ALL MATERIAL STOCKPILES ARE TO BE LOCATED WITHIN THE BOUNDARY OF THE INDICATED SILT FENCE. ADDITIONAL SILT FENCE IS TO BE ERECTED AROUND ANY PROPOSED STOCKPILES.
9. CATCH BASINS TO HAVE SILT TRAPS INSTALLED FOR THE DURATION OF CONSTRUCTION. REFERENCE DETAIL 2 ON SP2.
10. SILT FENCE AS PER OPSD 219.130
11. ALL EROSION CONTROL DEVICES ARE TO BE INSPECTED AND MAINTAINED WEEKLY AND AFTER EACH RAINFALL.
12. OWNER IS RESPONSIBLE FOR INSPECTIONS AND MAINTENANCE OF STORMCEPTOR AS PER MANUFACTURER'S INSTRUCTIONS. ALL EROSION AND SEDIMENTATION CONTROL DEVICES MUST BE IN PLACE PRIOR TO ANY EARTH MOVING/CONSTRUCTION ACTIVITIES AND MUST BE MAINTAINED UNTIL FINAL COVER IS ESTABLISHED.

SILT FENCE NOTES:

1. SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 1.5m BEYOND TOE OF SLOPE, 3m PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
2. ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
3. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
4. SILT FENCE AS PER OPSD 219.130
5. SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED.
6. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
9. SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.
10. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

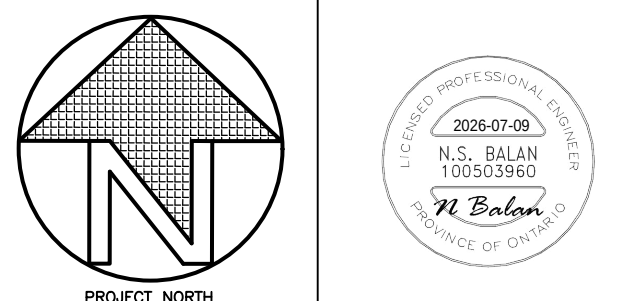
THE FOLLOWING DRAWINGS AND NOTES TO BE CONSIDERED AS PART OF THE CONSTRUCTION DRAWINGS:

-ANY DISCREPANCY BETWEEN THIS DRAWING AND ACTUAL FIELD CONDITIONS WHICH MAY IMPACT WORK IS TO BE REPORTED TO M.C. ENGINEERING PRIOR TO COMMENCEMENT OF WORK.

-DIMENSIONS ARE METRIC

NO.	REVISION	DESCRIPTION	DATE	BY
5	ISSUED FOR REVIEW		JULY 9 2026	RM
4	ISSUED FOR REVIEW		JUNE 27 2026	RM
3	ISSUED FOR REVIEW		OCT 15 2025	RM
2	ISSUED FOR REVIEW		MAY 15 2025	RM
1	ISSUED FOR REVIEW		JAN 3 2024	RM
0	ISSUED FOR REVIEW		OCT 16 2023	RM

DO NOT SCALE DRAWINGS; THESE DRAWINGS SHOW INTENT OF THE DESIGN ONLY OR EXISTING CONDITIONS AND MAY NOT REFLECT EXACT LOCATIONS.



M C ENGINEERING P.O. Box 1002, Simcoe, Ont. N3Y 5B3
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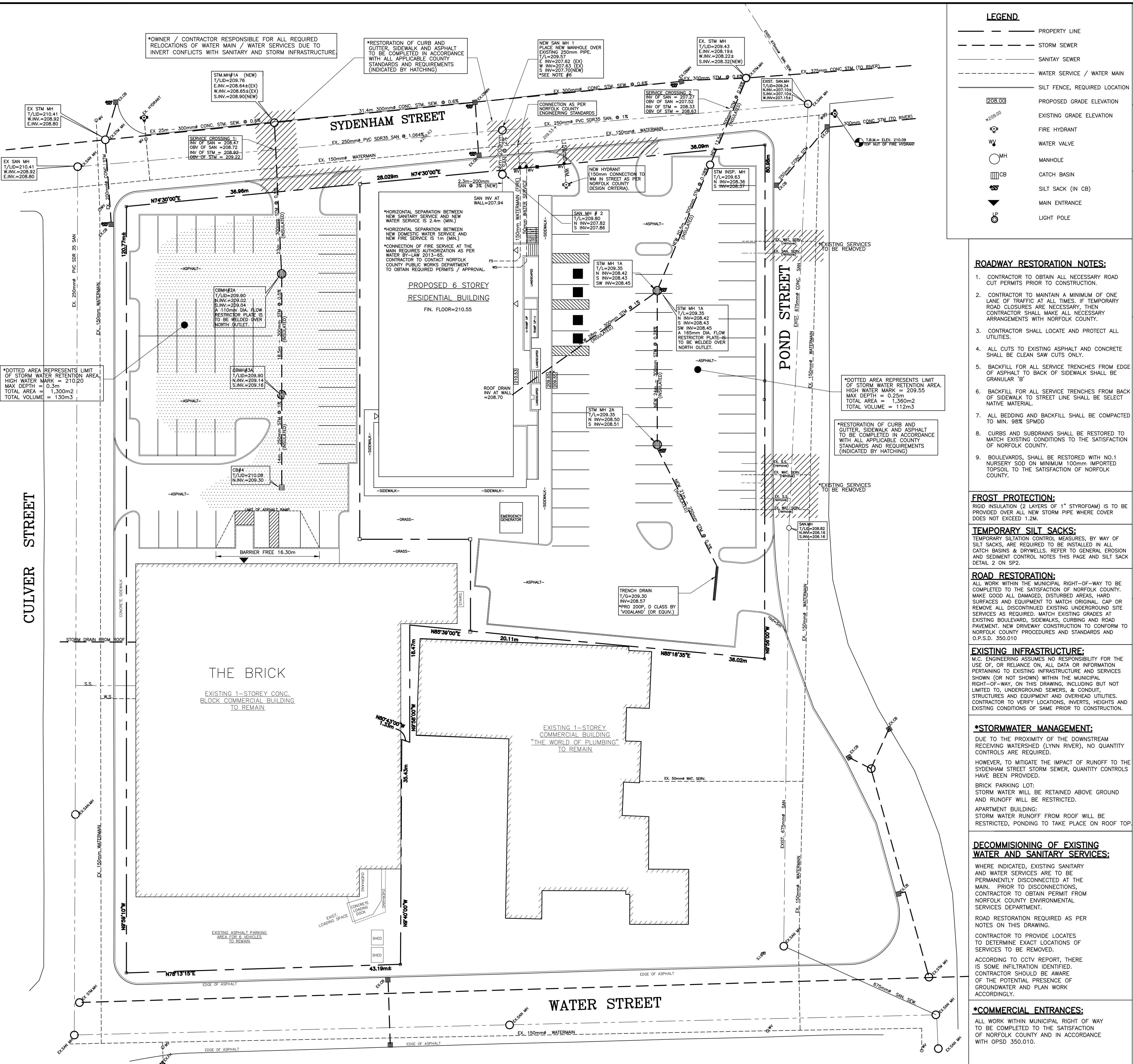
PROJECT NAME

CIVIL SITE PLAN
PROPOSED APARTMENT BUILDING

60 POND STREET
NORFOLK COUNTY

SHEET TITLE
GRADING PLAN / DRAINAGE PLAN
& SILTATION AND EROSION CONTROL PLAN

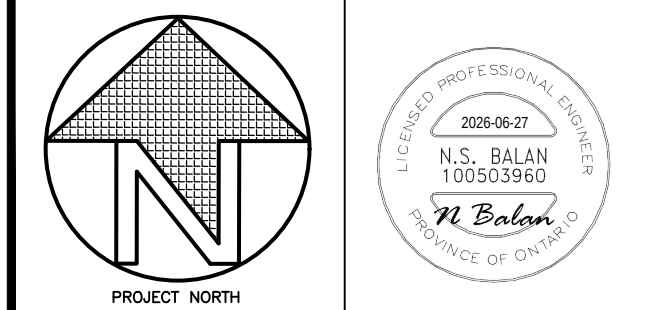
SCALE	1:300 METRIC	PROJECT NO.	7222
DRAWN BY	R MORRISON	DWG. NO.	SP1
CHECKED BY	N.B.	REV. NO.	5
DATE	NOV 2024		
FILE NAME	7222		



THE FOLLOWING DRAWINGS AND NOTES TO BE CONSIDERED AS PART OF THE CONSTRUCTION DRAWINGS:
-ANY DISCREPANCY BETWEEN THIS DRAWING AND ACTUAL FIELD CONDITIONS WHICH MAY IMPACT WORK IS TO BE REPORTED TO M C ENGINEERING PRIOR TO COMMENCEMENT OF WORK.
-DIMENSIONS ARE METRIC

NO.	REVISION	DESCRIPTION	DATE	BY
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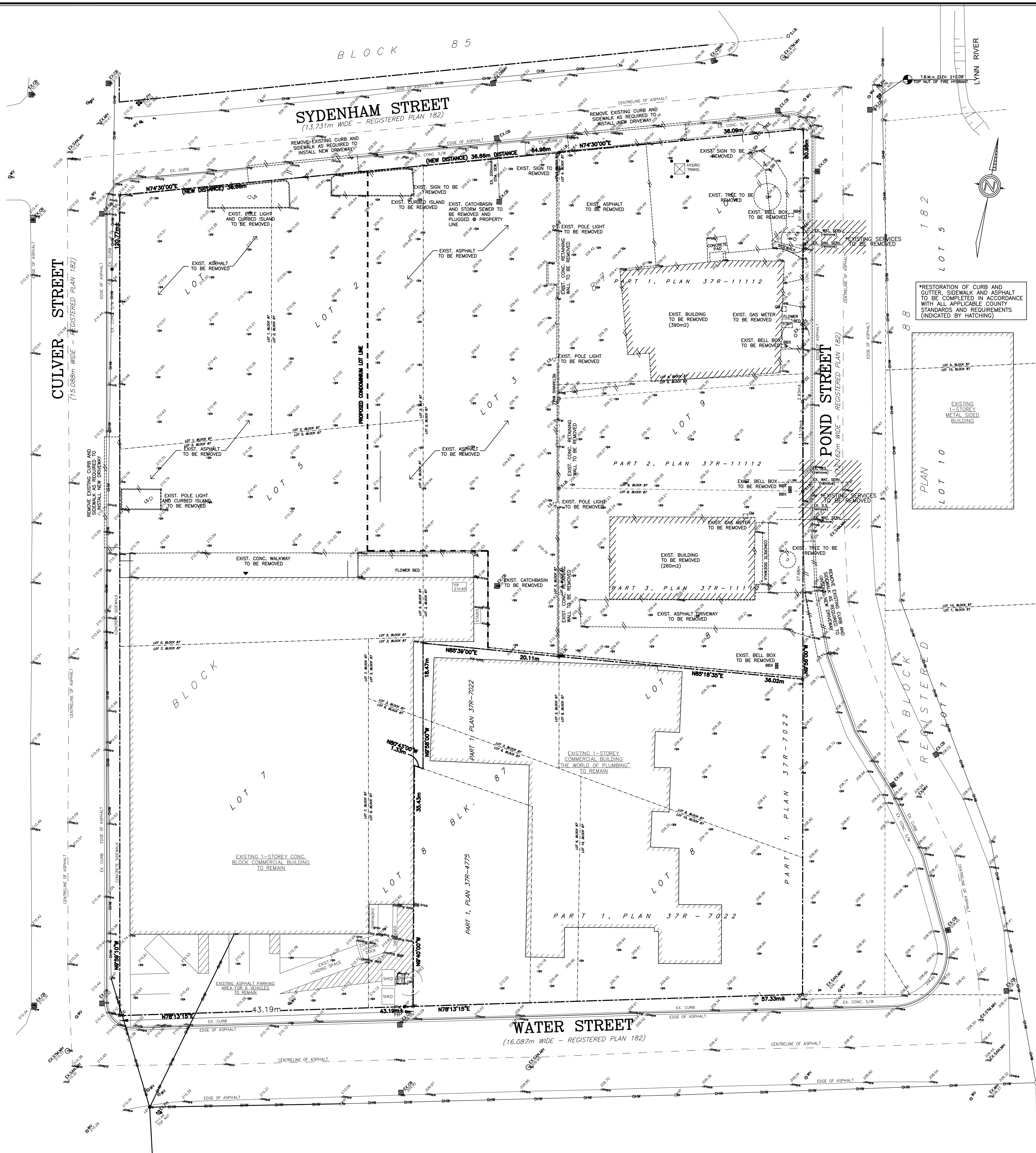


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PROJECT NAME
**CIVIL SITE PLAN
PROPOSED APARTMENT BUILDING**
60 POND STREET
NORFOLK COUNTY

SHEET TITLE
SITE SERVICING PLAN

SCALE 1:500 METRIC	PROJECT NO. 7222
DRAWN BY R MORRISON	DWG. NO. SP2
CHECKED BY N.B.	REV. NO. 5
DATE NOV 2024	
FILE NAME 7222	



LEGEND

- PROPERTY LINE
- STORM SEWER
- SANITARY SEWER
- WATER SERVICE / WATER MAIN
- SILT FENCE, REQUIRED LOCATION
- PROPOSED GRADE ELEVATION
- EXISTING GRADE ELEVATION
- FIRE HYDRANT
- WATER VALVE
- MANHOLE
- CATCH BASIN
- SILT SACK (IN CB)
- MAIN ENTRANCE
- LIGHT POLE

ROADWAY RESTORATION NOTES:

- CONTRACTOR TO OBTAIN ALL NECESSARY ROAD CUT PERMITS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO MAINTAIN A MINIMUM OF ONE LANE OF TRAFFIC AT ALL TIMES. IF TEMPORARY ROAD CLOSURES ARE NECESSARY, THEN CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH NORFOLK COUNTY.
- CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES.
- ALL CUTS TO EXISTING ASPHALT AND CONCRETE SHALL BE CLEAN SAW CUTS ONLY.
- BACKFILL FOR ALL SERVICE TRENCHES FROM EDGE OF ASPHALT TO BACK OF SIDEWALK SHALL BE GRANULAR 'B'.
- BACKFILL FOR ALL SERVICE TRENCHES FROM BACK OF SIDEWALK TO STREET LINE SHALL BE SELECT NATIVE MATERIAL.
- ALL BEDDING AND BACKFILL SHALL BE COMPACTED TO MIN. 98% SPMD.
- CURBS AND SUBDRAINS SHALL BE RESTORED TO MATCH EXISTING CONDITIONS TO THE SATISFACTION OF NORFOLK COUNTY.
- BOULEVARDS, SHALL BE RESTORED WITH NO.1 NURSERY SO. ON MINIMUM 100mm IMPORTED TOPSOIL TO THE SATISFACTION OF NORFOLK COUNTY.

THE FOLLOWING DRAWINGS AND NOTES TO BE CONSIDERED AS PART OF THE CONSTRUCTION DRAWINGS:
-ANY DISCREPANCY BETWEEN THIS DRAWING AND ACTUAL FIELD CONDITIONS WHICH MAY IMPACT WORK IS TO BE REPORTED TO M C ENGINEERING PRIOR TO COMMENCEMENT OF WORK.
-DIMENSIONS ARE METRIC

NO.	REVISION	DESCRIPTION	DATE	BY
5	ISSUED FOR REVIEW		JULY 9 2026	RM
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PROJECT NAME

CIVIL SITE PLAN
PROPOSED APARTMENT BUILDING

60 POND STREET
NORFOLK COUNTY

SHEET TITLE

EXISTING SITE CONDITION / DEMO PLAN

SCALE	1:500 METRIC	PROJECT NO.	7222
DRAWN BY	R MORRISON	DWG. NO.	SP3
CHECKED BY	N.B.	REV. NO.	5
DATE	NOV 2024		
FILE NAME	7222		

OPINON OF PROBABLE LANDSCAPE CONSTRUCTION COST

Project Name: 60 Pond Street - Apartment Site

Client: 1096966 Ontario Limited Inc. Date: 2026-07-07 Revision No: 6

Item	Description	Units	No. of Units	Unit Price	Cost
LANDSCAPE PLAN					
SUBJECT SITE					
A	Deciduous Trees (50mm caliper , wire basket)	ea	7	\$640.00	\$4,480.00
B	Deciduous Shrubs (50cm height, 3 gallon pot)	ea	73	\$50.00	\$3,650.00
C	Coniferous Shrubs (50cm spread, 5 gallon pot)	ea	61	\$65.00	\$3,965.00
D	Perennials (1 gallon pot)	ea	212	\$15.00	\$3,180.00
E	Sod with 150mm Topsoil	m2	670	\$15.00	\$10,050.00
F	1.8 Meter Tall Wood Fence	lm	132	\$300.00	\$39,600.00
G	Bike Rack	ea	2	\$500.00	\$1,000.00
TOTAL					\$65,925.00



In providing estimates of probable construction cost, the Client and the Municipality understand that the Consultant has no control over the cost or availability of labour, equipment, or materials; or over market conditions; or the Contractor's method of pricing, and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgement and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost.

OPINON OF PROBABLE LANDSCAPE CONSTRUCTION COST

Project Name: 60 Pond Street - Commercial Site

Client: 1096966 Ontario Limited Inc. Date: 2026-07-07 Revision No: 6

Item	Description	Units	No. of Units	Unit Price	Cost
LANDSCAPE PLAN					
SUBJECT SITE					
A	Deciduous Trees (50mm caliper , wire basket)	ea	1	\$640.00	\$640.00
B	Deciduous Shrubs (50cm height, 3 gallon pot)	ea	53	\$50.00	\$2,650.00
C	Coniferous Shrubs (50cm spread, 5 gallon pot)	ea	13	\$65.00	\$845.00
D	Perennials (1 gallon pot)	ea	88	\$15.00	\$1,320.00
E	Sod with 150mm Topsoil	m2	177	\$15.00	\$2,655.00
TOTAL					\$8,110.00



In providing estimates of probable construction cost, the Client and the Municipality understand that the Consultant has no control over the cost or availability of labour, equipment, or materials; or over market conditions; or the Contractor's method of pricing, and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgement and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost.

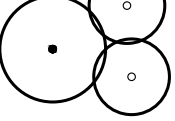
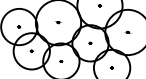
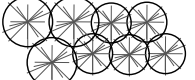
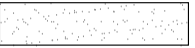
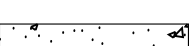
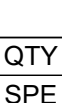
- ## 1 GENERAL LANDSCAPE NOTES

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES						
AF	2	ACER X FREEMANII 'AUTUMN BLAZE'	AUTUMN BLAZE MAPLE	50mm Caliper	Wire Basket	
AM	5	AMELAMCHIER X GRANDIFLORA 'PRINCESS DIANA'	PRINCESS DIANA SERVICEBERRY	50mm Caliper	Wire Basket	TREE FORM
UA	2	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	50mm Caliper	Wire Basket	ACCEPTABLE SUBSTITUTION 'PRINCETON'
	7	TOTAL TREES				

SHRUBS						
Bt	6	BERBERIS THUNBERGII 'GENTRY'	ROYAL BURGUNDY BARBERRY	50cm Height	2 Gallon Pot	1M O.C. SPACING
Ja	18	JUNIPERUS SABINA 'ARCADIA'	ARCADIA JUNIPER	50cm Spread	5 Gallon Pot	1.2 M O.C. SPACING
Js	35	JUNIPERUS SABINA	SAVIN JUNIPER	50cm Spread	5 Gallon Pot	1.2 M O.C. SPACING
Jv	2	JUNIPERUS VIRGINIANA 'BLUE ARROW'	BLUE ARROW JUNIPER	100cm Height	7 Gallon Pot	1.2 M O.C. SPACING
Pi	20	PHYSCARPUS OPULIFOLIUS 'LEMON CANDY'	LEMON CANDY NINEBARK	50cm Height	2 Gallon Pot	1M O.C. SPACING
Ra	47	RHUS AROMATICA 'GRO LOW'	GRO-LOW FRAGRANT SUMAC	50cm Spread	2 Gallon Pot	1M O.C. SPACING
Tx	6	TAXUS x MEDIA 'DENSIFORMIS'	DENSE JAPANESE YEW	50cm Spread	5 Gallon Pot	1.2 M O.C. SPACING
	134	TOTAL SHRUBS				

ORNAMENTAL GRASSES AND PERENNIALS						
all	24	ALLIUM X 'MILLENIUM'	ORNAMENTAL ONION	-	1 Gallon Pot	30CM O.C. SPACING
cak	69	CALAMAGROSTIS 'KARL FORESTER'	FEATHER REED GRASS	-	1 Gallon Pot	75CM O.C. SPACING
hem	25	HEMEROCALLIS 'STELLA D'ORO'	DAYLILY	-	1 Gallon Pot	45CM O.C. SPACING
hkr	8	HOSTA 'KROSSA REGAL'	HOSTA (LARGE BLUE LEAVES)	-	1 Gallon Pot	75CM O.C. SPACING
nep	47	NEPETA FAASSENII 'KITTEN AROUND'	CAT MINT	-	1 Gallon Pot	45CM O.C. SPACING
sed	39	SEDUM SPECTABILE 'HERBSTFREUDE'	AUTUMN JOY STONECROP	-	1 Gallon Pot	30CM O.C. SPACING
	212	TOTAL ORNAMENTAL GRASSES AND PERENNIALS				

LEGEND:

	PROPOSED DECIDUOUS TREES INDIVIDUAL MULCH SAUCERS WHEN IN TURF CONTINUOUSLY MULCHED WHEN IN SHRUB AND PERENNIAL BEDS
	PROPOSED DECIDUOUS SHRUBS CONTINUOUSLY MULCHED BEDS
	PROPOSED CONIFEROUS SHRUBS CONTINUOUSLY MULCHED BEDS
	PROPOSED ORNAMENTAL GRASSES AND PERENNIALS CONTINUOUSLY MULCHED BEDS
	PROPOSED SOD FESCUE BLUEGRASS BLEND WITH 150MM DEPTH TOPSOIL
	PROPOSED ASPHALT SURFACE REFER TO CIVIL PLANS PREPARED BY MC ENGINEERING
	PROPOSED CONCRETE SURFACE REFER TO CIVIL PLANS PREPARED BY MC ENGINEERING
	PROPOSED WATER FEATURE REFER TO LABEL/DETAIL FOR FENCE TYPE & HEIGHT
	PROPERTY BOUNDARY
	PLANT KEY

Aurelio Baglione
Aurelio Baglione
1096966 Ontario Limited
Owner

Date

Signature: 
Aurelio Baglione (Feb 23, 2024 20:07 EST)

Email: abaglione@virtuscapitalmgmt.com

6	REISSUED FOR SITE PLAN APPROVAL	MGN	07 JUL-26
5	REISSUED FOR APPROVAL	MGN	27 OCT-25
4	SITE PLAN SUBMISSION #2	MGN	31 MAY-25
3	REISSUED FOR APPROVAL	MGN	06 MAY-25
2	ISSUED FOR APPROVAL	MGN	26 FEB-24
1	ISSUED FOR COORDINATION	MGN	05 DEC-23
No.	Description	By	Date

REVISIONS: All previous issues of this drawing are supercede



ABOUT & ASSOCIATES INC.
Consulting Arborists • Ecologists • Landscape Architects
3-5 Edinburgh Road South, Guelph, Ontario, N1H 5N8, 519.822.6839, aboutdng.com

Title: _____

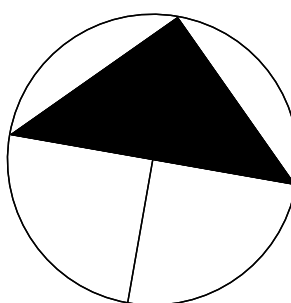
LANDSCAPE PLAN

Project: _____

POND STREET APARTMENTS

60 POND STREET, SIMCOE ONTARIO

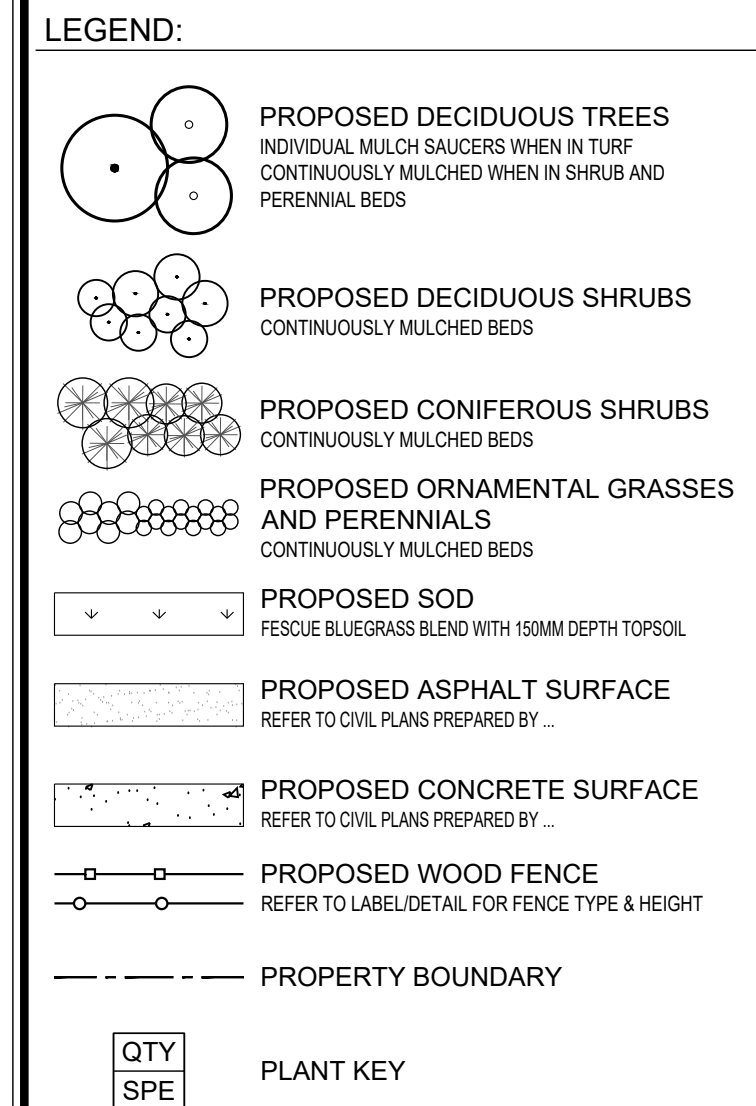
Date: NOVEMBER 2023	Designer: MGN
Project: AA23-210A	Drawn: NB
Scale: 1:200	Checked: MGN



Drawing No: _____

LP1.1

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
TREES						
UA	1	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	50mm Caliper	Wire Basket	ACCEPTABLE SUBSTITUTION 'PRINCETON'
	1	TOTAL TREES				
SHRUBS						
Ja	6	JUNIPERUS SABINA 'ARCADIA'	ARCADIA JUNIPER	50cm Spread	2 Gallon Pot	1.2 M O.C. SPACING
Js	7	JUNIPERUS SABINA	SAVIN JUNIPER	50cm Spread	2 Gallon Pot	1.2 M O.C. SPACING
Pl	5	PHYSOCARPUS OPULIFOLIUS 'LEMON CANDY'	LEMON CANDY NINEBARK	50cm Height	2 Gallon Pot	1M O.C. SPACING
Ra	48	RHUS AROMATICA 'GRO LOW'	GRO-LOW FRAGRANT SUMAC	50cm Spread	2 Gallon Pot	1M O.C. SPACING
	66	TOTAL SHRUBS				



6	REISSUED FOR SITE PLAN APPROVAL	MGN	07 JUL-26
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3	REISSUED FOR APPROVAL	MGN	06 MAY-25
2	ISSUED FOR APPROVAL	MGN	26 FEB-24
1	ISSUED FOR COORDINATION	MGN	05 DEC-23
No.	Description	By	Date

ABOUT & ASSOCIATES INC.
Consulting Arborists • Ecologists • Landscape Architects
3-5 Edinburgh Road South • Guelph, Ontario • N1H 5N8 • 519.822.6839 • abouting.com

Project:	
THE BRICK	
COMMERCIAL PROPERTY	
48 SYDENHAM STREET, SIMCOE ONTARIO	
Date: NOVEMBER 2023	Designer: MGN
Project: AA23-210A	Drawn: NB
Scale: 1:200	Checked: MGN



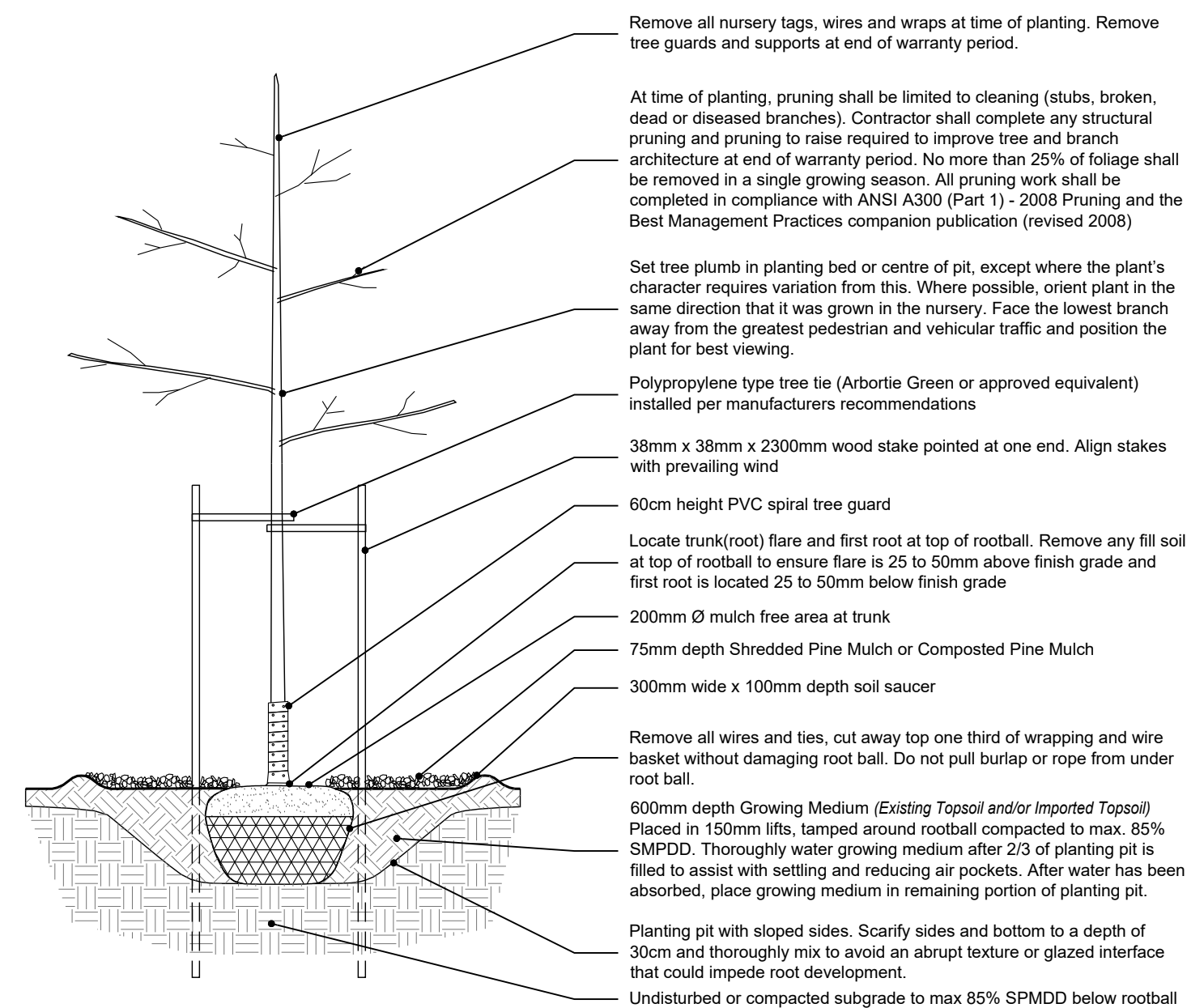
LP1.2

- Plant Characteristics, Rootballs, Rootball Standards including minimum rootball diameters specified on these plans are to be in accordance with the Canadian Nursery Landscape Association Canadian Standards for Nursery Stock, current edition.
2. Planting shall only be performed when weather and soil conditions are suitable for planting the materials specified in accordance with locally accepted practice. Install plant materials during the planting time as described below unless otherwise approved in writing by Landscape Architect. In the event that the Contractor request planting outside the dates of the planting season, approval of the request does not change the requirements of the warranty.
- Deciduous Trees: April 1 - June 30 and September 1 - October 31
 - Deciduous Shrubs: April 1 - June 30 and September 1 - October 31
 - Perennials and Groundcover: April 1 - June 30 and September 1 - October 31
 - Evergreen Trees and Shrubs: April 1 - June 30 and September 1 - October 31
3. Transportation of plants should be restricted to closed vans or trucks covered with mesh tarpaulin or, similar material, to protect the leaves or needles from windburn or desiccation. This may be supplemented by spraying the foliage with an antidesiccant prior to shipping.
4. Plant material shall at no time be dropped or handled roughly.
5. Protect plant material from frost, excessive heat, wind and sun following delivery.
6. Immediately store plants in accordance with this specification any time regardless of any previous approval.
7. When a plant has been rejected, immediately remove it from the area of the Work and replace it with a plant of the required species, size and quality at the earliest planting period consistent with these specifications. Replacement plant material shall meet all the requirements of this specification. Rejected plants shall be replaced at no cost to the Owner.
8. Acceptance shall not be given for the planting Work until all plants rejected during the course of the Work are replaced.
9. Any plant that has the following characteristics shall be cause for rejection:
- 13.1. Only nursery grown plants will be accepted.
 - 13.2. Any plant that has a canopy with 25% or more dead or removed limbs.
 - 13.3. Evidence of damage to plant material, which diminishes the aesthetic character/form, biological integrity, or structural integrity of the plant or group of plants.
 - 13.4. Evidence of improper digging; inadequate protection following digging; carelessness while in transit; evidence of desiccation or wind-related damage; cold damage; improper handling or storage; root zones that have dried to the point of leaf wilt; cracked, loose, damaged or distorted root balls.
 - 13.5. Plants with undersized root balls or containers, knicked or girdling roots, matted roots on the top, and edges of the container, excessive surface adventitious roots, root balls and containers with no structural roots in the top 75mm of the soil.
 - 13.6. Plants balled with synthetic, treated or non-biodegradable fabrics.
 - 13.7. Any tree that is of a species that characteristically has a dominant central leader, and if the leader is dead or removed, the tree will not be able to form consistent with the species.
 - 13.8. Any tree that has open wounds (not completely healed over) that penetrates the cambium into the wood on trunks or major limbs the removal of which would result in the loss of 25% or more of the structure and form of the tree
14. Topsoil shall be loose, friable, fertile loamy material that is free from subsoil, weeds, roots, vegetation and other deleterious material greater than 25mm diameter in the greatest dimension. The topsoil shall also be certified by an OMAFRA Accredited Soil Testing Laboratory in Ontario to meet the following requirements:
- 14.1. Topsoil texture shall be loam, sandy loam to with:
 - 14.1.1. Sand content between 20-75%
 - 14.1.2. Silt content between 5-30%
 - 14.1.3. Clay content between 5-30%
 - 14.2. Herbicides - No detectable levels
 - 14.3. Organic Matter content between 4-15%
 - 14.4. Phosphorus 10-60 (ppm)
 - 14.5. Potassium 80-259 (ppm)
 - 14.6. Calcium 1000-4000 (ppm)
 - 14.7. Magnesium 100-300 (ppm)
 - 14.8. Chloride <100 (ppm)
 - 14.9. Sodium <200 (ppm)
 - 14.10. Sodium Adsorption Ratio <15
 - 14.11. Shall not have contaminants that adversely affect plant growth.
 - 14.12. The cost to amend existing on-site topsoil to be reused shall be paid for by the Owner.
 - 14.13. The cost to amend imported topsoil supplied by the Contractor to meet Agronomist written recommendations shall be paid for by the Contractor.
15. Water shall not have contaminants or impurities that would adversely affect the germination and growth of vegetation. Proposed plants which come over or under any utility shall be relocated by the Contractor for review by the Landscape Architect, to the satisfaction of the utility provider.
16. Mulch shall be shredded hardwood or softwood chips, or similar material, applied to the planting details. Free from roots, leaves, twigs, debris, stones, fungus, crabgrass rhizomes, or any material detrimental to plant growth. Material shall be mulching grade, uniform in size and foreign matter. Mulch that has become saturated with water and presents an anaerobic odor shall be rejected.
17. Anti-Desiccant (if used) shall be emulsion type, film-forming agent similar to Dowax by Dow Chemical Company, or Wilt-Pruf by Nursery Specialty Products, Inc., Croton Falls, New York, designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and use in accordance with manufacturer's instructions. Submit manufacturers product data for approval.
18. Contractor to examine the surface grades and soil conditions for any circumstances that might be detrimental to plant growth, such as deposits of construction-related waste or soil contamination, storage of material or equipment, soil compaction or poor drainage. Contractor to examine the grading, verify all elevations, and notify the Landscape Architect in writing of any unsatisfactory conditions.
19. Contractor to inspect each plant after delivery and prior to installation for damage of other characteristics that may cause rejection of the plant.
20. Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify the Consultant before planting. Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill. Plants to be planted in prepared planting soil may utilize the soil removed from the planting excavation.
21. Set edge of the root ball at the elevation of the proposed finish. Consult the grading plan and utilize a builder's level or transit to determine the grade at the tree grade. For trees on sloped surfaces, set the edge of the root ball at the average grade around the tree. Set the root plant plumb and in the location indicated on the plan. The root flare and tree graft, if applicable, shall be visible at the top of the root ball, above the grade. Do not place soil on top of the root ball and remove soil pushed above root flare by mechanical potting/balled & burlapping process during transplantation by the nursery.
22. When set, brace root ball by tamping backfilled soil around the lower portion of the root ball. Place additional backfill around base and sides of ball in 150mm lifts. Work each lift to settle backfill and eliminate voids and air pockets. When excavation is approximately two-thirds full, water thoroughly before placing remainder of backfill. Ropes or strings on top of ball shall be cut and removed. If the ropes or cloth wrapping shall be cut and removed from the top of the root ball. The top horizontal ring of support wire baskets shall be cut in four places and the top half of the wire basket folded down into the soil.
23. Where staking is required, caliper trees shall be supported by wooden stakes driven outside the ball in line with the direction of the prevailing wind. Tree tie and installation method to be per planting detail. Stakes shall be 50mm x 50mm hardwood stakes free of knots and of lengths appropriate to the size plant required for to adequately support the plant.
24. Tree Guard type and installation per planting detail.
25. Maintain all trees and shrubs in a plumb position throughout the warranty period. Straighten all trees including those not staked. Plants to be straightened shall be excavated and the root ball moved to a plumb position, and then re-balled. Do not straighten plants by pulling the trunk with guys.
26. Not apply any fertilizer to plantings for the first year after transplanting, unless soil tests determine that fertilizer or other chemical additives are required. If required, fertilizers shall be applied according to the manufacturer's instructions and standard horticultural practices.
27. Pruning shall be done with clean, sharp, rust-free tools. Cuts shall be made flush, leaving no stubs as per ANSI A 300 - current edition. No tree paint or sealants shall be used.
28. Dead wood, suckers, and broken and badly bruised branches shall be removed. Do not prune plant material that has been severely damaged due to transit or handling until viewed by the Landscape Architect.
29. Pruning of broken or dead branches shall be done after planting. Form-corrective pruning may occur when there is heavy wind until any but-bark in the planting. If corrective pruning dates fall outside the construction schedule, it shall remain a punch list (warranty) item. The Contractor shall be responsible for completing this off-season punch list (warranty) item.
30. Mulch top of root balls and planting beds, covering the entire planting bed area. Leaving a mulch free zone at stem/trunk as indicated in planting details.
31. Water each plant on the day of installation to saturate the soil around the roots and wash the soil into the root zone. After the soil has drained, reset any settled plants or grades around the plant, adding soil if required.

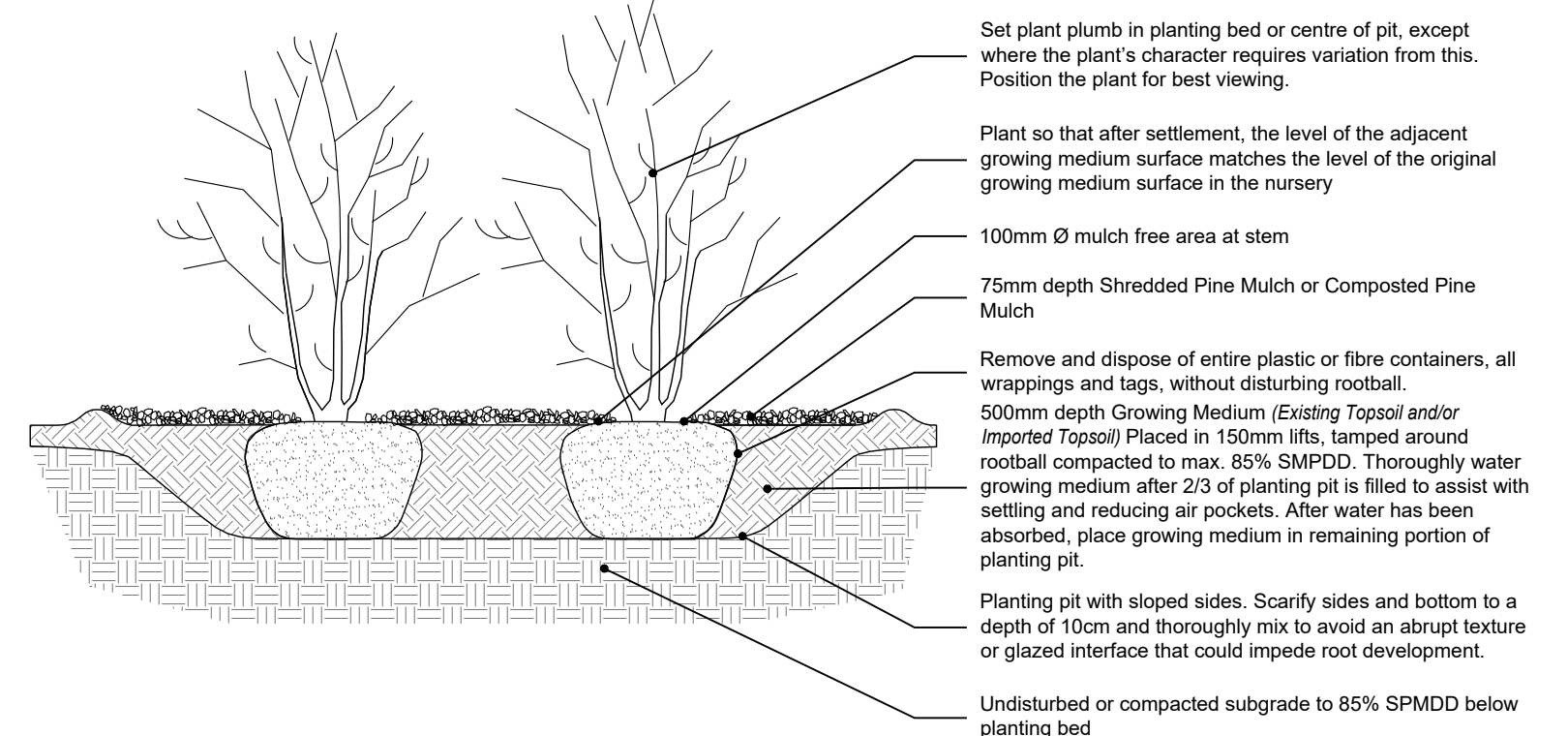
1 TREE, SHRUB, AND PERENNIAL INSTALLATION NOTES

- Sod shall be a No. 1 Commercial Grade Turfgrass Nursery Sod, Kentucky Bluegrass/Fine Fescue according to the Classifications and Use of Turfgrass Sod for Ontario.
 - Sod shall be seeded and established in nursery sod fields as a turfgrass sod.
 - Sod shall be uniform in texture, and in good healthy condition with no sign of decay.
 - There shall be no more than 5 broadleaf weeds per 40 m² of sod and up to 20% non-specified grass seed.
 - Sod shall be of sufficient density that no surface soil is visible. The grass height shall be 30 mm minimum and 70 mm maximum.
 - The soil portion of the sod shall be a good mineral type soil with a thickness of 10 mm minimum and 15 mm maximum.
 - Each sod piece shall be well permeated with roots. Individual sod pieces shall be in such condition so that each may be lifted, rolled, transported, and placed without breaking or tearing and without loss of soil under normal handling conditions.
 - Sod shall contain sufficient moisture to maintain its vitality during transportation and placement.
 - Topsail shall be loose, friable, fertile loamy material that is free from subsoil, weeds, roots, vegetation and other deleterious material greater than 25mm diameter in the greatest dimension. The topsail shall also be certified by an OMAFRA Accredited Soil Testing Laboratory in Ontario to meet the following requirements:
 - Topsail texture shall be loose, sandy loam to with:
 - Sand content between 20-75%
 - Silt content between 5-30%
 - Clay content between 5-30%
 - Herbicides - No detectable levels
 - Organic Matter content between 4-15%
 - Phosphorus 10-80 (ppm)
 - Potassium 80-250 (ppm)
 - Calcium 1000-4000 (ppm)
 - Magnesium 100-300 (ppm)
 - Chloride <100 (ppm)
 - Sodium <200 (ppm)
 - Sodium Adsorption Ratio <15
 - Shall not have contaminants that adversely affect plant growth.
 - The cost to amend existing on-site topsoil to be reused shall be paid for by the Owner.
 - The cost to amend imported topsail supplied by the Contractor to meet Agronomist written recommendations shall be paid for by the Contractor.
 - Water shall not have contaminants or impurities that would adversely affect the germination and growth of vegetation.
 - Sod shall not be separated from its mineral soil base and not damaged during transportation, handling, and placement.
 - Surface litter and debris shall be removed immediately prior to sod placement.
 - Topsail or sod shall not be placed when in a frozen condition, under adverse field conditions such as high wind, frozen soil or soil covered with snow, ice, or standing water.
 - Topsail shall be placed, spread and leveled as required to match grades as indicated in the grading drawings prepared by the Project Civil Engineer and to allow for positive drainage away from pathways and structures.
 - Minimum consistent depth for topsail in areas to be sodded after settlement shall be 200mm deep.
 - At the time of sodding, all surface areas designated for sodding shall be free of erosion and shall have a fine graded uniform surface. The sodding shall be uniformly cultivated to a minimum depth of 50 mm and shall not have surface materials greater than 25 mm in size, such as stones and clods and weeds or other unwanted vegetation.
 - Sod shall be placed in locations and as specified in the landscape drawings.
 - voids shall not be left between the soil portion of the sod and the underlying ground surface.
 - Sod shall be securely placed lengthwise across the face of slopes and parallel to the centreline of ditches.
 - the joints of adjacent sod pieces shall be staggered.
 - The edges of adjacent sod pieces shall be placed tightly against one another without overlapping.
 - Sod shall be countersunk to existing grade level at all edges.
 - Butt joints will be used where new sod blends with existing grass; lap joints will not be permitted.
 - Joints shall be tamped to a uniform surface.
 - Where required, sod should be staked to the grade to avoid movement.
 - Sod shall be maintained by the Contractor as part of base price during the establishment period (30 Days) following completion of placement. During this period, the placed sod shall be kept healthy, actively growing, and green in colour. This requirement shall be suspended during the winter dormant period defined as November 15 to April 15 inclusive. During the establishment period the Contractor will:
 - Install temporary barriers or signage to be maintained where required to protect newly established sod.
 - Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion. In a typical loam soil, optimum soil moisture in planting beds at root depth is 65% of field capacity.
 - Mow to a height of 60mm (2.5") when turf reaches height of 80mm (3") at least twice during the establishment period.
 - If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Consultant prior to application.
 - Control outbreaks of perennial weeds and annual weeds by mechanical or chemical means utilizing acceptable integrated pest management practices to meet acceptance/success targets.
 - If chemical means are used, comply with all municipal, provincial, and federal legislation and regulations.

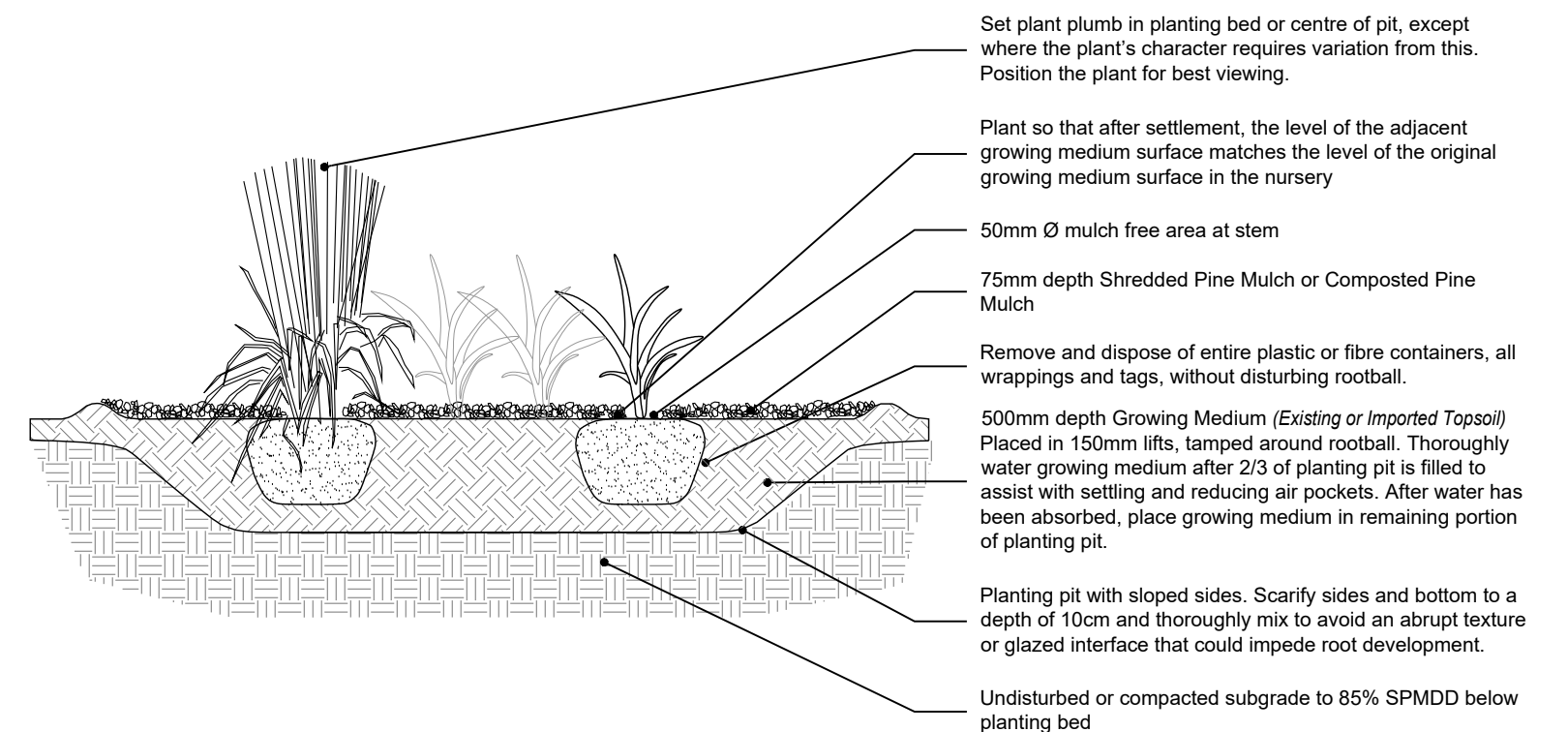
3 GENERAL LANDSCAPE MAINTENANCE NOTES



4 TYPICAL DECIDUOUS TREE PLANTING DETAIL
LP-2 N.T.S.



5 TYPICAL SHRUB PLANTING DETAIL - CONTINUOUS MULCHED BED
LP-2 N.T.S.



6 TYPICAL PERENNIAL PLANTING DETAIL - CONTINUOUS BED
LP-2 N.T.S.

LEGEND:

Aurelio Baglione

Aurelio Baglione
1096966 Ontario Limited
Owner

Signature: 
Aurelio Baglione (Feb 23, 2024 20:07 EST)
Email: abaglione@virtuscapitalmgmt.com

6	REISSUED FOR SITE PLAN APPROVAL	MGN	07 JUL-26
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REVISIONS: All previous issues of this drawing are supercede



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3-5 Edinburgh Road South, Guelph, Ontario, N1H 5N8, 519.822.6839, abouting.com

Title:

LANDSCAPE DETAILS - 1

Project: **POND STREET APARTMENTS**

POND STREET APARTMENTS
60 POND STREET, SIMCOE ONTARIO
THE BRICK
COMMERCIAL PROPERTY
48 SYDENHAM STREET, SIMCOE ONTARIO

Date: NOVEMBER 2023 Designer: MGN

Project: AA23-210A Drawn: NB

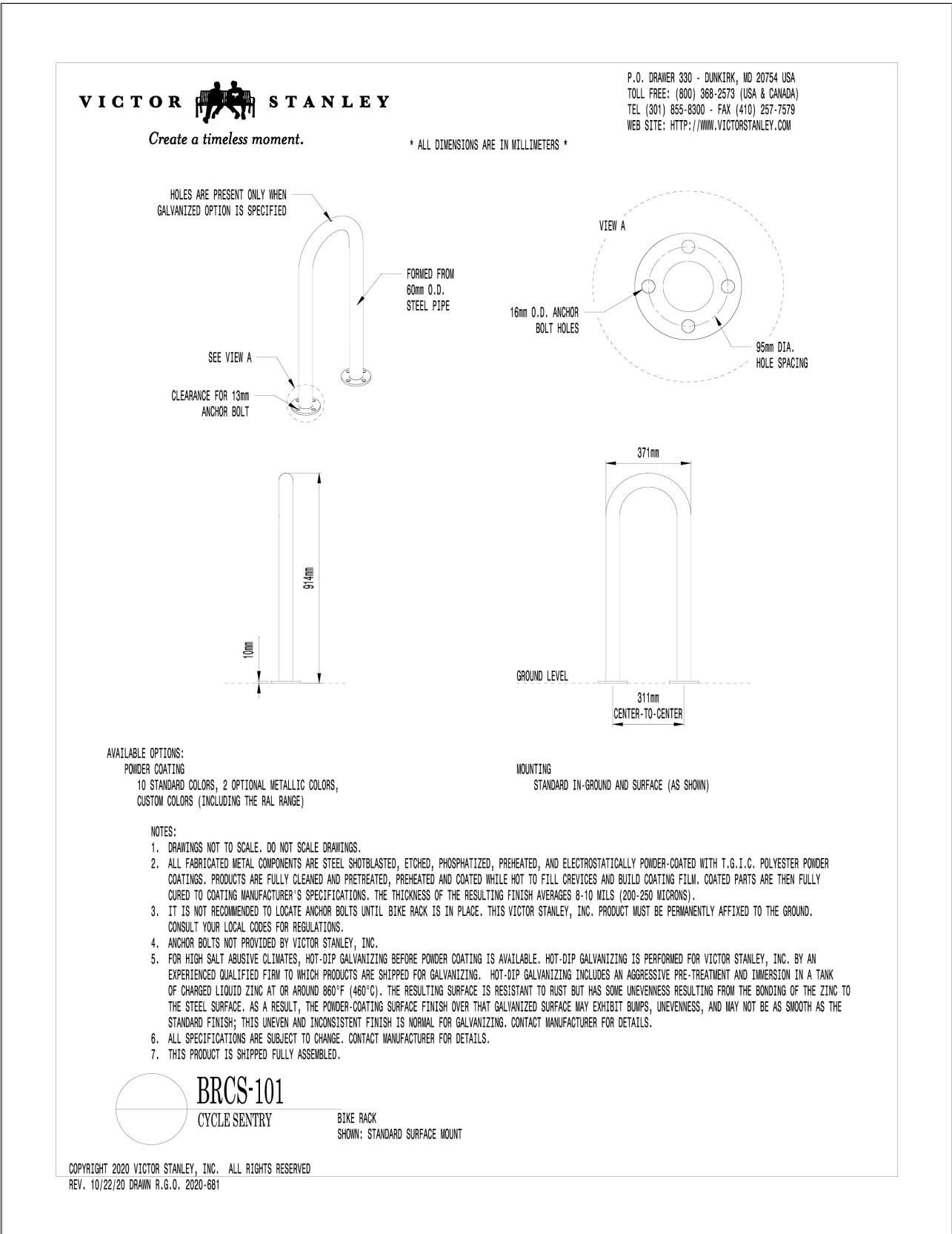
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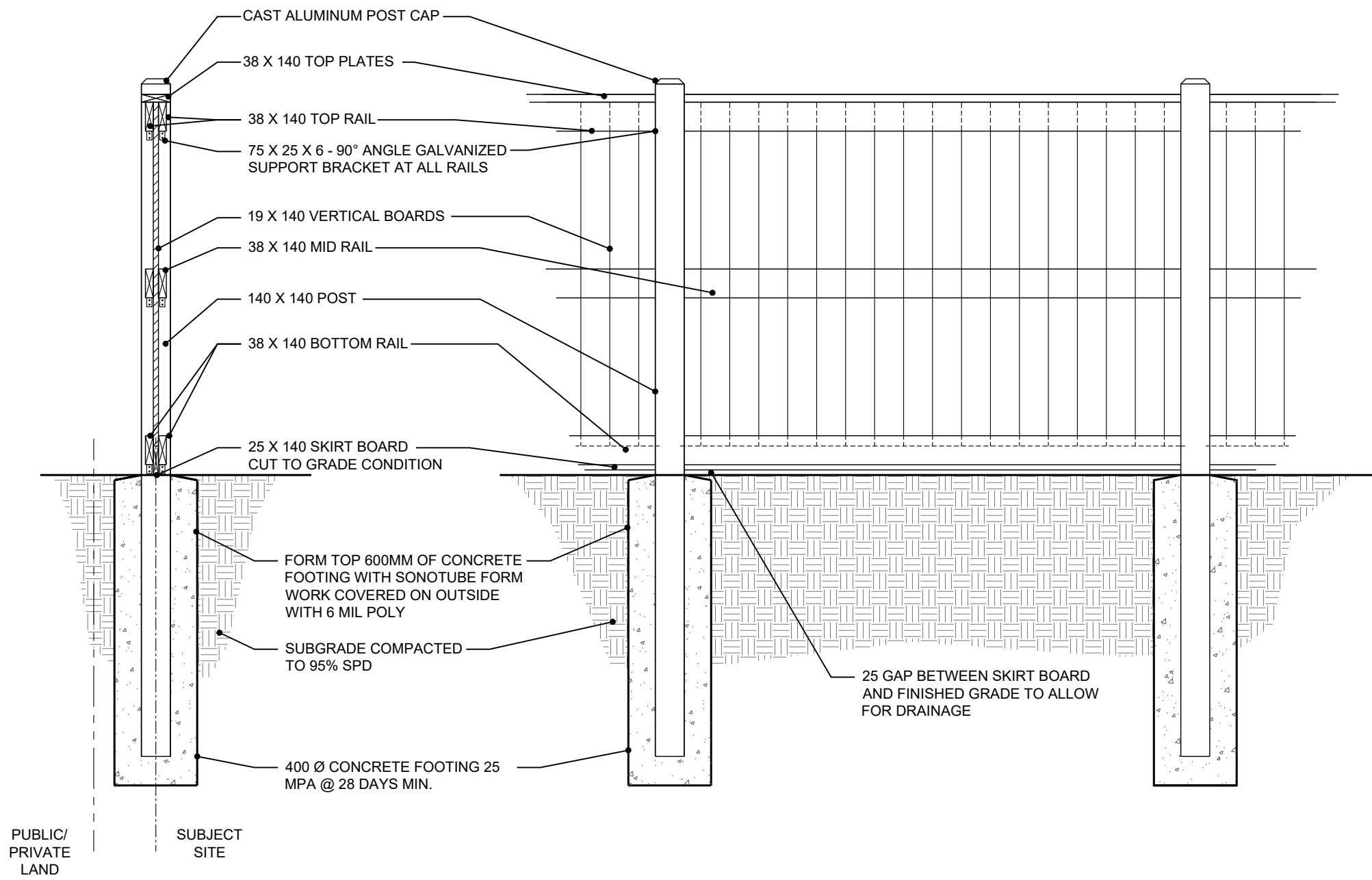
LP2



Hardware to be Supplied by Contractor: Anchor to Concrete with Stainless Steel Tamper Proof Hardware
Steel Finish/Colour: Victor Stanley Standard Black Powder Coat
Ontario Sales Representative: Park Street Solutions, Kevin Bettridge, Mobile: 519.589.5157, Email: kevin@parkst.ca



1
LP-3 BIKE RACK
N.T.S.



2
LP-3 1.8M VERTICAL WOOD PRIVACY FENCE
N.T.S.

- NOTES:
- STEP FENCING PANELS 50mm MIN AND 150mm MAX AT POSTS AS REQUIRED BY GRADE CONDITIONS.
 - ALL MATERIALS, COMPONENTS AND WORKMANSHIP TO CONFORM TO OBC AND LOCAL BY-LAWS.
 - ALL LUMBER SIZES ARE ACTUAL RATHER THAN NOMINAL.
 - ALL WOOD SHALL BEAR GRADING STAMP OF C.L.S. CERTIFIED AGENCY.
 - WARRANTY: THE FENCE SHALL BE GUARANTEED FOR THREE YEARS AS FOLLOWS:
5MM ON PLUMB OF POSTS AND LEVEL OF VERTICAL BOARDS. GAPS BETWEEN VERTICAL BOARDS SHALL NOT EXCEED 6MM. VERTICAL BOARDS SHALL BE TIGHT AND FREE OF RATTLING.
 - WOOD:
6.1. ALL WOOD SHALL BE PRESSURE TREATED SELECTED FOR GOOD APPEARANCE AND FREE OF WANE AND BARK POCKETS.
6.2. MEMBERS WITH HEAVY KNOTS AND/OR SAP STAIN SHALL BE WELL DISTRIBUTED THROUGHOUT THE INSTALLATION.
6.3. MOISTURE CONTENT OF WOOD SHALL NOT EXCEED 20% AT TIME OF CONSTRUCTION.
 - VERTICAL/HORIZONTAL BOARDS:
6.4.1. TO NLGA 204A OR BETTER "SELECT KNOTTY" GRADE.
6.5. POSTS
6.5.1. TO NLGA 131B#1 STRUCTURAL POST AND TIMBER
6.5.2. SHALL BE PLUMB WITHIN 5MM ABOVE GRADE.
 - FASTENERS
7.1. ALL FASTENERS INCLUDING ARDOX NAILS, LAG SCREWS, BOLTS, NUTS, WASHERS AND BRACKETS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE TO CSA STANDARD G184. LAG SCREWS AND BOLTS SHALL CONFORM TO ASTM A307 COUNTER-SINK ALL LAG SCREWS AND BOLTS AND DRIVE ALL NAIL HEADS BELOW SURFACE OF WOOD.
7.2. ALL ARDOX NAILS TO BE EVENLY SPACED AND SET NOT LESS THAN 25MM FROM EDGE OF ANY WOODED MEMBER.
7.3. USE SUFFICIENT SIZE AND QUANTITY OF FASTENERS TO ENSURE A STABLE AND SECURE STRUCTURE.

LEGEND:

Aurelio Baglione

Aurelio Baglione
1096966 Ontario Limited
Owner

Date

Signature: 
Email: abaglione@virtuscapitalmgmt.com

6	REISSUED FOR SITE PLAN APPROVAL	MGN	07 JUL-26
5	REISSUED FOR APPROVAL	MGN	27 OCT-25
4	SITE PLAN SUBMISSION #2	MGN	31 MAY-25
3	REISSUED FOR APPROVAL	MGN	06 MAY-25
2	ISSUED FOR APPROVAL	MGN	26 FEB-24
1	ISSUED FOR COORDINATION	MGN	05 DEC-23
No.	Description	By	Date

REVISIONS: All previous issues of this drawing are superseded.


ABOUD & ASSOCIATES INC.
Consulting Arborists • Ecologists • Landscape Architects
3-6 Edinburgh Road South, Guelph, Ontario, N1H 5N8 • 519.822.6839 • aboudinc.com

Title:

LANDSCAPE DETAILS - 2

Project:
POND STREET APARTMENTS
60 POND STREET, SIMCOE ONTARIO
THE BRICK
COMMERCIAL PROPERTY
48 SYDENHAM STREET, SIMCOE ONTARIO

Date: NOVEMBER 2023 Designer: MGN

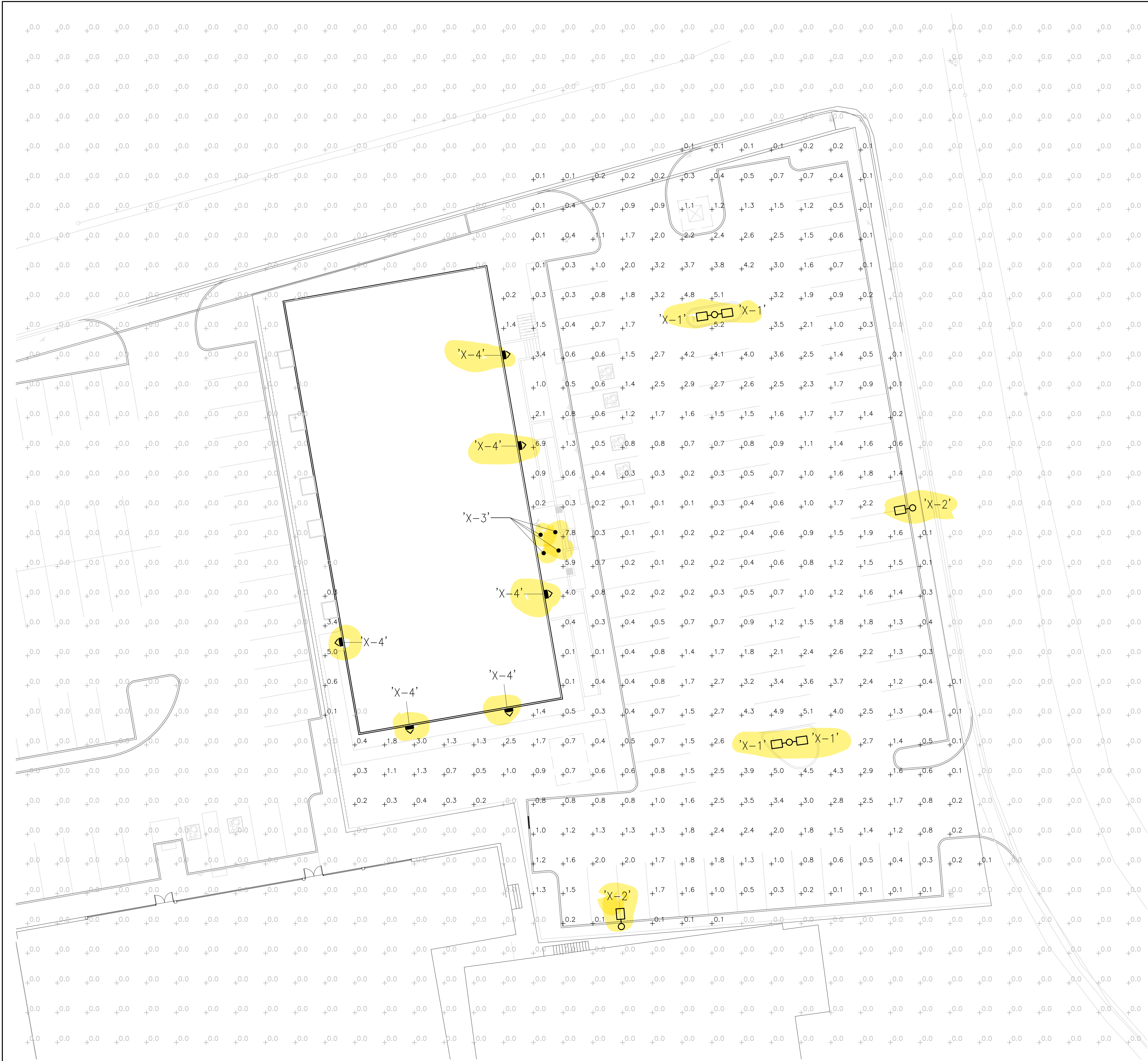
Project: AA23-210A Drawn: NB

Scale: --- Checked: MGN



Drawing No:

LP3



A
ES1
ELECTRICAL SITE PLAN- LIGHTING PHOTOMETRIC
SCALE: 1:200

Schedule						
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp
	X-1	4	Lithonia Lighting	DSX0 LED P3 35K 80CRI TSLG	D-Series Size 0 Area Luminaire P1 Performance Package 3500K CCT 80 CRI Type 5 Low Glare	8838
	X-2	2	Lithonia Lighting	DSX0 LED P3 35K 80CRI BLC3	D-Series Size 0 Area Luminaire P3 Performance Package 3500K CCT 80 CRI Type 3 Extreme Backlight Control	6139
	X-3	4	Lithonia Lighting	LDN3 35/05 AR LD	3" LDN, 3500K, 500LM, Clear Matte Diffuse Finish	450
	X-4	4	Lithonia Lighting	ARC1 LED P1 40K	ARC1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K	1454
						10.8751
B ES1 LIGHTING FIXTURE SCHEDULE						

Aurelio Baglione
Aurelio Baglione
1096666 Ontario Limited
Owner
Signature: _____
Date: _____
Email: abaglione@virtuscapitalmgmt.com

SCALE: AS NOTED
FILE: IE-7241
DESIGN: PO
DATE: 23.12.07
DRWN: PO
CHKD: QJH

POND STREET APARTMENTS
60 POND STREET
SIMCOE ONTARIO

1930 Blue Heron Drive
London, ON N6H 5L9
Tel: 519-472-3688
Fax: 519-472-4322
www.integratedengineering.ca

INTEGRATED
engineering

PROFESSIONAL ENGINEER
S. A. MOHL
100561442
JULY 27/99
PROVINCE OF ONTARIO

PROJECT NORTH

DO NOT SCALE THE DRAWING
THE CONTRACTOR IS RESPONSIBLE TO VERIFY
ALL DIMENSIONS AND CONDITIONS OF THE
ENGINEER'S OMISSIONS TO THE ENGINEER
THE CONTRACTOR IS RESPONSIBLE TO VERIFY
THE CONTRACTOR'S DRAWINGS
THE CONTRACTOR'S DRAWINGS
THE CONTRACTOR'S DRAWINGS
REPRODUCTION OF THESE DOCUMENTS IN PART
OR IN WHOLE WITHOUT THE WRITTEN
CONSENT OF THE ENGINEER IS STRICTLY PROHIBITED
1/2 inch = 10 mm

5	26.07.27	SITE PLAN APPROVAL
4	26.06.02	REVIEW
3	25.11.05	SITE PLAN APPROVAL
2	25.06.05	SITE PLAN APPROVAL
1	24.03.04	SITE PLAN APPROVAL
0	24.01.18	SITE PLAN APPROVAL

NO	DATE	DESCRIPTION
		REVISIONS

ES1 OF 2
ELECTRICAL SITE PLAN- LIGHTING PHOTOMETRIC

LIGHTING FIXTURE 'X-1' & 'X-2'

LIGHTING FIXTURE 'X-3'

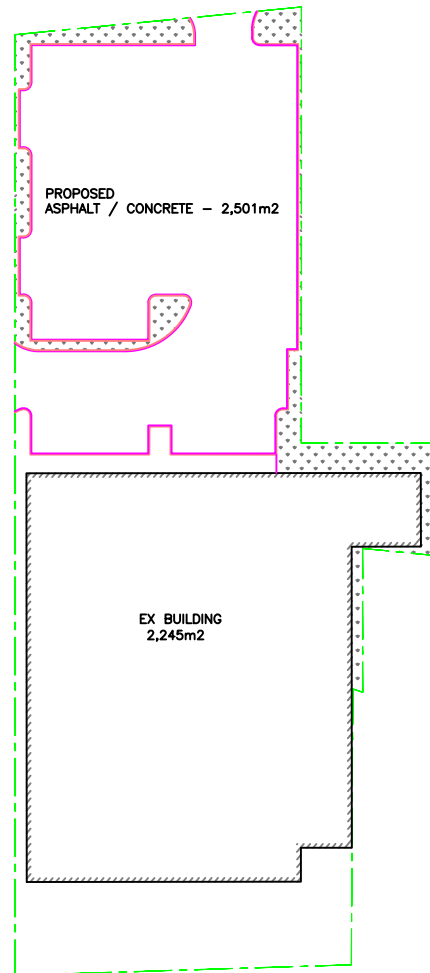
LIGHTING FIXTURE 'X-4'

Aurelio Baglione
Aurelio Baglione
1096966 Ontario Limited
Owner

Date

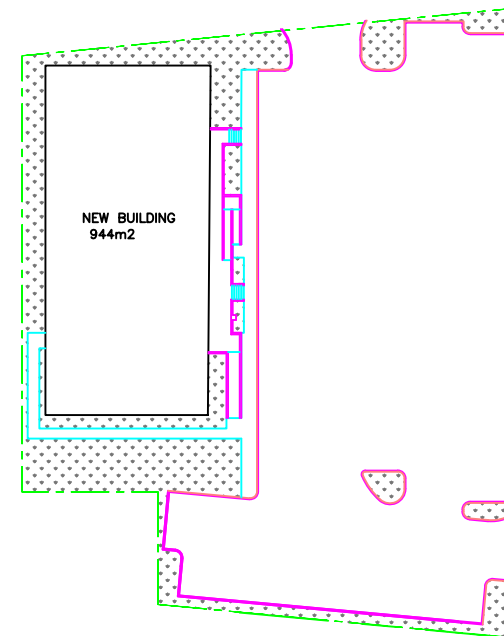
Signature: 
Aurelio Baglione (Feb 23, 2024 20:07 EST)

Email: abaglione@virtuscapitalmgmt.com



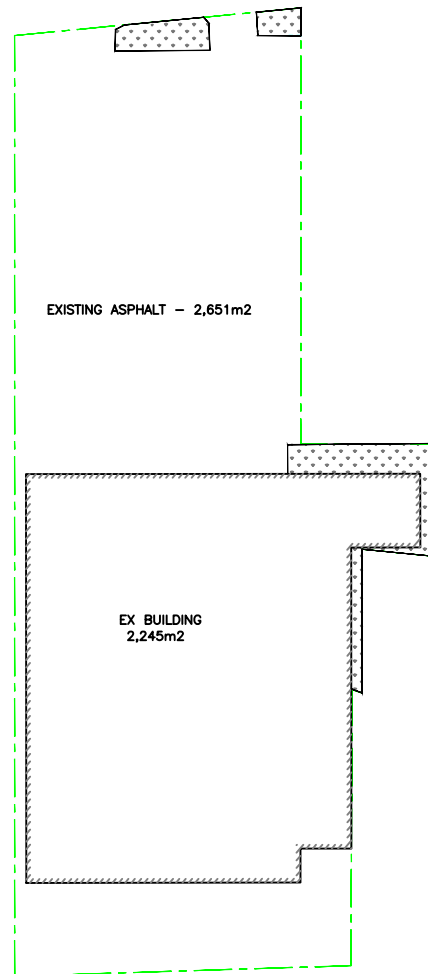
POST DEVELOPMENT DRAINAGE AREA PLAN – THE BRICK (JUNE 18 2026)

TOTAL LOT AREA= 5,096m²
 TOTAL BUILDING / ASPHALT @ 0.9= 4,746m²
 TOTAL GREENSPACE AREA @ 0.3= 350m²
 TOTAL POST DEV COEFFICIENT= 0.86



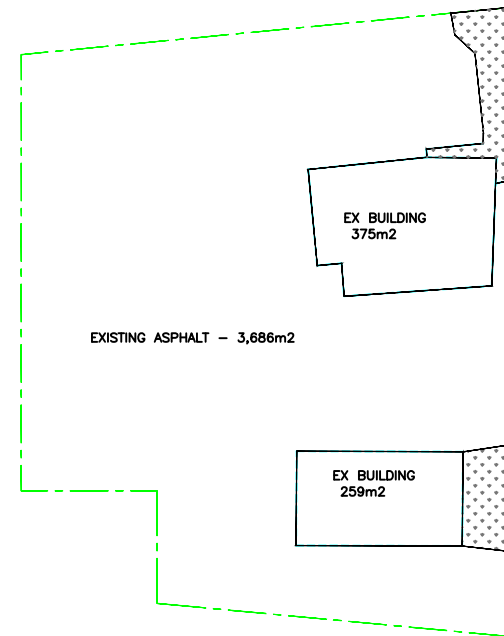
POST DEVELOPMENT DRAINAGE AREA PLAN – RESIDENTIAL (JUNE 18 2026)

TOTAL LOT AREA= 4,539m²
 TOTAL BUILDING / ASPHALT @ 0.9= 3,756m²
 TOTAL GREENSPACE AREA @ 0.3= 783m²
 TOTAL POST DEV COEFFICIENT= 0.79



PRE DEVELOPMENT DRAINAGE AREA PLAN - THE BRICK

TOTAL LOT AREA=	5,096m ²
TOTAL BUILDING / ASPHALT @ 0.9=	4,896m ²
TOTAL GREENSPACE AREA @ 0.3=	200m ²
TOTAL POST DEV COEFFICIENT=	0.87



PRE DEVELOPMENT DRAINAGE AREA PLAN - RESIDENTIAL

TOTAL LOT AREA=	4,539m ²
TOTAL BUILDING / ASPHALT @ 0.9=	4,319m ²
TOTAL GREENSPACE AREA @ 0.3=	220m ²
TOTAL PRE DEV COEFFICIENT=	0.87

4/13/2023

The template located within this workbook is to be completed by the Owner's

The template:

Is not a comprehensive list of required infrastructure and works required for you
Does not contain current costs, all costs should be based on engineered estimates
Minimum securities are required in event of emergency to ensure development :

Performance Securities for Site Plan Approvals are to be:

- 10% of all on site works including screening (private lands)
- 10% of all internal construction (street furniture, planters, decorative lighting and
- 100% of all off site works (public lands)
- 100% of all regulatory signage and lighting
- 100% of all landscaping
- 100% of all required fencing, retaining walls
- 100% of the cost of an air treatment control system (the odor control portion)
- 100% of the cost of an internal light shading system (unless subject building has
- 100% for as constructed (record) engineered drawings

PLEASE CHOOSE EITHER 10% OR 100% FOR EACH LINE

All items may not be relevant and others may need to be added based on your

s Professional Engineer and Landscape Architect

MINI STORAGE PROJECT
310 - 14TH STREET WEST, SIMN
SECURITIES AND CONSTRUCTION ESTIMATES

REVISION

DATE - Sept 25 2025
DATE - COLLECTED AT REGISTRATION
DATE - HELD AFTER ACCEPTANCE

ITEM	DESCRIPTION	UNIT	QTY.	UNIT PRICE	TOTAL COST	Sec
						10%

BELOW GROUND

SANITARY SEWERS

Sanitary Sewer						
a) 200mm Diameter	M	2	\$200	\$400	\$40	
b) 200mm Diameter ROW	M	4	\$200	\$800	\$0	
1200mm Diameter Manholes	EACH	2	\$3,000	\$6,000	\$0	
Road Restoration / Connection	L.S.	1	\$10,000	\$10,000	\$0	
Video Inspection and Report	L.S.	1	\$1,500	\$1,500	\$0	
TOTAL SANITARY SEWERS				\$18,700	\$40	

WATERMAIN

Watermain						
a) 150mm Diameter Private	M	15	\$200	\$3,000	\$300	
b) 150mm WM Connection ROW	L.S.	\$5,000	\$0	\$0	\$0	
c) 50 mm Diameter Private	M	15	\$100	\$1,500	\$150	
Watervalves						
a) 200mm Diameter	EACH	0	\$0	\$0	\$0	
b) 150mm Diameter	EACH	3	\$1,200	\$3,600	\$0	
Road Restoration	L.S.	1	\$10,000	\$10,000	\$0	
Hydrant Sets	EACH	1	\$3,500	\$3,500	\$0	
Sampling Station	EACH	0	\$0	\$0	\$0	
TOTAL WATERMAIN				\$21,600	\$450	

STORM SEWERS

Storm Sewer						
a) 300mm Diameter - Apartment Side	M	71	\$200	\$14,200	\$1,420	
b) 300mm Diameter - Brick Parking Lot	M	48	\$200	\$9,600	\$0	
c) 300mm Diameter - ROW	M	23	\$200	\$4,600	\$0	
d) 250mm Diameter (Apartment side)	M	28	\$170	\$4,760	\$476	
Manholes - Apartment Side	EA	3	\$3,000	\$9,000	\$900	
Manholes - Brick Side	EA	2	\$3,000	\$6,000	\$0	
Manholes - ROW	EA	1	\$3,000	\$3,000	\$0	
Road Restoration /.Storm Connections	L.S.	1	\$15,000	\$15,000	\$0	
Trench Drain	EA	1	\$4,000	\$4,000	\$400	
Video Inspection and Report	L.S.	1	\$1,500	\$1,500	\$0	
TOTAL BELOW STORM SEWER				\$71,660	\$3,196	
				\$111,960	\$3,686	

ABOVE GROUND

STORM SEWERS

catch basins	EA	2	\$2,500	\$5,000	\$500	
--------------	----	---	---------	---------	-------	--

ITEM	DESCRIPTION	UNIT	QTY.	UNIT PRICE	TOTAL COST	Sec
						10%

TOTAL ABOVE STORM SEWER	\$5,000	\$500
-------------------------	---------	-------

ROAD CONSTRUCTION

Granular 'A'	Tonne	1,600	\$15	\$24,000	\$2,400
Granular 'B'	Tonne	3,200	\$15	\$48,000	\$4,800
Curb and Gutter	M	60	\$100	\$6,000	\$600
Sidewalk	L.S.	1	\$6,500	\$6,500	\$650
Painted Linework on Pavement	L.S.	0	\$5,000	\$0	\$500
Supply and Install Street Signs	L.S.	0	\$0	\$0	\$0

TOTAL ROAD CONSTRUCTION	\$84,500	\$8,950
-------------------------	----------	---------

STREETLIGHTING

Streetlights (Pole, Mast Arm and Luminaire)	EACH	0	\$0	\$0	\$0
Streetlight Disconnect Pedestal	EACH	0	\$0	\$0	\$0
Conduit for Streetlight Conductor					
a) 50mm Conduit	M	0	\$0	\$0	\$0
b) 100mm Conduit (Road Crossings)	M	0	\$0	\$4	\$0
Streetlighting Conductor	M	0	\$0	\$0	\$0

TOTAL STREETLIGHTING	\$4	\$0
	\$0	\$9,450

FINISHING WORKS

40mm HL3 Asphalt (Top Lift)	M²	4,800	\$50	\$240,000	\$24,000
Grass and landscaping	L.S.	0	\$20,000	\$20,000	\$2,000
New Entrances in ROW, including: asphalt, curbing and installation	L.S.	4	\$10,000	\$40,000	\$0
Lot Grading	L.S.	1	\$50,000	\$50,000	\$5,000

\$350,000	\$31,000
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STORM WATER MANAGEMENT POND

Headwall and Rip Rap Outlet		1	\$0	\$0	\$0
		1	\$0	\$0	\$0

\$0	\$0
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LANDSCAPING AND ON SITE WORKS

*This section by Landscape Architect

Trees	E.A.	0	\$0	\$0	\$0
Trails and Walkways (topsoil to a depth of 0.15 metres and sod)		1	\$0	\$0	\$0
Park (topsoil to a depth of 0.15 metres and sod)					
Grass	L.S.	1	\$0	\$0	\$0

ITEM	DESCRIPTION	UNIT	QTY.	UNIT PRICE	TOTAL COST	Sec
						10%
	Flagstone		1	\$0	\$0	\$0
	Fencing	M	0	\$0	\$0	\$0
	Lighting		1	\$0	\$0	\$0
	Garbage Enclosure		1	\$0	\$0	\$0
	Retaining Wall		1	\$0	\$0	\$0
	Planters		1	\$0	\$0	\$0
	Signage		1	\$0	\$0	\$0
	Parking Lot Demarcation		1	\$0	\$0	\$0
					\$0	\$0

SUMMARY						
BELOW GROUND					\$111,960	\$3,686
ABOVE GROUND					\$0	\$9,450
FINISHING WORKS					\$350,000	\$31,000
STORM WATER MANAGEMENT POND					\$0	\$0
LANDSCAPING AND ON SITE WORKS					\$0	\$0

TOTAL SECURITIES REQUIRED AT REGISTRATION

urities
100%

\$0
\$800

\$6,000

\$10,000

\$1,500

\$18,300

\$0
\$5,000
\$0

\$0
\$3,600

\$10,000

\$3,500

\$0

\$22,100

\$0
\$9,600
\$4,600
\$0

\$0
\$6,000
\$3,000

\$15,000

\$0

\$1,500

\$39,700

\$80,100

\$0

urities
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\$80,100

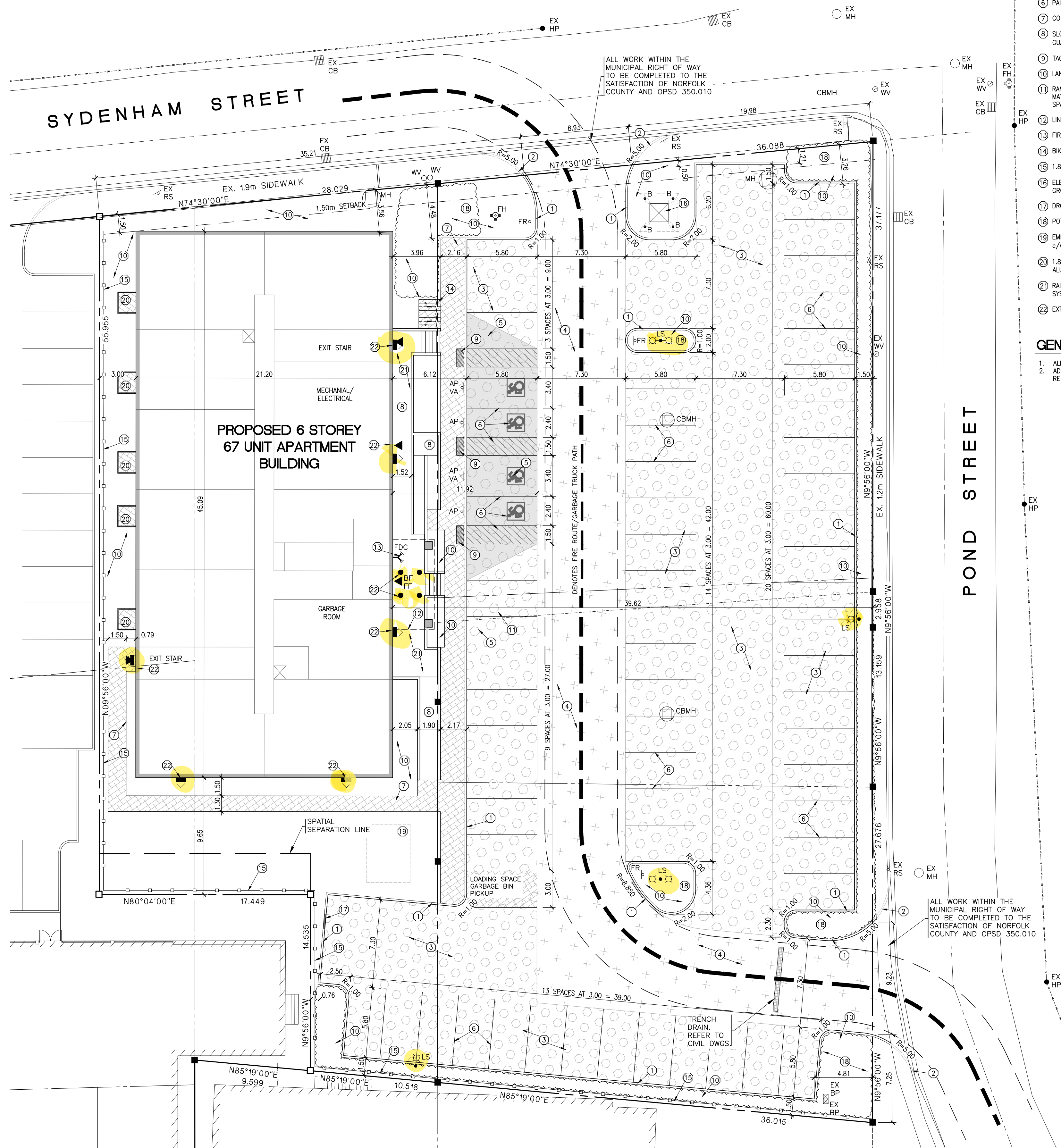
\$0

\$40,000

\$0

\$0

\$154,786



SITE PLAN NOTES

- STANDARD CONCRETE BARRIER CURB
- CURB PROFILE AT MUNICIPAL SIDEWALK - FLUSH WITH SIDEWALK SURFACE
- STANDARD DUTY ASPHALT
- HEAVY DUTY ASPHALT
- RAMPED ASPHALT SURFACE TO BE FLUSH WITH BARRIER CURB - MAXIMUM 1/2" ROLLOVER FOR BARRIER FREE ACCESS
- PAINTED LINE MARKINGS AND GRAPHICS
- CONCRETE SIDEWALK - REFER TO CIVIL AND LANDSCAPE DWGS.
- SLOPED CONCRETE RETAINING WALL/RAMP C/W TEMPERED GLAZING GUARD/RAILING SYSTEM - REFER TO CIVIL AND LANDSCAPE DWGS.
- TACTILE WARNING INDICATOR AT BARRIER FREE PARKING SPACE ACCESS AISLE
- LANDSCAPED AREA - REFER TO LANDSCAPE DWGS.
- RAMPED ASPHALT LOADING SPACE TO BE FLUSH WITH BARRIER CURB TO MATCH ADJACENT RAMPED ASPHALT SURFACE AT BARRIER FREE PARKING SPACES
- LINE OF OVERHEAD ENTRANCE CANOPY
- FIRE DEPARTMENT CONNECTION
- BIKE RACK (4 BIKES) ON CONCRETE PAD
- 1.8m HIGH PRESSURE TREATED WOOD FENCE SET 0.3m FROM PROPERTY LINE
- ELECTRICAL TRANSFORMER C/W CONCRETE FILLED STEEL PIPE BOLLARDS AND GROUNDING LOOP - REFER TO ELECTRICAL DWGS.
- DROPPED CONCRETE CURB FOR SURFACE DRAINAGE - REFER TO CIVIL DWGS.
- POTENTIAL SNOW STORAGE AREA
- EMERGENCY GENERATOR (SIZE TO BE DETERMINED) C/W CONCRETE PAD - REFER TO ELECTRICAL DWGS.
- 1.8 LG. x 1.5 WIDE FIRST FLOOR RESIDENTIAL SUITE PATIOS C/W PREFINISHED ALUMINUM RAILING ASSEMBLY ENCLOSURE
- RAISED CONCRETE SIDEWALK / STEPS C/W TEMPERED GLAZING GUARD/RAILING SYSTEM - REFER TO CIVIL AND LANDSCAPE DWGS.
- EXTERIOR BUILDING LIGHTING - REFER TO ELECTRICAL DRAWINGS.

GENERAL NOTES

- ALL OUTDOOR LIGHTING TO BE DARK SKY COMPLIANT.
- ADDITIONAL SNOW TO BE REMOVED FROM SITE BY PRIVATE SNOW REMOVAL SERVICE.

SITE DATA:

MUNICIPAL ADDRESS:

LEGAL DESCRIPTION:

60 POND STREET, SIMCOE, ONTARIO

PLAN OF SURVEY OF PART OF LOTS 3 & 6, BLOCK 87 REGISTERED PLAN 182 AND ALL OF LOTS 1, 2, 5 & 7, BLOCK 87 REGISTERED PLAN 182 (TOWN OF SIMCOE) IN NORFOLK COUNTY AS PREPARED BY JENNY AND DIXON LTD. ONTARIO LAND SURVEYORS, COMPLETED ON 2023.

	REQUIRED	PROVIDED	% LOT COVERAGE
AREA OF PROPOSED APARTMENT LOT		4,542.04m ²	100%
ZONING	CENTRAL BUSINESS DISTRICT (CBD) AND ZONING AMENDMENTS 14.930 & 36-2-2017		
LOT COVERAGE OF PROP. APARTMENT	(80% MAX)	955.91m ²	21.05%
GFA (GROUND FL) AREA OF PROP. APARTMENT		596.1m ²	13.12%
GFA (GROSS) OF PROPOSED APARTMENT		5,735.46m ²	
GUA (GROSS USEABLE) OF APARTMENT		4,756.5m ²	
USABILITY OF GROUND FLOOR FOR DWELLING UNITS	100% TO A MAX. OF 7 UNITS	8 UNITS	
FLOOR AREA RATIO (USABLE FLOOR AREA / LOT AREA)		1.05	
BUILDING HEIGHT	7 STOREYS	6 ST. (21.0m)	
FRONTAGE (NORTH) SYDENHAM ST.		64.117m	
DEPTH (ALONG POND STREET)		80.970m	
FRONT YARD SET BACK (NORTH)	3.0m MAX.	1.500m	
EXTERIOR SIDE YARD SET BACK (EAST)	0m	39.616m	
INTERIOR SIDE YARD SET BACK (WEST)	0m	3.00m	
REAR YARD SET BACK (SOUTH)	0m	9.65m	
LANDSCAPED/HARDSCAPED OPEN SPACE AREA		1,109.83m ²	24.43%
ASPHALTED AREAS (IMPERVIOUS)		2,476.30m ²	54.52%
PARKING SPACES:			
REGULAR PARKING SPACES (3m X 5.8m)		59 (NEW REGULAR)	
BARRIER-FREE PARKING CALC:			
TYPE 'A' - 3.4m X 5.8m (VAN ACCESSIBLE)		2	
TYPE 'B' - 2.4m X 5.8m		2	
ACCESSIBLE AISLE - 1.5m (ADJACENT TO ABOVE)			
LOADING SPACES:			
		63	
		1	

SPECIFICATIONS

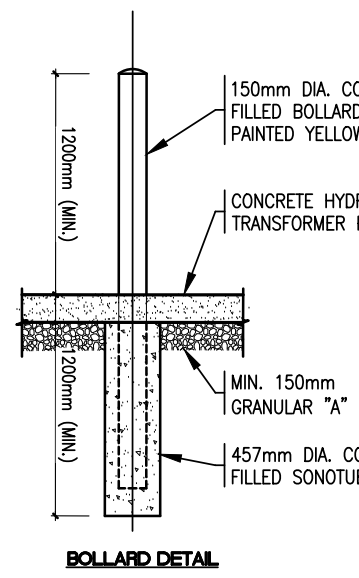
ITEM	REFER TO DETAIL
TYPE 'A' BARRIER CONCRETE CURBS	OPSD 600.110
CONCRETE SIDEWALK	OPSD 310.010
CONC. SIDEWALK ADJACENT TO CURB	OPSD 310.020
SIDEWALK RAMPS	OPSD 310.030
TACTILE WARNING INDICATORS AT SIDEWALK RAMPS	OPSD 310.030
LIGHT DUTY (LD) ASPHALT AT PARKING AREAS	60mm HL3, 300mm GRANULAR 'A' (COMPACTED TO 98% STANDARD PROCTOR DENSITY)
HEAVY DUTY (HD) ASPHALT TRAVEL AREAS/ENTRANCE	50mm HL8 BASE COURSE, 50mm HL3 TOP COURSE, 150mm GRANULAR 'A', 300mm GRANULAR 'B' (COMPACTED TO 98% STANDARD PROCTOR DENSITY)
NEW GRASSED AREAS	SODDED UNLESS OTHERWISE INDICATED
TEMPORARY SILT SACKS AT C/S	DETAIL REFER TO DETAIL CIVIL DRAWINGS
PAINTED LINEWORK ON PAVEMENT	AT LOCATIONS AS SHOWN, INCLUDING WHEELCHAIR ACCESSIBLE SYMBOL
LANDSCAPE AREAS/PLANTING BEDS	REFER TO LANDSCAPE PLAN BY OTHERS
CONCRETE FILLED PIPE BOLLARD	REFER TO DETAIL
COMMERCIAL DRIVEWAY ENTRANCE	ALL WORK WITHIN THE MUNICIPAL RIGHT-OF-WAY TO BE COMPLETED TO THE SATISFACTION OF NORFOLK COUNTY AND O.P.S.D. 350.010

SITE LEGEND:

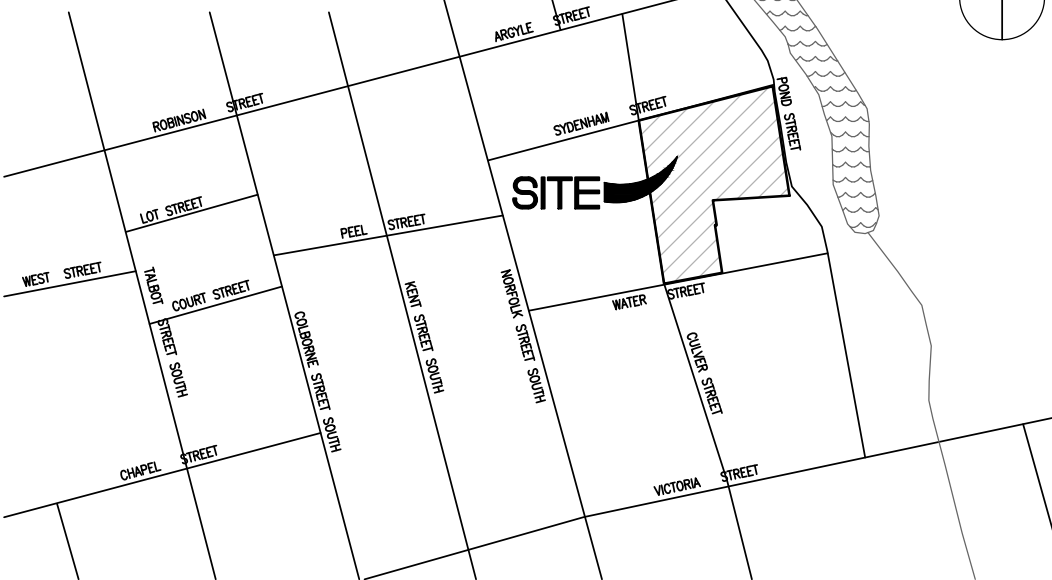
PROPERTY LINE	CONCRETE SIDEWALK
DENOTES FIRE ROUTE - MIN. 6.0m WIDE w/ 12.0m CENTRELINE RADIUS	CONCRETE LOADING SPACE/ SIDEWALK RAMPED TO BE FLUSH WITH BARRIER CURB
BUILDING EXIT	STANDARD DUTY ASPHALT RAMPED TO BE FLUSH WITH BARRIER CURB
BF - DENOTES BARRIER FREE	STANDARD DUTY ASPHALT
FF - DENOTES FIRE FIGHTER PRINCIPAL ENTRANCE	HEAVY DUTY ASPHALT
ACCESSIBLE PARKING	EXISTING CATCH BASIN
CB - NEW CATCH BASIN	EXISTING MANHOLE
MH - NEW MANHOLE	EXISTING FIRE HYDRANT
CBMH - NEW CATCH BASIN MANHOLE	EXISTING ROAD SIGN
WV - NEW WATER VALVE	EXISTING HYDRO POLE
LS - NEW LIGHT STANDARD	EXISTING WATER VALVE
FDC - FIRE DEPARTMENT CONNECTION	EXISTING BELL PEDESTAL
FNH - NEW FIRE HYDRANT	EXISTING OVERHEAD WIRES
NEW TRAFFIC SIGNAGE	
REFER TO SIGNAGE LEGEND	

SIGNAGE LEGEND:

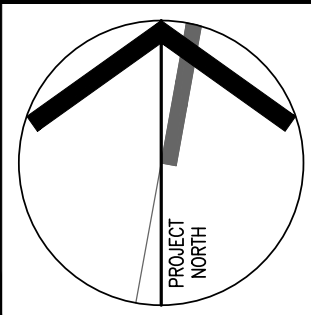
(AP) ACCESSIBLE PARKING SIGN	(FR) FIRE ROUTE SIGN
RB-93 (30x45) SUPPORT: STEEL	S-5 (30x45) cm SUPPORT: STEEL
	AS PER NORFOLK COUNTY STANDARDS



LOCATION MAP:



DO NOT SCALE DRAWINGS. DRAWINGS MUST BE READ IN CONJUNCTION WITH WRITTEN SPECIFICATIONS. ALL WORK SHALL BE CARRIED OUT ACCORDING TO LATEST VERSIONS OF THE ONTARIO BUILDING CODE, OTHER APPLICABLE CODES, AND ALL AUTHORITIES HAVING JURISDICTION. CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL DISCREPANCIES OR AMBIGUITIES TO THE ARCHITECT PRIOR TO ISSUANCE OF CONTRACT.



gb architect inc.
430 ONTARIO STREET
STRATFORD, ONTARIO. N5A 3J2
PHONE (519) 275 1410

"Guy R. Bellemeur, B. Arch., OAA, MRAIC, Principal Architect of GB ARCHITECT INC. is the designer for this project with respect to all architectural work identified on this drawing sheet. The Ontario Association of Architects has assigned Guy R. Bellemeur & GB ARCHITECT INC."

BCDM 4217
as per requirements of the Ministry of Municipal Affairs & Housing Bill 124."

The Architect above has exercised responsible control with respect to design activities. The Architect's seal number is their BCDN number.

GB Architect Inc. and Guy R. Bellemeur are not responsible for changes made to the Architectural drawings provided for this project, unless changes are made only after the Architect has reviewed and approved a change.

The Owner and the General Contractor are responsible to call the Architect for site reviews of the construction as it progresses. The Architect will not approve construction work that is "hidden" from the Architect's view.

In accordance with the Ontario Building Code, "No person shall make a material change or cause a material change to be made to a plan, specification, document or other related information on the basis of which a (Municipal Building) permit was issued without notifying, filing details with and obtaining the authorization of the chief building official."

No.	DATE	REVISION

POND STREET APARTMENTS

60 POND STREET
SIMCOE, ONTARIO

PRINT DATE:	August 14, 2026
DATE:	August 14, 2026
DRAWN BY:	KED
CHECKED BY:	G.R.B.
SCALE:	1:200
PROJECT No.:	22-2185

APARTMENT PROPERTY SITE PLAN

A1.2



STORM WATER MANAGEMENT BRIEF

TO BE READ IN CONJUNCTION WITH SITE PLAN
FOR

Proposed Residential Building
60 Pond Street, Simcoe, On

PREPARED BY:
MC ENGINEERING
(519) 428 6790

REVISION #3 June 27 2026



SECTION 1 - GENERAL:

This document is to be read in conjunction with Site Plan drawings SP1 & SP2 prepared by MC Engineering (Rev 2 - May 15 2025).

The following documents are included in this Report:

- PRE DEVELOPMENT DRAINAGE AREA PLAN
- POST DEVELOPMENT DRAINAGE AREA PLAN
- APPENDIX 'A' - BRICK PARKING LOT SWM CALCULATIONS
- APPENDIX 'B' - BUILDING ROOF SWM CALCULATIONS

FORWARD:

The subject property (60 Pond Street, Simcoe, Ontario) is currently developed. The property is home to 'The Brick Furniture Store' as well as two smaller commercial buildings. The proposal is to sever a portion of the existing lot and construct a residential building on the severed parcel.

The design strategy is to separate the drainage systems on the retained and severed parcels.

It should be noted that under post development site conditions there is no proposed increase in runoff for either the retained or severed parcel. As such, no new storm water management controls are required. However, storm water quantity controls are indeed provided on both the Brick parking Lot Side of the development, as well as the apartment building side of the development.

These controls will ensure that there is a net reduction in flows to the Sydenham Street Storm Sewer for all storm events.

There is no proposed increase to the absorption coefficient or subsequent runoff.

The LPRCA has indicated that no on-site storm water management controls are required.

OUTLET:

The property currently outlets to the municipal storm sewer in the ROW. It should be noted that the lands are directly adjacent to the Lynn River, which is the ultimate storm water outlet for the subject property.

Under the post development site condition, both the severed and retained parcels will have independent outlets to the existing municipal storm sewer.



IMPERVIOUSNESS COEFFICIENTS:

Commercial Property (The Brick)

PRE DEVELOPMENT: 0.87

POST DEVELOPMENT: 0.86

Residential Property (New Apartment Building)

PRE DEVELOPMENT: 0.87

POST DEVELOPMENT: 0.79

LPRCA REQUIREMENTS

The following requirements were issued by the LPRCA:

Filling

LPRCA staff indicated they can support the minor filling of the floodplain to ensure that vehicles are not susceptible to more than 0.3m of water during a 100-year event. Staff will not support filling that intends to remove lands entirely out of the floodplain, only what is necessary to bring the surface parking area and associated internal lane network up to the point of 0.3m of water (max.) during a 100 year storm.

100 year storm flood elevation: 209.64m

Minimum proposed grade elevation: 209.35m

Allowable ponding depth: 0.30m

Proposed ponding depth (max.): 0.30m

*LPRCA does not have any quantity or quality requirements. Runoff will outlet into the municipal storm sewer and directly to the Lynn River.

STORM WATER QUALITY CONTROL

There is a significant reduction in asphalt area under the post development site condition. This along with the increase in landscaping area will achieve a significant improvement in the quality of storm water runoff. Therefore no additional controls are provided.

Reference the attached Pre & Post Development Drainage Area Plans for additional information.



SECTION 2 - QUANTITY CONTROL - BRICK PARKING LOT

As previously mentioned, although no SWM Quantity controls are strictly required, the design proposes a reduced run off rate from the Brick Parking Lot.

Runoff will be directed to the proposed on site storm sewer and discharge at a reduced rate through a restricted outlet.

Quantity control will be provided. Storm water runoff will be retained in the asphalt parking lot area and discharge at the 2 year pre development rate to the existing municipal storm sewer on Sydenham Street. It should be noted that under current site conditions, the existing parking lot discharges to Sydenham Street.

The existing pre development runoff coefficient is 0.9 as the site is fully developed. The proposed grassed landscape islands will effectively reduce the post development run off coefficient to less than 0.9. Despite this, we have based the runoff calculations on a pre development coefficient of 0.5 (as per Norfolk County Development Engineering Comments dated July 25, 2024). As such, retention is required and provided to control the 100 year storm to the 2 year pre development release rate.

DESIGN SUMMARY

Quantity controls will be provided on site. The allowable release rate is based on the pre development 2-year runoff rate. The allowable release rate is 0.033m³/sec. (Please reference Appendix A). On Site storage has been provided to accommodate 100 year-storm event (51m³).

Only the area of the parking lot renovation is considered in the SWM calculations for this Section. (2400m²). The balance of the site will drain as per the existing site condition and will not be affected by the proposed redevelopment of the parking lot.

Pre Dev Coefficient: 0.5

Post Dev Coefficient: 0.9

DATA SUMMARY

***Reference appendix A - Modified rational method calculations**

Total Lot Area = 0.51ha

Area to be Controlled = 0.24ha

T_c = 10min.

Pre Development C = 0.50

Post Development C = 0.90

Max storage required = 51m³ (35 min / 100 year storm)

Storage provided = 130m³ (total above ground storage)



SUMMARY OF AREAS

TOTAL SITE AREA: 0.51ha
AREA TO BE CONTROLLED: 0.24ha

IMPERVIOUSNESS COEFFICIENTS

Predevelopment C: 0.5
Post Development C: 0.9

PRE DEVELOPMENT TO POST DEVELOPMENT CONTROL TABLE

*reference SWM Calculations / Appendix 'A'

	Pre Dev Runoff	Post Dev Discharge
2 year	0.033m3/sec	0.033m3/sec (release rate - 2 year storm event)
5 year	0.045m3/sec	0.033m3/sec
10 year	0.052m3/sec	0.033m3/sec
25 year	0.062m3/sec	0.033m3/sec
50 year	0.070m3/sec	0.033m3/sec
100 year	0.078m3/sec	0.033m3/sec

RETENTION INFORMATION

Required retention = 51m3
High water mark = 210.20m
Max Depth = 0.30m
Total area of retention = 1300m2
Total proposed above ground storage = 130m3 (+/-)

**retention area is listed on drawing SP1, and is indicated by hatching (dotted areas)*



BRICK PARKING LOT - DISCHARGE RATE THROUGH RESTRICTED OUTLET

The total maximum discharge must not exceed the allowable discharge rate of 0.033m³ per second.

*110mm dia. Orifice plate is required to be welded over the east outlet of CBMH#2A

Release Rate Calculation

Orifice Diameter = 110mm

H = 1.6m

$$Q_p = 0.6 \times A (2 \times 9.81 \times H)^{0.5}$$

Cd = 0.6

A = 0.0098 (110mm DIA.)

G = 9.81 m/s²

H = 1.6

$$Q_p = 0.6 \times 0.0098 \times (2 \times 9.81 \times 1.6)^{0.5}$$

Qp = 0.033m³/PER SEC.

Design release rate = 0.033m³/sec

QUANTITY CONTROL SUMMARY - BRICK PARKING LOT

ALLOWABLE POST DEVELOPMENT DISCHARGE RATE = 0.033m³/sec

MAXIMUM FLOW THROUGH CONTROLLED OUTLET= 0.033m³/sec

REQUIRED STORAGE VOLUME= 51m³

PROPOSED STORAGE VOLUME=130m³

SECTION 2 - CONCLUSION

The quantity controls provided in this section of the report demonstrate a significant reduction in storm water runoff to the ROW. The existing storm sewer on Sydenham Street is not expected to be adversely impacted.



SECTION 3 - QUANTITY CONTROL - APARTMENT BUILDING

As previously mentioned, although no SWM Quantity controls are strictly required by the County or the LPRCA, the design proposes a reduced run off rate from the Apartment Building side of the development. Runoff will be directed to the proposed on site storm sewer and discharge at a reduced rate through a restricted outlet located in STM MH 1A.

Runoff will be directed to the proposed on site storm sewer and discharge at a reduced rate through a restricted outlet.

Quantity control will be provided. Storm water runoff will be retained in the asphalt parking lot area and discharge at the 2 year pre development rate to the existing municipal storm sewer on Sydenham Street. It should be noted that under current site conditions, the existing parking lot discharges to Sydenham Street.

The existing pre development runoff coefficient is 0.9 as the site is fully developed. The proposed grassed landscape islands will effectively reduce the post development run off coefficient to less than 0.9. Despite this, we have based the runoff calculations on a pre development coefficient of 0.5 (as per Norfolk County Development Engineering Comments dated July 25, 2024). As such, retention is required and provided to control the 100 year storm to the 2 year pre development release rate.

***Reference appendix B - Modified rational method calculations**

DESIGN SUMMARY

Quantity controls will be provided on site. The allowable release rate is based on the pre development 2-year runoff rate. The allowable release rate is 0.061m³/sec. (Please reference Appendix B). On Site storage has been provided to accommodate 100 year-storm event .

Pre Dev Coefficient: 0.5

Post Dev Coefficient: 0.79

DATA SUMMARY

***Reference appendix B - Modified rational method calculations**

Total Lot Area = 0.45ha

T_c = 10min.

Pre Development C = 0.50

Post Development C = 0.79

Max storage required = 75m³ (35 min / 100 year storm)

Storage provided = 112m³ (total above ground storage)



SUMMARY OF AREAS (Apartment Bldg)

TOTAL AREA: 0.45ha

IMPERVIOUSNESS COEFFICIENTS

Predevelopment C: 0.5

Post Development C: 0.77

PRE DEVELOPMENT TO POST DEVELOPMENT CONTROL TABLE

*reference SWM Calculations / Appendix 'A'

	Pre Dev Runoff	Post Dev Discharge
2 year	0.061m3/sec	0.061m3/sec (release rate - 2 year storm event)
5 year	0.084m3/sec	0.061m3/sec
10 year	0.098m3/sec	0.061m3/sec
25 year	0.117m3/sec	0.061m3/sec
50 year	0.131m3/sec	0.061m3/sec
100 year	0.146m3/sec	0.061m3/sec

RETENTION INFORMATION

Required retention = 51m3

High water mark = 209.55

Max Depth = 0.25m

Total area of retention = 1360m2

Total proposed above ground storage = 112m3 (+/-)

**retention area is listed on drawing SP1, and is indicated by hatching (dotted areas)*



APARTMENT BUILDING - PARKING LOT DISCHARGE RATE THROUGH RESTRICTED OUTLET

The total maximum discharge must not exceed the allowable discharge rate of 0.061m³ per second.

*165mm dia. Orifice plate is required to be welded over the east outlet of CBMH#1A

Release Rate Calculation

Orifice Diameter = 165mm

H = 1.15m

$$Q_p = 0.6 \times A (2 \times 9.81 \times H)^{0.5}$$

Cd = 0.6

A = 0.0214 (165mm DIA.)

G = 9.81 m/s²

H = 1.15

$$Q_p = 0.6 \times X \times (2 \times 9.81 \times 1.15)^{0.5}$$

Qp = 0.061m³/PER SEC.

Design release rate = 0.061m³/sec

QUANTITY CONTROL SUMMARY - APARTMENT BUILDING

ALLOWABLE POST DEVELOPMENT DISCHARGE RATE = 0.061m³/sec

MAXIMUM FLOW THROUGH CONTROLLED OUTLET= 0.061m³/sec

REQUIRED STORAGE VOLUME= 75m³

PROPOSED STORAGE VOLUME=112m³

SECTION 3 - CONCLUSION

The quantity controls provided in this section of the report demonstrate a reduction in storm water runoff to the ROW. The existing storm sewer on Sydenham Street is not expected to be adversely impacted.

7 November 2025
File No.: 25-1872

Virtus Real Estate Investment Trust
c/o Ollie Switch Developments
100 Arbors Lane, Unit D
Vaughan, ON L4L 7G4

Via email: mark.bristoll@ollieswitch.com

Attention: Mark Bristoll

Re: 48 Sydenham / 60 Pond Street Residential, Simcoe
Supplementary Memo Re: Sight Line Analysis

Dear Mr. Bristoll:

Virtus Real Estate Investment Trust is proposing a mid-rise condominium development consisting of 67 units with two site accesses, one to / from Sydenham Street and one to / from Pond Street. The site plan is provided in **Appendix A**. The proposed Pond Street Condominiums are to be located at 60 Pond Street / 48 Sydenham Street, approximately one kilometre south of Queensway East, in Simcoe, ON, and two blocks east of Norfolk Street South (County Road 24).

In February 2020, RC Spencer Associates Inc. completed a Traffic Impact Study for this site. Since that time, however, more clarity was requested regarding the potential sight line constraints, particularly for the proposed site access to Pond Street. Accordingly, intersection sight distance (ISD) and stopping sight distance (SSD) sight lines were evaluated for the proposed site accesses at Sydenham Street and at Pond Street. The speed limit at these accesses is assumed to be 50 km/h, even though the area geometries and controls make it challenging to even travel at that speed (with a parking lot to the north, a chicane to the south, a one-way westbound operation about 100m west of the site, and a waterway to the east). Therefore, since the proposed site accesses are in an area where it would be challenging for a vehicle to exceed the posted speed, the analysis was completed for a 50 km/h design speed. As provided in **Appendix B**, this analysis was completed in accordance with the methodology provided in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads, Chapter 9: Intersections (2017), whereby the egressing motorist's line of sight is to be evaluated at 4.4m from the edge of the nearest travelled lane.

To account for the most critical left turn egress maneuver, Table 9.9.4: Design Intersection Sight Distance – Case B1, Left Turn from Stop, was referenced; the stopping sight distance for a design speed of 50 km/h is 65m, and the intersection sight distance for passenger cars is 104m. For the less critical through / right turn egress maneuver, Table 9.9.6: Design Intersection Sight Distance – Case B2, Right Turn from Stop, was referenced; the stopping sight distance for a design speed of 50 km/h is 65m, and the intersection sight distance for passenger cars is 90m.



The figures in **Appendix B** illustrate the horizontal stopping sight distance (SSD) and intersection sight distance (ISD) triangles, and a supplementary on-site visit was made on 3 November 2025 (to validate the corresponding sight lines); the “street level” photographs are provided as follows:



Sight Line Looking Left (West) from the Proposed Sydenham Street Site Access



Sight Line Looking Right (East) from the Proposed Sydenham Street Site Access

Leamington: 18 Talbot St. W. – Leamington, ON N8 1M4
Windsor: 800 University Ave. W. – Windsor, ON N9A 5R9
Chatham-Kent: 49 Raleigh St. – Chatham, ON N7M 2M6



Sight Line Looking Left (North) from the Proposed Pond Street Site Access



Sight Line Looking Right (South) from the Proposed Pond Street Site Access



Of note, Sydenham Street is a two-way street that transitions to a westbound one-way street west of Culver Street; the stretch of roadway between Culver Street and Pond Street is only about 100m, and since it does not function as a “thoroughfare”, minimum sight distance may be reduced without detriment to the safety of traffic operations. No sight line obstructions exist for either egress maneuver, except for a metal framework for a sign located to the west of the site (on a short concrete wall dividing the subject site from The Brick’s parking lot). If this framework were to house a sign, it would restrict the sight distance to the west; therefore, it should be removed prior to allowing egress onto Sydenham Street.

For the proposed egress onto Pond Street, it is noted that three trees located on the subject property interfere with the available sight lines to the north. The developer has noted that all boulevard areas within the right-of-way (on the east side of the development site) are clear of vegetation, particularly the three trees which conflict with the required sight distance for safe traffic operations. The trees located to the south of the proposed access are not an operational hindrance, as confirmed during the on-site evaluation; an egressing motorist has enough visibility around the curve (below the existing tree canopy) to observe any potential conflicting on-street volumes. Finally, as previously identified, north of Sydenham Street, Pond Street is effectively a parking lot aisle; any vehicles cutting through from Argyle Street (at the north) will be travelling below 50 km/h through this area.

At both accesses, 65m of stopping sight distance (SSD) is sufficient for oncoming drivers to perceive and react to vehicles egressing the site.

After reviewing the “street level” photographs and the supplementary sight distance triangles, it was observed that the stopping sight distance and sight line triangles will be clear of potential obstructions when the developer removes the trees along the east side of the site. Therefore, it is the engineers’ opinion that the proposed site accesses will operate within safe stopping sight distance and intersection sight distance parameters.



All of which is respectfully submitted,

RC Spencer Associates Inc.

Aaron D. Blata, M.Eng., P.Eng., PTOE, RSP1
Consulting Engineer, Road Safety Professional &
Professional Traffic Operations Engineer
Associate / Leamington Office Manager



Richard C. Spencer, M.A.Sc., P.Eng., PE
Consulting Engineer &
Fellow ITE Member
President / Windsor Office Manager



Appendix A

SITE PLAN



gb architect inc.
405 UNIVERSITY DRIVE E
STRATFORD, ONTARIO N5A 4C6
TEL: (519) 271-0070 FAX: (519) 271-0070

"Guy R. Belkhamre, B. Arch., OAA MRAP,
Principal Architect of GB ARCHITECT INC. is the
designer for this project with respect to all architect
work identified on this drawing sheet. The Ontario
Association of Architects has assigned
Guy R. Belkhamre & GB ARCHITECT INC.
as per requirements of the Ministry of Municipal
Affairs & Housing B.11.24."

The Architect above has exercised responsible control with respect to design activities. The Architect's seal number is their ICDN number.

No.	DATE	REVISION
1.	FEB. 26/24	ISSUED FOR SPA
2.	MAY 31/25	RE-ISSUED FOR SPA
3.	OCT. 22/25	RE-ISSUED FOR SPA

11

POND STREET APARTMENTS 60 POND STREET SIMCOE, ONTARIO	PRINT DATE:	October 22, 2025
	DATE:	October 22, 2025
	DRAWN BY:	KED
	CHECKED BY:	G.R.B.
	SCALE:	1:200
PROJECT No.:	22-2105	

APARTMENT
PROPERTY
SITE PLAN

A1.2

gb

SITE PLAN NOTES

- ① STANDARD CONCRETE BARRIER CURB
- ② CURB PROFILE AT MUNICIPAL SIDEWALK - FLUSH WITH SIDEWALK SURFACE
- ③ STANDARD DUTY ASPHALT
- ④ HEAVY DUTY ASPHALT
- ⑤ PAVED ASPHALT SURFACE TO BE FLUSH WITH BARRIER CURB - MAXIMUM 1/2" ROLL-OVER FOR BARRIER FREE ACCESS
- ⑥ BARRIER TYPE, MATERIAL AND FINISH

SITE DATA:

MUNICIPAL ADDRESS:
LEGAL DESCRIPTION:

PLAN OF SURVEY OF PART OF LOTS 3 & 6, BLOCK 87 REGISTERED PLAN 182 AND ALL OF LOTS 1, 2, 6 & 7, BLOCK 87 REGISTERED PLAN 182 (TOWN OF SIMCOE) IN NORFOLK COUNTY AS PREPARED BY JERRY AND DIXON LTD. ONTARIO LAND SURVEYORS, COMPLETED ON

AREA OF PROPOSED APARTMENT LOT		REQUIREMENTS	PROPOSED	100%
1	100%	100%	100%	100%
2	100%	100%	100%	100%
3	100%	100%	100%	100%
4	100%	100%	100%	100%
5	100%	100%	100%	100%
6	100%	100%	100%	100%
7	100%	100%	100%	100%
8	100%	100%	100%	100%
9	100%	100%	100%	100%
10	100%	100%	100%	100%
11	100%	100%	100%	100%
12	100%	100%	100%	100%
13	100%	100%	100%	100%
14	100%	100%	100%	100%
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16	100%	100%	100%	100%
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20	100%	100%	100%	100%
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23	100%	100%	100%	100%
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25	100%	100%	100%	100%
26	100%	100%	100%	100%
27	100%	100%	100%	100%
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75	100%	100%	100%	100%
76	100%	100%	100%	100%
77	100%	100%	100%	100%
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91	100%	100%	100%	100%
92	100%	100%	100%	100%
93	100%	100%	100%	100%
94	100%	100%	100%	100%
95	100%	100%	100%	100%
96	100%	100%	100%	100%
97	100%	100%	100%	100%
98	100%	100%	100%	100%
99	100%	100%	100%	100%
100	100%	100%	100%	100%

GENERAL NOTES

1. ALL OUTDOOR LIGHTING TO BE DARK SKY COMPLIANT.
2. ADDITIONAL SNOW TO BE REMOVED FROM SITE BY PRIVATE SNOW REMOVAL SERVICE.

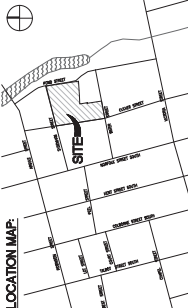
STATE LEGEND:

- [illegible]

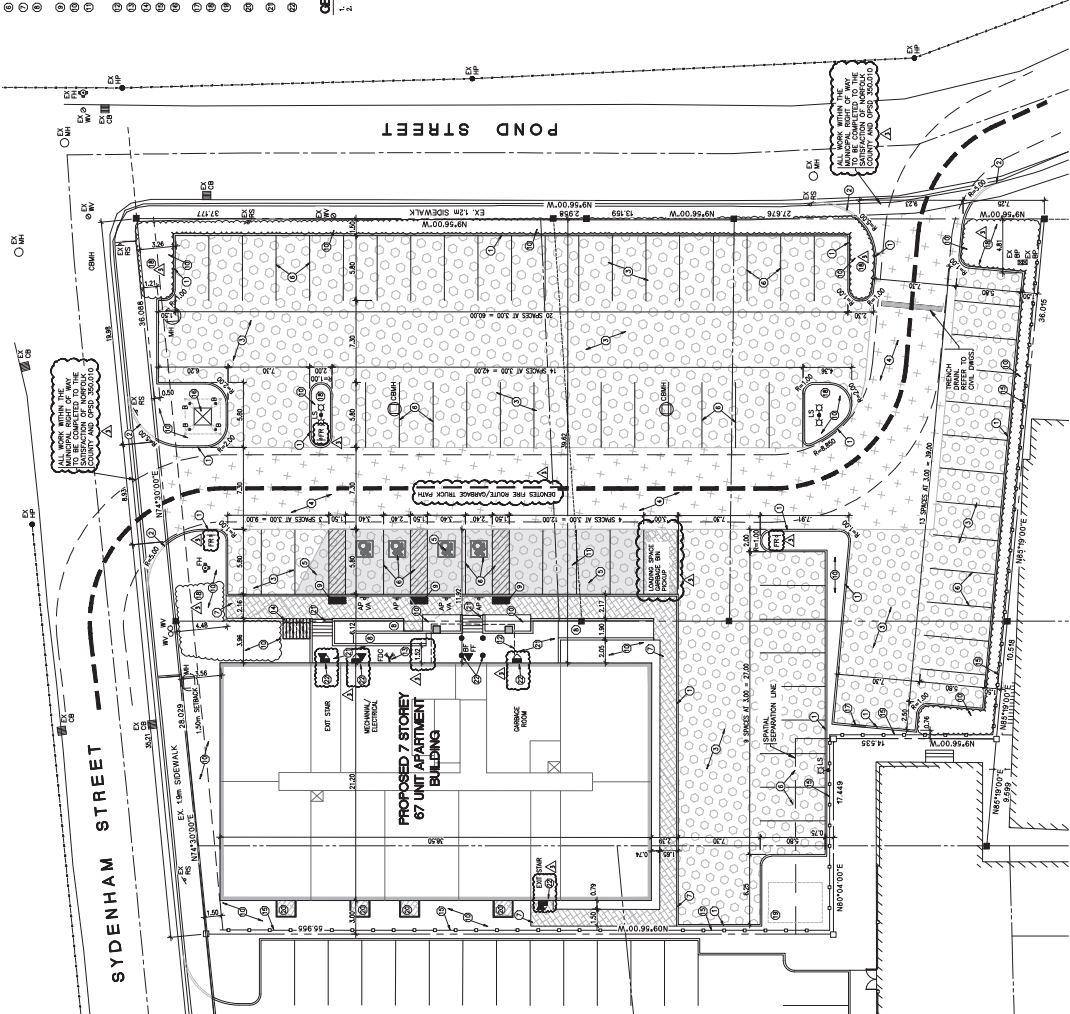
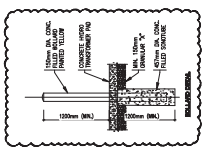
SIGNAGE / LEGEND:

- | | |
|---|--|
|  | (AP) ACCESSIBLE
PARKING SIGN
RB-93 (30x45)
SUPPORT: STEEL |
|  | (FR) FIRE ROUTE SIGN
S-5 (30x45) cm
SUPPORT: STEEL
AS PER NORFOLK
COUNTY STANDARDS |

LOCATION MAP



SPECIFICATIONS

[illegible]

Appendix B

SIGHT LINE CALCULATIONS

25-1872: Pond Street Condominiums, Simcoe TIS - Sight Line Analysis

Design Intersection Sight Distance (TAC Geometric Design Guide for Canadian Roads)

Design Speed: 50km/h (Posted Speed Limit = 40 km/h)

Table 9.9.3: Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck (WB 19 and WB 20)	11.5
Longer truck	To be established by road authority

Intersection Stopping Distance (**ISD**) = $0.278 V_{\text{major}} t_g$

Where:

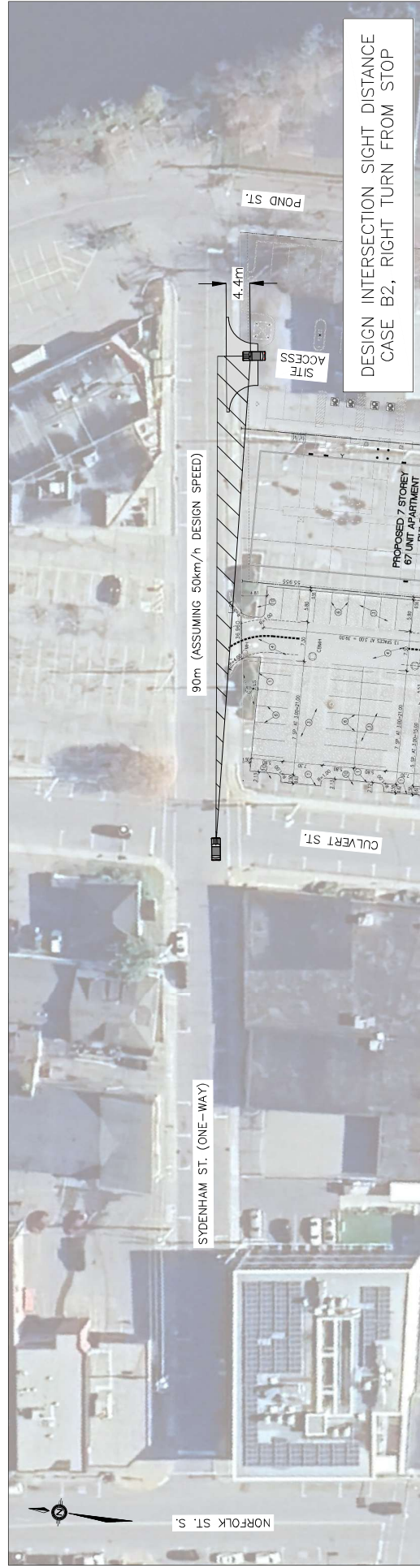
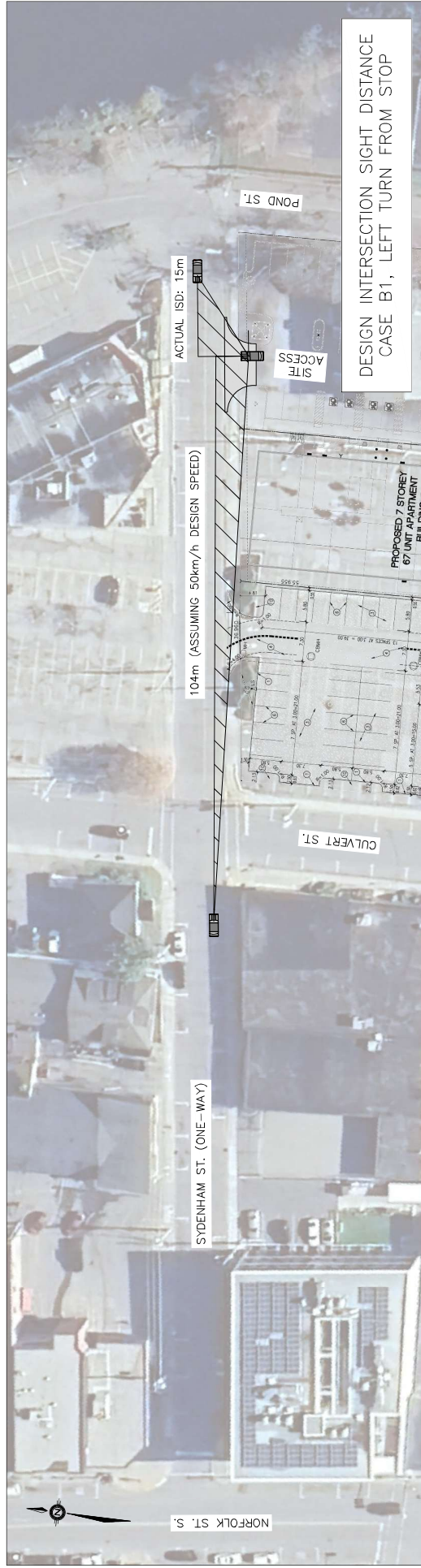
ISD = intersection sight distance (m)
(length of the leg of sight triangle along the major road)
 V_{major} = design speed of the major road (km/h)
 t_g = time gap for minor road vehicle to enter the major road (s)

ISD_{passenger car} (left turn from stop) = $0.278 \times 50 \times 7.5 = 104 \text{ m}$

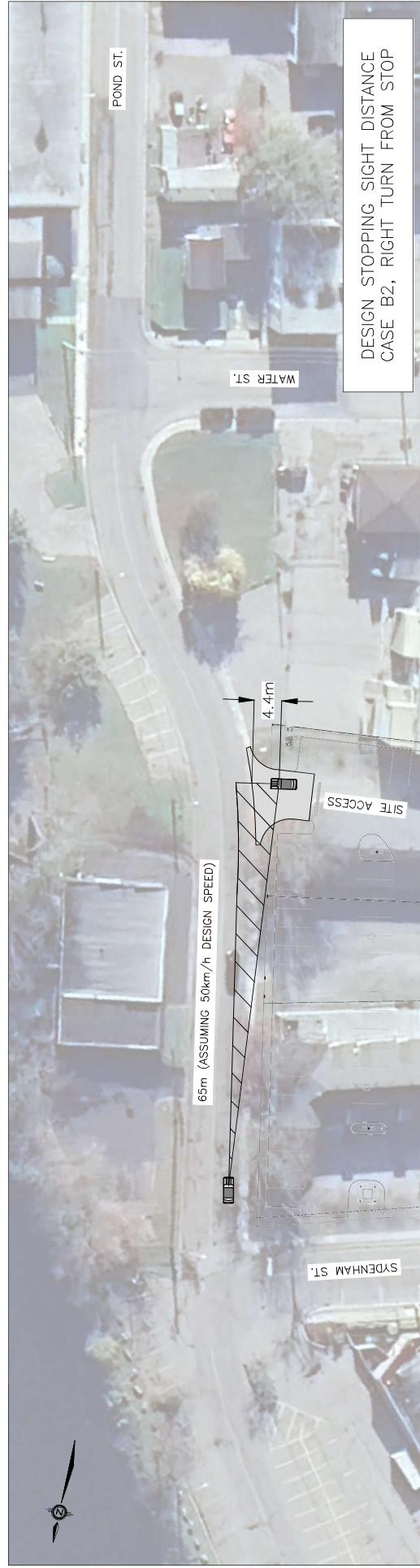
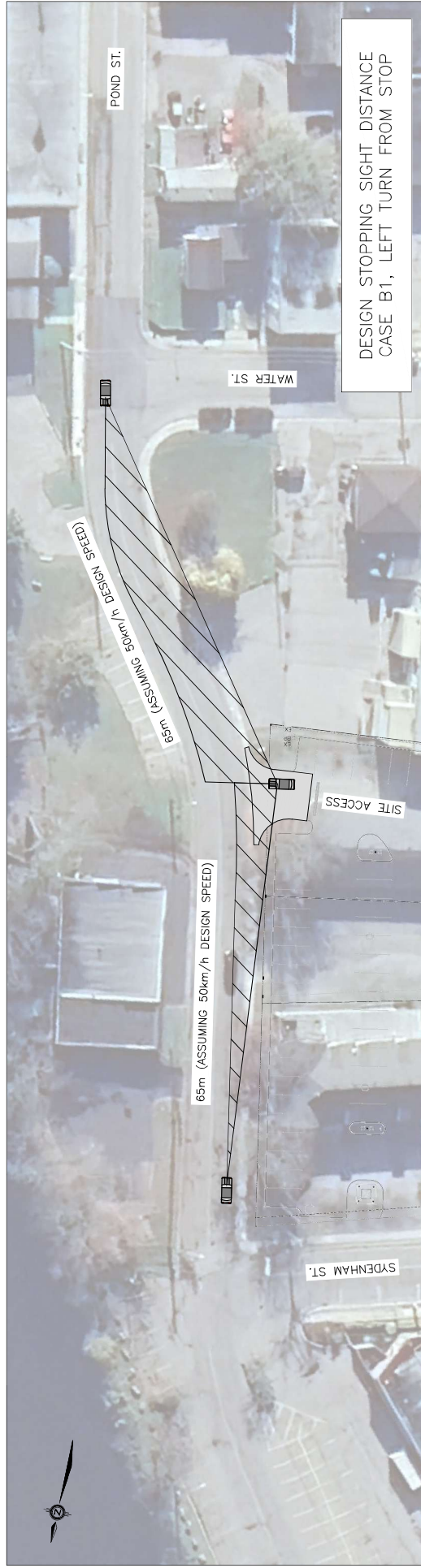
Table 9.9.5: Time Gap for Case B2—Right Turn from Stop and Case B3—Crossing Maneuver

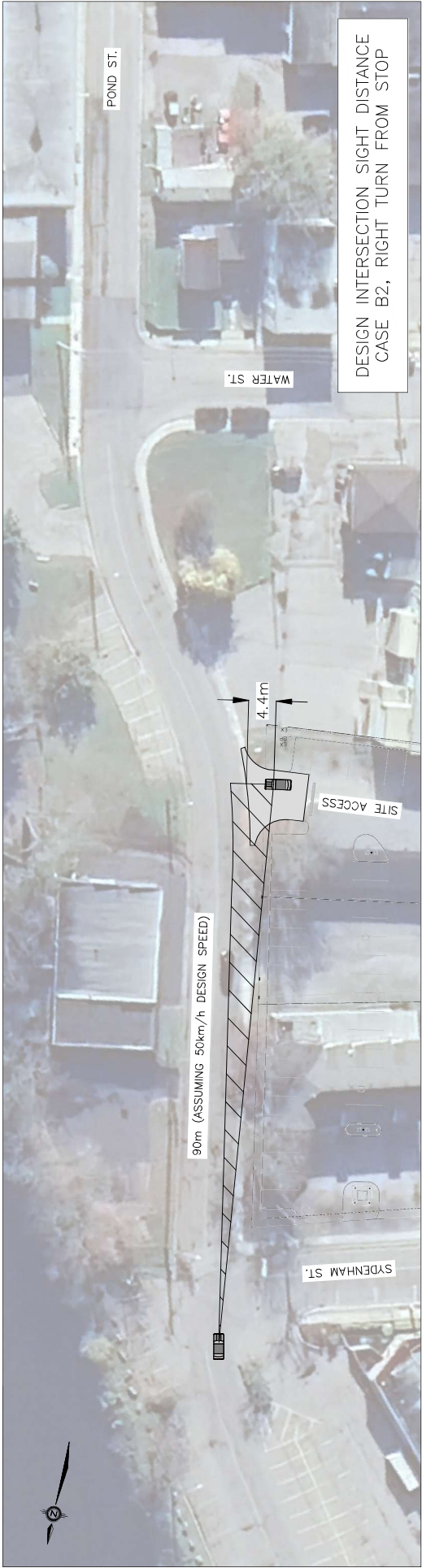
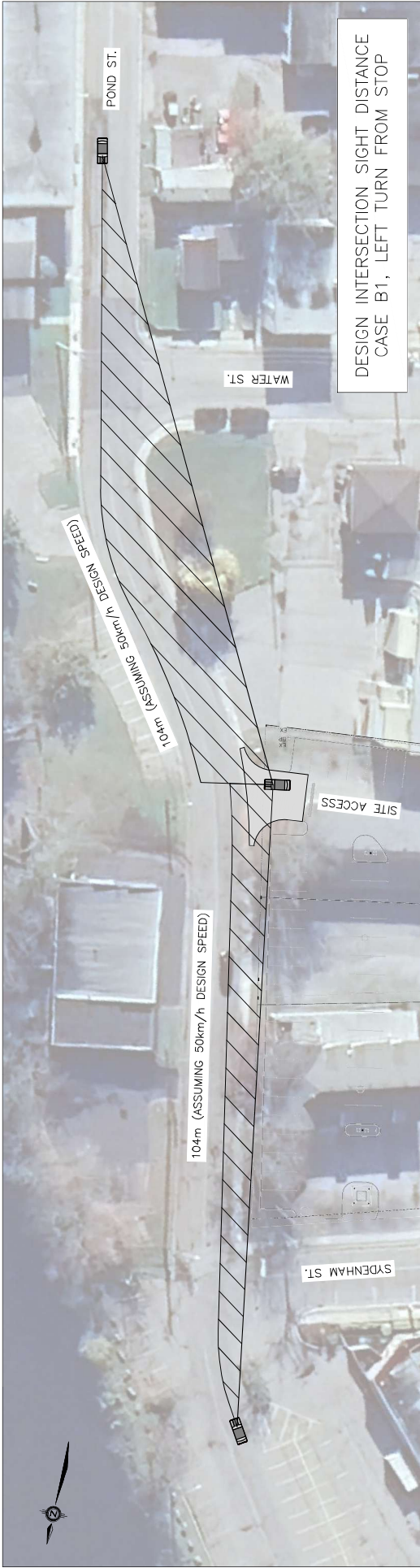
Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck (WB 19 and WB 20)	10.5

ISD_{passenger car} (right turn from stop) = $0.278 \times 50 \times 6.5 = 90 \text{ m}$



 KC SPENCER ASSOCIATES INC. CONSULTING ENGINEERS 10000 Highway 100, Suite 200 Westborough, MA 01581 Telephone: 508/336-8800 Fax: 508/336-8801 E-mail: kcsa@kcspencer.com  Professional Engineers Massachusetts									
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R.C. SPENCER ASSOCIATES INC.
Consulting Engineers
Waterloo 1001 Wellington Ave. - Waterloo, ON N2Y 1G4
Chartered: 1984, Registered: 1984, Chartered: 1984, Registered: 1984



Professional Engineer
No. 123456789

NO.	REVISION	DATE	BY	APP	SCALE	N.T.S.
1.	CREATED REPORT FIGURES	06 NOV. 2025	E.A.R.	A.D.B.	DATE	NOVEMBER 2025
					CHECKED	A.D.B.
					DRAWN	E.A.R.
					CHECKED	A.D.B.
					DESIGN	A.D.B.

60 POND PLACE RESIDENTIAL, SIMCOE - T.I.S.						PROJECT NO. 25-1872
INTERSECTION SIGHT DISTANCE POND STREET AT SITE ACCESS						FIGURE NO. 4
						OF 4

19 January 2024
File No.: 24-1548

**Virtus Real Estate Investment Trust
c/o Ollie Switch Developments
100 Arbors Lane, Unit D
Vaughan, ON L4L 7G4**

Via email: mark.bristoll@ollieswitch.com

Attention: Mark Bristoll

Re: 48 Sydenham / 60 Pond Place Residential, Simcoe
Memo Regarding Implications on the Previous Traffic Impact Study's Conclusions

Dear Mr. Bristoll:

As provided in Appendix A, a Traffic Impact Study was completed in February 2020 for a proposed residential development located at 48 Sydenham / 60 Pond Place, in Simcoe, Ontario. The original site plan proposed a 67-unit, 8-storey apartment building; the site plan has since been amended, but the number of dwelling units and the location of the site accesses remain unchanged. The updated site plan is provided in Appendix B; it now proposes 67 dwelling units within a 7-storey apartment building.

On page 5 of the "Development Engineering – 48 Sydenham 60 Pond Place, Simcoe Paper Pre-Consultation to revise 2019 Pre-Consultation" comments from Norfolk County, dated 15 August 2023, it is stated that, *"In review of the TIS submitted at the OPA/ZBA stage, Development Engineering requires resubmission of the TIS at Site Plan application. The applicant shall have the Traffic Consultant confirm that the original Feb 2020 TIS remains current and relevant to the new proposal."*

A supplemental memo was deemed to be an appropriate method of addressing the proposed changes and the corresponding trips generated.

TRIP GENERATION ESTIMATES

Tables 1 and 2 compare the trip generation and distribution estimates from the original study to what may be expected with the revised site plan. After the February 2020 report was complete, the Institute of Transportation Engineers (ITE) released the 11th Edition of the Trip Generation Manual; the revised calculations are provided in Appendix C, along with their respective 11th Edition references.

Table 1: Originally Proposed Site Development Trip Generation and Distribution (10th Edition)

Total Trips		
	Trips Entering	Trips Exiting
AM Peak Hour	6	18
PM Peak Hour	18	11

Table 2: Updated Site Development Trip Generation and Distribution (11th Edition)

Total Trips		
	Trips Entering	Trips Exiting
AM Peak	6	19
PM Peak	16	10

It is observed that the amended land uses will generate very similar traffic when compared to the estimates from the original study; total site generated traffic in the AM peak hour is minimally increased from 24 peak hour trips to 25 peak hour trips, while total site generated traffic in the PM peak hour is reduced from 29 peak hour trips to 26 peak hour trips. In effect, the proposed development is anticipated to contribute less than one new vehicle trip every two minutes to the area road network.

INTERSECTION ANALYSIS RESULTS

In the February 2020 TIS, detailed Synchro 10 analysis was carried out at both study area intersections for the AM and PM peak time periods. Background traffic was increased by 1% per year (compounded annually) for the 2025 and 2030 horizon forecasts, which is conservative for the region. During preliminary correspondence with City staff, no area developments were identified for consideration within the “background traffic” scenarios.

The revised site generated trips were applied to the study area intersections, assuming the same modelling parameters. The level of service results for the Total Traffic 2030 scenarios (utilizing the updated Synchro 11 analysis program) indicate that the traffic operations metrics will effectively remain the same. The results are reported in Appendix D and are summarized in the following Tables 3 and 4:

Table 3: Level of Service by Approach – Argyle Street at Pond Street

Scenario	Argyle Street at Pond Street							
	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	B	-	A	A	B	-
Total Traffic 2030	A	A	B	-	A	A	B	-

Table 4: Level of Service by Approach – Victoria Street at Pond Street

Scenario	Victoria Street at Pond Street							
	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	A	B	A	A	B	B
Total Traffic 2030	A	A	A	B	A	A	C	B

CONCLUSIONS

As a result of the theoretical decrease in site generated traffic, the level of service results will be the same as those reported in the February 2020 TIS. All conclusions / recommendations stated in the original 2020 report remain valid; at the intersections of Pond Street at Argyle Street and Victoria Street, the levels of service will be satisfactory; no geometric or traffic control improvements are warranted at these intersections.

In the original 2020 report, it was noted that the trees along Pond Street may interfere with the available sight lines and that the developer should ensure that all boulevard areas within the right-of-way are clear of vegetation (particularly if they are in conflict with the required sight distance for safe traffic operations).

Therefore, upon review of the updated technical results, it is the engineers' opinion that the conclusions stated in the original February 2020 report remain valid; the proposed development will not adversely impact area traffic operations.

All of which is respectfully submitted,

RC Spencer Associates Inc.



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Appendix A

POND STREET CONDOMINIUMS SIMCOE, ONTARIO

TRAFFIC IMPACT STUDY FEBRUARY 2020

POND STREET CONDOMINIUMS SIMCOE, ONTARIO

TRAFFIC IMPACT STUDY

Prepared by:



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POND STREET CONDOMINIUMS

SIMCOE, ONTARIO

TRAFFIC IMPACT STUDY

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Sight Line Analysis	4
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Figure 1: Area Plan

Figure 2: Study Area

Figure 3: Site Plan

Figure 4: Site Generated Traffic (AM / PM Peak)

Figure 5: Existing Traffic (AM / PM Peak)

Figure 6: Existing + Site Generated Traffic (AM / PM Peak)

Figure 7: Total Traffic 2025 (AM / PM Peak)

Figure 8: Total Traffic 2030 (AM / PM Peak)

Figure 9A: Sight Line Analysis – Sydenham Street Access

Figure 9B: Sight Line Analysis – Pond Street Access

Appendix A: Traffic Counts

- Argyle Street at Pond Street
- Victoria Street at Pond Street

Appendix B: ITE Trip Generation Manual – 10th Edition References

- Multi - Family Housing (Mid-Rise) AM Peak Hour
- Multi - Family Housing (Mid-Rise) PM Peak Hour

Appendix C: Traffic Projection Figures

- Argyle Street at Pond Street
- Victoria Street at Pond Street

Appendix D: Detailed Synchro Results

- Argyle Street at Pond Street
- Victoria Street at Pond Street

Appendix E: Sight Line Analysis

- Sydenham Street at Site Access
- Pond Street at Site Access



INTRODUCTION AND BACKGROUND

The proposed Pond Street Condominiums are to be located on Pond Street, approximately one kilometre south of Queensway East in Simcoe, Ontario, and two blocks east of Norfolk Street South (County Road 24). Primary access to Pond Street from Norfolk Street South is gained by means of Argyle Street to the north and Victoria Street to the south. The area plan is provided on Figure 1 and the study area is illustrated on Figure 2.

Norfolk Street is a north / south arterial road that provides regional access to and from Simcoe. Argyle Street / Robinson Street is an east / west collector road located one block to the north of the site, and Victoria Street is an east / west minor arterial road located one and a half blocks to the south of the site. Pond Street is a north / south local road. Pond Street at Argyle Street is a tee intersection, and Pond Street at Victoria Street is a four-way intersection, with the south leg being a driveway generating minimal traffic. Both have stop-control measures on the minor streets. Sydenham Street and Water Street are minor local streets adjacent to the site with limited local traffic function between Norfolk Street and Pond Street.

The developer is proposing a mid-rise condominium development consisting of 67 units with two site accesses, one to / from Sydenham Street and one to / from Pond Street. The site plan is provided on Figure 3.

The purpose of this study is to examine the implications of the proposed development on traffic operations in the defined study area.

EXISTING CONDITIONS

Turning movement counts were obtained by Pyramid Traffic on 4 February 2020 for the intersections of Pond Street at Argyle Street and at Victoria Street, which are both controlled by stop signs on Pond Street.

All turning movement counts are provided in Appendix A. These counts were analyzed using the Synchro 10 program, which calculates various parameters of intersection performance, such as level of service (LOS), intersection capacity utilization (ICU), and control delay.

The results of the analyses show that the non-signalized intersection of Argyle Street at Pond Street is performing satisfactorily in both AM and PM peak hours. The non-signalized intersection of Victoria Street at Pond Street is also performing satisfactorily in both AM and PM peak hours.

TRIP GENERATION AND DISTRIBUTION

Trip generation for the proposed development was estimated from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). ITE Land Use Code 221 - Multi Family Housing (Mid-Rise) is the most appropriate code for this use; it provides average trip generation rates of 0.36 trips per dwelling unit in the AM peak hour with 26% entering and 74% exiting, and 0.44 trips per dwelling unit in the PM peak hour with 61% in and 39% exiting. The trips generated by the proposed development are estimated to be 24 trips during the AM peak hour, with 6 entering and 18 exiting the site, and 29 trips during the PM peak hour, with 18 entering and 11 exiting the site. The details of the trip generation analysis are contained in Appendix B, noting that separate estimates were developed for AM and PM peak hours.

To be conservative, the analysis was carried out assuming full build-out in year 2020 and projected horizon years of 2025 and 2030. Background traffic was increased by 1% per year for the 2025 and 2030 horizon forecasts, which provides for very conservative increases to background traffic when compounded annually. This growth is consistent with census data.

Site generated traffic was distributed to and from the proposed site access in accordance with origin-destination matrices derived from the obtained turning movement counts. Estimated trip distribution percentages were applied to the trip generation results from Appendix B; the resulting turning movements at intersections within the study area are illustrated on Figure 4 – Site Generated Traffic (AM / PM Peak Hour).

Figure 5 shows the existing AM / PM peak hour traffic volumes. Figures 6 to 8 (AM / PM Peak Hour) summarize total traffic estimates that result from the summation of site generated traffic and the existing, projected 2025, and projected 2030 background traffic volumes. Figures 6 to 8 do not show the traffic volumes at the site accesses, as the site generated traffic is minimal, and the purpose of this report is to assess traffic impact on the surrounding intersections.

CAPACITY AND LEVEL OF SERVICE ANALYSIS

Detailed analysis using the Synchro 10 analysis program was carried out for the intersections of Pond Street with Argyle Street and with Victoria Street for AM and PM peak hours with respect to the following scenarios:

- existing traffic
- existing + site generated traffic
- 2025 background traffic + site generated traffic (total traffic 2025)
- 2030 background traffic + site generated traffic (total traffic 2030)

The effect of adding site generated traffic to existing and future volumes at each specific intersection can be found in Appendix C – Traffic Projection Figures. The data from Figures 5 to 8 was used in the Synchro analysis of intersection performance. The proposed development accesses were not modelled because of the minimal ingress / egress volumes. The results from the Synchro reports are summarized in Tables 1 and 2, and the detailed Synchro results are provided in Appendix D.

Table 1: Level of Service by Approach – Argyle Street at Pond Street

Scenario	Argyle Street at Pond Street							
	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	B	-	A	A	B	-
Existing + Site Generated	A	A	B	-	A	A	B	-
Total Traffic 2025	A	A	B	-	A	A	B	-
Total Traffic 2030	A	A	B	-	A	A	B	-

Table 2: Level of Service by Approach – Victoria Street at Pond Street

Scenario	Victoria Street at Pond Street							
	AM Peak Hour				PM Peak Hour			
	E/B	W/B	N/B	S/B	E/B	W/B	N/B	S/B
Existing Traffic	A	A	A	B	A	A	B	B
Existing + Site Generated	A	A	A	B	A	A	B	B
Total Traffic 2025	A	A	A	B	A	A	C	B
Total Traffic 2030	A	A	A	B	A	A	C	B

The following observations may be made from a review of the results from Tables 1 and 2:

The intersection of Argyle Street at Pond Street is a stop-controlled tee intersection, with the traffic on Argyle Street being through traffic. It will not be affected by the distribution of the site generated traffic, and it will continue to operate at a satisfactory level of service well into the future. In the worst-case scenario (Total Traffic 2030, PM Peak Hour), the average control delay changes from 10.4 seconds to 10.8 seconds.

The intersection of Victoria Street at Pond Street is a two-way stop-controlled intersection. It will not be affected by the distribution of the site generated traffic, and it will continue to operate at a satisfactory level of service well into the future. In the worst-case scenario (Total Traffic 2030, PM Peak Hour), on the northbound approach the control delay changes from 14.4 to 15.8, changing from LOS B to LOS C, which is insignificant considering that this approach is a private driveway.

From the reported results, there is no reason to suggest that traffic signals are warranted at the intersections of Pond Street with Argyle Street or with Victoria Street.

SIGHT LINE ANALYSIS

A sight line analysis was completed for the Sydenham Street and Pond Street site accesses. The analysis was completed per the TAC Geometric Design Guide for Canadian Roads (2017). The speed limit at these accesses is assumed to be 50 km/h. Since it is an area where it would be challenging for a vehicle to exceed the posted speed, the analysis was completed for a 50 km/h design speed. As illustrated on Figures 9A to 9B and detailed in Appendix E, the intersection sight distance is determined to be 104m for the worst-case left turn maneuver. Intersection sight distance for a right turn is determined to be 90m.

It should be noted that Sydenham Street is a two-way street that transitions to a one-way street west of Culver Street. The stretch of roadway between Culver Street and Pond Street is only about 100m, and since it does not function as a “thoroughfare”, required minimum sight distance may be reduced without detriment to safe traffic operations. No sight line obstructions exist for either egress maneuver, except for a tree located at the southwest of the Pond Street / Sydenham Street intersection. According to the site plan, this tree shall not remain; however, the road authority should confirm that the tree is removed prior to allowing egress onto Sydenham Street.

For the proposed egress onto Pond Street, it is noted that a number of trees may interfere with the available sight lines. The developer should ensure that all boulevard areas within the right-of-way are clear of vegetation, particularly if they are in conflict with the required sight distance for safe traffic operations. Should the trees located to the south of the proposed access become an operational problem, the road authority may consider a reduction in speed limit on Pond Street to 40 km/h, as there would be no anticipated detriment to its functionality or traffic operations.

SUMMARY AND CONCLUSIONS

The proposed Pond Street Condominiums are to be located on Pond Street, approximately one kilometre south of Queensway East in Simcoe, Ontario, and two blocks east of Norfolk Street South (County Road 24). Using recently obtained turning movement counts and applying the best available trip generation and distribution data and methodologies, an analysis was completed to measure the traffic operations impact of the development on adjacent intersections with respect to existing, total 2025 and total 2030 traffic volumes.

After modelling the traffic network and extracting the relevant traffic operations metrics, the following conclusions were made:

- The stop-controlled tee intersection of Argyle Street at Pond Street will not be affected by the distribution of the site generated traffic, and it will continue to operate at a satisfactory level of service well into the future;
- The two-way stop-controlled intersection of Victoria Street at Pond Street will not be affected by the distribution of the site generated traffic, and it will continue to operate at a satisfactory level of service well into the future;
- Traffic signals are not warranted at the intersections of Pond Street with Argyle Street or with Victoria Street;
- There will be no measurable traffic impact on Norfolk Street;
- The road authority should confirm that the tree located at the southwest of Pond Street/ Sydenham Street is removed prior to allowing egress onto Sydenham Street;
- For the proposed egress onto Pond Street, it is noted that a number of trees may interfere with the available sight lines; the developer should ensure that all boulevard areas within the right-of-way are clear of vegetation, particularly if they are in conflict with the required sight distance for safe traffic operations.

All of which is respectfully submitted,

RC Spencer Associates Inc.

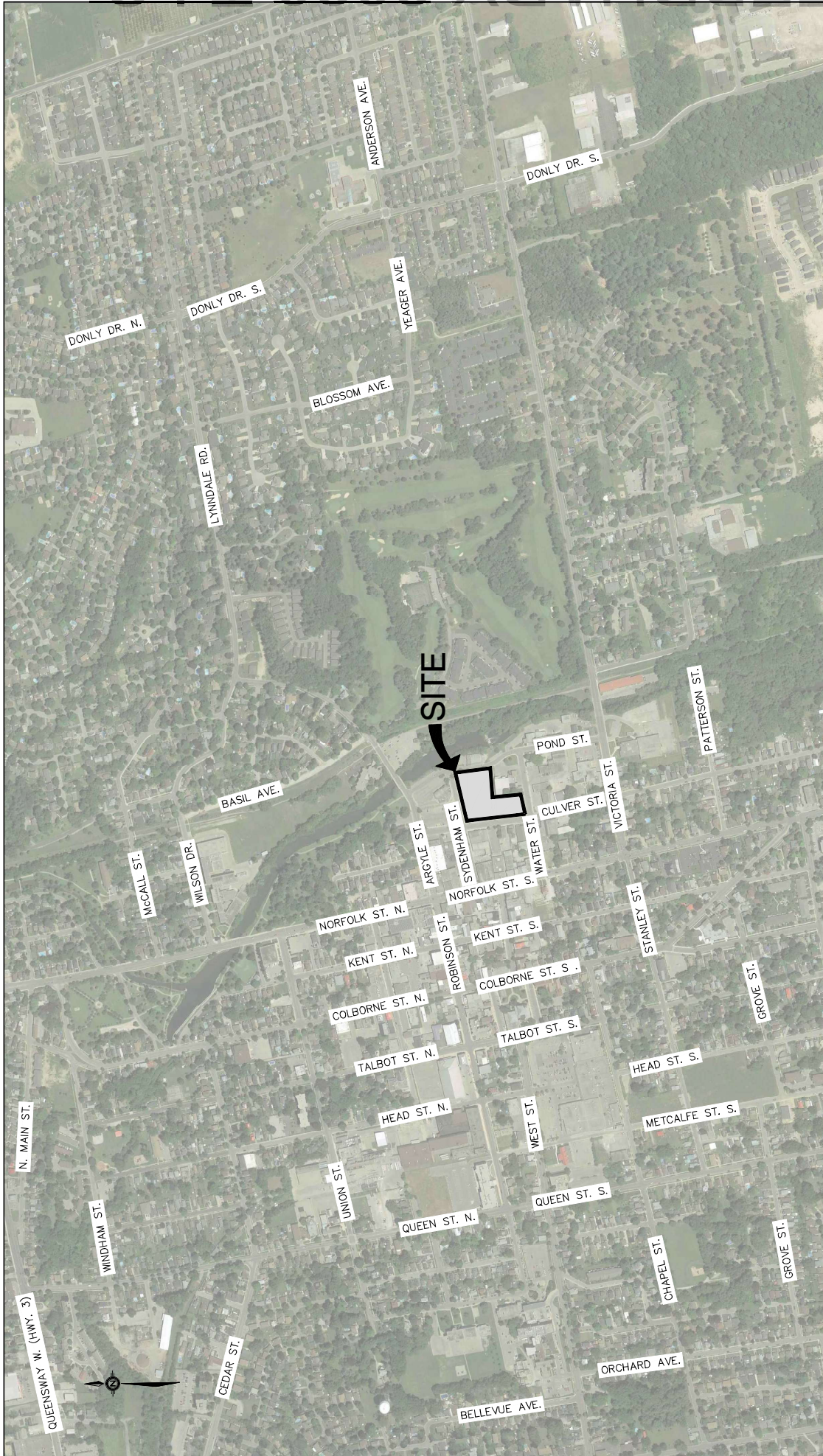


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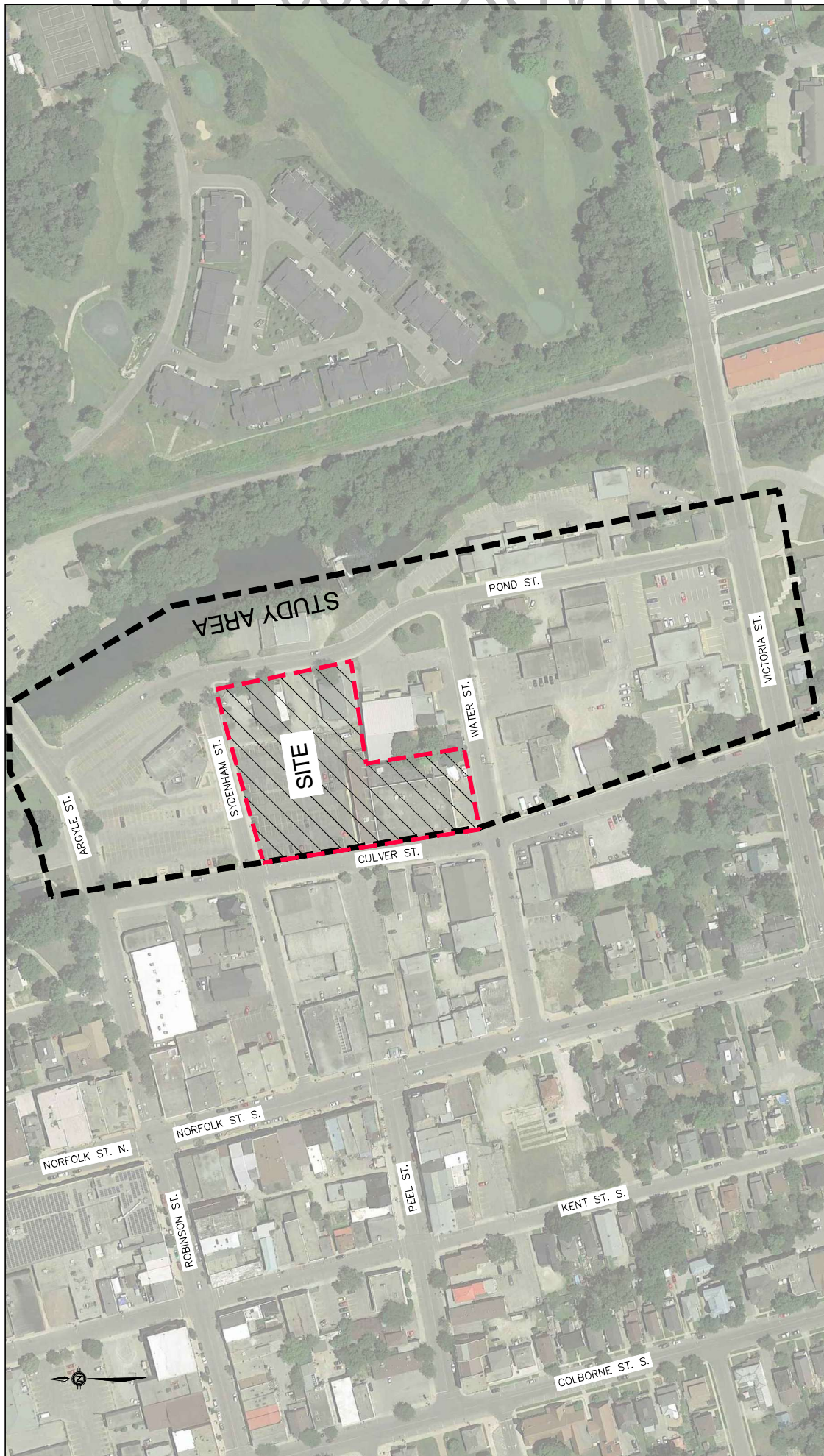


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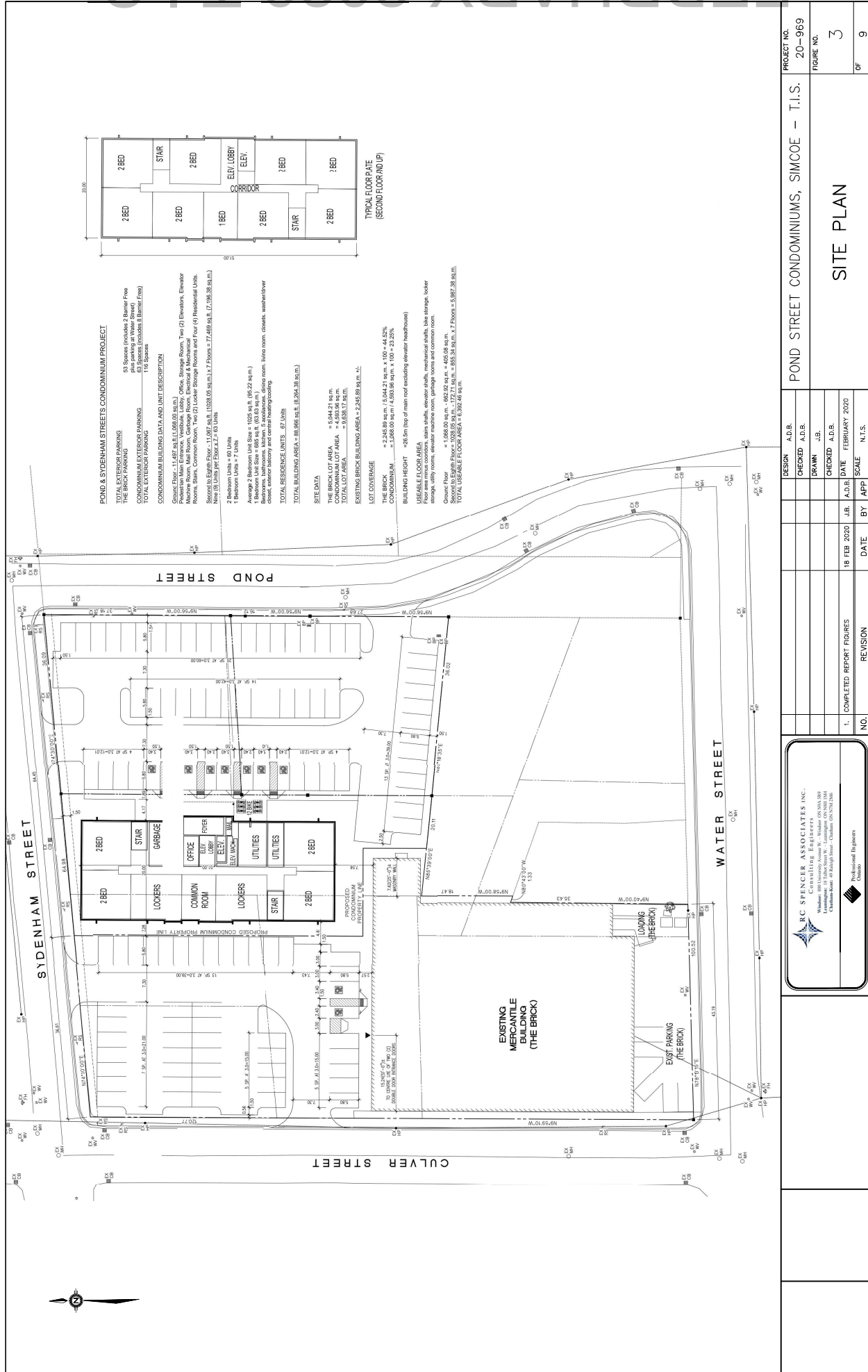
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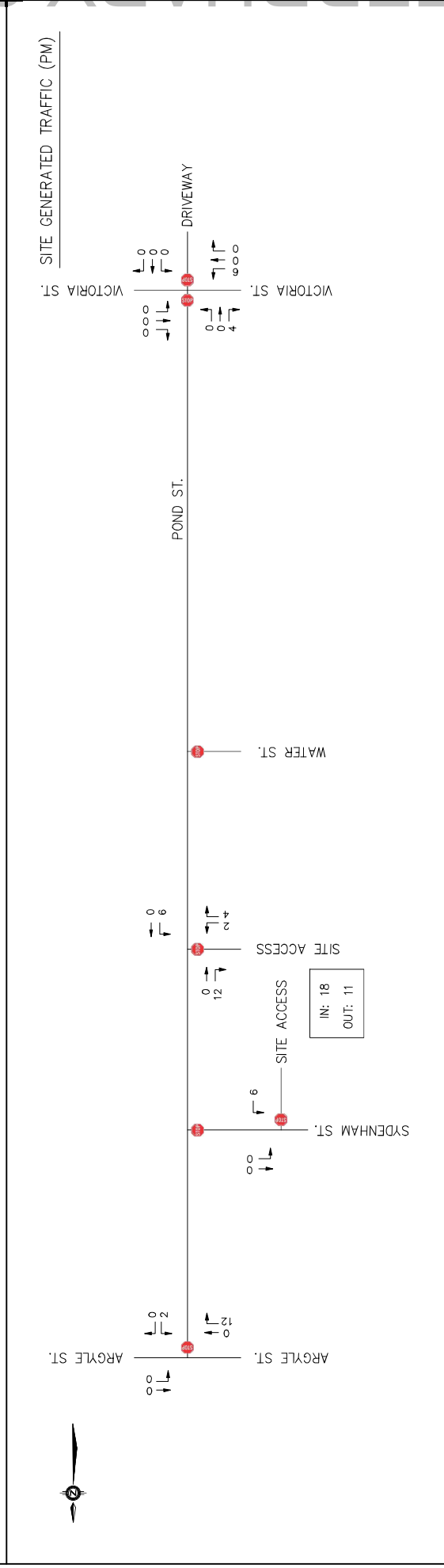
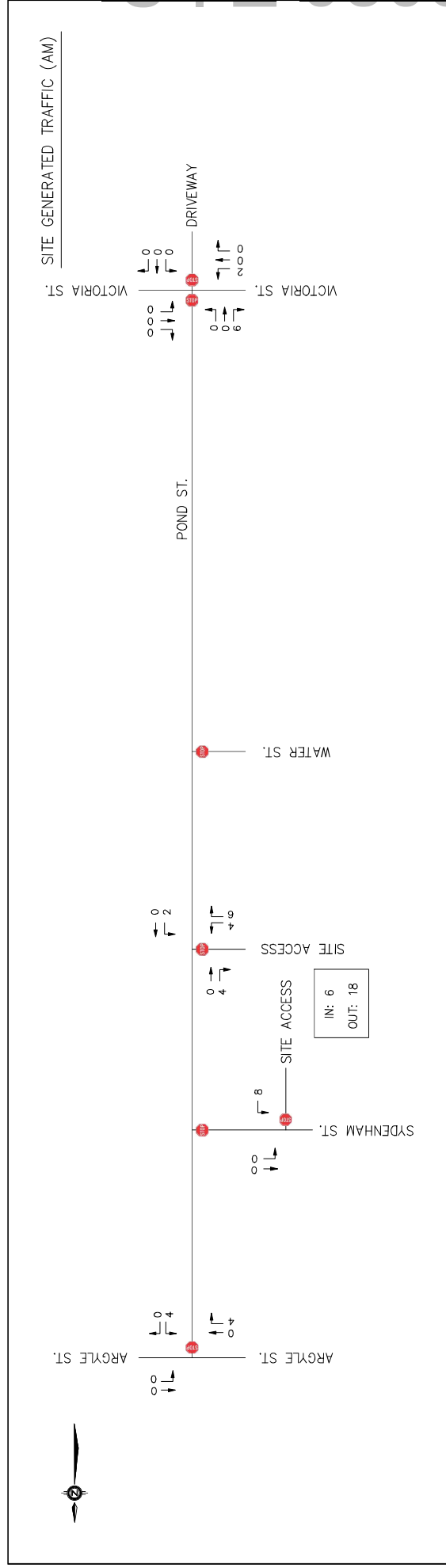


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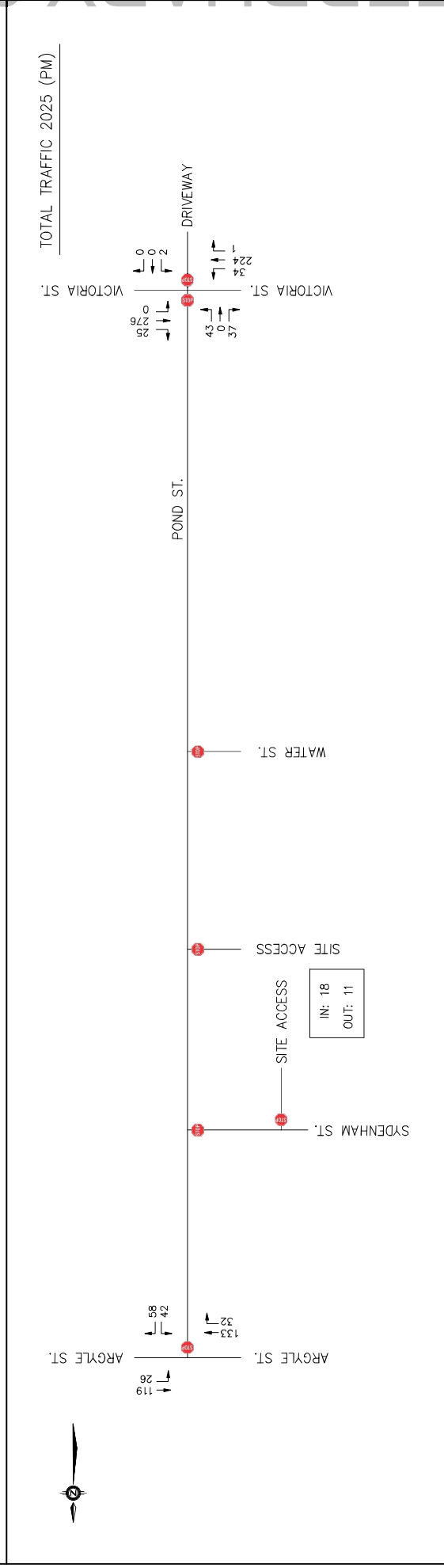
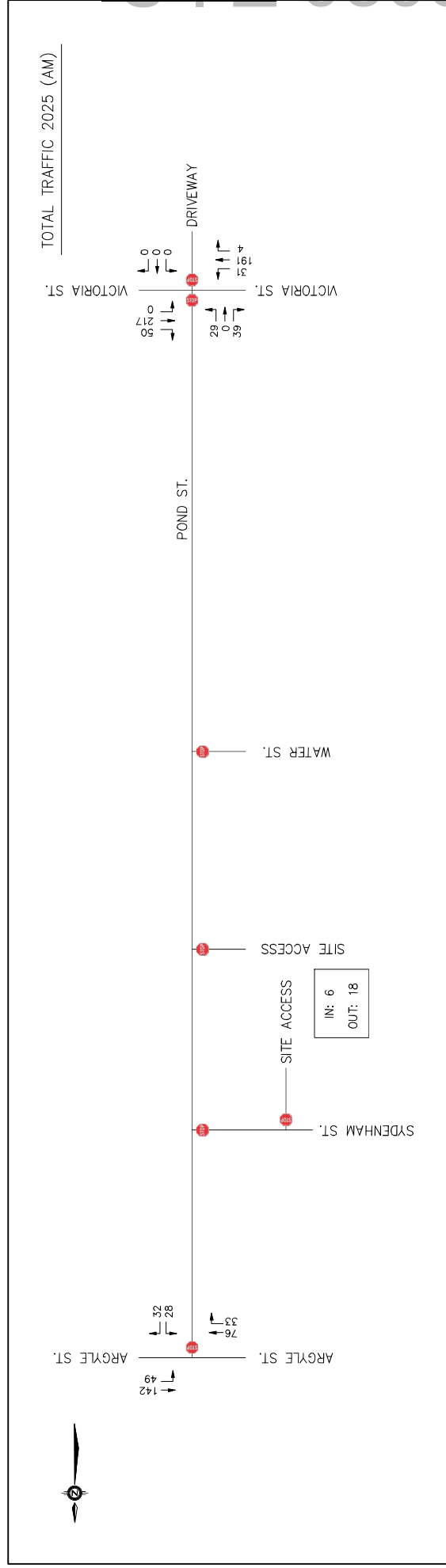
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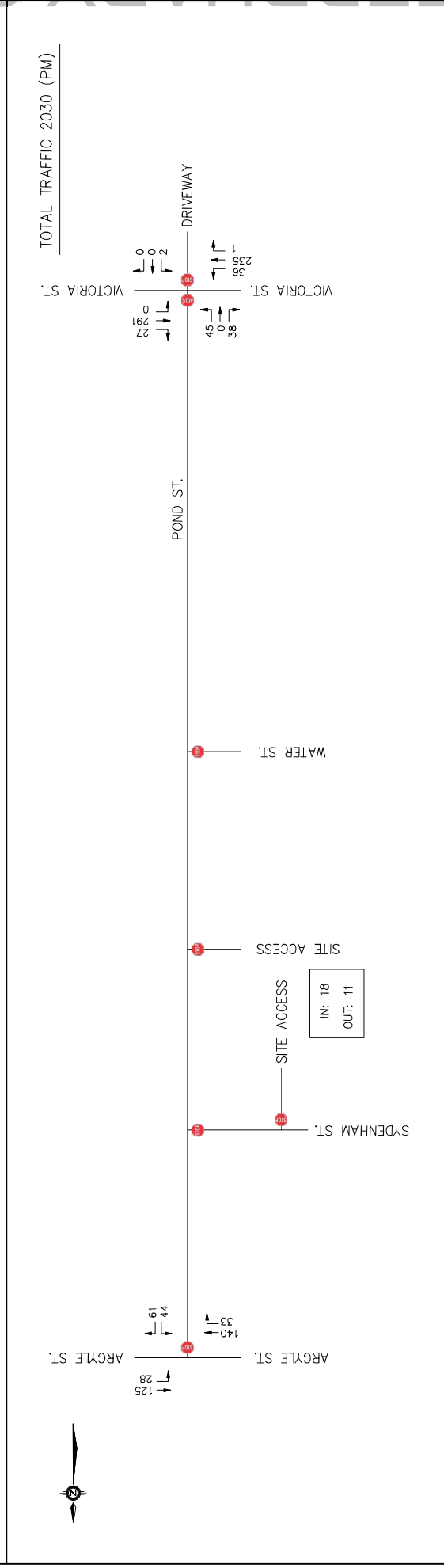
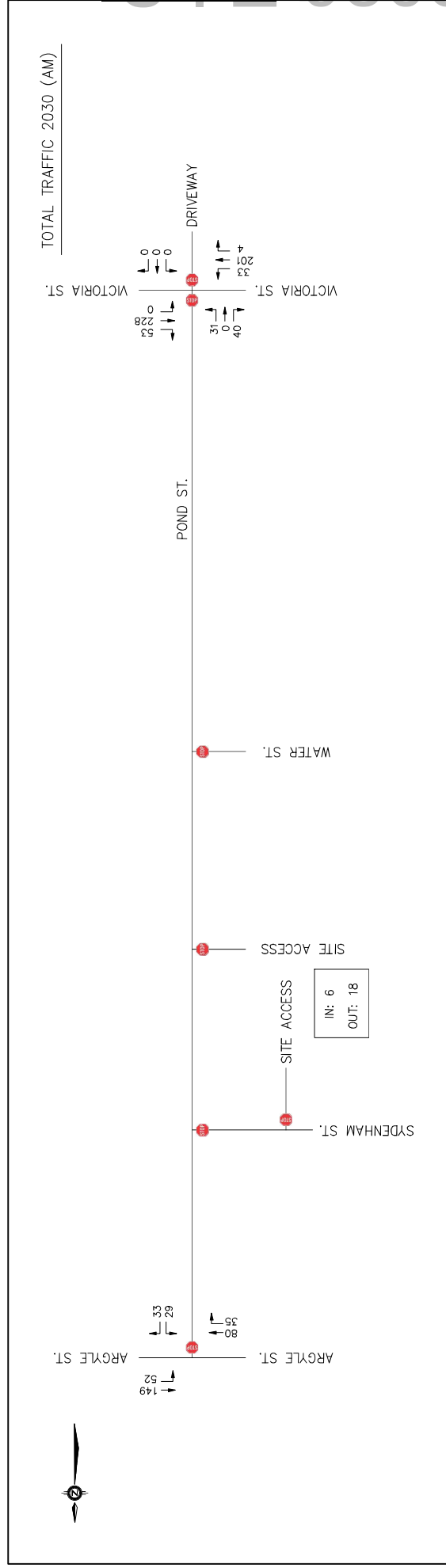


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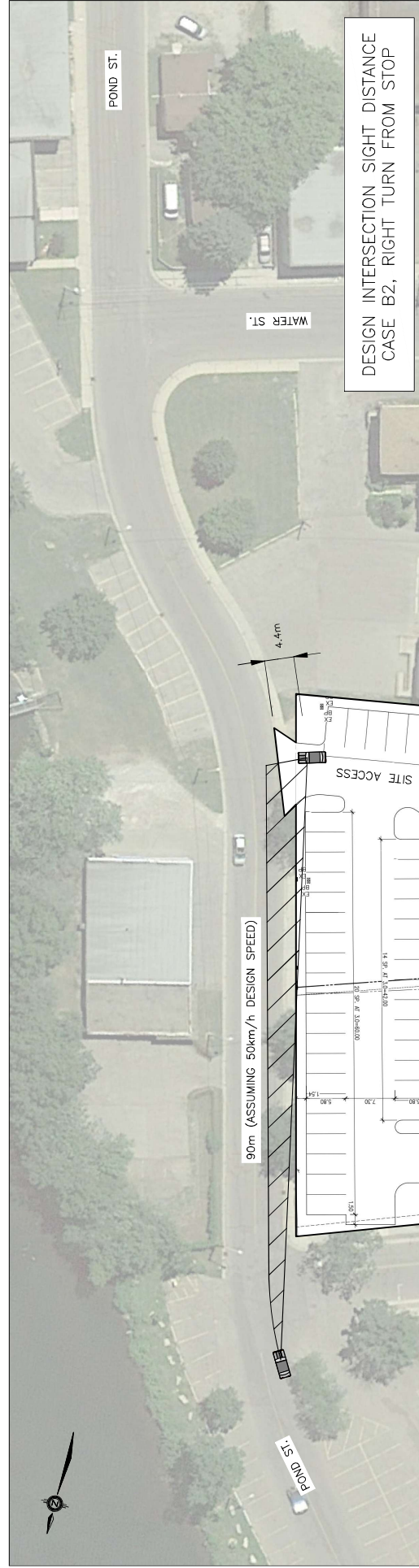
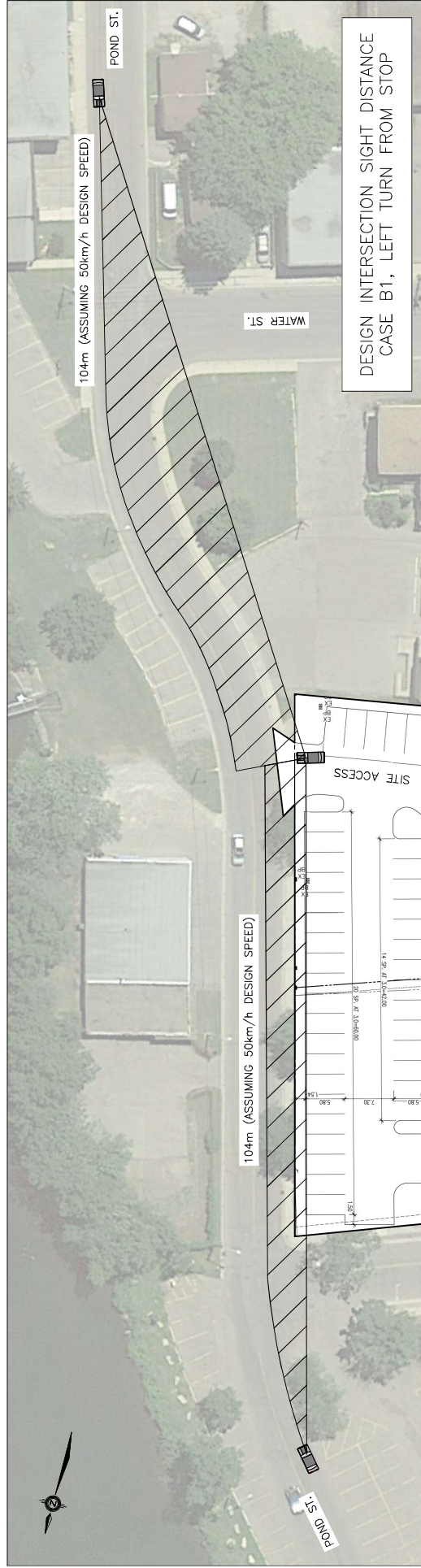


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	FIGURE NO. 9										OF 9									

[illegible]



 RC SPFINGER ASSOCIATES INC. CONSULTING ENGINEERS 1000 SHEPPARD AVENUE EAST, SUITE 200 WILLOWDALE, ONTARIO M2H 3L9 Tel: (416) 490-8888 Fax: (416) 490-8889 E-mail: info@rcsfinger.com	 Professional Engineer (Ontario)	POND STREET CONDOMINIUMS, SIMCOE — T.I.S.										PROJECT NO. 20-969
		SIGHT LINE ANALYSIS: SYDENHAM STREET AT SITE ACCESS										FIGURE NO. 9A
		1. COMPLETED REPORT FIGURES										OF 9



 RC SPENCER ASSOCIATES INC. Consulting Engineers 5000 Yonge Street, Suite 200 Scarborough, Ontario M1S 1V5 Tel: (416) 291-1000 Fax: (416) 291-1001 Email: info@rcspencer.com		PROJECT NO. 20-969		POND STREET CONDOMINIUMS, SIMCOE — T.I.S.	
		FIGURE NO. 9B		SIGHT LINE ANALYSIS: POND STREET AT SITE ACCESS	
1. COMPLETED REPORT FIGURES NO.		18 FEB 2020		DESIGN A.D.B.	
		DATE		CHECKED A.D.B.	
REVISION		BY APP		DRAWN J.B.	
		SCALE N.T.S.		CHECKED A.D.B.	

Appendix A

TRAFFIC COUNTS

**Argyle Street at Pond Street
Victoria Street at Pond Street**

FEBRUARY 2020 T.I.S.

Pond St @ Argyle St

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Simcoe

Site #: 0000000001

Intersection: Argyle St & Pond St

TFR File #: 1

Count date: 4-Feb-2020

Weather conditions:

Overcast/Dry

Person(s) who counted:

Cam

**** Non-Signalized Intersection ****

Major Road: Argyle St runs W/E

East Leg Total: 284

East Entering: 182

East Peds: 0

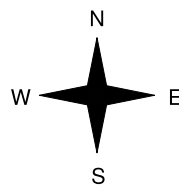
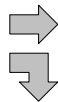
Peds Cross: X

Heavys	Trucks	Cars	Totals
10	0	148	158



Argyle St

Heavys	Trucks	Cars	Totals
1	0	71	72
1	1	26	28
2	1	97	



Pond St

Cars	Trucks	Heavys	Totals
127	0	8	135
46	0	1	47
173	0	9	



Argyle St

Cars	Trucks	Heavys	Totals
101	0	1	102

Peds Cross: X
West Peds: 4
West Entering: 100
West Leg Total: 258

Cars	Trucks	Heavys	Totals
72	1	2	75



Cars	Trucks	Heavys	Totals
21	0	2	23
30	0	0	30
51	0	2	

Peds Cross: X
South Peds: 3
South Entering: 53
South Leg Total: 128

Comments

Pond St @ Argyle St

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 14:00:00

One Hour Peak

From: 12:00:00

To: 13:00:00

Municipality: Simcoe

Site #: 0000000001

Intersection: Argyle St & Pond St

TFR File #: 1

Count date: 4-Feb-2020

Weather conditions:

Overcast/Dry

Person(s) who counted:

Cam

**** Non-Signalized Intersection ****

Major Road: Argyle St runs W/E

East Leg Total: 359

East Entering: 166

East Peds: 1

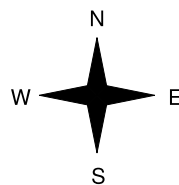
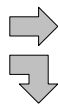
Peds Cross: X

Heavys	Trucks	Cars	Totals
1	0	148	149



Argyle St

Heavys	Trucks	Cars	Totals
0	1	138	139
0	0	32	32
0	1	170	



Pond St

Cars	Trucks	Heavys	Totals
128	0	0	128
38	0	0	38
166	0	0	



Argyle St

Cars	Trucks	Heavys	Totals
191	2	0	193



Peds Cross: X
West Peds: 2
West Entering: 171
West Leg Total: 320

Cars	Trucks	Heavys	Totals
70	0	0	70



Cars	Trucks	Heavys	Totals
20	0	1	21
53	1	0	54
73	1	1	

Peds Cross: X
South Peds: 5
South Entering: 75
South Leg Total: 145

Comments

Pond St @ Argyle St

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 15:00:00

To: 16:00:00

Municipality: Simcoe

Site #: 0000000001

Intersection: Argyle St & Pond St

TFR File #: 1

Count date: 4-Feb-2020

Weather conditions:

Overcast/Dry

Person(s) who counted:

Cam

**** Non-Signalized Intersection ****

Major Road: Argyle St runs W/E

East Leg Total: 320

East Entering: 138

East Peds: 2

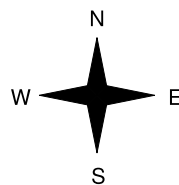
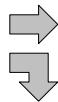
Peds Cross: X

Heavys	Trucks	Cars	Totals
4	0	147	151



Argyle St

Heavys	Trucks	Cars	Totals
0	0	127	127
0	1	18	19
0	1	145	



Pond St

Cars	Trucks	Heavys	Totals
111	0	2	113
25	0	0	25
136	0	2	



Argyle St

Cars	Trucks	Heavys	Totals
179	1	2	182

Peds Cross: X
West Peds: 2
West Entering: 146
West Leg Total: 297

Cars	43
Trucks	1
Heavys	0
Totals	44



Cars	36	52	88
Trucks	0	1	1
Heavys	2	2	4
Totals	38	55	

Peds Cross: X
South Peds: 2
South Entering: 93
South Leg Total: 137

Comments

FEBRUARY 2020 T.I.S.

Pond St @ Argyle St

Total Count Diagram

Municipality: Simcoe
Site #: 0000000001
Intersection: Argyle St & Pond St
TFR File #: 1
Count date: 4-Feb-2020

Weather conditions:
 Overcast/Dry
Person(s) who counted:
 Cam

**** Non-Signalized Intersection ****

Major Road: Argyle St runs W/E

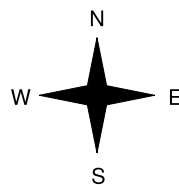
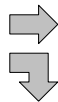
East Leg Total: 2284
 East Entering: 1143
 East Peds: 8
 Peds Cross: 8

Heavys	Trucks	Cars	Totals
21	6	1009	1036



Argyle St

Heavys	Trucks	Cars	Totals
1	5	808	814
1	4	204	209
2	9	1012	



Pond St

Cars	Trucks	Heavys	Totals
844	1	12	857
283	2	1	286
1127	3	13	



Argyle St

Cars	Trucks	Heavys	Totals
1130	8	3	1141

Peds Cross: 8
 West Peds: 18
 West Entering: 1023
 West Leg Total: 2059

Cars	487
Trucks	6
Heavys	2
Totals	495



Cars	165	322	487
Trucks	5	3	8
Heavys	9	2	11
Totals	179	327	

Peds Cross: 8
 South Peds: 24
 South Entering: 506
 South Leg Total: 1001

Comments

FEBRUARY 2020 T.I.S.

Pond St @ Victoria St

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 8:00:00

To: 9:00:00

Municipality: Simcoe

Site #: 0000000002

Intersection: Victoria St & Pond St

TFR File #: 2

Count date: 4-Feb-2020

Weather conditions:

Overcast/Dry

Person(s) who counted:

Cam

** Non-Signalized Intersection **

Major Road: Victoria St runs W/E

North Leg Total: 135

North Entering: 59

North Peds: 2

Peds Cross: $\times$

Heavys	0	0	2	2
Trucks	1	0	0	1
Cars	30	0	26	56
Totals	31	0	28	

Heavys 2

Trucks 1

Cars 73

Totals 76

East Leg Total: 464

East Entering: 254

East Peds: 0

Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
10	2	225	237



Victoria St

Heavys	Trucks	Cars	Totals
0	1	27	28
9	3	170	182
0	0	4	4
9	4	201	

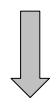
Peds Cross: $\times$

West Peds: 0

West Entering: 214

West Leg Total: 451

Cars	4
Trucks	0
Heavys	0
Totals	4



Driveway

Cars	0	0	0	0
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	0	0	0	0

Cars	Trucks	Heavys	Totals
46	0	2	48
195	1	10	206
0	0	0	0
241	1	12	

Victoria St



Cars	Trucks	Heavys	Totals
196	3	11	210

Peds Cross: $\times$

South Peds: 24

South Entering: 0

South Leg Total: 4

Comments

Pond St @ Victoria St

Mid-day Peak Diagram

Specified Period

From: 11:00:00

To: 14:00:00

One Hour Peak

From: 12:00:00

To: 13:00:00

Municipality: Simcoe

Site #: 0000000002

Intersection: Victoria St & Pond St

TFR File #: 2

Count date: 4-Feb-2020

Weather conditions:

Overcast/Dry

Person(s) who counted:

Cam

** Non-Signalized Intersection **

Major Road: Victoria St runs W/E

North Leg Total: 143

North Entering: 83

North Peds: 5

Peds Cross: $\times$

Heavys	0	0	0	0
Trucks	1	0	0	1
Cars	50	1	31	82
Totals	51	1	31	



Heavys 1

Trucks 0

Cars 59

Totals 60

East Leg Total: 467

East Entering: 244

East Peds: 3

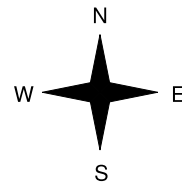
Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
1	3	261	265



Victoria St

Heavys	Trucks	Cars	Totals
0	0	29	29
0	2	190	192
0	0	2	2
0	2	221	



Driveway

Cars	Trucks	Heavys	Totals
30	0	1	31
210	2	1	213
0	0	0	0
240	2	2	



Victoria St



Cars	Trucks	Heavys	Totals
221	2	0	223

Peds Cross: $\times$

West Peds: 3

West Entering: 223

West Leg Total: 488

Cars	3
Trucks	0
Heavys	0
Totals	3



Cars	1	0	0	1
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	1	0	0	

Peds Cross: $\times$

South Peds: 10

South Entering: 1

South Leg Total: 4

Comments

Pond St @ Victoria St

Afternoon Peak Diagram

Specified Period

From: 15:00:00

To: 18:00:00

One Hour Peak

From: 15:15:00

To: 16:15:00

Municipality: Simcoe

Site #: 0000000002

Intersection: Victoria St & Pond St

TFR File #: 2

Count date: 4-Feb-2020

Weather conditions:

Overcast/Dry

Person(s) who counted:

Cam

** Non-Signalized Intersection **

Major Road: Victoria St runs W/E

North Leg Total: 123

North Entering: 72

North Peds: 6

Peds Cross: 8

Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	31	0	41	72
Totals	31	0	41	



Heavys	4
Trucks	1
Cars	46
Totals	51

East Leg Total: 541

East Entering: 287

East Peds: 3

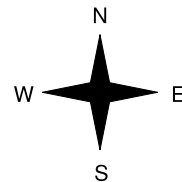
Peds Cross: 8

Heavys	Trucks	Cars	Totals
4	3	289	296



Victoria St

Heavys	Trucks	Cars	Totals
2	1	24	27
2	0	211	213
0	0	1	1
4	1	236	



Driveway

Cars	Trucks	Heavys	Totals
22	0	2	24
256	3	4	263
0	0	0	0
278	3	6	

Victoria St



Cars	Trucks	Heavys	Totals
252	0	2	254

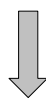
Peds Cross: 8

West Peds: 0

West Entering: 241

West Leg Total: 537

Cars	1
Trucks	0
Heavys	0
Totals	1



Cars	2	0	0	2
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	2	0	0	

Peds Cross: 8

South Peds: 11

South Entering: 2

South Leg Total: 3

Comments

Pond St @ Victoria St

Total Count Diagram

Municipality: Simcoe
Site #: 0000000002
Intersection: Victoria St & Pond St
TFR File #: 2
Count date: 4-Feb-2020

Weather conditions:
 Overcast/Dry
Person(s) who counted:
 Cam

**** Non-Signalized Intersection ****

Major Road: Victoria St runs W/E

North Leg Total: 973
 North Entering: 519
 North Peds: 20
 Peds Cross: 2

	Heavys	Trucks	Cars	Totals
North	0	0	4	4
East	5	0	1	6
South	263	2	244	509
Totals	268	2	249	

	Heavys	Trucks	Cars	Totals
North	10	8	436	454
East	5	0	1	6
South	263	2	244	509
Totals	268	2	249	

East Leg Total: 3391
 East Entering: 1806
 East Peds: 15
 Peds Cross: 8

Heavys	Trucks	Cars	Totals
24	15	1820	1859

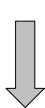


Victoria St

Heavys	Trucks	Cars	Totals
3	6	223	232
15	11	1310	1336
0	0	15	15
18	17	1548	

Peds Cross: 8
 West Peds: 5
 West Entering: 1583
 West Leg Total: 3442

	Cars	Trucks	Heavys	Totals
West	17	0	0	17
South	6	0	0	6
East	1	0	0	1
Totals	6	1	0	



	Cars	Trucks	Heavys	Totals
West	6	0	0	6
South	1	0	0	1
East	0	0	0	0
Totals	6	1	0	

Driveway

Cars	Trucks	Heavys	Totals
212	2	7	221
1551	10	24	1585
0	0	0	0
1763	12	31	



Victoria St

Cars	Trucks	Heavys	Totals
1554	12	19	1585

Peds Cross: 2
 South Peds: 78
 South Entering: 7
 South Leg Total: 24

Comments

Appendix B

ITE TRIP GENERATION MANUAL – 10TH EDITION REFERENCES

Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 53

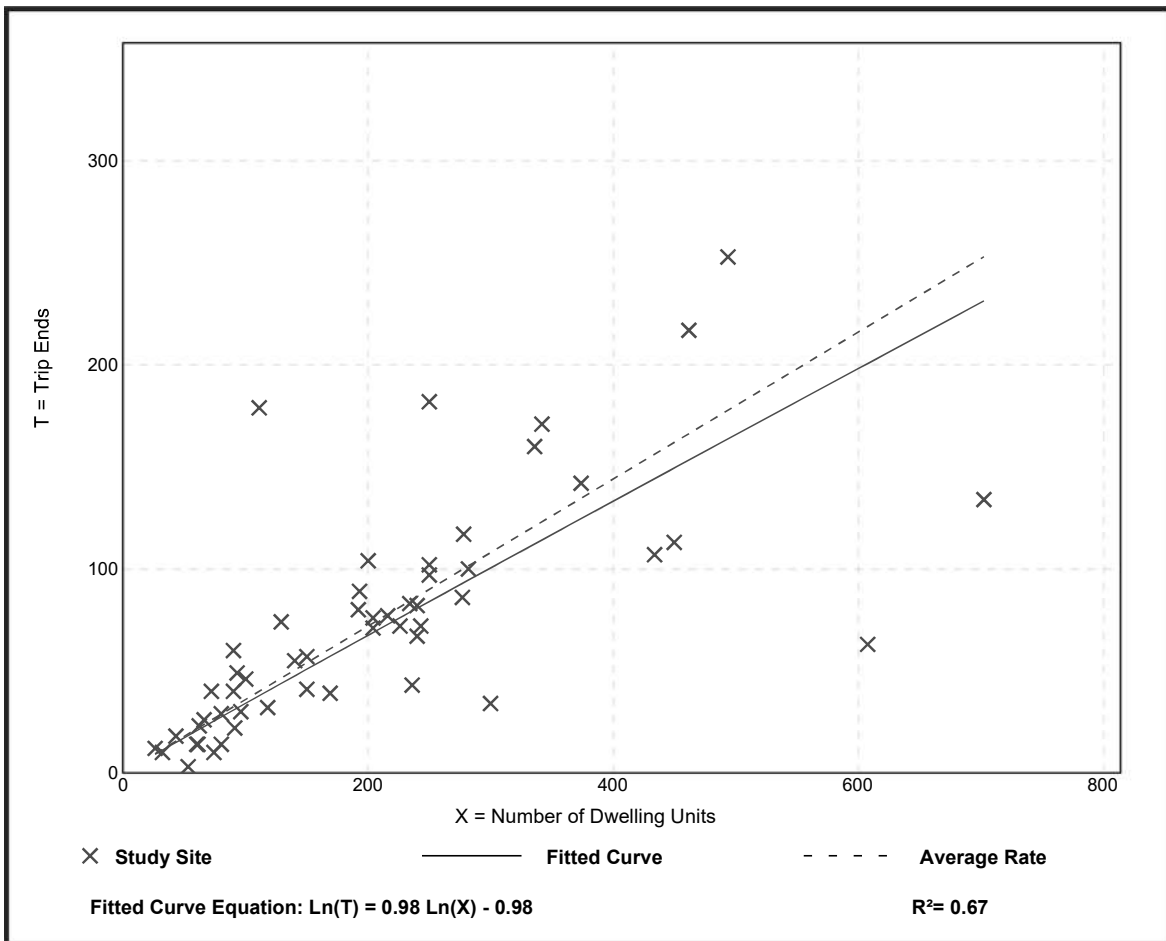
Avg. Num. of Dwelling Units: 207

Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 60

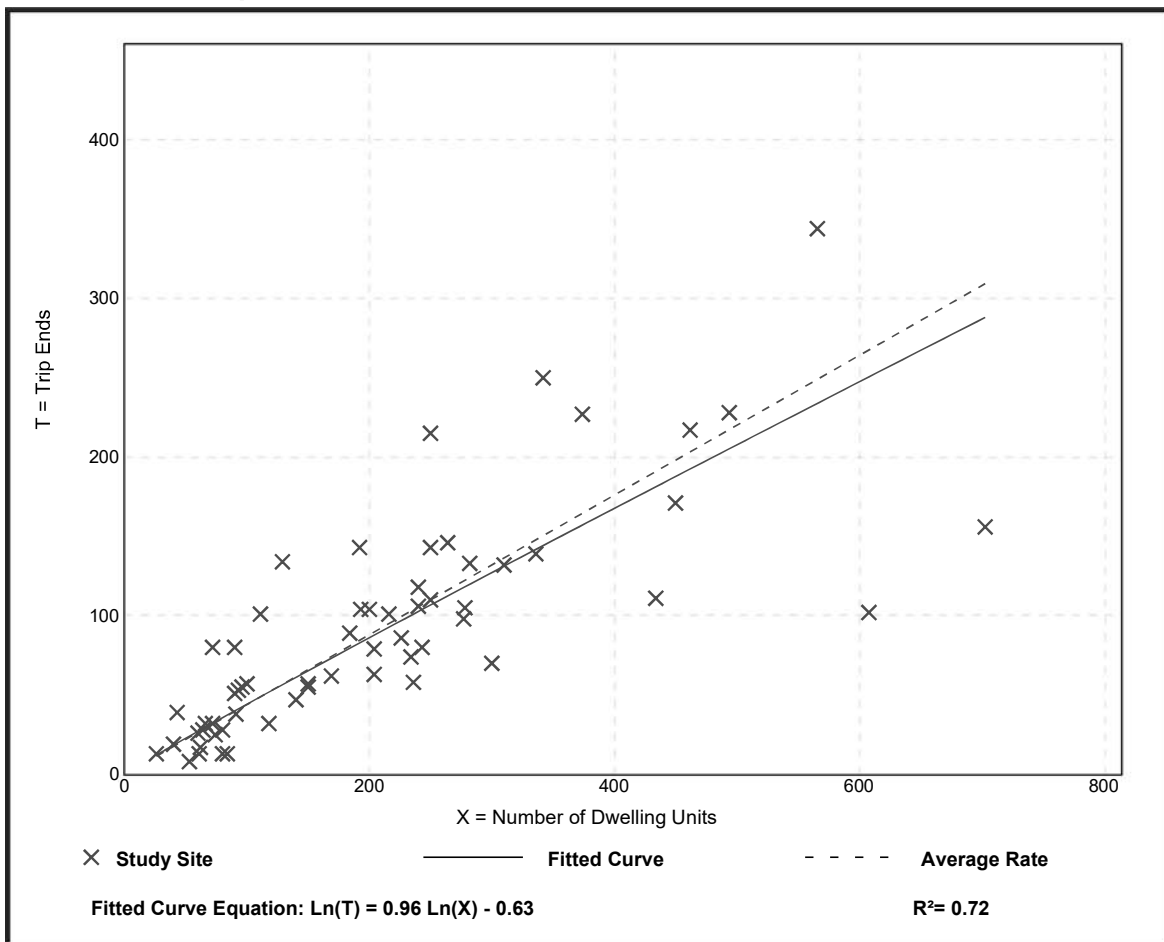
Avg. Num. of Dwelling Units: 208

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Proposed Site Development Trip Generation and Distribution

Project: Pond Street Condominiums Traffic Impact Study

Site: 56 Pond Street - Simcoe, Ontario

Assumed Land Use (1): Multifamily Housing (Mid-Rise)- ITE No. 221

Average Vehicle Trip Ends vs.: Dwelling Units

ITE Trip Generation Data collected on a: Weekday

AM Peak Hour: = Average Rate

26	% Entering
74	% Exiting

PM Peak Hour: = Average Rate

61	% Entering
39	% Exiting

Assumed Land Use (1): Multifamily Housing (Mid-Rise)- ITE No. 221				
	Dwelling Units	Trips Generated	Trips Entering	Trips Exiting
AM Peak	67	24	6	18
PM Peak	67	29	18	11

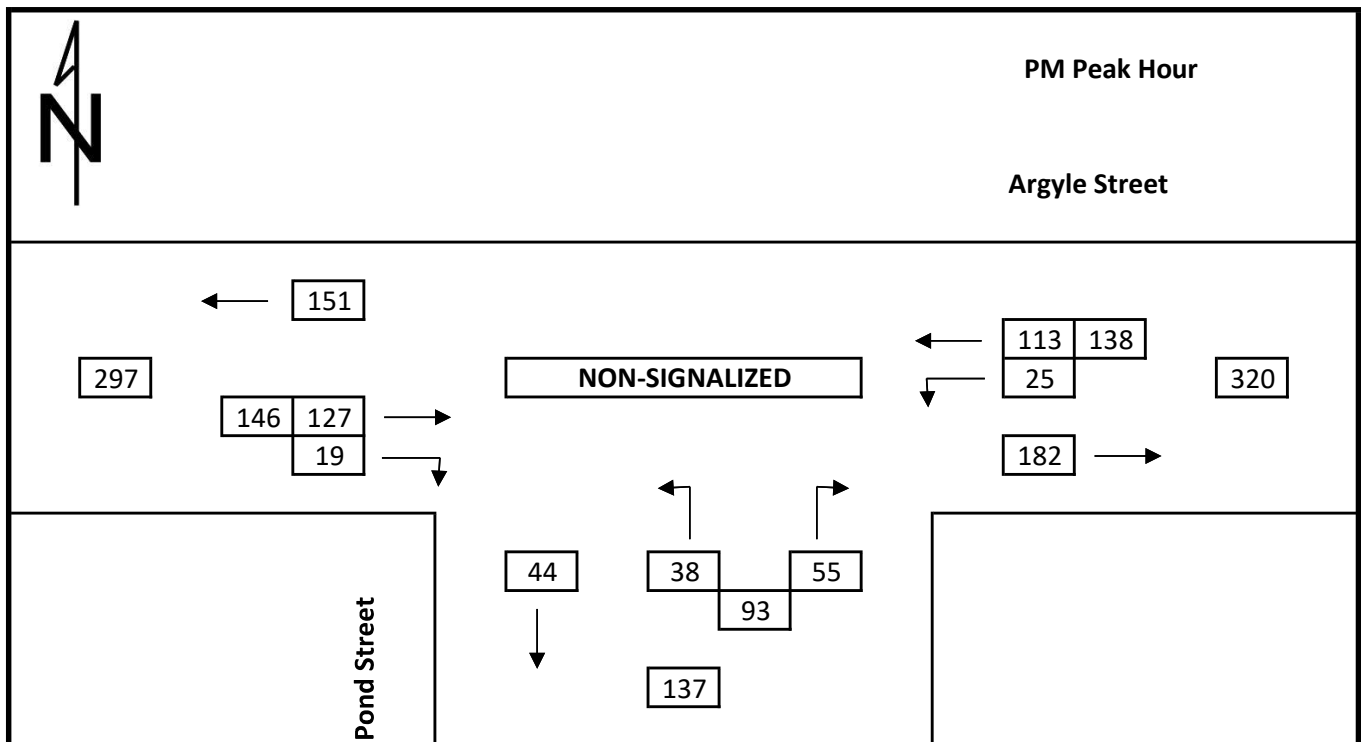
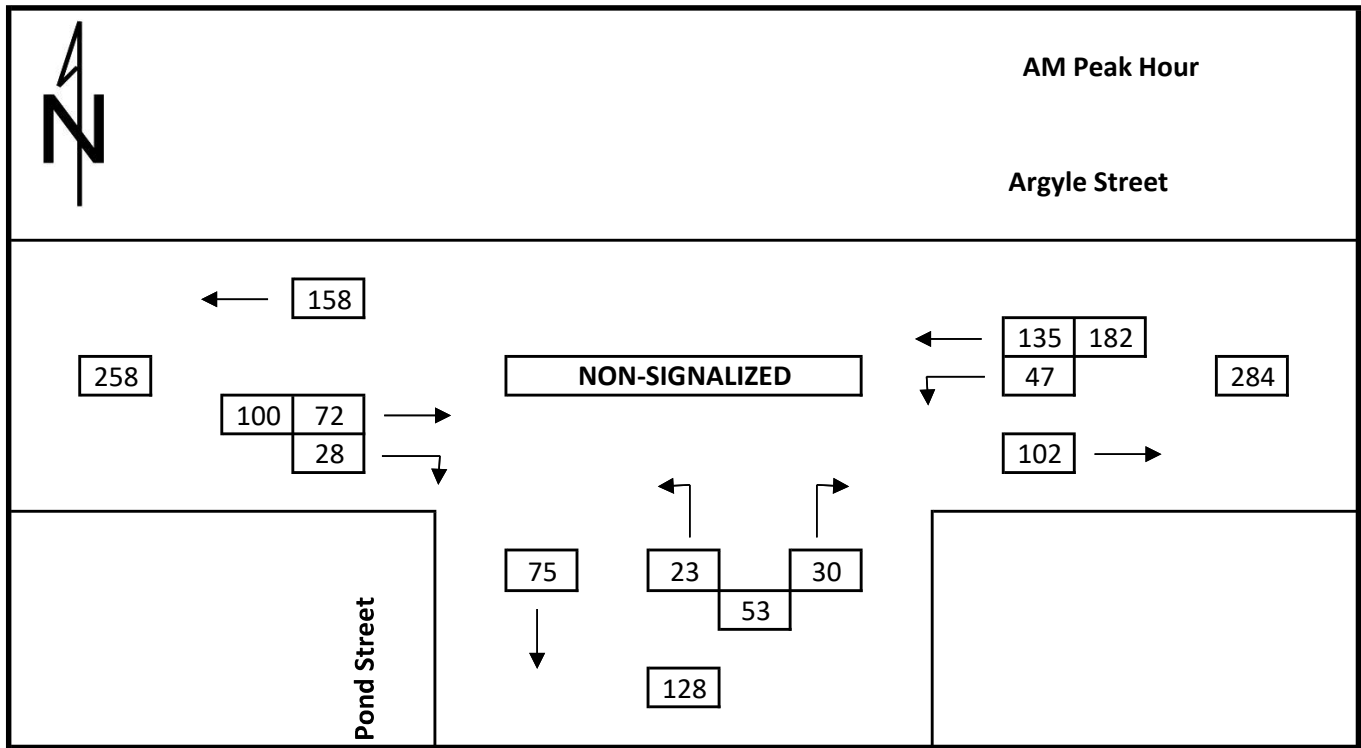
Total Trips		
	Trips Entering	Trips Exiting
AM Peak	6	18
PM Peak	18	11

Appendix C

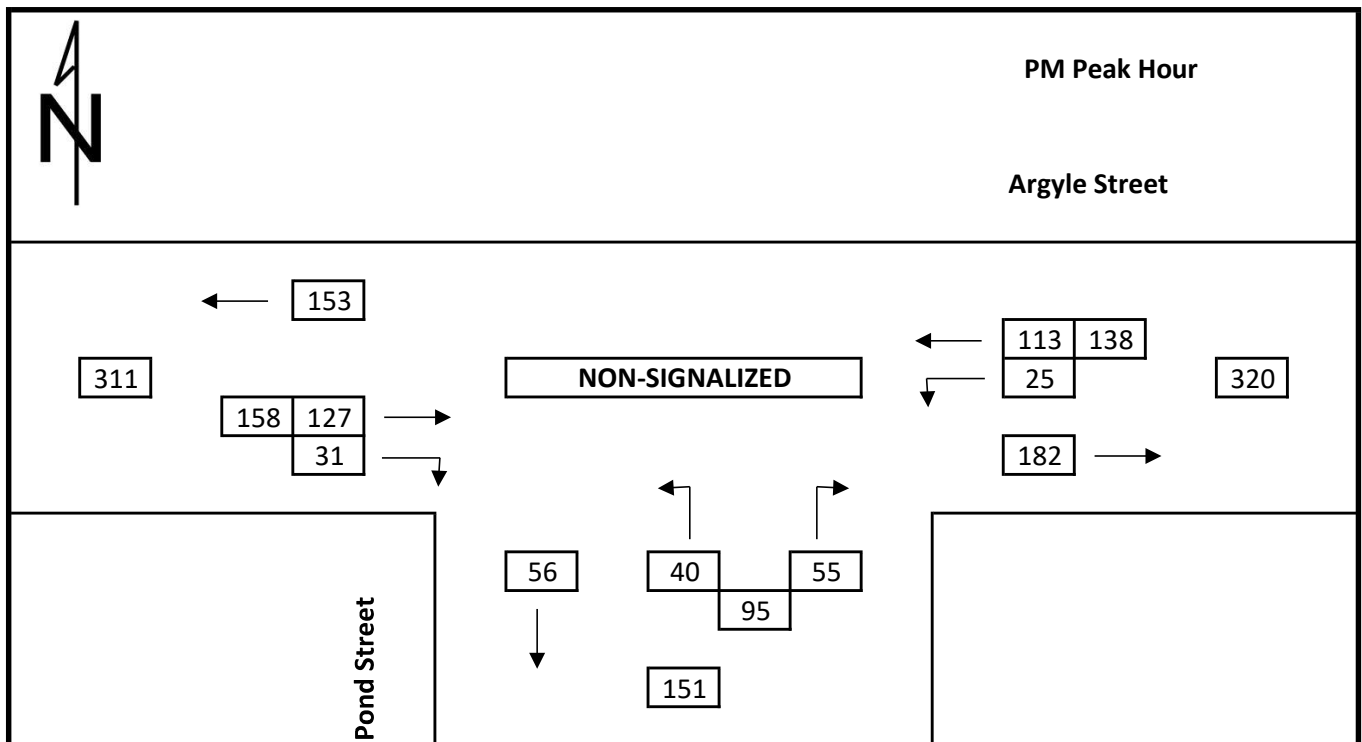
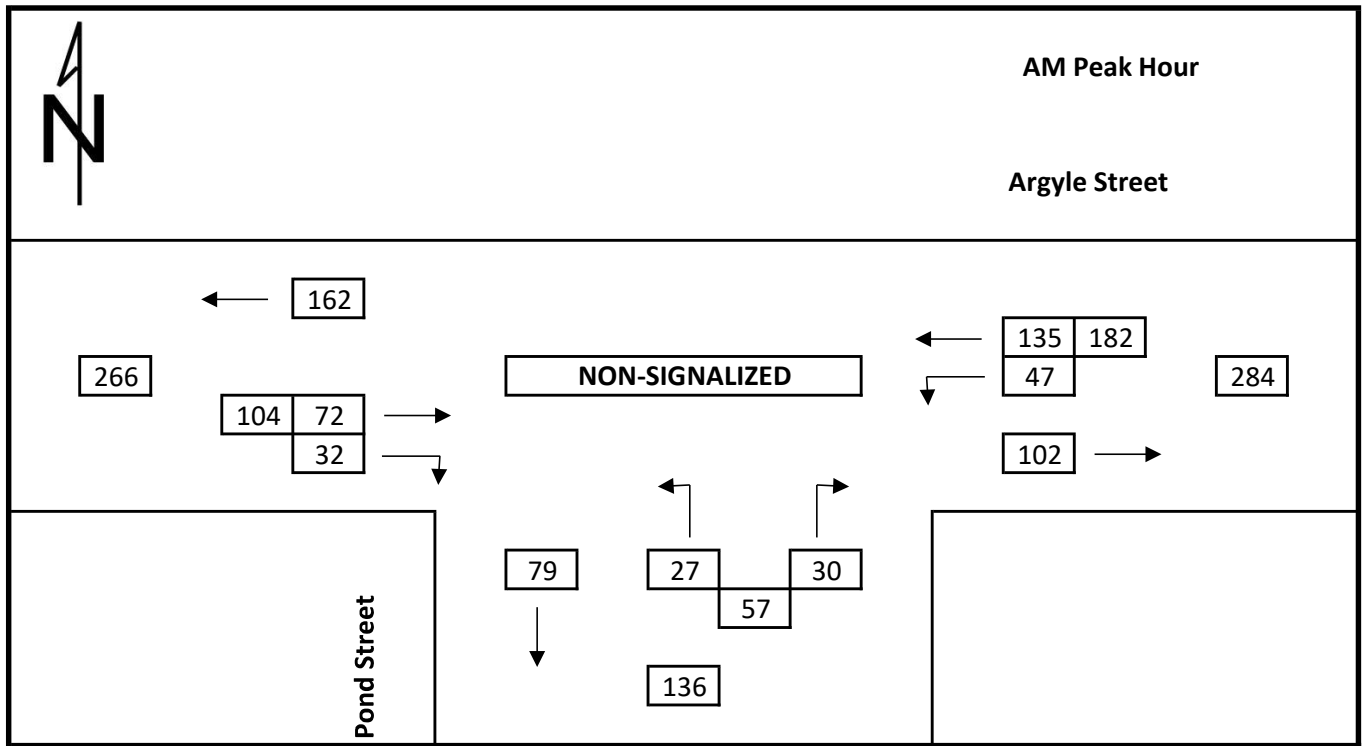
TRAFFIC PROJECTION FIGURES

**Argyle Street at Pond Street
Victoria Street at Pond Street**

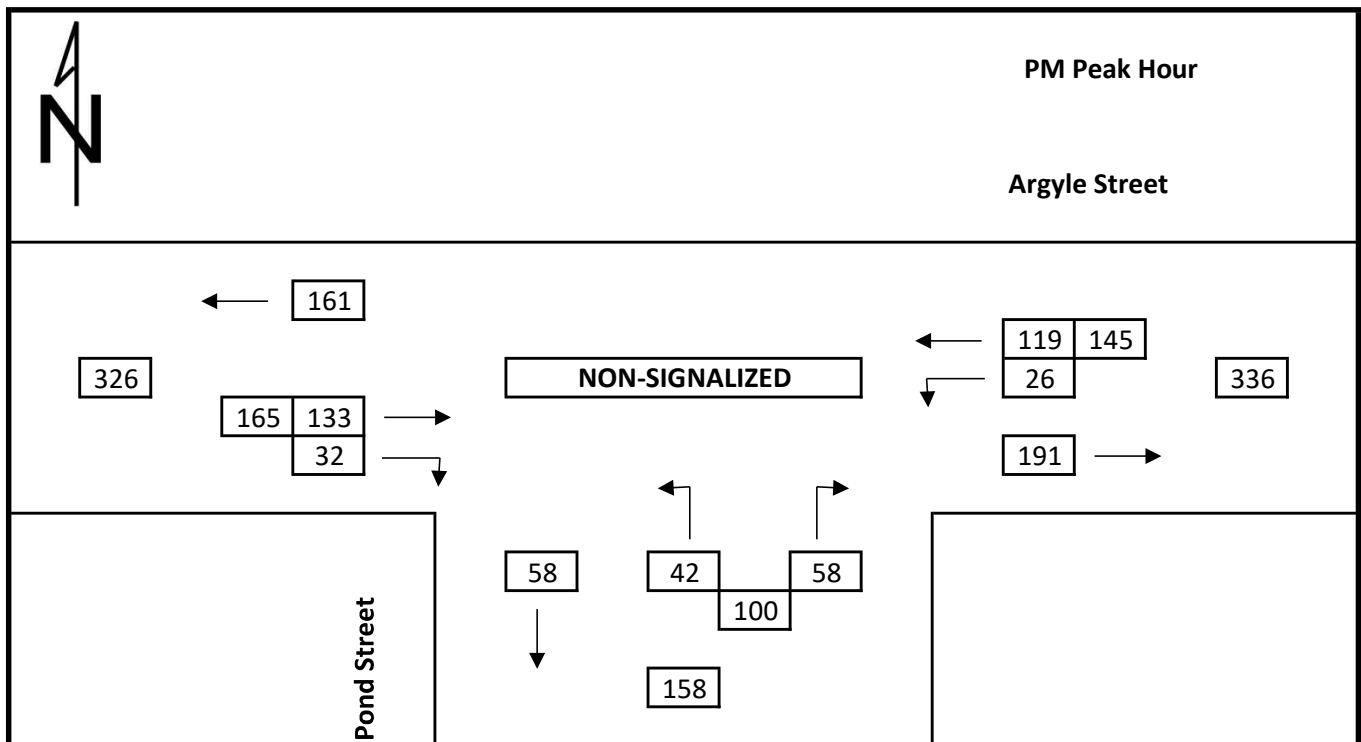
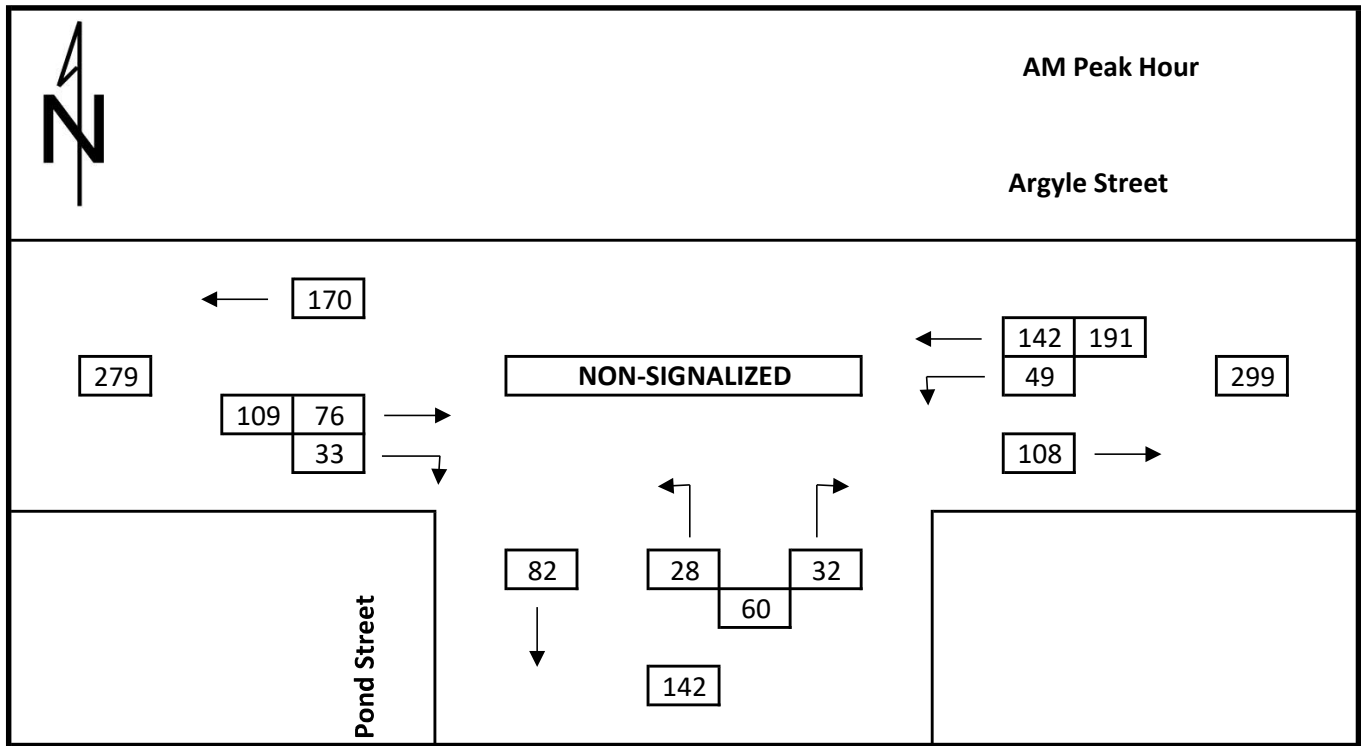
Existing Traffic Counts Argyle Street at Pond Street



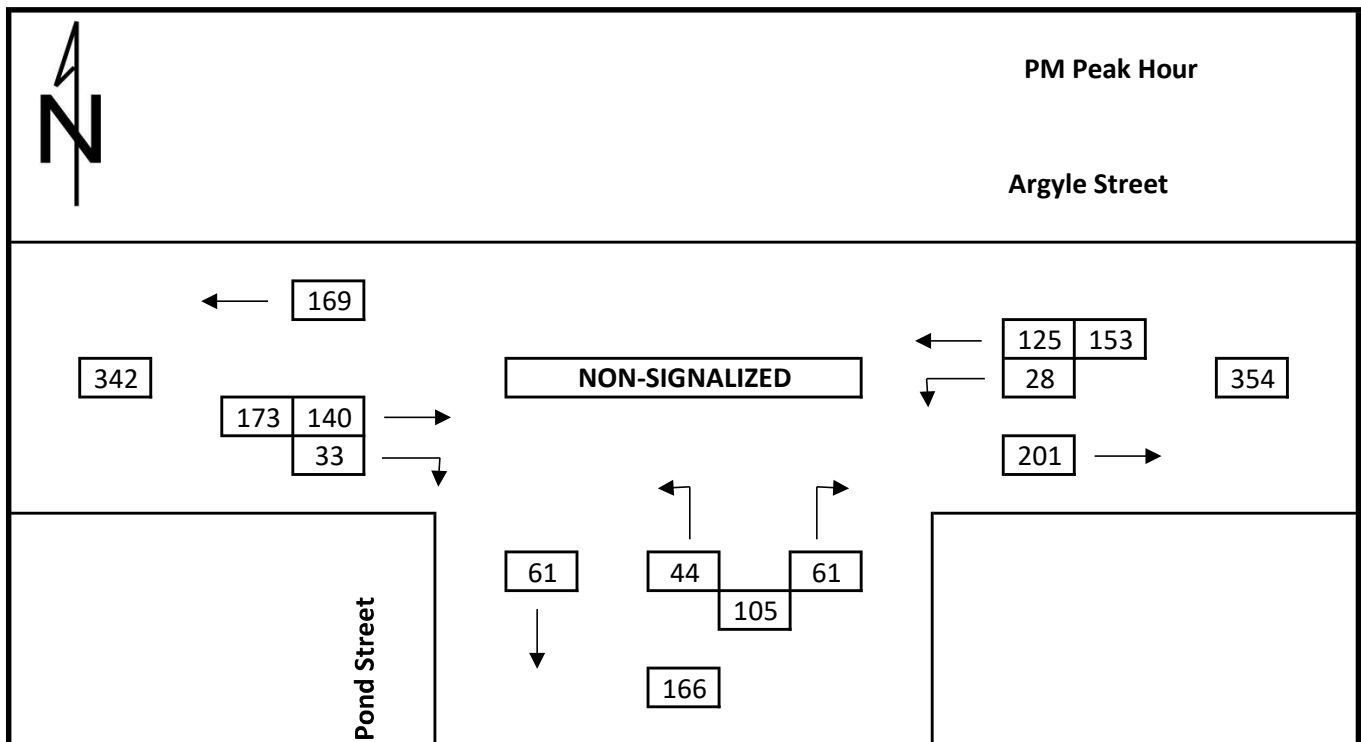
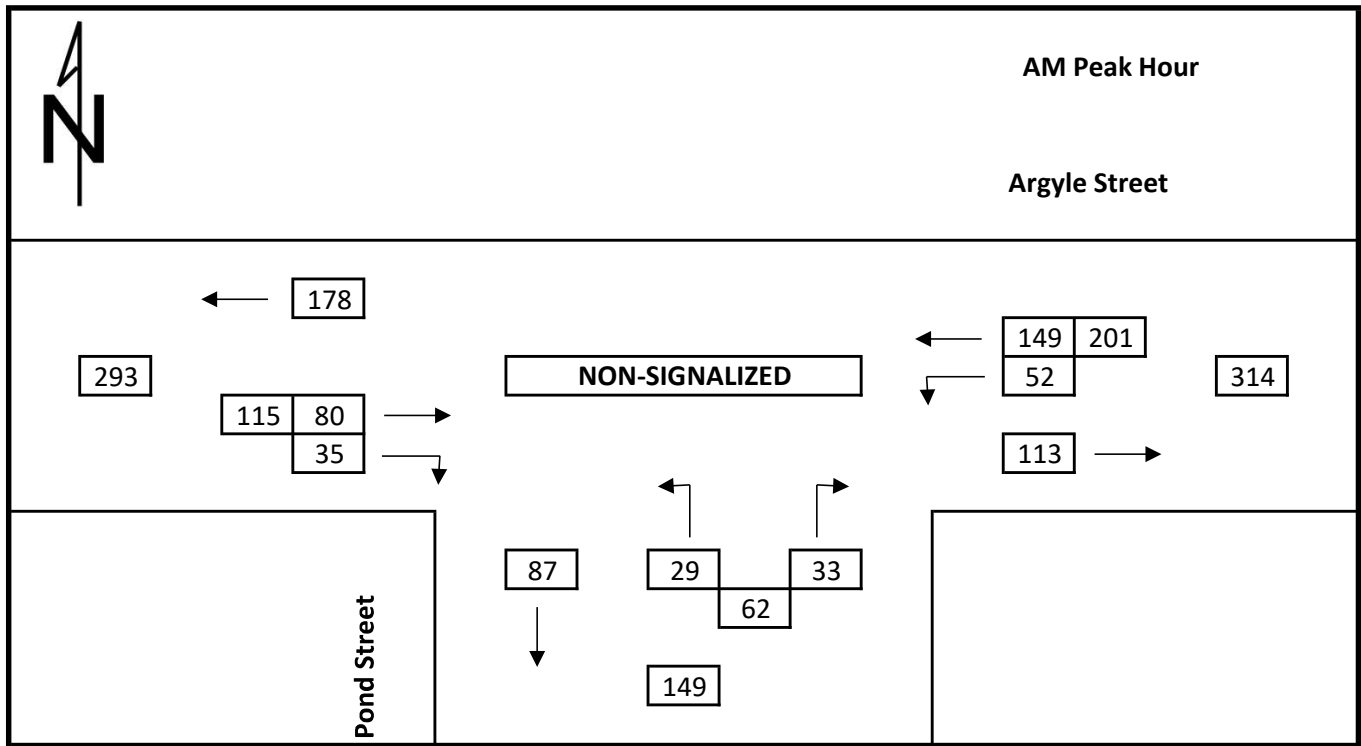
Existing + Site Generated Traffic
Argyle Street at Pond Street



Total Traffic 2025
Argyle Street at Pond Street

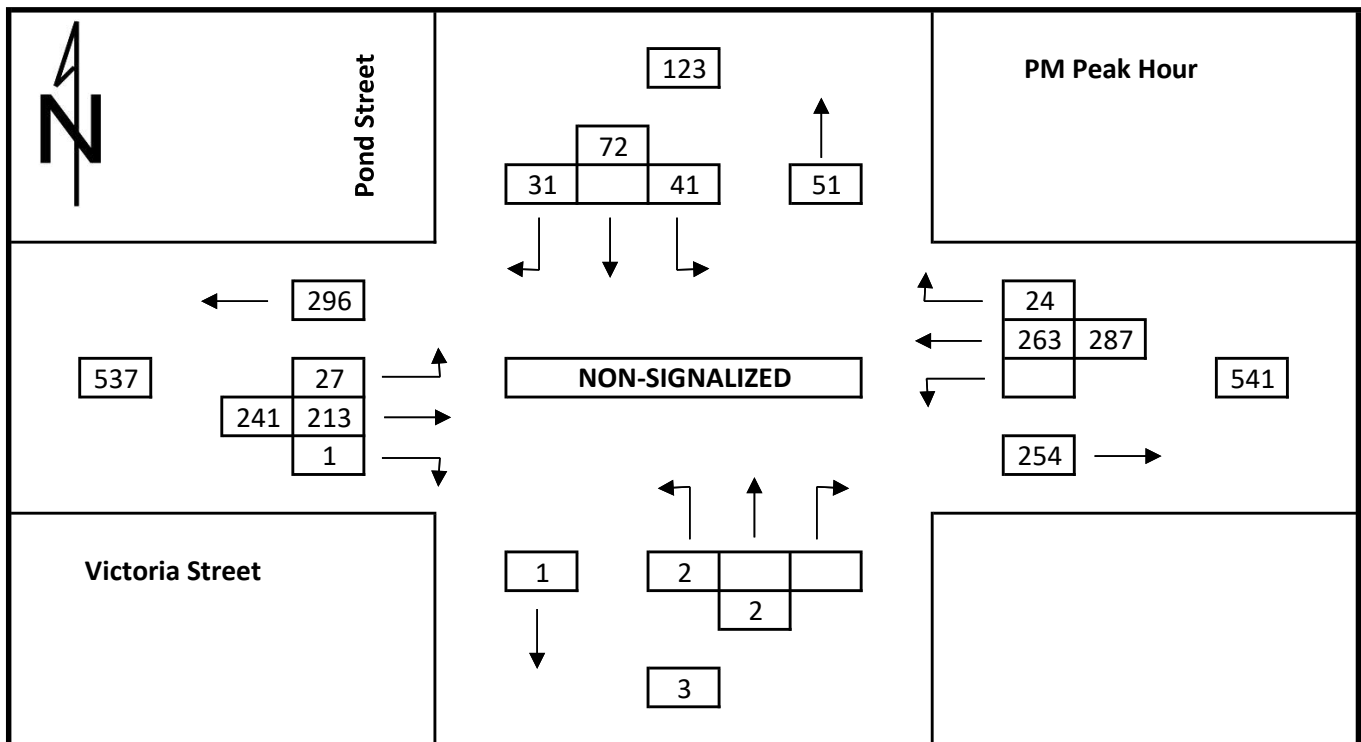
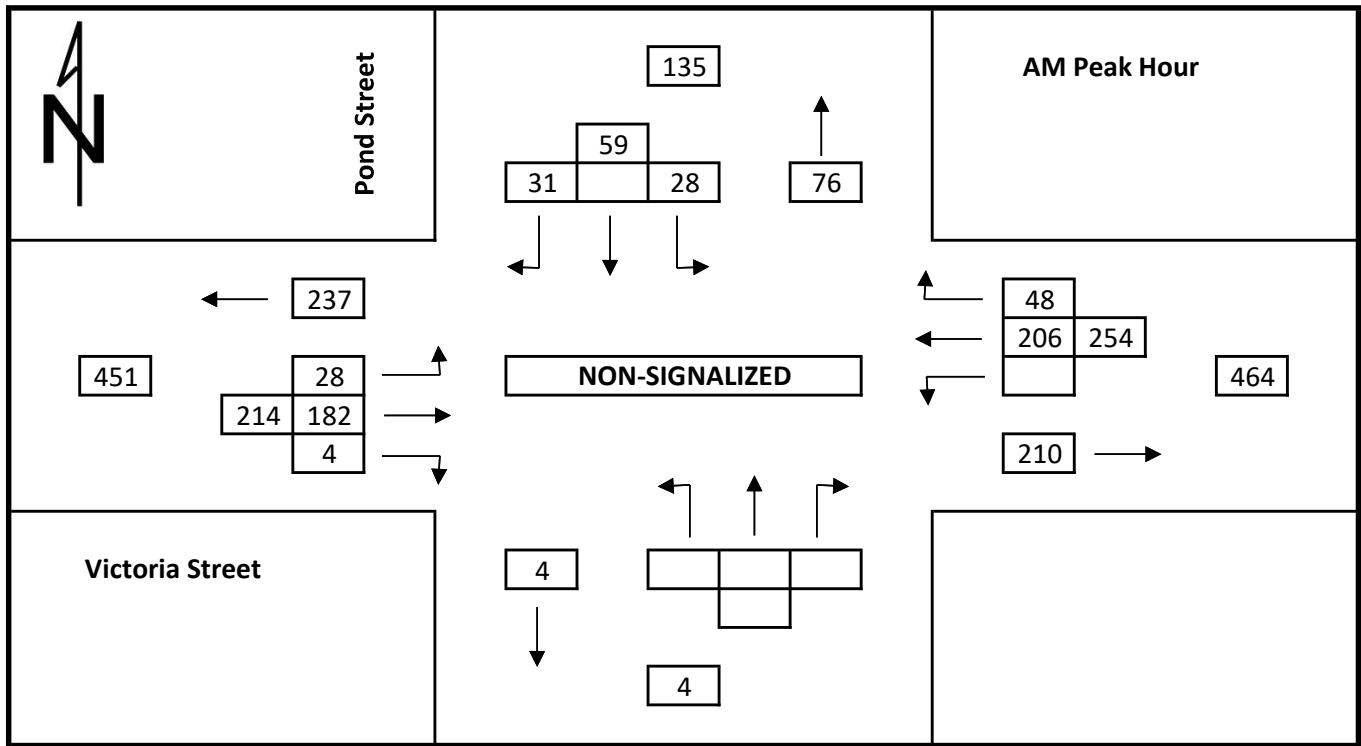


Total Traffic 2030
Argyle Street at Pond Street

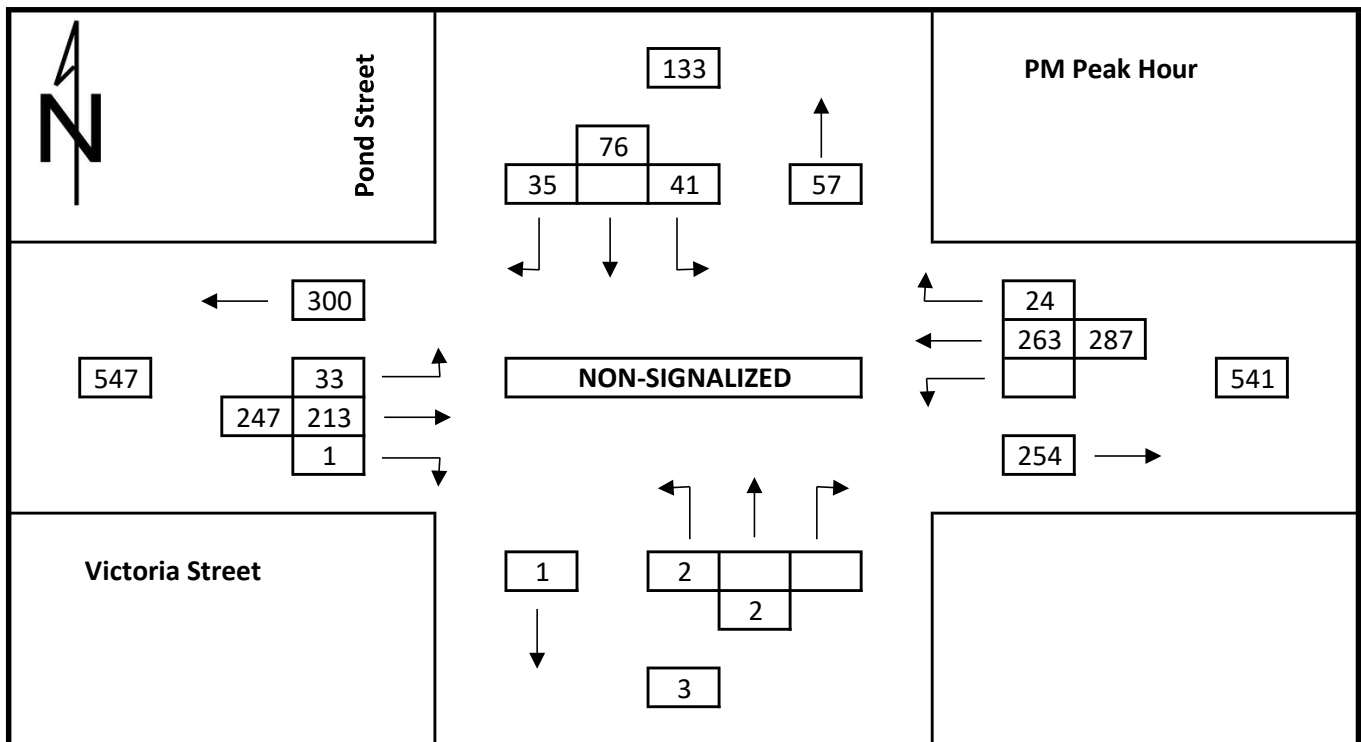
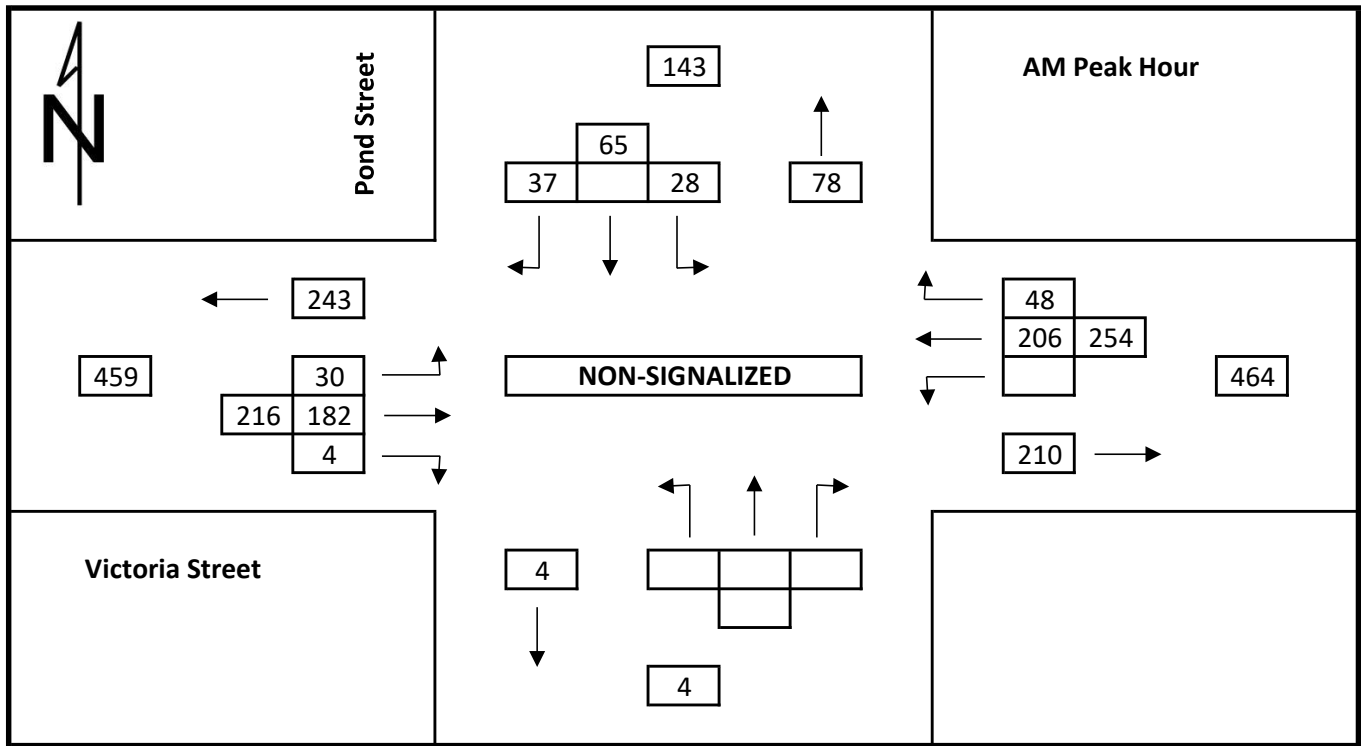


Existing Traffic Counts

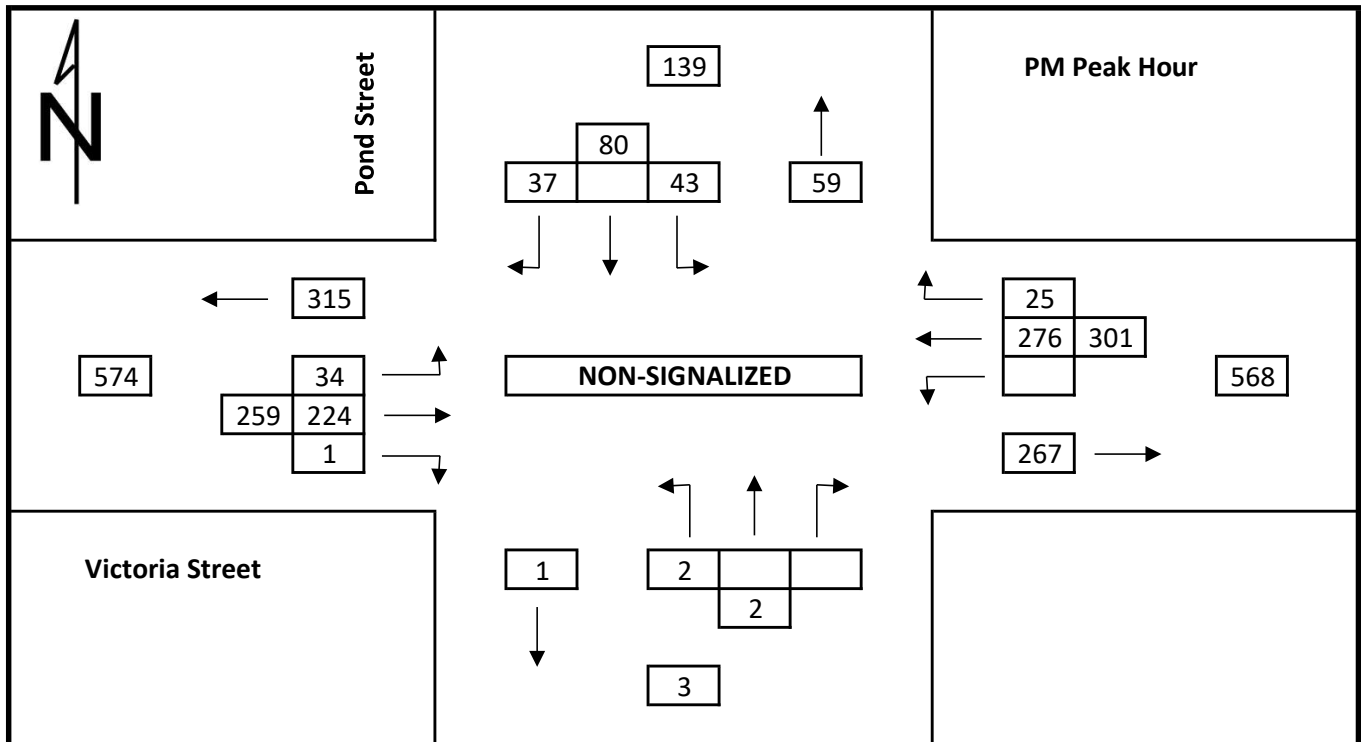
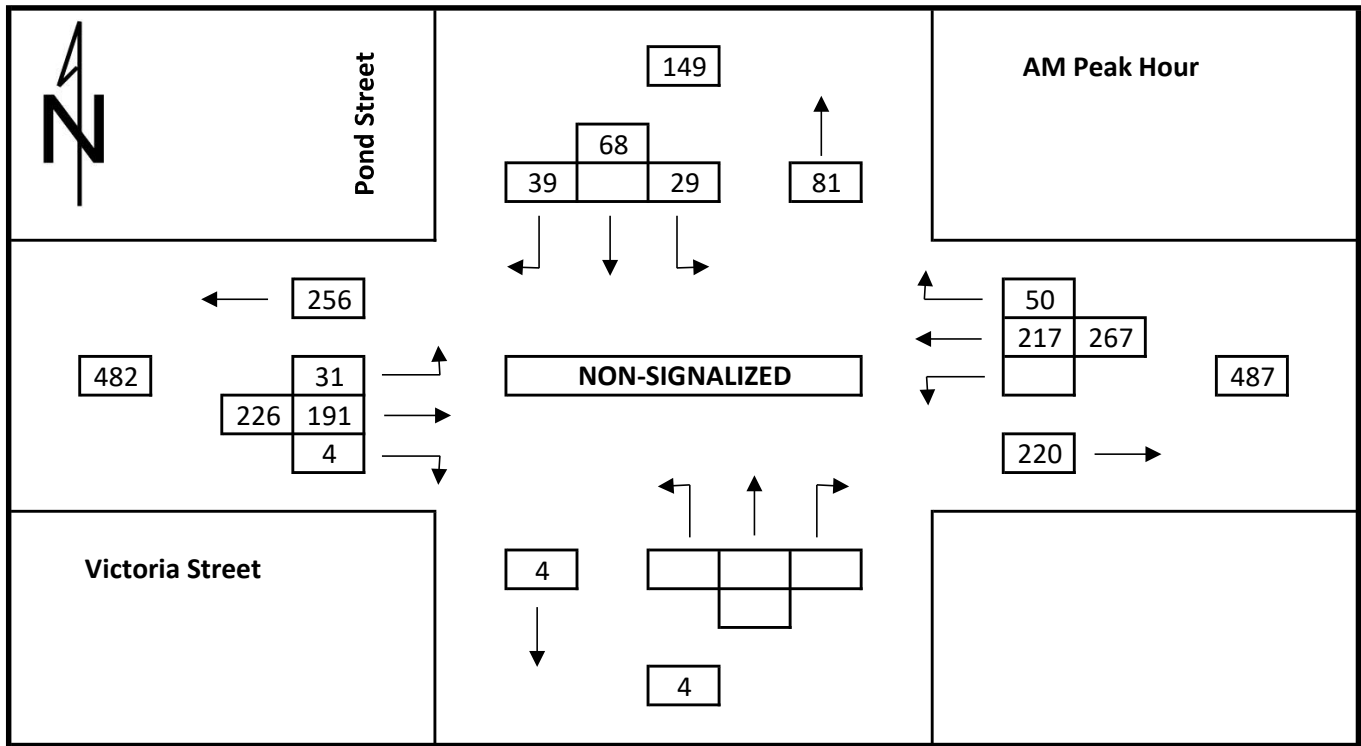
Victoria Street at Pond Street



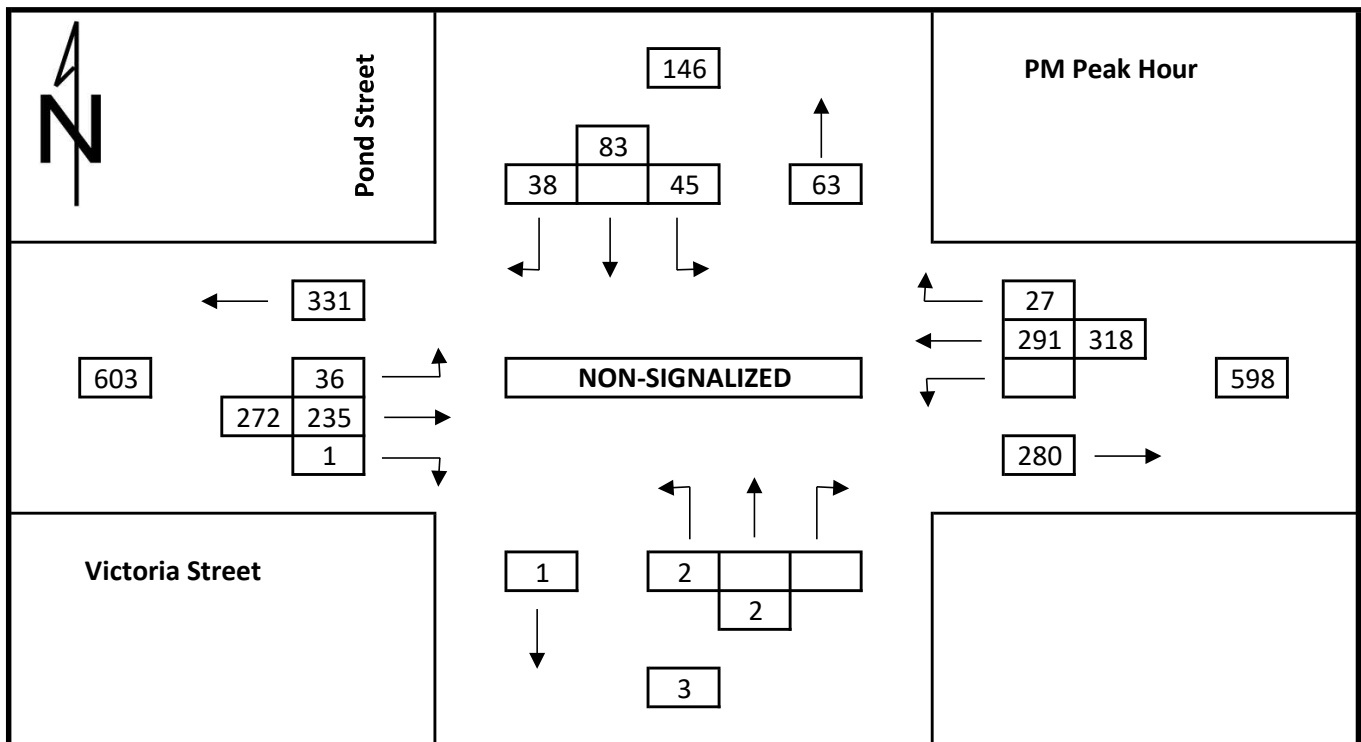
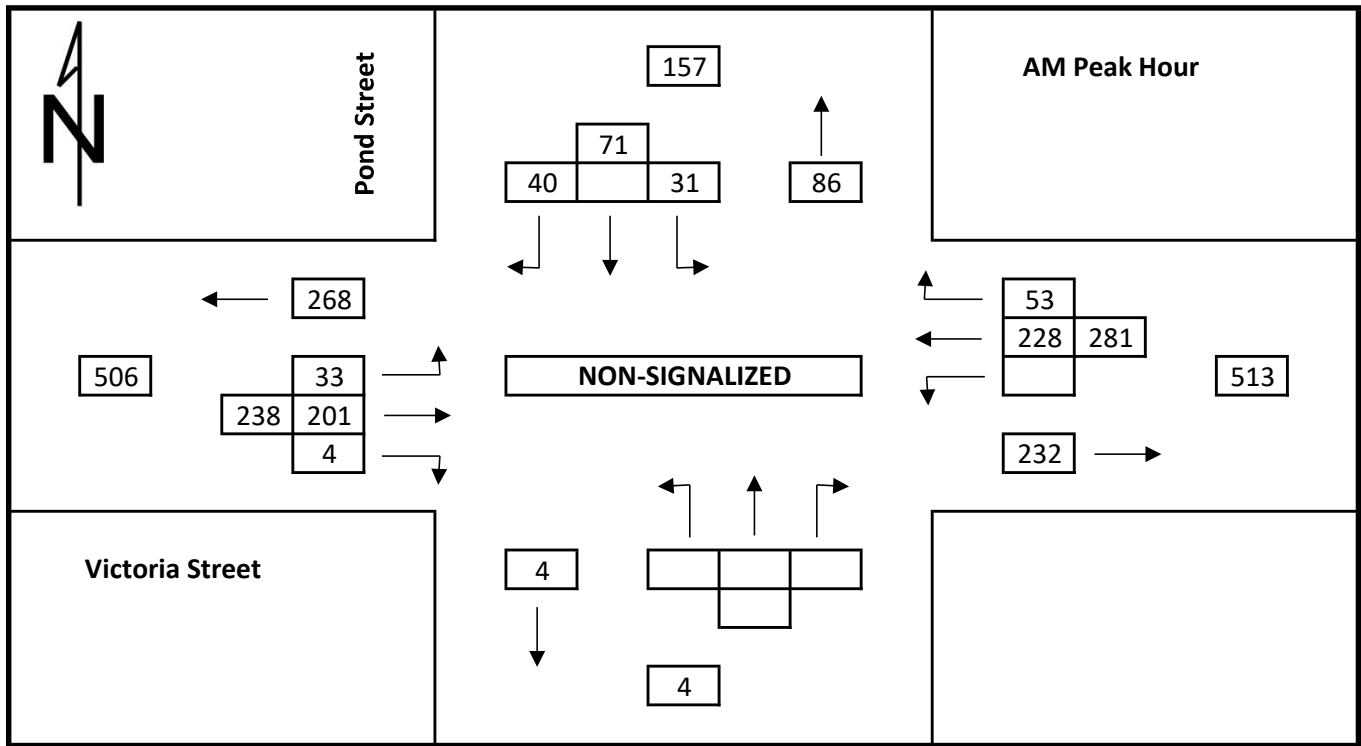
Existing + Site Generated Traffic
Victoria Street at Pond Street



Total Traffic 2025
Victoria Street at Pond Street



Total Traffic 2030
Victoria Street at Pond Street



Appendix D

DETAILED SYNCHRO RESULTS

**Argyle Street at Pond Street
Victoria Street at Pond Street**

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	28	47	135	23	30
Future Vol, veh/h	72	28	47	135	23	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	2	6	9	0
Mvmt Flow	78	30	51	147	25	33
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	108	0	342	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	-	-	4.12	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.218	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1483	-	640	970
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1483	-	616	970
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	776	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.9		10		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	776	-	-	1483	-	
HCM Lane V/C Ratio	0.074	-	-	0.034	-	
HCM Control Delay (s)	10	-	-	7.5	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	19	25	113	38	55
Future Vol, veh/h	127	19	25	113	38	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	2	5	5
Mvmt Flow	138	21	27	123	41	60
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	159	0	326	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.1	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1433	-	662	890
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1433	-	649	890
Mov Cap-2 Maneuver	-	-	-	-	649	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	846	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.4		10.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	773	-	-	1433	-	
HCM Lane V/C Ratio	0.131	-	-	0.019	-	
HCM Control Delay (s)	10.4	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	32	47	135	27	30
Future Vol, veh/h	72	32	47	135	27	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	2	6	9	0
Mvmt Flow	78	35	51	147	29	33
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	113	0	345	96
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	-	-	4.12	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.218	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1476	-	638	966
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1476	-	614	966
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	776	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.9		10.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	760	-	-	1476	-	
HCM Lane V/C Ratio	0.082	-	-	0.035	-	
HCM Control Delay (s)	10.2	-	-	7.5	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	31	25	113	40	55
Future Vol, veh/h	127	31	25	113	40	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	2	5	5
Mvmt Flow	138	34	27	123	43	60
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	172	0	332	155
Stage 1	-	-	-	-	155	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.1	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1417	-	657	883
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1417	-	644	883
Mov Cap-2 Maneuver	-	-	-	-	644	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	846	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.4		10.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	764	-	-	1417	-	
HCM Lane V/C Ratio	0.135	-	-	0.019	-	
HCM Control Delay (s)	10.4	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	33	49	142	28	32
Future Vol, veh/h	76	33	49	142	28	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	2	6	9	0
Mvmt Flow	83	36	53	154	30	35
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	119	0	361	101
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	-	-	4.12	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.218	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1469	-	624	960
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1469	-	600	960
Mov Cap-2 Maneuver	-	-	-	-	600	-
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	767	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.9		10.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	750	-	-	1469	-	
HCM Lane V/C Ratio	0.087	-	-	0.036	-	
HCM Control Delay (s)	10.3	-	-	7.5	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	133	32	26	119	42	58
Future Vol, veh/h	133	32	26	119	42	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	2	5	5
Mvmt Flow	145	35	28	129	46	63
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	180	0	348	163
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	185	-
Critical Hdwy	-	-	4.1	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1408	-	643	874
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1408	-	629	874
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	839	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.4		10.6	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	751	-	-	1408	-	
HCM Lane V/C Ratio	0.145	-	-	0.02	-	
HCM Control Delay (s)	10.6	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	35	52	149	29	33
Future Vol, veh/h	80	35	52	149	29	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	2	6	9	0
Mvmt Flow	87	38	57	162	32	36
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	125	0	382	106
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	276	-
Critical Hdwy	-	-	4.12	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.218	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1462	-	607	954
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	755	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1462	-	581	954
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	755	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	2		10.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	734	-	-	1462	-	
HCM Lane V/C Ratio	0.092	-	-	0.039	-	
HCM Control Delay (s)	10.4	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	140	33	28	125	44	61
Future Vol, veh/h	140	33	28	125	44	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	2	5	5
Mvmt Flow	152	36	30	136	48	66
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	188	0	366	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	196	-
Critical Hdwy	-	-	4.1	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1398	-	628	866
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1398	-	614	866
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	830	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.4		10.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	739	-	-	1398	-	
HCM Lane V/C Ratio	0.154	-	-	0.022	-	
HCM Control Delay (s)	10.8	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	182	4	0	206	48	0	0	0	28	0	31
Future Vol, veh/h	28	182	4	0	206	48	0	0	0	28	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	0	5	4	0	0	0	7	0	3
Mvmt Flow	30	198	4	0	224	52	0	0	0	30	0	34
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	202	0	0	527	536	200	510	512	250
Stage 1	-	-	-	-	-	-	260	260	-	250	250	-
Stage 2	-	-	-	-	-	-	267	276	-	260	262	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1299	-	-	1382	-	-	465	454	846	466	468	786
Stage 1	-	-	-	-	-	-	749	697	-	743	704	-
Stage 2	-	-	-	-	-	-	743	685	-	734	695	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1299	-	-	1382	-	-	437	444	846	458	457	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	437	444	-	458	457	-
Stage 1	-	-	-	-	-	-	732	681	-	726	704	-
Stage 2	-	-	-	-	-	-	711	685	-	717	679	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0			0			11.9		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1299	-	-	1382	-	-	587				
HCM Lane V/C Ratio	-	0.023	-	-	-	-	-	0.109				
HCM Control Delay (s)	0	7.8	-	-	0	-	-	11.9				
HCM Lane LOS	A	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4				

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	213	1	0	263	24	2	0	0	41	0	31
Future Vol, veh/h	27	213	1	0	263	24	2	0	0	41	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	11	1	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	29	232	1	0	286	26	2	0	0	45	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	233	0	0	607	603	233	590	590	299
Stage 1	-	-	-	-	-	-	291	291	-	299	299	-
Stage 2	-	-	-	-	-	-	316	312	-	291	291	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1199	-	-	1346	-	-	411	416	811	422	423	745
Stage 1	-	-	-	-	-	-	721	675	-	714	670	-
Stage 2	-	-	-	-	-	-	699	661	-	721	675	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1346	-	-	385	406	811	414	413	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	385	406	-	414	413	-
Stage 1	-	-	-	-	-	-	704	659	-	697	670	-
Stage 2	-	-	-	-	-	-	667	661	-	704	659	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	14.4	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	385	1199	-	-	1346	-	-	512
HCM Lane V/C Ratio	0.006	0.024	-	-	-	-	-	0.153
HCM Control Delay (s)	14.4	8.1	-	-	0	-	-	13.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	182	4	0	206	48	0	0	0	28	0	37
Future Vol, veh/h	30	182	4	0	206	48	0	0	0	28	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	0	5	4	0	0	0	7	0	3
Mvmt Flow	33	198	4	0	224	52	0	0	0	30	0	40
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	202	0	0	536	542	200	516	518	250
Stage 1	-	-	-	-	-	-	266	266	-	250	250	-
Stage 2	-	-	-	-	-	-	270	276	-	266	268	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1299	-	-	1382	-	-	459	450	846	462	465	786
Stage 1	-	-	-	-	-	-	744	692	-	743	704	-
Stage 2	-	-	-	-	-	-	740	685	-	728	691	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1299	-	-	1382	-	-	427	439	846	453	453	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	427	439	-	453	453	-
Stage 1	-	-	-	-	-	-	725	675	-	724	704	-
Stage 2	-	-	-	-	-	-	702	685	-	710	674	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			0			11.8		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1299	-	-	1382	-	-	597				
HCM Lane V/C Ratio	-	0.025	-	-	-	-	-	0.118				
HCM Control Delay (s)	0	7.8	-	-	0	-	-	11.8				
HCM Lane LOS	A	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	213	1	0	263	24	2	0	0	41	0	35
Future Vol, veh/h	33	213	1	0	263	24	2	0	0	41	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	11	1	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	36	232	1	0	286	26	2	0	0	45	0	38
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	233	0	0	623	617	233	604	604	299
Stage 1	-	-	-	-	-	-	305	305	-	299	299	-
Stage 2	-	-	-	-	-	-	318	312	-	305	305	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1199	-	-	1346	-	-	401	408	811	413	415	745
Stage 1	-	-	-	-	-	-	709	666	-	714	670	-
Stage 2	-	-	-	-	-	-	698	661	-	709	666	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1346	-	-	372	396	811	404	403	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	372	396	-	404	403	-
Stage 1	-	-	-	-	-	-	688	646	-	693	670	-
Stage 2	-	-	-	-	-	-	662	661	-	688	646	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			14.7			13.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	372	1199	-	-	1346	-	-	512				
HCM Lane V/C Ratio	0.006	0.03	-	-	-	-	-	0.161				
HCM Control Delay (s)	14.7	8.1	-	-	0	-	-	13.4				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.6				

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	191	4	0	217	50	0	0	0	29	0	39
Future Vol, veh/h	31	191	4	0	217	50	0	0	0	29	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	0	5	4	0	0	0	7	0	3
Mvmt Flow	34	208	4	0	236	54	0	0	0	32	0	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	290	0	0	212	0	0	562	568	210	541	543	263
Stage 1	-	-	-	-	-	-	278	278	-	263	263	-
Stage 2	-	-	-	-	-	-	284	290	-	278	280	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1283	-	-	1370	-	-	441	435	835	444	450	773
Stage 1	-	-	-	-	-	-	733	684	-	731	694	-
Stage 2	-	-	-	-	-	-	727	676	-	718	683	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1283	-	-	1370	-	-	408	423	835	435	438	773
Mov Cap-2 Maneuver	-	-	-	-	-	-	408	423	-	435	438	-
Stage 1	-	-	-	-	-	-	713	666	-	711	694	-
Stage 2	-	-	-	-	-	-	687	676	-	699	665	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			0			12.1		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1283	-	-	1370	-	-	581				
HCM Lane V/C Ratio	-	0.026	-	-	-	-	-	0.127				
HCM Control Delay (s)	0	7.9	-	-	0	-	-	12.1				
HCM Lane LOS	A	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	224	1	0	276	25	2	0	0	43	0	37
Future Vol, veh/h	34	224	1	0	276	25	2	0	0	43	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	11	1	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	37	243	1	0	300	27	2	0	0	47	0	40
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	327	0	0	244	0	0	652	645	244	632	632	314
Stage 1	-	-	-	-	-	-	318	318	-	314	314	-
Stage 2	-	-	-	-	-	-	334	327	-	318	318	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1184	-	-	1334	-	-	384	393	800	396	400	731
Stage 1	-	-	-	-	-	-	698	657	-	701	660	-
Stage 2	-	-	-	-	-	-	684	651	-	698	657	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1184	-	-	1334	-	-	354	381	800	386	388	731
Mov Cap-2 Maneuver	-	-	-	-	-	-	354	381	-	386	388	-
Stage 1	-	-	-	-	-	-	676	637	-	679	660	-
Stage 2	-	-	-	-	-	-	646	651	-	676	637	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			15.2			13.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	354	1184	-	-	1334	-	-	494				
HCM Lane V/C Ratio	0.006	0.031	-	-	-	-	-	0.176				
HCM Control Delay (s)	15.2	8.1	-	-	0	-	-	13.8				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.6				

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	201	4	0	228	53	0	0	0	31	0	40
Future Vol, veh/h	33	201	4	0	228	53	0	0	0	31	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	0	5	4	0	0	0	7	0	3
Mvmt Flow	36	218	4	0	248	58	0	0	0	34	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	306	0	0	222	0	0	591	598	220	569	571	277
Stage 1	-	-	-	-	-	-	292	292	-	277	277	-
Stage 2	-	-	-	-	-	-	299	306	-	292	294	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1266	-	-	1359	-	-	422	418	825	425	434	759
Stage 1	-	-	-	-	-	-	720	675	-	719	685	-
Stage 2	-	-	-	-	-	-	714	665	-	705	673	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1266	-	-	1359	-	-	389	406	825	416	422	759
Mov Cap-2 Maneuver	-	-	-	-	-	-	389	406	-	416	422	-
Stage 1	-	-	-	-	-	-	700	656	-	699	685	-
Stage 2	-	-	-	-	-	-	673	665	-	685	654	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	0	12.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1266	-	-	1359	-	-	558
HCM Lane V/C Ratio	-	0.028	-	-	-	-	-	0.138
HCM Control Delay (s)	0	7.9	-	-	0	-	-	12.5
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	235	1	0	291	27	2	0	0	45	0	38
Future Vol, veh/h	36	235	1	0	291	27	2	0	0	45	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	11	1	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	39	255	1	0	316	29	2	0	0	49	0	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	345	0	0	256	0	0	685	679	256	665	665	331
Stage 1	-	-	-	-	-	-	334	334	-	331	331	-
Stage 2	-	-	-	-	-	-	351	345	-	334	334	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1165	-	-	1321	-	-	365	376	788	376	383	715
Stage 1	-	-	-	-	-	-	684	647	-	687	649	-
Stage 2	-	-	-	-	-	-	670	640	-	684	647	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1165	-	-	1321	-	-	335	364	788	366	370	715
Mov Cap-2 Maneuver	-	-	-	-	-	-	335	364	-	366	370	-
Stage 1	-	-	-	-	-	-	661	626	-	664	649	-
Stage 2	-	-	-	-	-	-	631	640	-	661	626	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	15.8	14.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	335	1165	-	-	1321	-	-	471
HCM Lane V/C Ratio	0.006	0.034	-	-	-	-	-	0.192
HCM Control Delay (s)	15.8	8.2	-	-	0	-	-	14.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7

Appendix E

SIGHT LINE CALCULATIONS

Sydenham Street at Site Access

Pond Street at Site Access

20-969: Pond Street Condominiums, Simcoe TIS - Sight Line Analysis

Design Intersection Sight Distance (TAC Geometric Design Guide for Canadian Roads)

Design Speed: 50km/h (Posted Speed Limit = 40 km/h)

Table 9.9.3: Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck (WB 19 and WB 20)	11.5
Longer truck	To be established by road authority

Intersection Stopping Distance (**ISD**) = $0.278 V_{\text{major}} t_g$

Where:

ISD = intersection sight distance (m)
(length of the leg of sight triangle along the major road)
 V_{major} = design speed of the major road (km/h)
 t_g = time gap for minor road vehicle to enter the major road (s)

ISD_{passenger car} (left turn from stop) = $0.278 \times 50 \times 7.5 = 104 \text{ m}$

Table 9.9.5: Time Gap for Case B2—Right Turn from Stop and Case B3—Crossing Maneuver

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck (WB 19 and WB 20)	10.5

ISD_{passenger car} (right turn from stop) = $0.278 \times 50 \times 6.5 = 90 \text{ m}$

Appendix B

UPDATED SITE PLAN

Appendix C

ITE TRIP GENERATION MANUAL – 11TH EDITION REFERENCES

Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 30

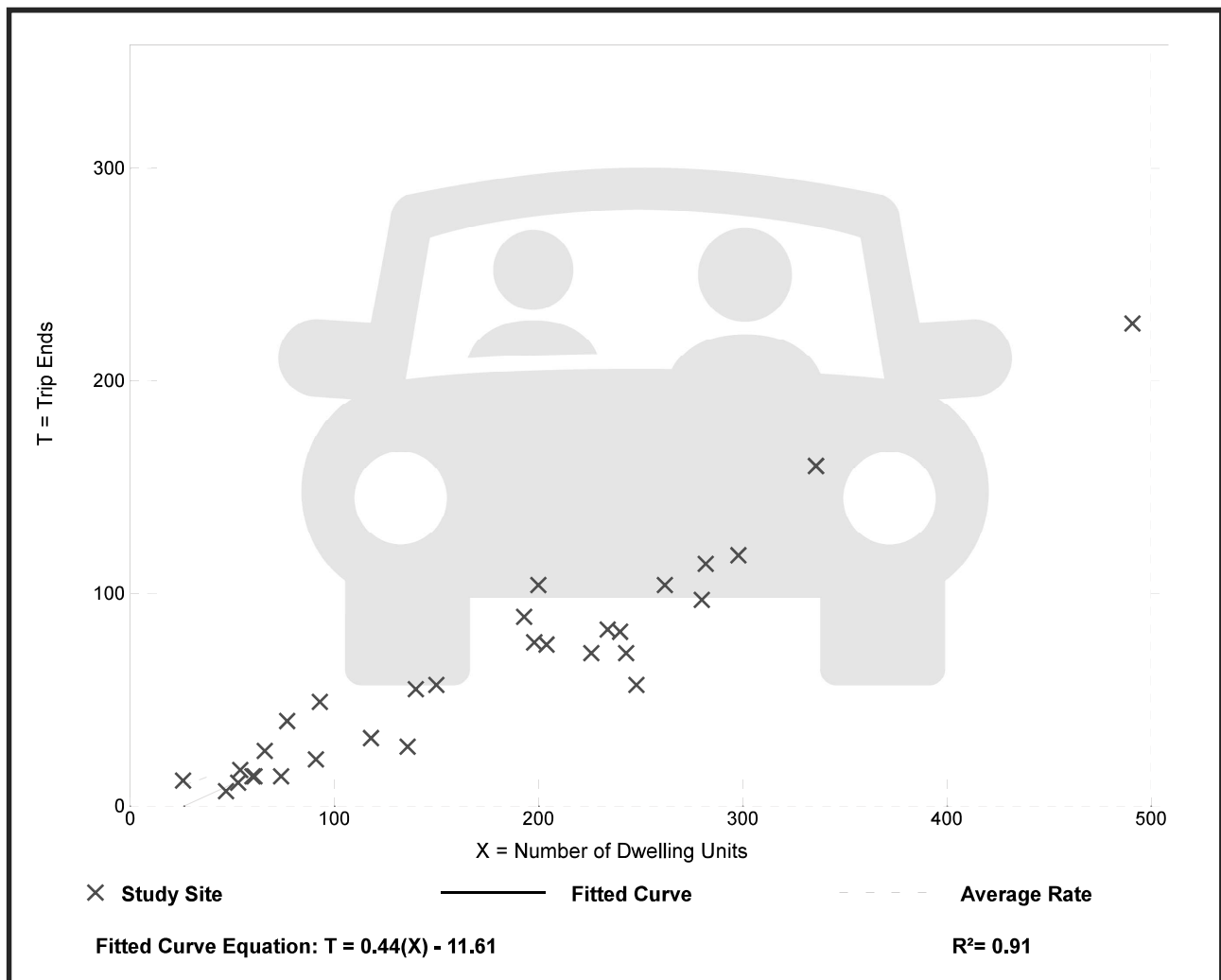
Avg. Num. of Dwelling Units: 173

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 31

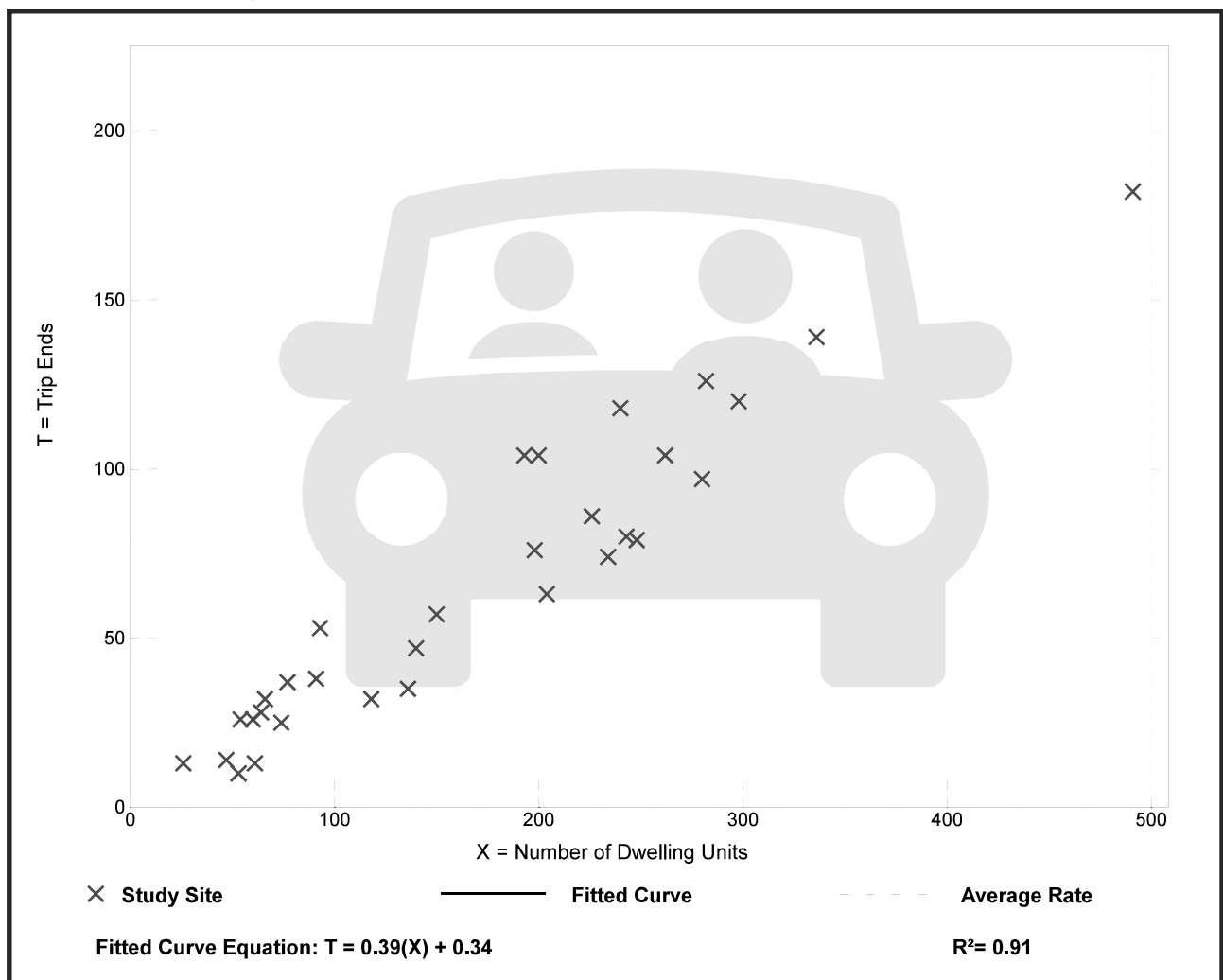
Avg. Num. of Dwelling Units: 169

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Proposed Site Development Trip Generation and Distribution

Project: Pond Street Condominiums Traffic Impact Study

Site: 56 Pond Street - Simcoe, Ontario

Assumed Land Use (1): Multifamily Housing (Mid-Rise)- ITE No. 221

Average Vehicle Trip Ends vs.: Dwelling Units

ITE Trip Generation Data collected on a: Weekday

AM Peak Hour:

0.37

 = Average Rate

23
77

 % Entering
% Exiting

PM Peak Hour:

0.39

 = Average Rate

61
39

 % Entering
% Exiting

Assumed Land Use (1): Multifamily Housing (Mid-Rise)- ITE No. 221				
	Dwelling Units	Trips Generated	Trips Entering	Trips Exiting
AM Peak	67	25	6	19
PM Peak	67	26	16	10

Total Trips		
	Trips Entering	Trips Exiting
AM Peak	6	19
PM Peak	16	10

Appendix D

DETAILED SYNCHRO RESULTS

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	28	47	135	23	30
Future Vol, veh/h	72	28	47	135	23	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	2	6	9	0
Mvmt Flow	78	30	51	147	25	33
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	108	0	342	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	-	-	4.12	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.218	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1483	-	640	970
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1483	-	616	970
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	776	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.9		10	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	776	-	-	1483	-	
HCM Lane V/C Ratio	0.074	-	-	0.034	-	
HCM Control Delay (s)	10	-	-	7.5	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	19	25	113	38	55
Future Vol, veh/h	127	19	25	113	38	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	2	5	5
Mvmt Flow	138	21	27	123	41	60
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	159	0	326	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.1	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1433	-	662	890
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1433	-	649	890
Mov Cap-2 Maneuver	-	-	-	-	649	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	846	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.4		10.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	773	-	-	1433	-	
HCM Lane V/C Ratio	0.131	-	-	0.019	-	
HCM Control Delay (s)	10.4	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	182	4	0	206	48	0	0	0	28	0	31
Future Vol, veh/h	28	182	4	0	206	48	0	0	0	28	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	0	5	4	0	0	0	7	0	3
Mvmt Flow	30	198	4	0	224	52	0	0	0	30	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	202	0	0	527	536	200	510	512	250
Stage 1	-	-	-	-	-	-	260	260	-	250	250	-
Stage 2	-	-	-	-	-	-	267	276	-	260	262	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1299	-	-	1382	-	-	465	454	846	466	468	786
Stage 1	-	-	-	-	-	-	749	697	-	743	704	-
Stage 2	-	-	-	-	-	-	743	685	-	734	695	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1299	-	-	1382	-	-	437	444	846	458	457	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	437	444	-	458	457	-
Stage 1	-	-	-	-	-	-	732	681	-	726	704	-
Stage 2	-	-	-	-	-	-	711	685	-	717	679	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	0	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1299	-	-	1382	-	-	587
HCM Lane V/C Ratio	-	0.023	-	-	-	-	-	0.109
HCM Control Delay (s)	0	7.8	-	-	0	-	-	11.9
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	213	1	0	263	24	2	0	0	41	0	31
Future Vol, veh/h	27	213	1	0	263	24	2	0	0	41	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	11	1	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	29	232	1	0	286	26	2	0	0	45	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	233	0	0	607	603	233	590	590	299
Stage 1	-	-	-	-	-	-	291	291	-	299	299	-
Stage 2	-	-	-	-	-	-	316	312	-	291	291	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1199	-	-	1346	-	-	411	416	811	422	423	745
Stage 1	-	-	-	-	-	-	721	675	-	714	670	-
Stage 2	-	-	-	-	-	-	699	661	-	721	675	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1346	-	-	385	406	811	414	413	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	385	406	-	414	413	-
Stage 1	-	-	-	-	-	-	704	659	-	697	670	-
Stage 2	-	-	-	-	-	-	667	661	-	704	659	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	14.4	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	385	1199	-	-	1346	-	-	512
HCM Lane V/C Ratio	0.006	0.024	-	-	-	-	-	0.153
HCM Control Delay (s)	14.4	8.1	-	-	0	-	-	13.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.5

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	35	52	149	29	33
Future Vol, veh/h	80	35	52	149	29	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	7	2	6	9	0
Mvmt Flow	87	38	57	162	32	36
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	125	0	382	106
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	276	-
Critical Hdwy	-	-	4.12	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.218	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1462	-	607	954
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	755	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1462	-	581	954
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	723	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	2		10.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	734	-	-	1462	-	
HCM Lane V/C Ratio	0.092	-	-	0.039	-	
HCM Control Delay (s)	10.4	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	140	32	28	125	44	61
Future Vol, veh/h	140	32	28	125	44	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	2	5	5
Mvmt Flow	152	35	30	136	48	66
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	187	0	366	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	196	-
Critical Hdwy	-	-	4.1	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1399	-	628	866
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1399	-	614	866
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	811	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.4		10.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	739	-	-	1399	-	
HCM Lane V/C Ratio	0.154	-	-	0.022	-	
HCM Control Delay (s)	10.8	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	201	4	0	228	53	0	0	0	31	0	40
Future Vol, veh/h	33	201	4	0	228	53	0	0	0	31	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	7	0	0	5	4	0	0	0	7	0	3
Mvmt Flow	36	218	4	0	248	58	0	0	0	34	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	306	0	0	222	0	0	591	598	220	569	571	277
Stage 1	-	-	-	-	-	-	292	292	-	277	277	-
Stage 2	-	-	-	-	-	-	299	306	-	292	294	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1266	-	-	1359	-	-	422	418	825	425	434	759
Stage 1	-	-	-	-	-	-	720	675	-	719	685	-
Stage 2	-	-	-	-	-	-	714	665	-	705	673	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1266	-	-	1359	-	-	389	406	825	416	422	759
Mov Cap-2 Maneuver	-	-	-	-	-	-	389	406	-	416	422	-
Stage 1	-	-	-	-	-	-	700	656	-	699	685	-
Stage 2	-	-	-	-	-	-	673	665	-	685	654	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			0			12.5		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1266	-	-	1359	-	-	558
HCM Lane V/C Ratio	-	0.028	-	-	-	-	-	0.138
HCM Control Delay (s)	0	7.9	-	-	0	-	-	12.5
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	235	1	0	291	27	2	0	0	45	0	37
Future Vol, veh/h	35	235	1	0	291	27	2	0	0	45	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	11	1	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	38	255	1	0	316	29	2	0	0	49	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	345	0	0	256	0	0	683	677	256	663	663	331
Stage 1	-	-	-	-	-	-	332	332	-	331	331	-
Stage 2	-	-	-	-	-	-	351	345	-	332	332	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1165	-	-	1321	-	-	366	377	788	377	384	715
Stage 1	-	-	-	-	-	-	686	648	-	687	649	-
Stage 2	-	-	-	-	-	-	670	640	-	686	648	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1165	-	-	1321	-	-	337	365	788	368	371	715
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	365	-	368	371	-
Stage 1	-	-	-	-	-	-	663	627	-	664	649	-
Stage 2	-	-	-	-	-	-	632	640	-	664	627	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	15.8	14.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	337	1165	-	-	1321	-	-	471
HCM Lane V/C Ratio	0.006	0.033	-	-	-	-	-	0.189
HCM Control Delay (s)	15.8	8.2	-	-	0	-	-	14.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.7