

January 23, 2025

City of Ottawa
Planning and Growth Management Department
110 Laurier Ave. W., 4th Floor,
Ottawa, Ontario K1P 1J1

Attention: Mr. Mike Giampa
Project Manager, Infrastructure Approvals

Dear Mr. Giampa:

Reference: 5618 Hazeldean Road
CTS/TIS – Addendum (Phases 2 to 4)
Our File No. 122130

1.0 INTRODUCTION

A Revised Community Transportation Study (CTS)/Transportation Impact Study (TIS) was prepared in support of Draft Plan of Subdivision application for the above property in May 2020. The Draft Plan of Subdivision was approved in July 2021 and the final signed Draft Plan is included in **Appendix A**. Following approval, the lands have been acquired by Minto Communities Inc. and minor alterations to the local street pattern are proposed for lotting purposes.

An addendum, dated November 28th, 2024, was prepared in support of a revised Draft Plan of Subdivision and Zoning By-law Amendment application for Phase 1 of the subdivision. The addendum prepared for Phase 1 reviewed the alterations to Phase 1 of the Draft Plan and assessed transportation related impacts associated with the proposed revisions.

This addendum has been prepared in support of a Zoning By-law Amendment application for Phases 2 to 4 of the subdivision. It will review the proposed alterations to Phases 2 to 4 of the Draft Plan and assess any transportation related impacts associated with the proposed revisions. A copy of the proposed Concept Plan is included in **Appendix B**.

The following table provides a comparison of the number of housing units provided in Phases 2 to 4 the current concept plan to the housing units provided in the previously approved Draft Plan within the same area.

Table 1: Historical Development Statistics

Land Use	Number of Units		Difference
	May 2020	Current Proposal	
Single-Family	204	349	+145
Townhouses	353	527	+174
Multi-Family Housing	747	461	-286
Total	1,304	1,337	+33

2.0 BACKGROUND

Since the approval of the original Draft Plan, the design of Robert Grant Avenue between Abbott Street and Hazeldean Road, through the subject subdivision, has been completed and has advanced to construction. Based on the approved design, the following intersection control is proposed for the subdivision accesses:

- Street 21/23: all movement unsignalized intersection
- Cranesbill Road/Street 17: single lane roundabout
- Street 7: all movement unsignalized intersection
- Street 12: all movement unsignalized intersection

The approved design for Robert Grant Avenue between Abbott Street and Hazeldean Road is included in **Appendix C**.

3.0 TRIP GENERATION

Trips generated by the residential portion of the proposed development were previously estimated using relevant rates for the suburban area in Table 3.18 of the *2009 TRANS Trip Generation Study Report* in the May 2020 CTS report. The trips generated by Phases 2 to 4 in the previous CTS report for the weekday AM and PM peak hours are summarized in **Table 2** below.

The proposed Concept Plan was studied using the trip generation rates presented in the City's *2020 TRANS Trip Generation Study Report*. The trip generation rates for the development are taken from Table 3. The directional split between inbound and outbound trips are based on the splits presented in Table 9 of the report. The trips generated by the proposed development during the weekday AM and PM peak hours for Phases 2 to 4 are summarized in **Table 2** below and compared to the trips generated within the May 2020 CTS report.

Table 2: Person Trip Generation

Table 2.1. Green Trip Generation

Land Use	Units	AM Peak			PM Peak		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Previous TIA							
Single-Family Houses	204	75	185	260	181	107	288
Townhouses	353	136	231	367	255	150	405
Multi-Family Housing	747	242	540	782	438	344	782
	Total	453	956	1,409	874	601	1,475
Revised Development							
Single-Family Houses	349	108	253	361	243	149	392
Townhouses	527	106	252	358	212	166	378
Multi-Family Housing	461	58	128	186	110	78	188
	Total	272	633	905	565	393	958
	DIFFERENCE	-181	-323	-504	-309	-208	-517

Based on the foregoing, when using the updated trip generation rates within the *2020 TRANS Trip Generation Study Report* the proposed development is anticipated to generate 504 fewer person trips during the AM peak hour and 517 fewer person trips during the PM peak hour compared to the May 2020 CTS report. The proposed modifications to the draft plan are not anticipated to impact the findings of the intersection capacity analysis presented in the previous CTS/TIS.

The previously approved CTS/TIS included two development scenarios, one reflecting a pre-BRT scenario along Robert Grant Avenue with typical modal shares and the other reflecting a post-BRT scenario where a portion of the development is located within a Transit Oriented Development (TOD) Zone. For the purposes of this Addendum, the modal shares for each scenario are anticipated to be consistent with the previous CTS/TIS. The assumed modal shares for scenario one are summarized as follows:

- 55% Auto Driver
- 15% Auto Passenger
- 20% Transit
- 10% Non-Auto

Table 3 below summarizes the person trips by modal share for scenario one.

Table 3: Person Trips by Modal Share – Scenario One

Travel Mode		AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Single Detached Dwellings							
<i>Total Person Trips</i>		108	253	361	243	149	392
Auto Driver	55%	57	132	189	130	79	209
Auto Passenger	15%	15	37	52	35	22	57
Transit	20%	24	55	79	50	31	81
Bike/Walk	10%	12	29	41	28	17	45
Townhouse Dwellings							
<i>Total Person Trips</i>		106	252	358	212	166	378
Auto Driver	55%	56	132	188	113	89	202
Auto Passenger	15%	15	36	51	31	24	55
Transit	20%	23	55	78	44	34	78
Bike/Walk	10%	12	29	41	24	19	43
Multi-Family Dwellings							
<i>Total Person Trips</i>		58	128	186	110	78	188
Auto Driver	55%	30	67	97	58	42	100
Auto Passenger	15%	8	19	27	16	11	27
Transit	20%	13	28	41	23	16	39
Bike/Walk	10%	7	14	21	13	9	22
Total Auto Driver		143	331	474	301	210	511
Total Auto Passenger		39	90	129	82	57	139
Total Transit		60	138	198	117	82	199
Total Bike/Walk		31	73	104	65	45	110

When the future BRT/LRT is extended to this area, the development within 600m of the future Hazeldean Road LRT/BRT station will be located within a Transit Oriented Development (TOD) zone. For the purposes of scenario two, all developments north of Cranesbill Road/Street 17 have been assumed to be located within the future TOD zone. The modal shares associated with developments within the TOD zone reflect a higher transit modal share, and reduced auto modal share. However, as the proposed development is located in a suburban context, the City's TOD modal shares have been adjusted to reflect a higher auto modal share associated with the Kanata/Stittsville District. The assumed modal shares for developments within the TOD Zone are summarized as follows:

- 30% Auto Driver
- 5% Auto Passenger
- 50% Transit
- 15% Bike/Walk

For the purposes of scenario two, the adjusted TOD modal shares have been applied to all residential development north of Cranesbill Road/Street 17, while the modal shares presented in scenario one have been applied to all other residential development.

Table 4 below summarizes the person trips by modal share for scenario two.

Table 4: Person Trips by Modal Share – Scenario Two

Travel Mode		AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Single Detached Dwellings							
<i>Total Person Trips</i>		111	259	370	247	152	399
Auto Driver	55%/30%	42	100	142	97	60	157
Auto Passenger	15%/5%	10	22	32	22	14	36
Transit	20%/50%	43	100	143	92	57	149
Bike/Walk	10%/15%	16	37	53	36	21	57
Townhouse Dwellings							
<i>Total Person Trips</i>		109	254	363	212	169	381
Auto Driver	55%/30%	51	120	171	102	81	183
Auto Passenger	15%/5%	13	31	44	27	21	48
Transit	20%/50%	31	71	102	57	45	102
Bike/Walk	10%/15%	14	32	46	26	22	48
Multi-Family Dwellings							
<i>Total Person Trips</i>		60	130	190	113	77	190
Auto Driver	55%/30%	25	55	80	48	34	82
Auto Passenger	15%/5%	6	14	20	12	8	20
Transit	20%/50%	21	43	64	37	25	62
Bike/Walk	10%/15%	8	18	26	16	10	26
Total Auto Driver		118	275	393	247	175	422
Total Auto Passenger		29	67	96	61	43	104
Total Transit		95	214	309	186	127	313
Total Bike/Walk		38	87	125	78	53	131

4.0 TRIP DISTRIBUTION

Per City request, updated trip distribution figures have been prepared for the revised trip generation. The distribution is assumed to be consistent with the original CTS/TIS. For the purposes of scenario one, the access intersection configurations are anticipated to be consistent with the approved Robert Grant Avenue design. For the purposes of scenario two, it is assumed that the Street 21/23, Street 7, and Street 12 intersections are anticipated to be converted to right-in right-out following conversion to median BRT. This approach is consistent with the original CTS/TIS.

Traffic volumes generated by the proposed development under scenario one are shown in **Figure 1**. Traffic volumes generated by the proposed development under scenario two are shown in **Figure 2**.

5.0 ACCESS REVIEW

Within Phases 2 to 4 of the current Concept Plan the locations of the previously proposed accesses onto Abbott Street and Robert Grant Avenue are generally consistent with the approved Draft Plan. Streets 7, 12, 17, 21, 23, and Cranesbill Road meet Robert Grant Avenue at roughly the same locations where Streets 3, 8, 13, 15, 16, and Cranesbill Road were previously shown in the approved Draft Plan.

Primary access to development Blocks 12-16 are anticipated to occur via Streets 7, 17, 21, and Cranesbill Road. Access to the aforementioned development blocks and Block 127 will be further studied as part of a site plan application.

6.0 DEVELOPMENT DESIGN

As described above, access to the subdivision will be generally consistent with the previously approved Draft Plan. However, a new lotting pattern has resulted in a new internal local roadway network. Residential development blocks along Robert Grant Avenue have been adjusted to incorporate window streets in select areas. The northern Park Block west of Robert Grant Avenue has been relocated to a more central location west of the Cranesbill roundabout. The intersection spacing within Phases 2 to 4 adheres to the TAC required 40m T-intersection spacing along local roadways.

Consistent with the approved Draft Plan, most local roadways within Phase 2 to 4 will have a right-of-way width of 18m and Abbott Street, Street 1 will have a right-of-way width of 22m, and Cranesbill Road will have a right-of-way width of 26m. Exceptions include the window street sections of Streets 4, 5, 13, 19, and 24 which have a ROW of roughly 14.75m. Proposed cross-sections are included in **Appendix D**.

Figure 1: Scenario One Site Traffic

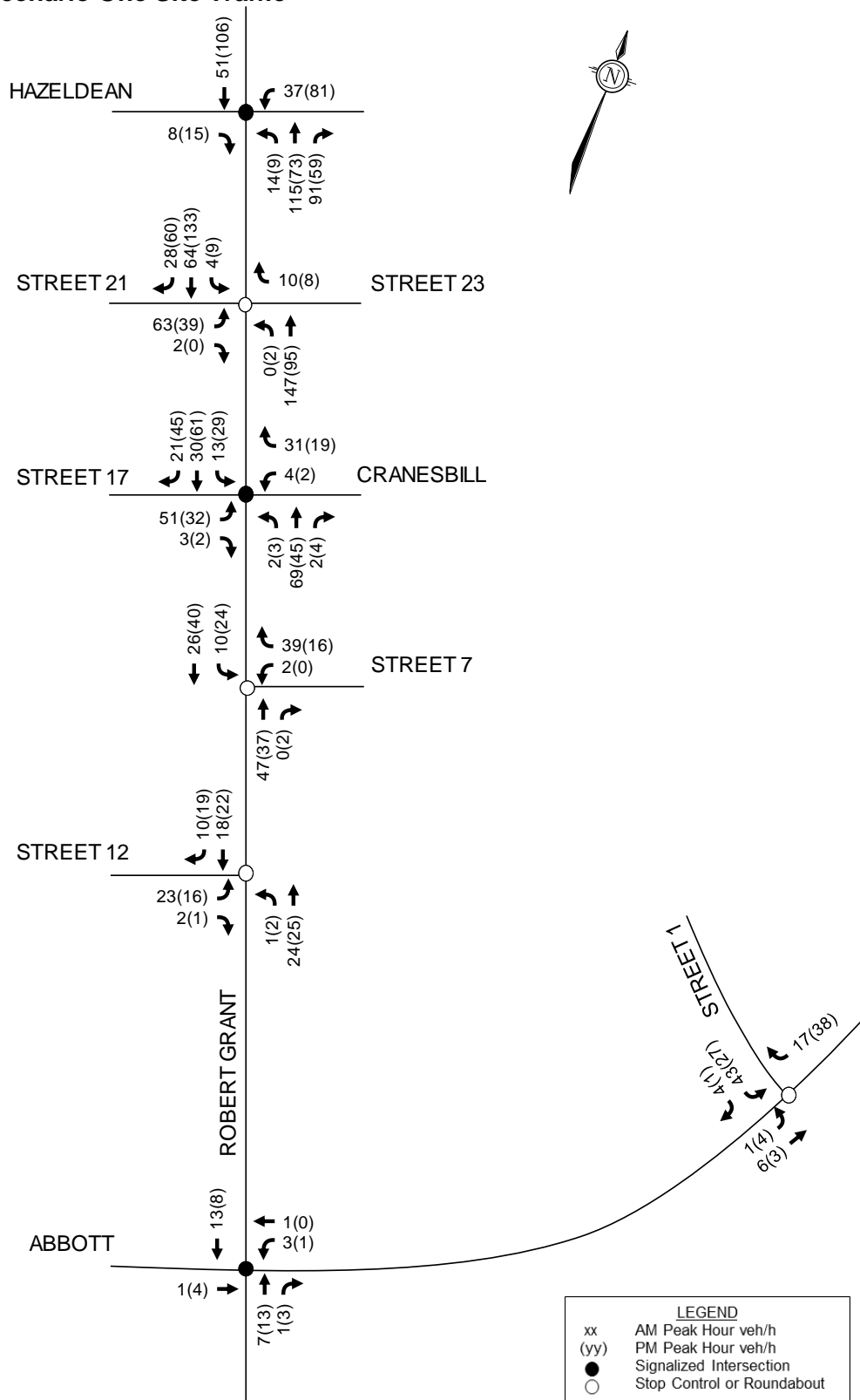
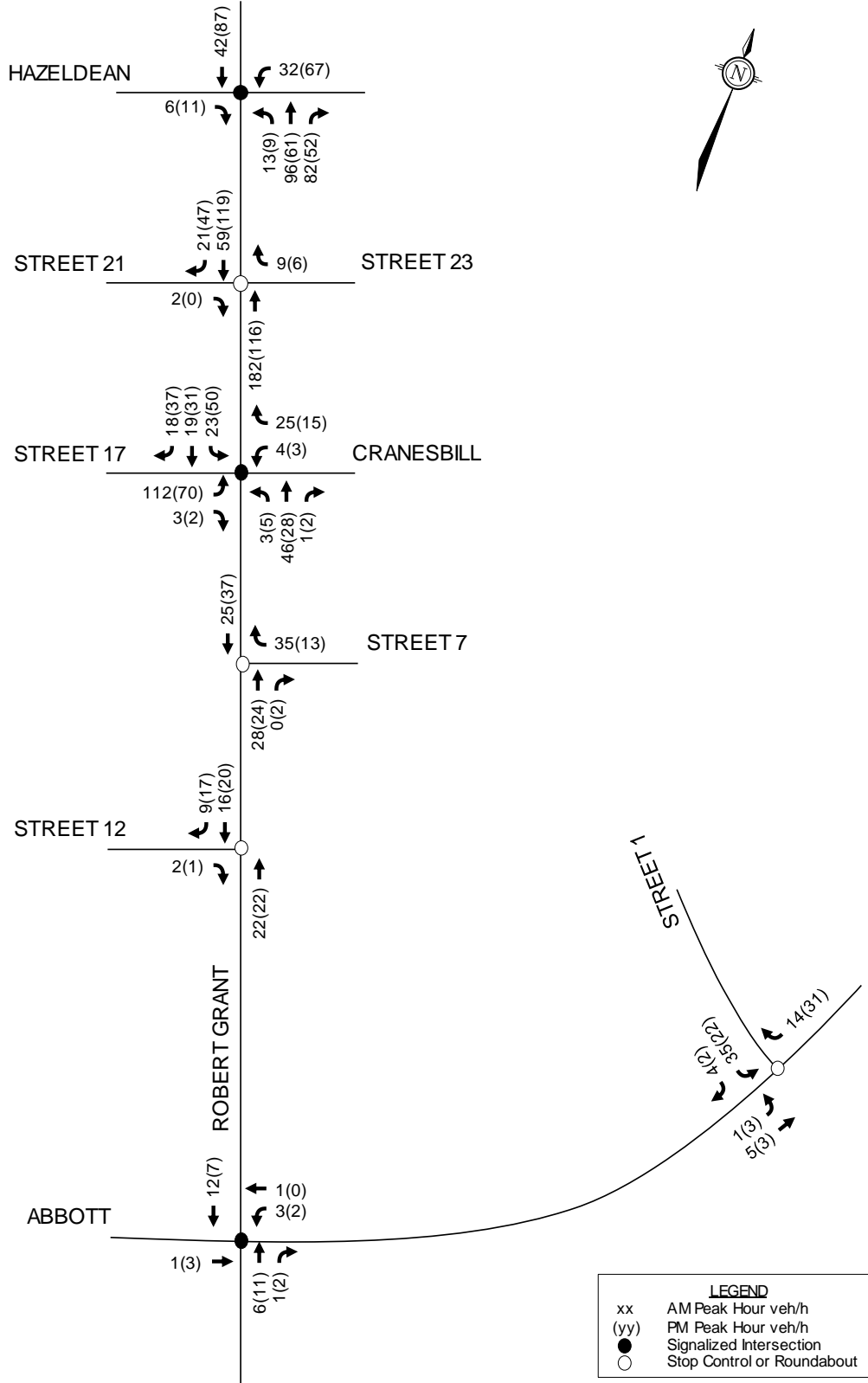


Figure 2: Scenario Two Site Traffic



7.0 CONCLUSIONS

The conclusions of the above TIA Addendum can be summarized as follows:

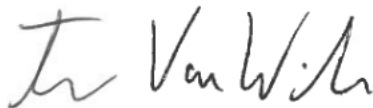
- The proposed development is anticipated to generate 504 fewer person trips during the AM peak hour and 517 fewer person trips during the PM peak hour compared to the May 2020 CTS report.
- The proposed modifications to the draft plan are not anticipated to impact the findings of the intersection capacity analysis presented in the previous CTS/TIS.
- The proposed access intersections to Phases 2 to 4 of the revised Concept Plan are generally consistent with the approved Draft Plan.
- The proposed road network within Phases 2 to 4 of the revised Concept Plan adheres to the TAC minimum intersection spacing requirements.
- Consistent with the approved Draft Plan, most local roadways within Phases 2 to 4 will have a right-of-way width of 18m and Abbott Street, Street 1 will have a right-of-way width of 22m, and Cranesbill Road will have a right-of-way width of 26m. Exceptions include the window street sections of Streets 4, 5, 13, 19, and 24 which have a ROW of roughly 14.75m.

Based on the foregoing, the proposed Concept Plan for Phases 2 to 4 is generally consistent with the approved Draft Plan. The proposed modifications are not anticipated to impact the findings of the previously approved CTS/TIS. As such, the revised Concept Plan for Phases 2 to 4 is recommended from a transportation perspective.

Yours truly,

NOVATECH

Prepared by:



Trevor Van Wiechen, M.Eng.
E.I.T. | Transportation

Reviewed by:



Brad Byvelds, P.Eng.
Project Manager | Transportation

Appendix A

Approved Draft Plan of Subdivision


BLOCK #s	LAND USE	UNITS	AREA (hectares)
1 – 288	Singles	288	12.34
289 – 307	Towns	469	12.05
309 – 315	Multi-Family	747	13.58
319, 320	High Density Residential	360	4.40
321	Institutional		3.23
308, 317, 318	Mixed Use	591	6.49
316	MU / Park & Ride	300	2.27
322	SWM		4.41
323 – 326	Park		3.25
327	Open Space		1.19
328, 329	Transmission Corridor		2.69
330 – 332	Pathway Blocks		0.10
333	Private Access Block		0.06
334	Servicing Block		0.11
	Roads		19.84
TOTAL			86.00

**ERIN O'CONNELL, MANAGER (A)
DEVELOPMENT REVIEW WEST
PLANNING, INFRASTRUCTURE AND ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA**

KEY MAP
NOT TO SCALE

DRAFT PLAN OF SUBDIVISION OF
PART LOT 28
CONCESSION 11
GEOGRAPHIC TOWNSHIP of GOULBOURN
CITY OF OTTAWA

SCALE
1 : 3,000

A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 30, 60, 90, and 120.

DATE: JULY, 2021


I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJOINING LANDS ARE CORRECTLY SHOWN.

DATED July 19 / 21 _____

T. HARTWICK
ONTARIO LAND SURVEYOR

WE, KIZELL MANAGEMENT CORPORATION, BEING THE REGISTERED OWNER(S), HEREBY AUTHORIZE NOVATECH TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF OTTAWA FOR REVIEW AND APPROVAL.

DATED 7/20/2021

DocuSigned by:

C5BF03F2552D4D1...
MARK WITKOWSKI - KIZELL MANAGEMENT CORP.
I have the authority to bind the Corporation.

A) The boundaries of the land proposed to be subdivided, certified by an Ontario Land Surveyor;

As shown on Draft Plan

B) The location, width and names of the proposed highways within the proposed subdivision & of existing highways to which the proposed subdivision abuts;

As shown on Draft Plan

C) The minimum proposed lot size shall be not less than 10 m by 30 m, of the land adjacent to the proposed subdivision that is owned by the applicant or to which the applicant has an interest, every subdivision adjacent to the proposed subdivision & the relationship of the proposed subdivision to the proposed subdivision to which the boundaries of the township of local original grant of which the lot forms the whole part;

As shown on Draft Plan

D) The purpose for which the proposed lots are to be used;

Residential, Mixed Use, Institutional, Stormwater Management Facility, Commercial, Open Space, Park and Part 3, Ride shown on Draft Plan

E) The existing uses of all adjoining lands;

Residential, Light Industrial, Mixed Use, Park, Open Space, and Commercial shown on Draft Plan

F) The approximate dimensions & layout of the proposed lots;

As shown on Draft Plan

G) Natural & artificial features such as buildings or other structures or installations, railways, highways, watercourses, drainage ditches, wetlands & wooded areas within or adjacent to the land proposed to be subdivided;

As shown on Draft Plan

H) The availability and nature of domestic water supplies;

Development will be supplied with full municipal piped water service

I) The nature & purpose of the soil;

Silty Clay, Clayey Silt, Glacial till, Sandy Silt, Silty, Silty Sand

J) The proposed structures or elevations or any other feature may be required to define the grade of the highways and the drainage of the land proposed to be subdivided;

As shown on Draft Plan

K) The minimum proposed intervals at 0.25 metre intervals on Draft Plan

L) The municipal services available or to be available to the land proposed to be subdivided;

Development will be supplied with full sanitary and storm water sewer services.

M) The nature & extent of any restrictions affecting the land proposed to be subdivided, including restrictive covenants or easements, 1984, c. 29, s. 36 (1996, c. 4, s. 29 (3));

Part 3 on 4R-247157 as in GB101262 & GB130137; on 4R-247468 OC1152134; Part 1 on 4R-247157 NS12819, OC813935; and Parts 4,5,6 on 4R-24073 OC1151233.

OC103496 All Lands

DEL SUBDIVISION

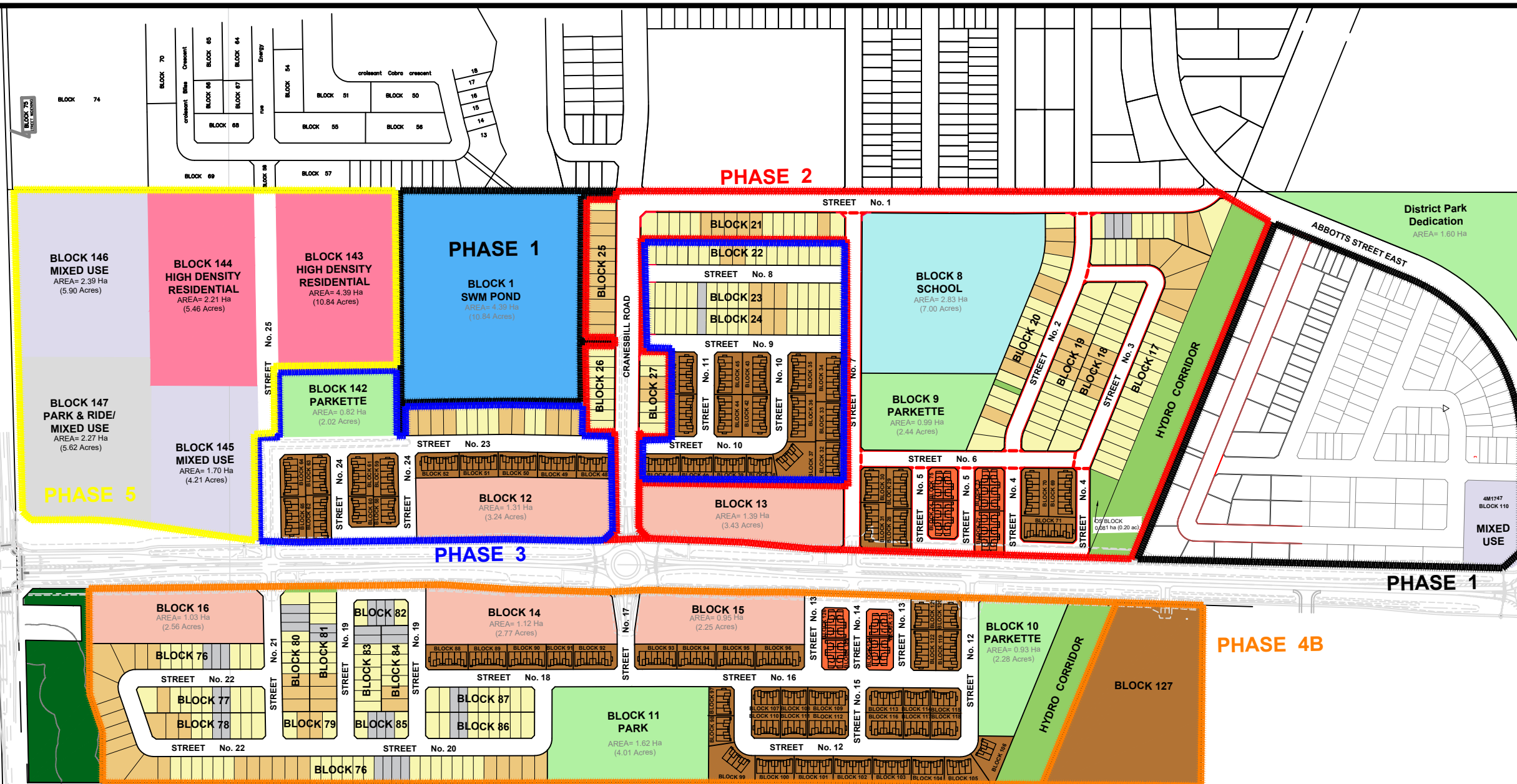
PROJECT No. 108195

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

Appendix B

















Proposed Concept Plan



Title: **Concept Plan 34**

Project: **Abbott's Run**

Legend

- | | |
|--|----------------------------------|
|  | 28' Single Family Homes |
|  | 30' Single Family Homes |
|  | 36' Single Family Homes |
|  | 43' Single Family Homes |
|  | Executive Town Homes |
|  | Avenue (B2B) Town Homes |
|  | Rear Lane Town Homes |
|  | 4-6 Storey Medium Density Condos |
|  | High Density Residential |
|  | Mixed Use Blocks |
|  | Mixed Use Block / Park & Ride |
|  | School Facilities |
|  | Parkland |
|  | Open Space |
|  | Natural Feature |
|  | Storm Water Management Pond |

10	Updated Lotting and Phase 4B	2025-01-20	E.H.
7	Updated table	2024-11-06	K.P.
6	Updated table and parkland	2024-09-04	E.H.
5	Updated table and parkland	2024-09-04	E.H.
4	Updated table and parkland	2024-08-02	M.M.
3	Update lotting	2024-07-22	M.M.
2	Parkland Update	2024-07-19	G.T.
1	Updated With Lotting	2024-07-16	G.T.
0	Issued For Review	2024-07-11	M.M.
No.	Description	Date	By

Revisions



Drawn By: M.M.
Checked By: C.T.

Minto Communities Inc
180 Kent Street,
Ottawa, ON
K1P 0B6

Scale: **NTS**

Unit Type	Phase 1	Phase 2	Phase 3	Phase 4A	Phase 4B	Total	
Singles	92	130	69	150	0	441	
Townhomes	191	87	165	205	70	718	
4-6 Storey Medium Density Condos	0	104	111	246	0	461	
High Density Residential	0	0	0	0	0	0	
Mixed Use Residential	0	0	0	0	0	0	
Total Unit Count	283	321	345	601	70	1620	
Commercial (2% of Area)	0.01 ha	0.00 ha	0.00 ha	0.00 ha	0.00 ha	0.01 ha	0.02 ac
Parkland Required ^($\frac{1}{300}$ rate)	0.94 ha	1.07 ha	2.52 ha	NA	NA	4.53 ha	11.20 ac
Parkland Required ^($\frac{1}{600}$ rate)	NA	NA	0.21 ha	1.00 ha	0.12 ha	1.33 ha	3.29 ac
Total Parkland Required	0.95 ha	1.07 ha	2.73 ha	1.00 ha	0.12 ha	5.87 ha	14.51 ac
Previous Parkland Dedicated	1.60 ha (District Park Dedication) + 1.74 (Landowner Parkland Agreement)					3.34 ha	8.25 ac
Current Parkland Dedicated	0.00 ha	0.99 ha	0.82 ha	2.55 ha	0.00 ha	4.36 ha	10.77 ac
Total Parkland Dedicated	NA					7.70 ha	19.02 ac

Appendix C

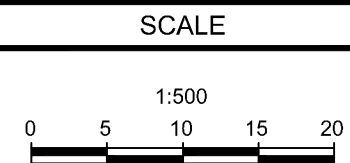
Robert Grant Avenue Extension

M:\2028\108180\NSAerial\Signage_11\CAD\ACAD_Lays\108180-TPM.dwg, TPM1, Oct 20, 2023, 11:48am, nrbrien

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS,
WATERMANS, SEWERS AND OTHER
UNDERGROUND AND OVERGROUND UTILITIES AND
STRUCTURES IS NOT NECESSARILY SHOWN ON
THE CONTRACT DRAWINGS, AND WHERE SHOWN,
THE ACCURACY OF THE POSITION OF SUCH
UTILITIES AND STRUCTURES IS NOT GUARANTEED,
BEFORE STARTING WORK, DETERMINE THE EXACT
LOCATION OF ALL SUCH UTILITIES AND
STRUCTURES AND ASSUME ALL LIABILITY FOR
DAMAGE TO THEM.

TO BE REVIEWED AND APPROVED BY CITY
NO SIGNAGE OR LINE PAINTING TO BE
INSTALLED UNTIL CITY AUTHORITIES HAVE
PROVIDED THEIR STAMP OF APPROVAL

No.	REVISION	DATE	BY
5.	ISSUED FOR CONSTRUCTION	2024-01-15	RJD
4.	ISSUED FOR FEA EXECUTION	2023-10-20	RJD
3.	ISSUED FOR CONTRACT AWARD	2023-07-19	RJD
2.	ISSUED FOR TENDER	2023-01-10	RJD
1.	ISSUED FOR MUNICIPAL CONSENT	2022-06-28	RJD



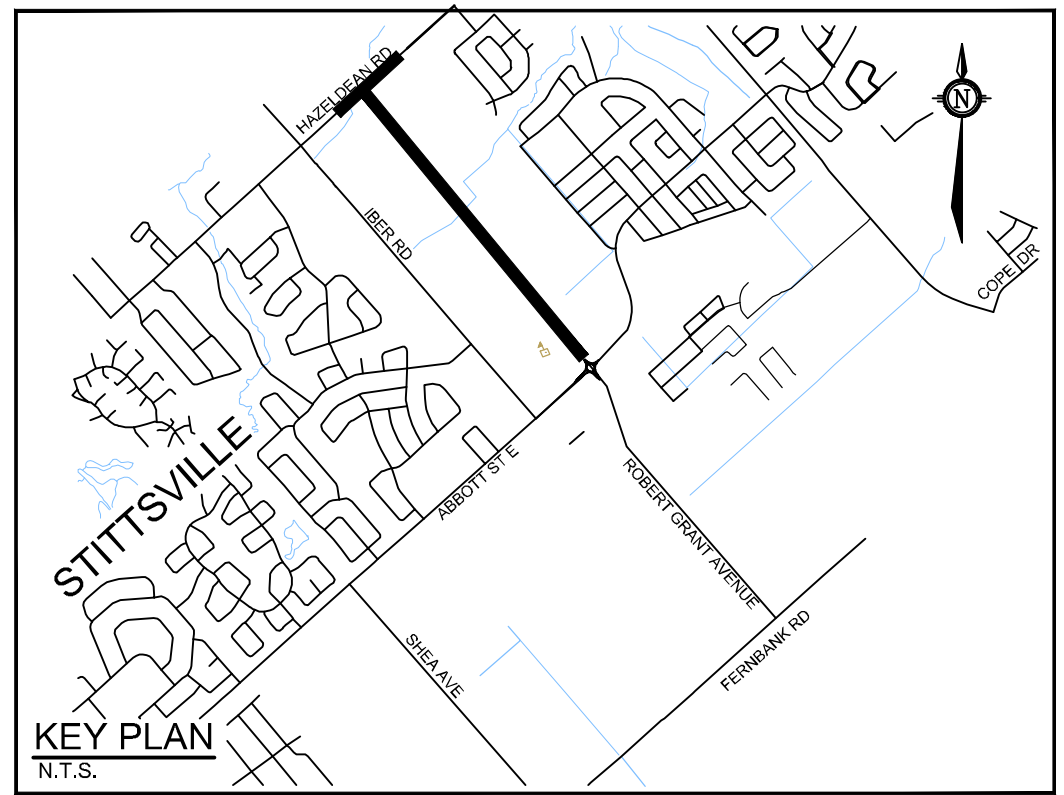
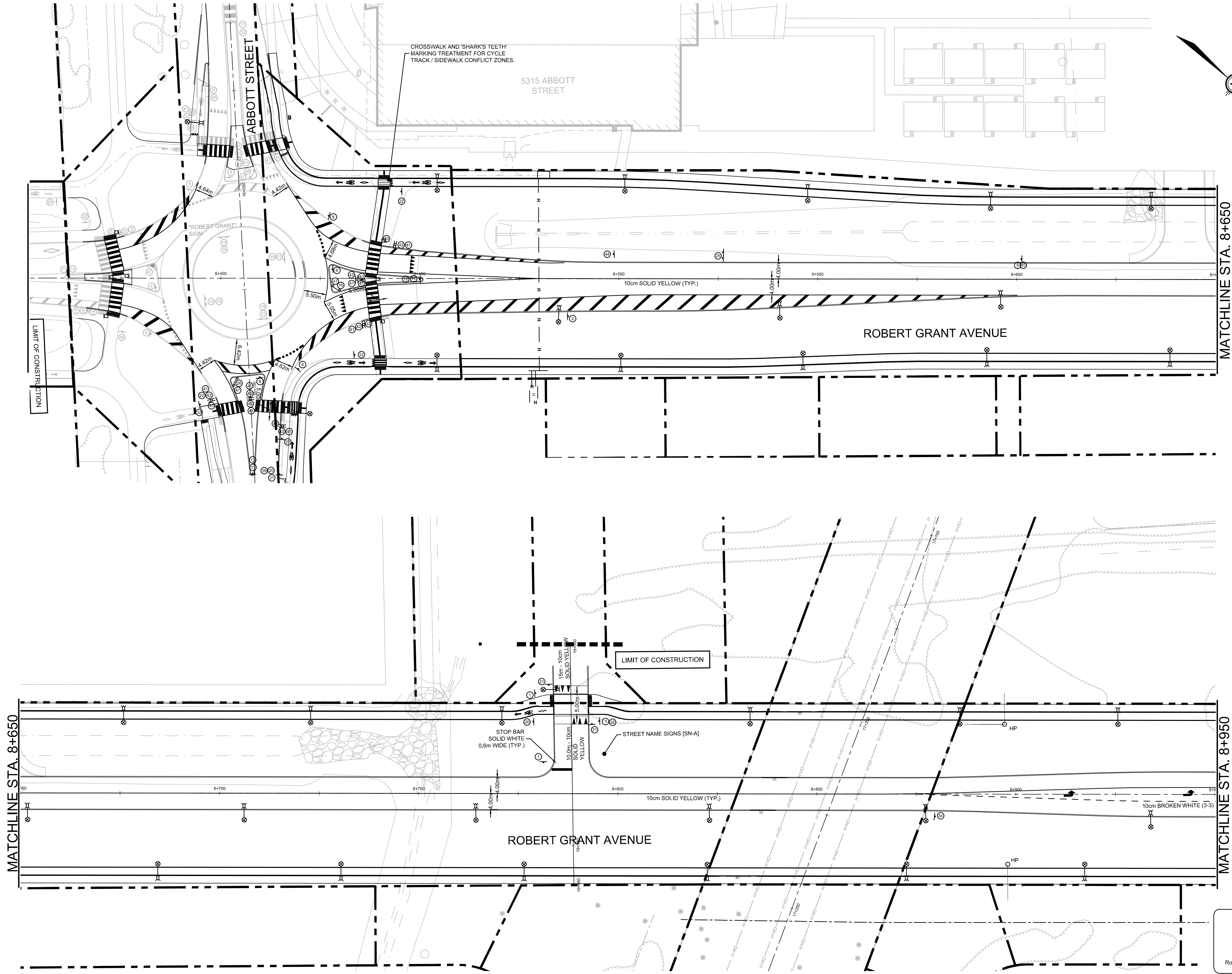
DESIGN	TPB
CHECKED	RJD
DRAWN	TPB
CHECKED	JDM
APPROVED	RJD

FOR REVIEW ONLY

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
ROBERT GRANT AVENUE EXTENSION
ABBOTT STREET TO HAZELDEAN ROAD
DRAWING NAME
PAVEMENT MARKINGS AND SIGNAGE
ROBERT GRANT AVENUE
STA. 8+350 TO STA. 8+950

PROJECT No.	108180
REV	REV # 5
DRAWING No.	108180-TPM1



LEGEND

#	PROPOSED SIGNAGE	#	EXISTING SIGNAGE
1	STOP Ra-1	3	MAXIMUM Wa-8LR
2	60 Rb-1 (60)	4	NEW Wb-2
7	Wa-11A	5	NEW Wb-3
8	Ra-2	6	NEW Rb-41
9	Wa-37 (MUTCD)	7	NEW Wa-11A
10	Wa-71 (30)	8	NEW Ra-2
11	Wa-33L	9	NEW Wa-37 (MUTCD)
12	Rb-25(R)	10	NEW Wa-71 (30)
13	Wa-38 (MUTCD)	11	NEW Wa-33L
14	Robert Grant South Exit Sign	12	NEW Rb-25(R)
15	Robert Grant North Exit Sign	13	NEW Wa-38 (MUTCD)
16	Robert Grant/Cranesbill Advance Directional Sign	14	NEW Robert Grant South Exit Sign
17	Ra-18	15	NEW Robert Grant North Exit Sign
18	Wc-44LR (TAC)	16	NEW Robert Grant/Cranesbill Advance Directional Sign
19	Rb-21	17	NEW Ra-18
20	Rb-84	18	NEW Wc-44LR (TAC)
21	Wa-74	19	NEW Rb-21
22	Bikes Yield to Pedestrians	20	NEW Rb-84
23	Robert Grant/Cranesbill Advance Directional Sign	21	NEW Wa-74
24	Rb-25 (L)	22	NEW Bikes Yield to Pedestrians
25	Robert Grant/Abbott Advance Directional Sign	23	NEW Robert Grant/Cranesbill Advance Directional Sign
26	Abbott Street East Exit Sign	24	NEW Rb-25 (L)
27	Rb-16	25	NEW Robert Grant/Abbott Advance Directional Sign
28	Abbott Street West Exit Sign	26	NEW Abbott Street East Exit Sign
29	Rb-72b	27	NEW Rb-16
30	Rb-55	28	NEW Abbott Street West Exit Sign
31	Wa-33R	29	NEW Rb-72b
32	Rb-70	30	NEW Rb-55
33	Wa-13R	31	NEW Wa-33R
34	Wa-13L	32	NEW Rb-70
35	Rb-84t (Bilingual)	33	NEW Wa-13R
36	Cranesbill Road Exit Sign	34	NEW Wa-13L
37	Rb-16	35	NEW Rb-84t (Bilingual)
38	Abbott Street West Exit Sign	36	NEW Cranesbill Road Exit Sign
39	Rb-84t (Bilingual)	37	NEW Rb-16
40	Rb-85A	38	NEW Abbott Street West Exit Sign
41	Ra-4T	39	NEW Rb-84t (Bilingual)
42	Ra-5R	40	NEW Rb-85A
43	Ra-5L	41	NEW Ra-4T
44	Wc-27R	42	NEW Ra-5R
45	Wc-37R	43	NEW Ra-5L
46	Wc-37L	44	NEW Wc-27R
47	Wa-33LR	45	NEW Wc-37R
48	Rb-10	46	NEW Wc-37L
49	Rb-10t	47	NEW Wa-33LR
50	Rb-79R	48	NEW Rb-10
51	Robert Grant/XXX Advance Directional Sign	49	NEW Rb-10t
52	Rb-42	50	NEW Rb-79R
53	Rb-81	51	NEW Robert Grant/XXX Advance Directional Sign
54	Rb-101	52	NEW Rb-42
55	Rb-102	53	NEW Rb-81
56	Wc-24t	54	NEW Rb-101
57	Wc-24t	55	NEW Rb-102
58	Wc-24t	56	NEW Wc-24t

CITY FILE No. 1007-20-21-0001 CITY PLAN No. 17320

M:\2020\108180\NS-Atterial\Signage_11\CA\DWG\108180-TPM.dwg, TPM2, Oct 20, 2023, 11:48am, robrien

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS,
WATERMAINS, SEWERS AND OTHER
UNDERGROUND AND OVERGROUND UTILITIES AND
STRUCTURES IS NOT NECESSARILY SHOWN ON
THE CONTRACT DRAWINGS, AND WHERE SHOWN,
THE ACCURACY OF THE POSITION OF SUCH
UTILITIES AND STRUCTURES IS NOT GUARANTEED,
BEFORE STARTING WORK, DETERMINE THE EXACT
LOCATION OF ALL SUCH UTILITIES AND
STRUCTURES AND ASSUME ALL LIABILITY FOR
DAMAGE TO THEM.

TO BE REVIEWED AND APPROVED BY CITY
NO SIGNAGE OR LINE PAINTING TO BE
INSTALLED UNTIL CITY AUTHORITIES HAVE
PROVIDED THEIR STAMP OF APPROVAL

5.	ISSUED FOR CONSTRUCTION	2024-01-15	RJD
4.	ISSUED FOR FEA EXECUTION	2023-10-20	RJD
3.	ISSUED FOR CONTRACT AWARD	2023-07-19	RJD
2.	ISSUED FOR TENDER	2023-01-10	RJD
1.	ISSUED FOR MUNICIPAL CONSENT	2022-06-28	RJD

No.	REVISION	DATE	BY
-----	----------	------	----

SCALE	
1:500	
0 5 10 15 20	

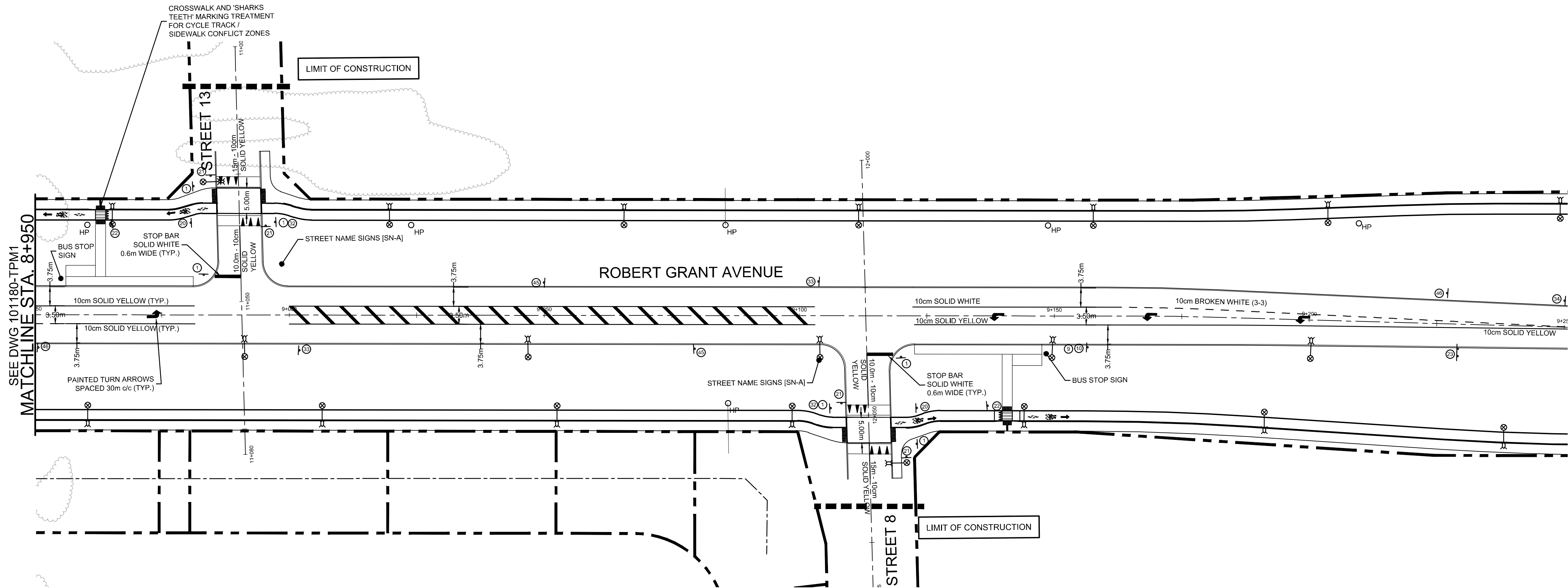
DESIGN
TPB
CHECKED
RJD
DRAWN
TPB
CHECKED
JDM
APPROVED
RJD

FOR REVIEW ONLY

















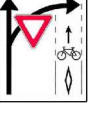

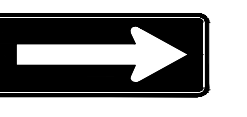





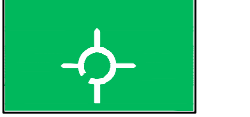





















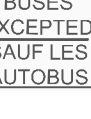




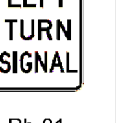

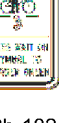


NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

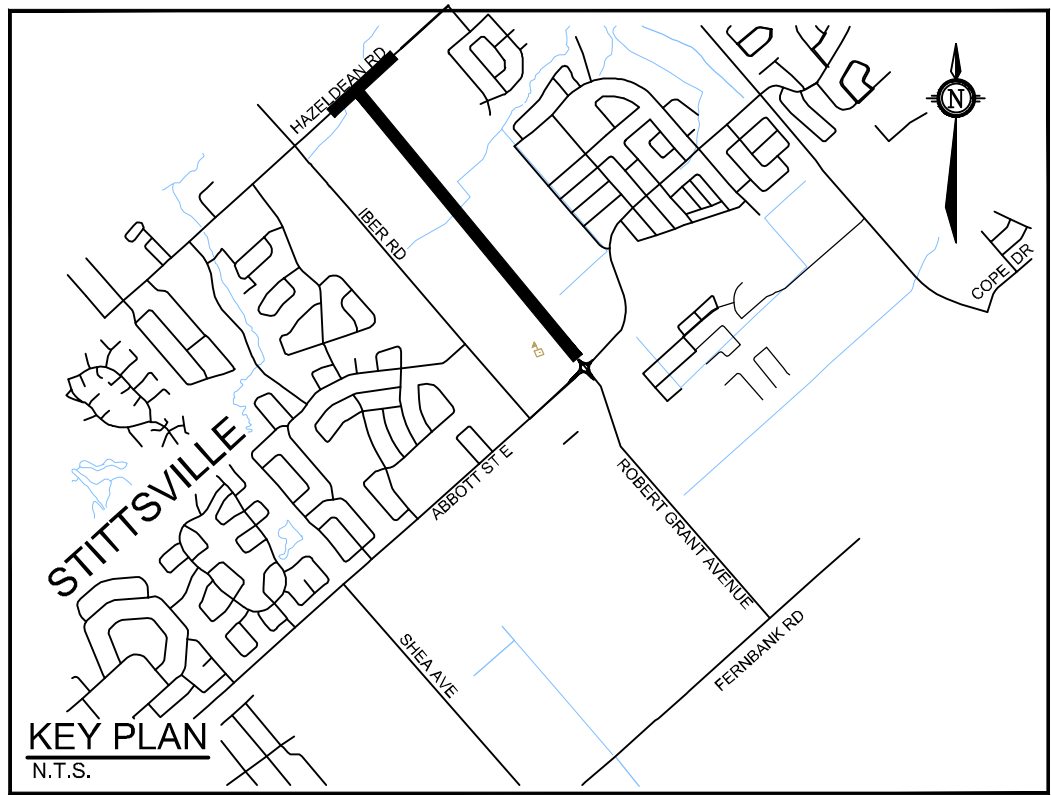
LOCATION
ROBERT GRANT AVENUE EXTENSION
ABBOTT STREET TO HAZELDEAN ROAD
DRAWING NAME
PAVEMENT MARKINGS AND SIGNAGE
ROBERT GRANT AVENUE
STA. 8+950 TO STA. 9+250

PROJECT No.	108180
REV	REV # 5
DRAWING No.	108180-TPM2



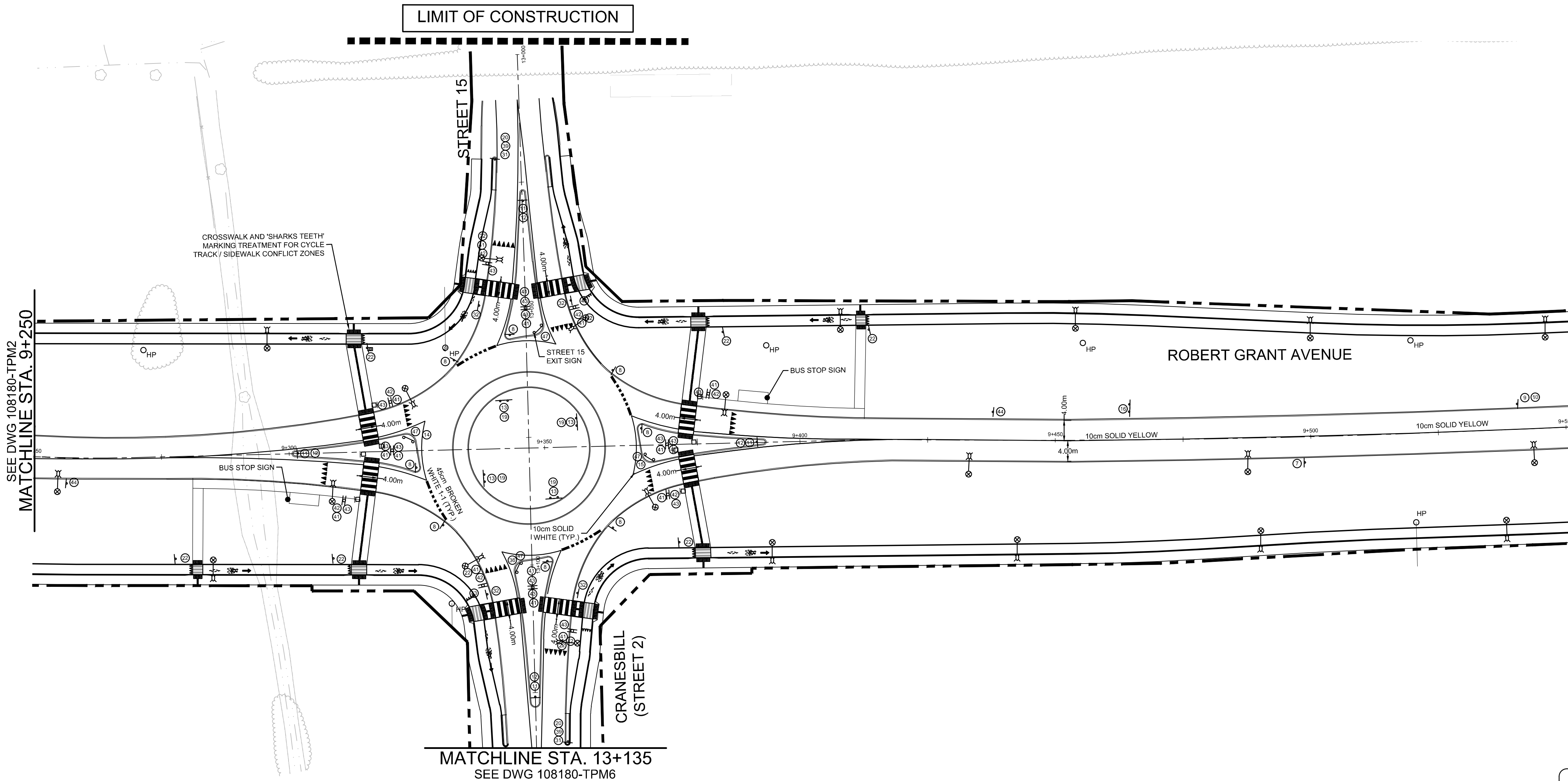
LEGEND

#	PROPOSED SIGNAGE	#	EXISTING SIGNAGE								
1	 Ra-1	2	 Rb-1 (60)	3	 Wa-8LR	4	 Wb-2	5	 Wb-3	6	 Rb-41
7	 Wa-11A	8	 Ra-2	9	 Wa-37 (MUTCD)	10	 Wa-71 (30)	11	 Wa-33L	12	 Rb-25(R)
13	 Wa-38 (MUTCD)	14	 Robert Grant South Exit Sign	15	 Robert Grant North Exit Sign						
16	 Robert Grant/Cranesbill Advance Directional Sign	17	 Ra-18	18	 Wc-44LR (TAC)	19	 Rb-21				
20	 Rb-84	21	 Wa-74	22	 Bikes Yield to Pedestrians	23	 Robert Grant/Cranesbill Advance Directional Sign	24	 Rb-25 (L)		
25	 Robert Grant/Abbott Advance Directional Sign	26	 Abbott Street East Exit Sign	27	 Rb-72b	28	 Rb-55				
29	 Rb-72b	30	 Rb-55	31	 Wa-33R	32	 Rb-70	33	 Wa-13R	34	 Wa-13L
35	 Cranesbill Road Exit Sign	36	 Rb-16	37	 Abbott Street West Exit Sign	38	 Rb-84t (Bilingual)				
39	 Rb-85A	40	 Ra-4T	41	 Ra-5R	42	 Ra-5L	43	 Wc-27R	44	 Wc-37R
45	 Wc-37L	46	 Wa-33LR	47	 Rb-10	48	 Rb-10t	49	 Rb-79R	50	 Robert Grant/XXX Advance Directional Sign
51	 Rb-42	52	 Rb-81	53	 Rb-101	54	 Rb-102	55	 Rb-102	56	 Wc-24t



LEGEND

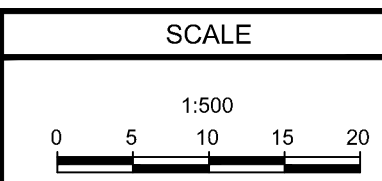
#	PROPOSED SIGNAGE	#	EXISTING SIGNAGE
1	STOP	3	MAXIMUM 60 km/h
Ra-1		Wa-8LR	
2	60 km/h	Wb-2	
Rb-1 (60)		Wb-3	
3	MAXIMUM 60 km/h	Wb-41	
Wa-8LR			
4	Wb-2		
5	Wb-3		
6	Wb-41		
7	Wa-11A		
8	Ra-2		
9	Wa-37 (MUTCD)		
10	Wa-71 (30)		
11	Wa-33L		
12	Rb-25(R)		
13	Wa-38 (MUTCD)		
14	Robert Grant South Exit Sign		
15	Robert Grant North Exit Sign		
16	Robert Grant/Cranesbill Advance Directional Sign		
17	Ra-18		
18	Wc-44LR (TAC)		
19	Rb-21		
20	Rb-84		
21	Wa-74		
22	Bikes Yield to Pedestrians		
23	Robert Grant/Cranesbill Advance Directional Sign		
24	Rb-25 (L)		
25	Robert Grant/Abbott Advance Directional Sign		
26	Abbott Street East Exit Sign		
27			
28			
29	KEEP LEFT RIGHT		
30	Rb-55		
31	Wa-33R		
32	Rb-70		
33	Wa-13R		
34	Wa-13L		
35			
36	Cranesbill Road Exit Sign		
37	Rb-16		
38	Abbott Street West Exit Sign		
39	Rb-84t (Bilingual)		
40	Rb-85A		
41	Ra-4T		
42	Ra-5R		
43	Ra-5L		
44	Wc-27R		
45	Wc-37R		
46	Wc-37L		
47	Wa-33LR		
48	Rb-10		
49	Rb-10t		
50	Rb-79R		
51	Robert Grant/XXX Advance Directional Sign		
52	Rb-42		
53	Rb-81		
54	Rb-101		
55	Rb-102		
56	Wc-24t		



NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS,
WATERMANS, SEWERS AND OTHER
UNDERGROUND AND OVERGROUND UTILITIES AND
STRUCTURES IS NOT NECESSARILY SHOWN ON
THE CONTRACT DRAWINGS, AND WHERE SHOWN,
THE ACCURACY OF THE POSITION OF SUCH
UTILITIES AND STRUCTURES IS NOT GUARANTEED,
BEFORE STARTING WORK, DETERMINE THE EXACT
LOCATION OF ALL SUCH UTILITIES AND
STRUCTURES AND ASSUME ALL LIABILITY FOR
DAMAGE TO THEM.

TO BE REVIEWED AND APPROVED BY CITY
NO SIGNAGE OR LINE PAINTING TO BE
INSTALLED UNTIL CITY AUTHORITIES HAVE
PROVIDED THEIR STAMP OF APPROVAL

No.	REVISION	DATE	BY
5.	ISSUED FOR CONSTRUCTION	2024-01-15	RJD
4.	ISSUED FOR FEA EXECUTION	2023-10-20	RJD
3.	ISSUED FOR CONTRACT AWARD	2023-07-19	RJD
2.	ISSUED FOR TENDER	2023-01-10	RJD
1.	ISSUED FOR MUNICIPAL CONSENT	2022-06-28	RJD



DESIGN	TPB
CHECKED	RJD
DRAWN	TPB
CHECKED	JDM
APPROVED	RJD

FOR REVIEW ONLY	

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION ROBERT GRANT AVENUE EXTENSION ABBOTT STREET TO HAZELDEAN ROAD	
DRAWING NAME PAVEMENT MARKINGS AND SIGNAGE ROBERT GRANT AVENUE STA. 9+250 TO STA. 9+550	
PROJECT NO. 108180	REV # 5
DRAWING NO. 108180-TPM3	

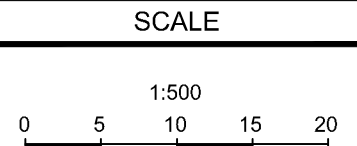
M:\2028\108180\NS-Aerial\Sigsig_11\CAD\CAD Acad_Level\108180-TPM.dwg, TPM.dwg, Oct 20, 2023 - 11:48am, nobrian

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS,
WATERMANS, SEWERS AND OTHER
UNDERGROUND AND OVERGROUND UTILITIES AND
STRUCTURES IS NOT NECESSARILY SHOWN ON
THE CONTRACT DRAWINGS, AND WHERE SHOWN,
THE ACCURACY OF THE POSITION OF SUCH
UTILITIES AND STRUCTURES IS NOT GUARANTEED,
BEFORE STARTING WORK, DETERMINE THE EXACT
LOCATION OF ALL SUCH UTILITIES AND
STRUCTURES AND ASSUME ALL LIABILITY FOR
DAMAGE TO THEM.

TO BE REVIEWED AND APPROVED BY CITY
NO SIGNAGE OR LINE PAINTING TO BE
INSTALLED UNTIL CITY AUTHORITIES HAVE
PROVIDED THEIR STAMP OF APPROVAL

5.	ISSUED FOR CONSTRUCTION	2024-01-15	RJD
4.	ISSUED FOR FEA EXECUTION	2023-10-20	RJD
3.	ISSUED FOR CONTRACT AWARD	2023-07-19	RJD
2.	ISSUED FOR TENDER	2023-01-10	RJD
1.	ISSUED FOR MUNICIPAL CONSENT	2022-06-28	RJD

No.	REVISION	DATE	BY
-----	----------	------	----



DESIGN	TPB
CHECKED	RJD
DRAWN	TPB
CHECKED	JDM
APPROVED	RJD

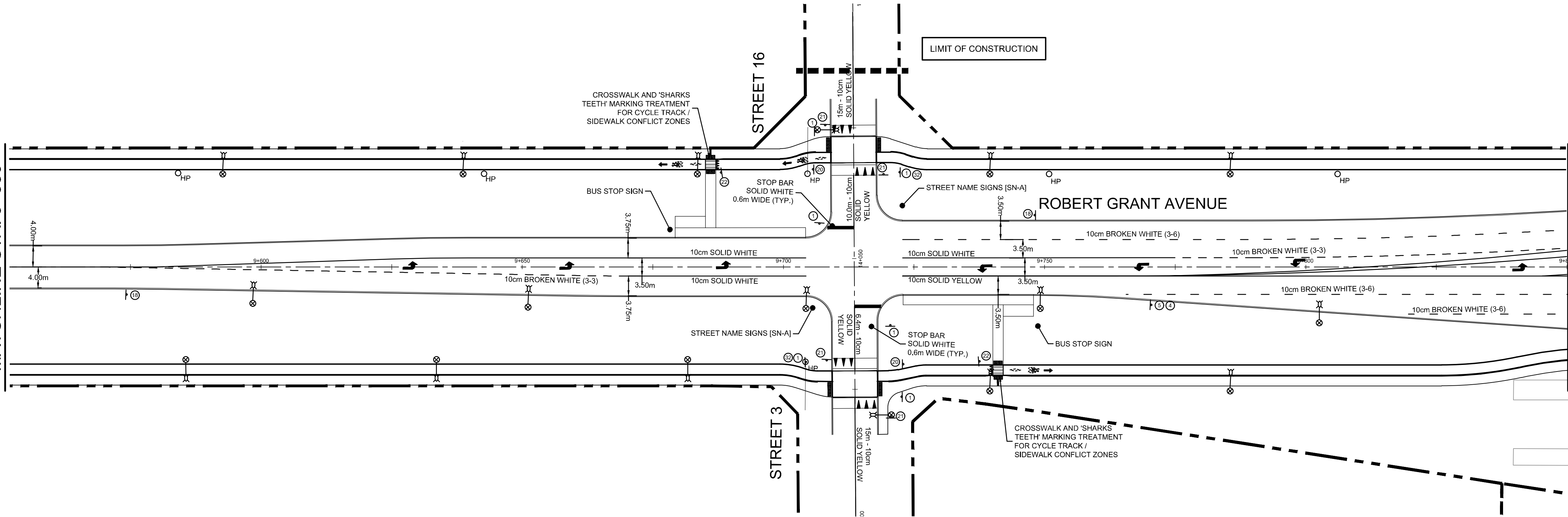
FOR REVIEW ONLY

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
ROBERT GRANT AVENUE EXTENSION
ABBOTT STREET TO HAZELDEAN ROAD
DRAWING NAME
PAVEMENT MARKINGS AND SIGNAGE
ROBERT GRANT AVENUE
STA. 9+550 TO STA. 9+850

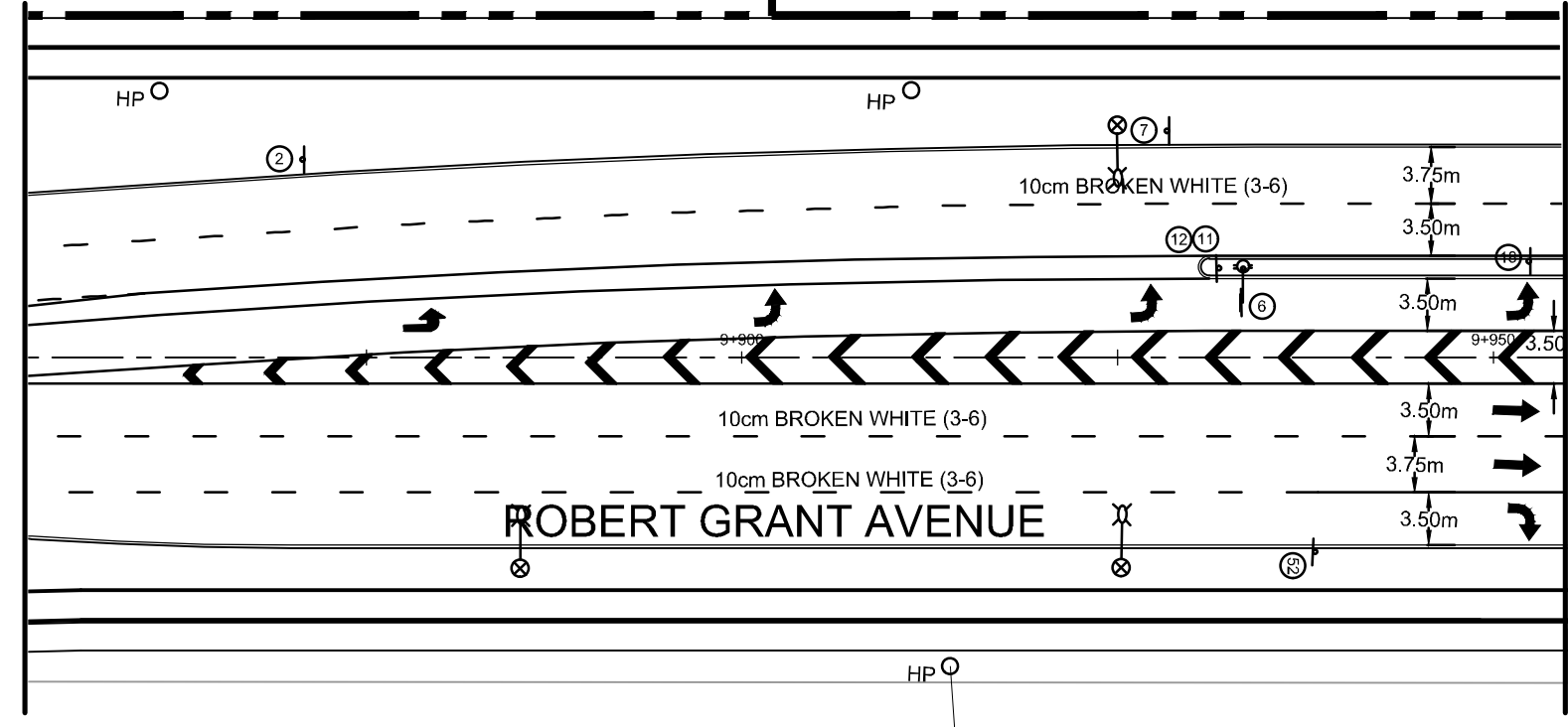
PROJECT No.	108180
REV	REV # 5
DRAWING No.	108180-TPM4

SEE DWG 101180-TPM3
MATCHLINE STA. 9+550

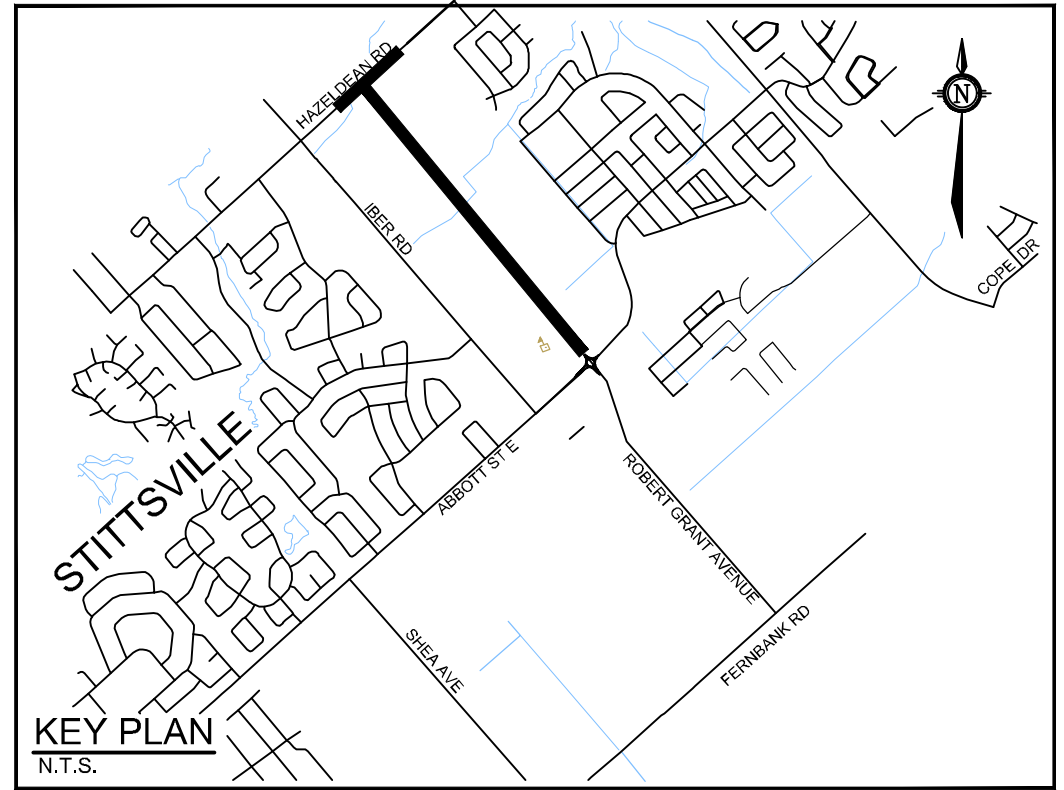


MATCHLINE STA. 9+850

MATCHLINE STA. 9+850



MATCHLINE STA. 9+955
SEE DWG 101180-TPM5



LEGEND

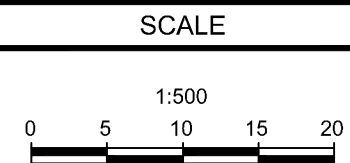
#	PROPOSED SIGNAGE	#	EXISTING SIGNAGE
1	STOP (Ra-1)	4	Wb-2
2	60 MAXIMUM km/h (Rb-1 (60))	5	Wb-3
3	Wa-8LR	6	Rb-41
7	Wa-11A	9	Wa-37 (MUTCD)
8	Ra-2	10	Wa-71 (30)
9	Wa-37 (MUTCD)	11	Wa-33L
10	Wa-71 (30)	12	Rb-25(R)
13	Wa-38 (MUTCD)	14	Robert Grant South Exit Sign
14	Robert Grant South Exit Sign	15	Robert Grant North Exit Sign
15	Robert Grant North Exit Sign	16	Robert Grant/Cranesbill Advance Directional Sign
16	Robert Grant/Cranesbill Advance Directional Sign	17	Ra-18
17	Ra-18	18	Wc-44LR (TAC)
18	Wc-44LR (TAC)	19	Rb-21
19	Rb-21	20	Rb-84
20	Rb-84	21	Wa-74
21	Wa-74	22	Bikes Yield 10 Pedestrians
22	Bikes Yield 10 Pedestrians	23	Robert Grant/Cranesbill Advance Directional Sign
23	Robert Grant/Cranesbill Advance Directional Sign	24	Rb-25 (L)
24	Rb-25 (L)	25	Robert Grant/Abbott Advance Directional Sign
25	Robert Grant/Abbott Advance Directional Sign	26	Abbott Street East Exit Sign
26	Abbott Street East Exit Sign	27	Rb-84t (Bilingual)
27	Rb-84t (Bilingual)	28	Rb-84t (Bilingual)
28	Rb-84t (Bilingual)	29	KEEP LEFT RIGHT (Rb-72b)
29	KEEP LEFT RIGHT (Rb-72b)	30	Rb-55
30	Rb-55	31	Wa-33R
31	Wa-33R	32	Rb-70
32	Rb-70	33	Wa-13R
33	Wa-13R	34	Wa-13L
34	Wa-13L	35	Rb-16
35	Rb-16	36	Abbott Street West Exit Sign
36	Abbott Street West Exit Sign	37	Rb-84t (Bilingual)
37	Rb-84t (Bilingual)	38	Rb-84t (Bilingual)
38	Rb-84t (Bilingual)	39	Rb-84t (Bilingual)
39	Rb-84t (Bilingual)	40	Rb-85A
40	Rb-85A	41	Ra-4T
41	Ra-4T	42	Ra-5R
42	Ra-5R	43	Ra-5L
43	Ra-5L	44	Wc-27R
44	Wc-27R	45	Wc-37R
45	Wc-37R	46	Wc-37L
46	Wc-37L	47	Wa-33LR
47	Wa-33LR	48	Rb-10
48	Rb-10	49	BUSES EXCEPTED SAUF LES AUTOBUS (Rb-10t)
49	BUSES EXCEPTED SAUF LES AUTOBUS (Rb-10t)	50	Rb-79R
50	Rb-79R	51	Robert Grant/XXX Advance Directional Sign
51	Robert Grant/XXX Advance Directional Sign	52	Rb-42
52	Rb-42	53	LEFT TURN SIGNAL (Rb-81)
53	LEFT TURN SIGNAL (Rb-81)	54	CYCLISTS STOP HERE (Rb-101)
54	CYCLISTS STOP HERE (Rb-101)	55	Rb-102
55	Rb-102	56	Wc-24t
56	Wc-24t		

M:\2008\108180\NSAerial\Signage - 1108180-TPM.dwg, TPMS, Oct 20, 2023 - 11:48am, robrien

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS,
WATERMAINS, SEWERS AND OTHER
UNDERGROUND AND OVERGROUND UTILITIES AND
STRUCTURES IS NOT NECESSARILY SHOWN ON
THE CONTRACT DRAWINGS, AND WHERE SHOWN,
THE ACCURACY OF THE POSITION OF SUCH
UTILITIES AND STRUCTURES IS NOT GUARANTEED,
BEFORE STARTING WORK, DETERMINE THE EXACT
LOCATION OF ALL SUCH UTILITIES AND
STRUCTURES AND ASSUME ALL LIABILITY FOR
DAMAGE TO THEM.

TO BE REVIEWED AND APPROVED BY CITY
NO SIGNAGE OR LINE PAINTING TO BE
INSTALLED UNTIL CITY AUTHORITIES HAVE
PROVIDED THEIR STAMP OF APPROVAL

5.	ISSUED FOR CONSTRUCTION	2024-01-15	RJD
4.	ISSUED FOR FEA EXECUTION	2023-10-20	RJD
3.	ISSUED FOR CONTRACT AWARD	2023-07-19	RJD
2.	ISSUED FOR TENDER	2023-01-10	RJD
1.	ISSUED FOR MUNICIPAL CONSENT	2022-12-09	RJD
No.	REVISION	DATE	BY



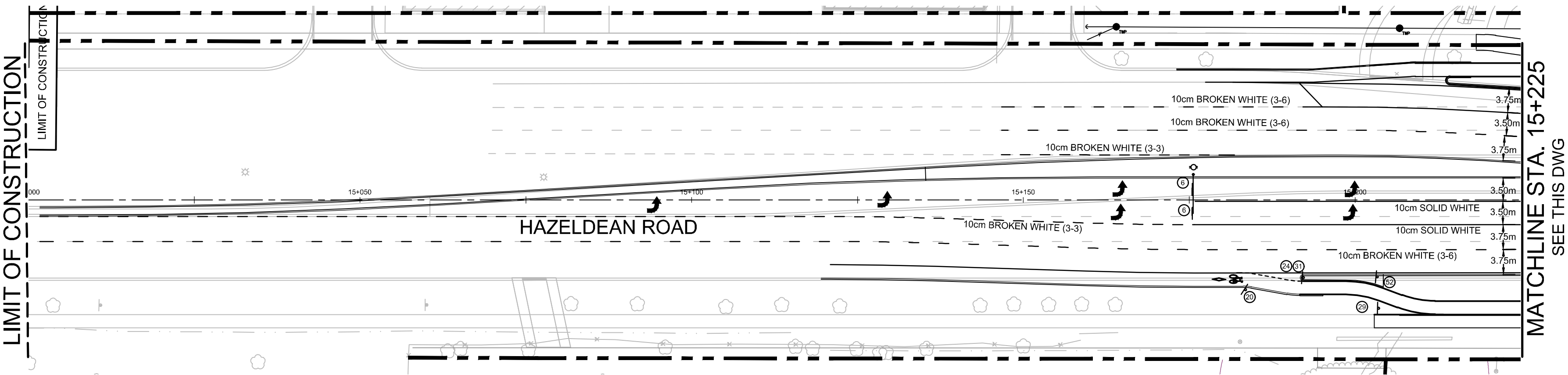
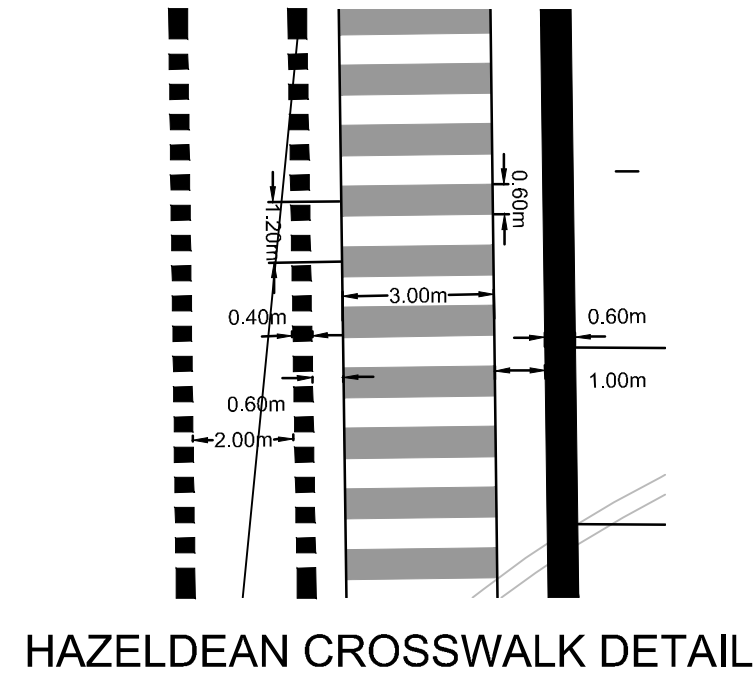
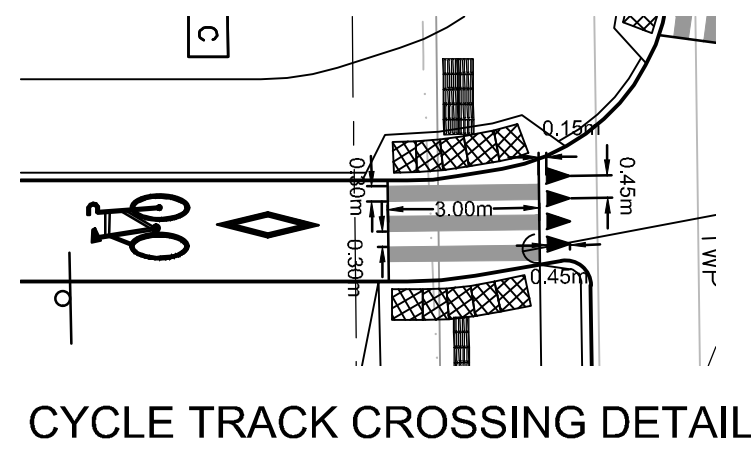
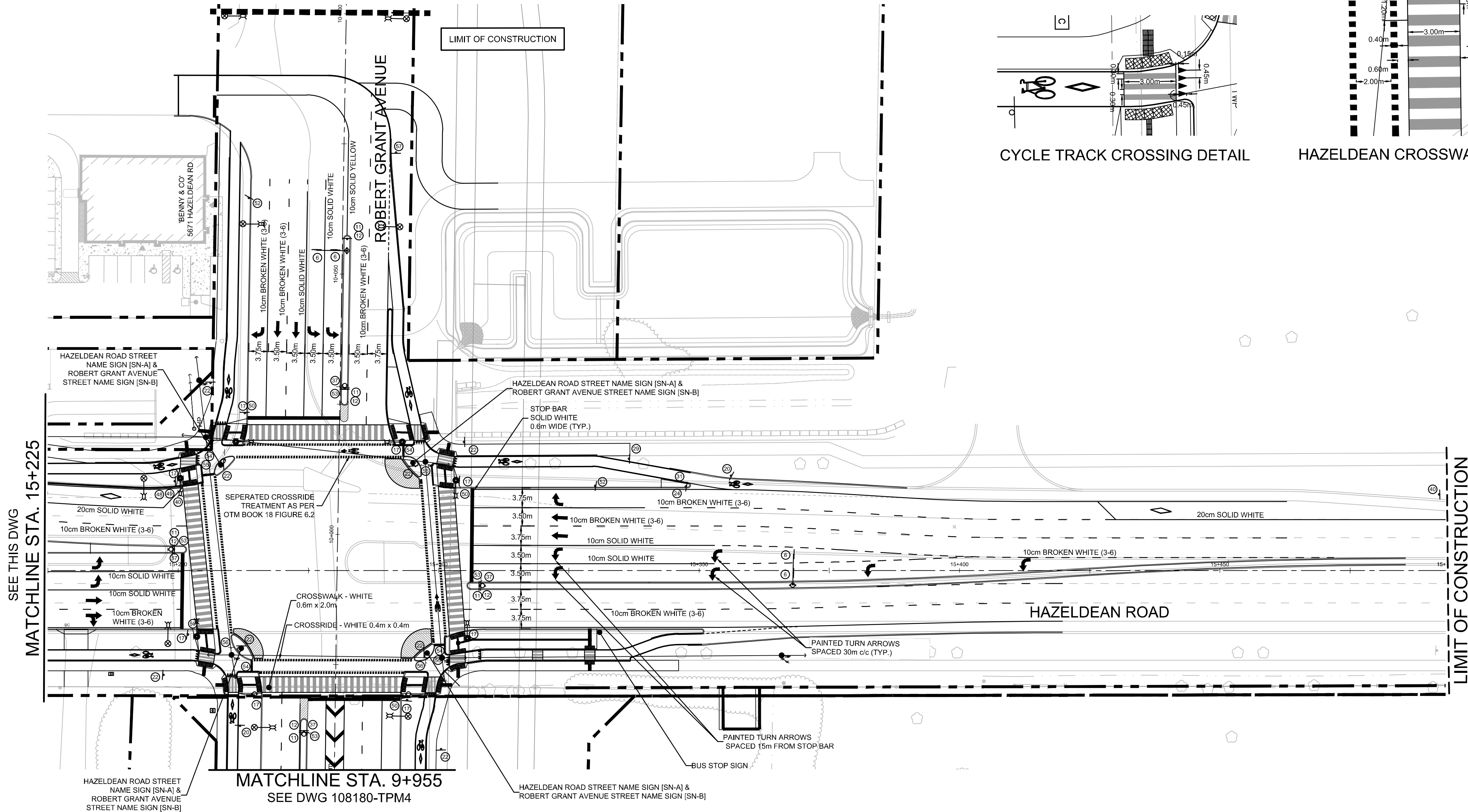
DESIGN	NAO
CHECKED	RJD
DRAWN	NAO
CHECKED	JDM
APPROVED	RJD

FOR REVIEW ONLY

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
ROBERT GRANT AVENUE EXTENSION
ABBOTT STREET TO HAZELDEAN ROAD
DRAWING NAME
PAVEMENT MARKINGS AND SIGNAGE
ROBERT GRANT AVENUE
STA. 15+000 TO STA. 15+493

PROJECT NO.	101180
REV	REV # 5
DRAWING NO.	108180-TPM5



SEE THIS DWG
MATCHLINE STA. 15+225

MATCHLINE STA. 9+955
SEE DWG 108180-TPM4

HAZELDEAN ROAD STREET
NAME SIGN (SN-A) &
ROBERT GRANT AVENUE
STREET NAME SIGN (SN-B)

HAZELDEAN ROAD STREET
NAME SIGN (SN-A) &
ROBERT GRANT AVENUE
STREET NAME SIGN (SN-B)

HAZELDEAN ROAD STREET NAME SIGN (SN-A) &
ROBERT GRANT AVENUE STREET NAME SIGN (SN-B)

HAZELDEAN ROAD STREET NAME SIGN (SN-A) &
ROBERT GRANT AVENUE STREET NAME SIGN (SN-B)

LIMIT OF CONSTRUCTION

LIMIT OF CONSTRUCTION

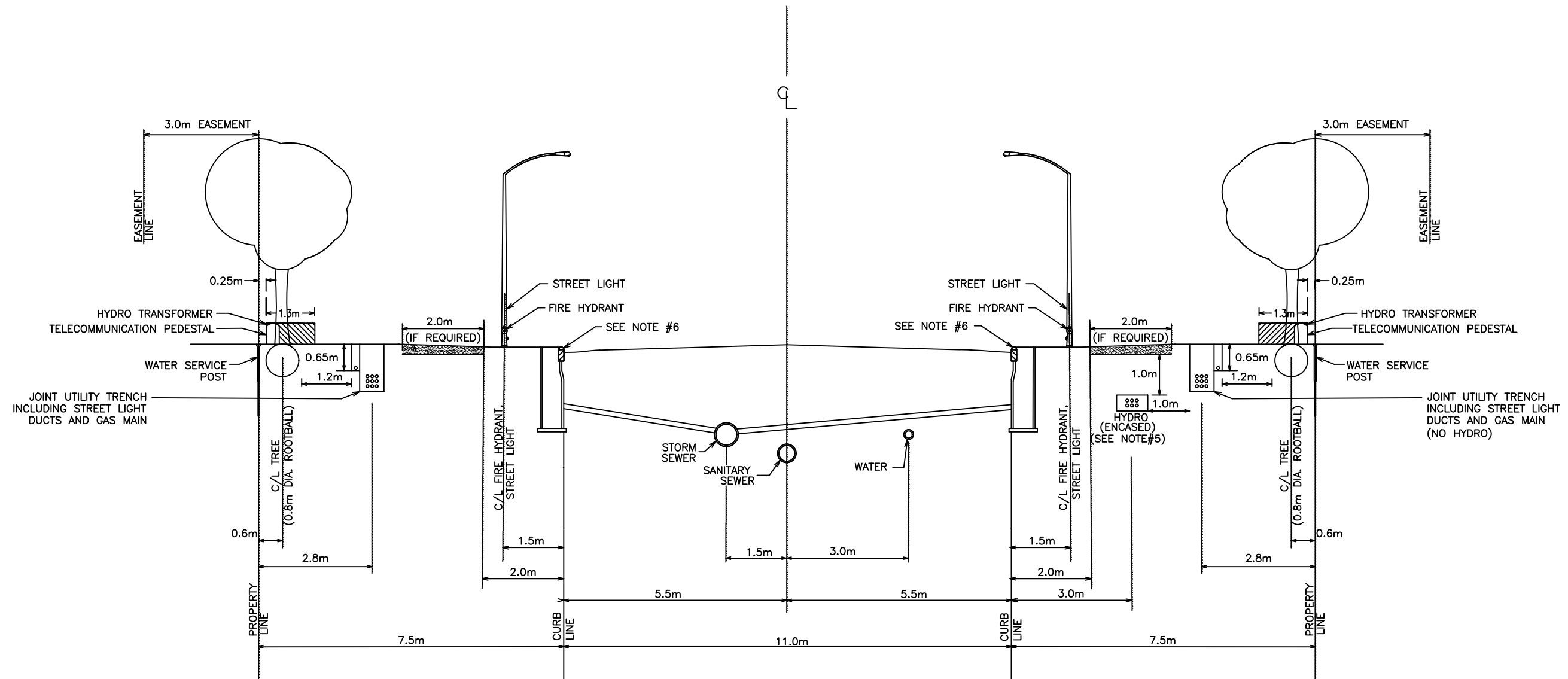
LIMIT OF CONSTRUCTION

LEGEND

#	PROPOSED SIGNAGE	#	EXISTING SIGNAGE
1	STOP Ra-1	3	MAXIMUM 60 km/h Wa-8LR
2	MAXIMUM 60 km/h Rb-1 (60)	4	NEW Wb-2
3	MAXIMUM 60 km/h Wa-8LR	5	NEW Wb-3
4	MAXIMUM 60 km/h Rb-1 (60)	6	NEW Rb-41
5	MAXIMUM 60 km/h Wa-8LR	7	MAXIMUM 60 km/h Rb-1 (60)
6	MAXIMUM 60 km/h Rb-1 (60)	8	MAXIMUM 60 km/h Wa-8LR
7	MAXIMUM 60 km/h Rb-1 (60)	9	MAXIMUM 60 km/h Wa-8LR
8	MAXIMUM 60 km/h Wa-8LR	10	MAXIMUM 60 km/h Rb-1 (60)
9	MAXIMUM 60 km/h Wa-8LR	11	MAXIMUM 60 km/h Wa-8LR
10	MAXIMUM 60 km/h Rb-1 (60)	12	MAXIMUM 60 km/h Rb-25(R)
11	MAXIMUM 60 km/h Wa-8LR	13	MAXIMUM 60 km/h Rb-25(R)
12	MAXIMUM 60 km/h Rb-25(R)	14	MAXIMUM 60 km/h Rb-25(R)
13	MAXIMUM 60 km/h Rb-25(R)	15	MAXIMUM 60 km/h Rb-25(R)
14	MAXIMUM 60 km/h Rb-25(R)	16	MAXIMUM 60 km/h Rb-25(R)
15	MAXIMUM 60 km/h Rb-25(R)	17	MAXIMUM 60 km/h Rb-25(R)
16	MAXIMUM 60 km/h Rb-25(R)	18	MAXIMUM 60 km/h Rb-25(R)
17	MAXIMUM 60 km/h Rb-25(R)	19	MAXIMUM 60 km/h Rb-25(R)
18	MAXIMUM 60 km/h Rb-25(R)	20	MAXIMUM 60 km/h Rb-25(R)
19	MAXIMUM 60 km/h Rb-25(R)	21	MAXIMUM 60 km/h Rb-25(R)
20	MAXIMUM 60 km/h Rb-25(R)	22	MAXIMUM 60 km/h Rb-25(R)
21	MAXIMUM 60 km/h Rb-25(R)	23	MAXIMUM 60 km/h Rb-25(R)
22	MAXIMUM 60 km/h Rb-25(R)	24	MAXIMUM 60 km/h Rb-25(R)
23	MAXIMUM 60 km/h Rb-25(R)	25	MAXIMUM 60 km/h Rb-25(R)
24	MAXIMUM 60 km/h Rb-25(R)	26	MAXIMUM 60 km/h Rb-25(R)
25	MAXIMUM 60 km/h Rb-25(R)	27	MAXIMUM 60 km/h Rb-25(R)
26	MAXIMUM 60 km/h Rb-25(R)	28	MAXIMUM 60 km/h Rb-25(R)
27	MAXIMUM 60 km/h Rb-25(R)	29	MAXIMUM 60 km/h Rb-25(R)
28	MAXIMUM 60 km/h Rb-25(R)	30	MAXIMUM 60 km/h Rb-25(R)
29	MAXIMUM 60 km/h Rb-25(R)	31	MAXIMUM 60 km/h Rb-25(R)
30	MAXIMUM 60 km/h Rb-25(R)	32	MAXIMUM 60 km/h Rb-25(R)
31	MAXIMUM 60 km/h Rb-25(R)	33	MAXIMUM 60 km/h Rb-25(R)
32	MAXIMUM 60 km/h Rb-25(R)	34	MAXIMUM 60 km/h Rb-25(R)
33	MAXIMUM 60 km/h Rb-25(R)	35	MAXIMUM 60 km/h Rb-25(R)
34	MAXIMUM 60 km/h Rb-25(R)	36	MAXIMUM 60 km/h Rb-25(R)
35	MAXIMUM 60 km/h Rb-25(R)	37	MAXIMUM 60 km/h Rb-25(R)
36	MAXIMUM 60 km/h Rb-25(R)	38	MAXIMUM 60 km/h Rb-25(R)
37	MAXIMUM 60 km/h Rb-25(R)	39	MAXIMUM 60 km/h Rb-25(R)
38	MAXIMUM 60 km/h Rb-25(R)	40	MAXIMUM 60 km/h Rb-25(R)
39	MAXIMUM 60 km/h Rb-25(R)	41	MAXIMUM 60 km/h Rb-25(R)
40	MAXIMUM 60 km/h Rb-25(R)	42	MAXIMUM 60 km/h Rb-25(R)
41	MAXIMUM 60 km/h Rb-25(R)	43	MAXIMUM 60 km/h Rb-25(R)
42	MAXIMUM 60 km/h Rb-25(R)	44	MAXIMUM 60 km/h Rb-25(R)
43	MAXIMUM 60 km/h Rb-25(R)	45	MAXIMUM 60 km/h Rb-25(R)
44	MAXIMUM 60 km/h Rb-25(R)	46	MAXIMUM 60 km/h Rb-25(R)
45	MAXIMUM 60 km/h Rb-25(R)	47	MAXIMUM 60 km/h Rb-25(R)
46	MAXIMUM 60 km/h Rb-25(R)	48	MAXIMUM 60 km/h Rb-25(R)
47	MAXIMUM 60 km/h Rb-25(R)	49	MAXIMUM 60 km/h Rb-25(R)
48	MAXIMUM 60 km/h Rb-25(R)	50	MAXIMUM 60 km/h Rb-25(R)
49	MAXIMUM 60 km/h Rb-25(R)	51	MAXIMUM 60 km/h Rb-25(R)
50	MAXIMUM 60 km/h Rb-25(R)	52	MAXIMUM 60 km/h Rb-25(R)
51	MAXIMUM 60 km/h Rb-25(R)	53	MAXIMUM 60 km/h Rb-25(R)
52	MAXIMUM 60 km/h Rb-25(R)	54	MAXIMUM 60 km/h Rb-25(R)
53	MAXIMUM 60 km/h Rb-25(R)	55	MAXIMUM 60 km/h Rb-25(R)
54	MAXIMUM 60 km/h Rb-25(R)	56	MAXIMUM 60 km/h Rb-25(R)
55	MAXIMUM 60 km/h Rb-25(R)	57	MAXIMUM 60 km/h Rb-25(R)
56	MAXIMUM 60 km/h Rb-25(R)	58	MAXIMUM 60 km/h Rb-25(R)
57	MAXIMUM 60 km/h Rb-25(R)	59	MAXIMUM 60 km/h Rb-25(R)
58	MAXIMUM 60 km/h Rb-25(R)	60	MAXIMUM 60 km/h Rb-25(R)
59	MAXIMUM 60 km/h Rb-25(R)	61	MAXIMUM 60 km/h Rb-25(R)
60	MAXIMUM 60 km/h Rb-25(R)	62	MAXIMUM 60 km/h Rb-25(R)
61	MAXIMUM 60 km/h Rb-25(R)	63	MAXIMUM 60 km/h Rb-25(R)
62	MAXIMUM 60 km/h Rb-25(R)	64	MAXIMUM 60 km/h Rb-25(R)
63	MAXIMUM 60 km/h Rb-25(R)	65	MAXIMUM 60 km/h Rb-25(R)
64	MAXIMUM 60 km/h Rb-25(R)	66	MAXIMUM 60 km/h Rb-25(R)
65	MAXIMUM 60 km/h Rb-25(R)	67	MAXIMUM 60 km/h Rb-25(R)
66	MAXIMUM 60 km/h Rb-25(R)	68	MAXIMUM 60 km/h Rb-25(R)
67	MAXIMUM 60 km/h Rb-25(R)	69	MAXIMUM 60 km/h Rb-25(R)
68	MAXIMUM 60 km/h Rb-25(R)	70	MAXIMUM 60 km/h Rb-25(R)
69	MAXIMUM 60 km/h Rb-25(R)	71	MAXIMUM 60 km/h Rb-25(R)
70	MAXIMUM 60 km/h Rb-25(R)	72	MAXIMUM 60 km/h Rb-25(R)
71	MAXIMUM 60 km/h Rb-25(R)	73	MAXIMUM 60 km/h Rb-25(R)
72	MAXIMUM 60 km/h Rb-25(R)	74	MAXIMUM 60 km/h Rb-25(R)
73	MAXIMUM 60 km/h Rb-25(R)	75	MAXIMUM 60 km/h Rb-25(R)
74	MAXIMUM 60 km/h Rb-25(R)	76	MAXIMUM 60 km/h Rb-25(R)
75	MAXIMUM 60 km/h Rb-25(R)	77	MAXIMUM 60 km/h Rb-25(R)
76	MAXIMUM 60 km/h Rb-25(R)	78	MAXIMUM 60 km/h Rb-25(R)
77	MAXIMUM 60 km/h Rb-25(R)	79	MAXIMUM 60 km/h Rb-25(R)
78	MAXIMUM 60 km/h Rb-25(R)	80	MAXIMUM 60 km/h Rb-25(R)
79	MAXIMUM 60 km/h Rb-25(R)	81	MAXIMUM 60 km/h Rb-25(R)
80	MAXIMUM 60 km/h Rb-25(R)	82	MAXIMUM 60 km/h Rb-25(R)
81	MAXIMUM 60 km/h Rb-25(R)	83	MAXIMUM 60 km/h Rb-25(R)
82	MAXIMUM 60 km/h Rb-25(R)	84	MAXIMUM 60 km/h Rb-25(R)
83	MAXIMUM 60 km/h Rb-25(R)	85	MAXIMUM 60 km/h Rb-25(R)
84	MAXIMUM 60 km/h Rb-25(R)	86	MAXIMUM 60 km/h Rb-25(R)
85	MAXIMUM 60 km/h Rb-25(R)	87	MAXIMUM 60 km/h Rb-25(R)
86	MAXIMUM 60 km/h Rb-25(R)	88	MAXIMUM 60 km/h Rb-25(R)
87	MAXIMUM 60 km/h Rb-25(R)	89	MAXIMUM 60 km/h Rb-25(R)
88	MAXIMUM 60 km/h Rb-25(R)	90	MAXIMUM 60 km/h Rb-25(R)
89	MAXIMUM 60 km/h Rb-25(R)	91	MAXIMUM 60 km/h Rb-25(R)
90	MAXIMUM 60 km/h Rb-25(R)	92	MAXIMUM 60 km/h Rb-25(R)
91	MAXIMUM 60 km/h Rb-25(R)	93	MAXIMUM 60 km/h Rb-25(R)
92	MAXIMUM 60 km/h Rb-25(R)	94	MAXIMUM 60 km/h Rb-25(R)
93	MAXIMUM 60 km/h Rb-25(R)	95	MAXIMUM 60 km/h Rb-25(R)
94	MAXIMUM 60 km/h Rb-25(R)	96	MAXIMUM 60 km/h Rb-25(R)
95	MAXIMUM 60 km/h Rb-25(R)	97	MAXIMUM 60 km/h Rb-25(R)
96	MAXIMUM 60 km/h Rb-25(R)	98	MAXIMUM 60 km/h Rb-25(R)
97	MAXIMUM 60 km/h Rb-25(R)	99	MAXIMUM 60 km/h Rb-25(R)
98	MAXIMUM 60 km/h Rb-25(R)	100	MAXIMUM 60 km/h Rb-25(R)
99	MAXIMUM 60 km/h Rb-25(R)	101	MAXIMUM 60 km/h Rb-25(R)
100	MAXIMUM 60 km/h Rb-25(R)	102	MAXIMUM 60 km/h Rb-25(R)

Appendix D

Proposed Cross-Sections

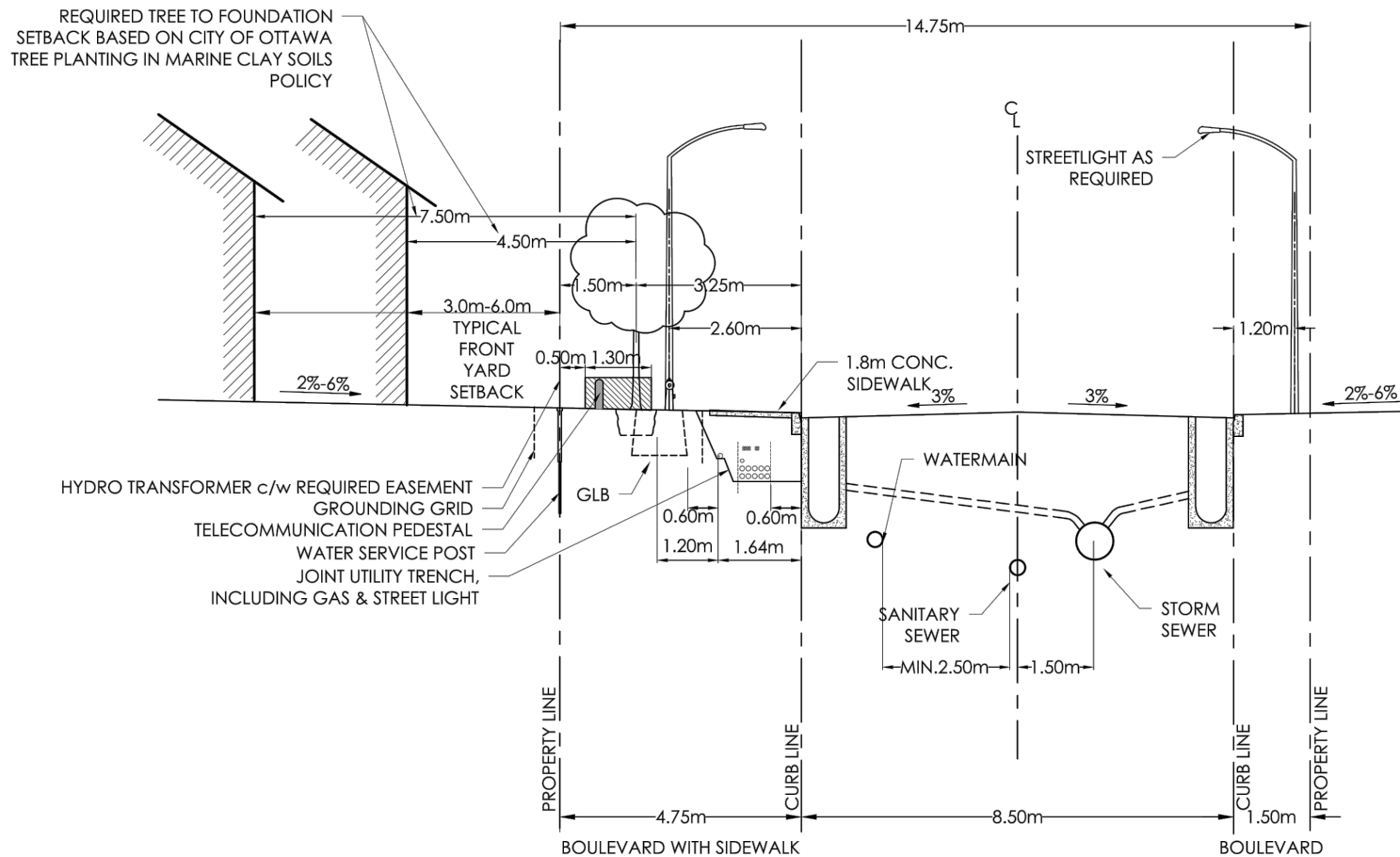


NOTES:

1. REFERENCE STANDARD NOTES ROAD ALLOWANCE (DWG:ROW-NOTES)
2. AT CATCH BASIN AND HYDRANT LOCATIONS THE GAS MAIN SHALL HAVE A MINIMUM 0.6m CLEARANCE FROM STRUCTURES.
3. ALL PEDESTALS TO BE INSTALLED IN LINE WITH HYDRO TRANSFORMERS OR ON SIDE OF TRENCH AWAY FROM ROAD.
4. REQUIREMENT FOR PROTECTIVE BOLLARDS AT TRANSFORMERS SHALL BE DETERMINED BY HYDRO ON A CASE BY CASE BASIS.
5. HYDRO DUCTS (ENCASED) TYPICALLY REQUIRED ON ONE SIDE OF ROW ONLY. PROVIDE 1.0m COVER ON ALL CONCRETE ENCASED DUCTS.
6. CONCRETE CURBS MAY BE BARRIER TYPE OR MOUNTABLE TYPE. CATCH BASIN TYPE WILL SUIT CURB DESIGN. SEE SEWER DESIGN GUIDELINES FOR CATCH BASIN PREFERENCE.
7. TREE SPECIES AND CALIPER SHALL BE DETERMINED IN CONFORMANCE WITH THE GEOTECHNICAL RECOMMENDATIONS AND CURRENT POLICIES IN PLACE AT TIME OF PLANTING.

**RESIDENTIAL ROAD MODIFIED
26.0m ROAD ALLOWANCE
4-PARTY TRENCH**

DATE:	-
REV. DATE:	JANUARY 2023
DWG. No.:	ROW - 26JTMOD



NOTES:

1. STANDARD CROSS-SECTIONS TO BE READ IN CONJUNCTION WITH THE GENERAL STANDARD CROSS-SECTION NOTES AND OTHER APPLICABLE CITY AND UTILITY PLANS AND DETAILS
2. 14.75m RIGHT-OF-WAY NOT TO BE USED ON STREETS WITH BUS SERVICE
3. CONCRETE CURBS TO BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD DETAILS
4. TYPICAL FRONT YARD SETBACKS ARE TO BE CLEAR AND UNENCUMBERED OF ANY SUBSURFACE BUILDING ENCROACHMENTS
5. FIRE HYDRANTS SHALL BE LOCATED ON THE WATERMAIN SIDE OF THE STREET.
6. CATCH BASINS TO BE PER CITY OF OTTAWA DETAIL S2.
7. STREETLIGHTS MAY BE LOCATED ON EITHER SIDE OF THE RIGHT-OF-WAY.
8. GAS MAIN SHALL HAVE A MINIMUM OF 0.6m CLEARANCE FROM STRUCTURES (E.G. CATCH BASINS AND HYDRANTS) AND 1.2m FROM TREE ROOT BALL
9. JOINT-USE UTILITY TRENCH (JUT) UNDER SIDEWALK AS PER DETAIL UDS0049. HELD BY HYDRO OTTAWA
10. GRADE LEVEL BOX (GLB) AS DRAWN SHOWS GLB3660. EXACT LOCATION TO BE CONFIRMED
11. THIS CROSS-SECTION CANNOT BE USED WHERE A CONCRETE ENCASED HYDROELECTRIC DUCT OR ANOTHER SEPARATE UTILITY DUCT IS REQUIRED
12. TREE CLEARANCES TO HYDRO OTTAWA PLANT SHALL FOLLOW GCS0038
13. BOULEVARD MAXIMUM SLOPE 1:3
14. NO RETAINING WALLS WITHIN 2.0m OF THE CURB LINE
15. CLEARANCES SHOWN ARE MINIMUMS



TITLE:

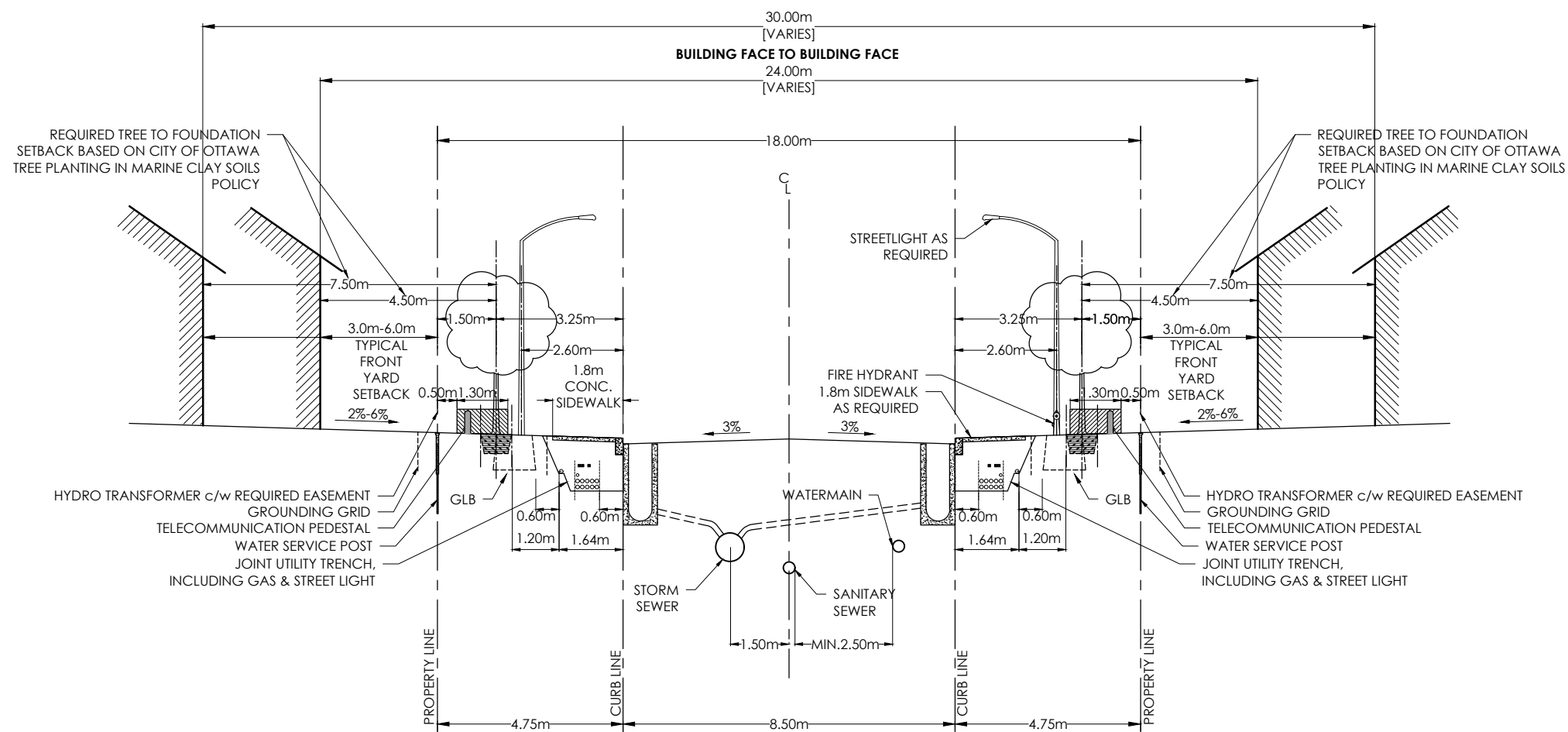
14.75m ROW CROSS SECTION

DATE: AUG 2022

REV: JULY 2024

DWG No: ROW-14.75

1. STANDARD CROSS-SECTIONS TO BE READ IN CONJUNCTION WITH THE GENERAL STANDARD CROSS-SECTION NOTES AND OTHER APPLICABLE CITY AND UTILITY PLANS AND DETAILS.
2. 18M RIGHT-OF-WAY NOT TO BE USED ON STREETS WITH BUS SERVICE.
3. CONCRETE CURBS TO BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD DETAILS.
4. TYPICAL FRONT YARD SETBACK IS TO BE CLEAR AND UNENCUMBERED OF ANY SUBSURFACE BUILDING ENCROACHMENTS.
5. FIRE HYDRANTS TO BE LOCATED ON THE WATERMAIN SIDE OF THE STREET.
6. CATCH BASINS TO BE PER CITY OF OTTAWA DETAIL S2.
7. GAS MAIN SHALL HAVE A MINIMUM OF 0.6M CLEARANCE FROM STRUCTURES E.G. CATCH BASINS AND HYDRANTS) AND 1.2 M FROM TREE ROOT BALL.
8. STREETLIGHTS CAN BE LOCATED ON EITHER SIDE OF THE RIGHT-OF-WAY.
9. JOINT-USE UTILITY TRENCH (JUT) UNDER SIDEWALK AS PER DETAIL UDS0049. HELD BY HYDRO OTTAWA.
10. GRADE LEVEL BOX (GLB) AS DRAWN SHOWS GLB3660. EXACT LOCATION TO BE CONFIRMED.
11. THIS CROSS-SECTION CANNOT BE USED WHERE A CONCRETE ENCASED HYDROELECTRIC DUCT OR ANOTHER SEPARATE UTILITY DUCT IS REQUIRED.
12. TREE CLEARANCES TO HYDRO OTTAWA PLANT SHALL FOLLOW GCS0038.
13. CLEARANCES SHOWN ARE MINIMUMS.



18.0m ROW CROSS SECTION

REV.DATE: AUG. 2022

DWG. No. ROW-18.0