

Memorandum

To/Attention Eric Harrold **Date** June 24, 2022

From Ryan Magladry Project No 122507-6.2.3

Amy Zhuang

cc Melissa Pettem

Reuben Noel

Subject Golf Course Cart Storage Building - Servicing Memorandum

IBI Group Professional Services Inc. (IBI, IBI Group) has been retained by Mattamy Homes to provide engineering consultation for the Stonebridge Golf Course new cart storage building, which is proposed as an accessory structure to the Golf Course Clubhouse. The existing golf cart storage building will be removed as a result of the golf course hole #9 reconfiguration. The existing practice putting green will also be relocated to the western portion of the existing parking lot to make way for the hole #9 reconfiguration. A legal plan of the subdivision is included in **Appendix A**. This memorandum will summarize the servicing requirements and design considerations for the proposed cart storage building.

Domestic Water Supply

No new municipal water services and water fixtures are required for the site. A seasonal distribution line will be extended from the existing irrigation system located at the "snack shack" to the north-west of the proposed storage building, and will be used for cart cleaning operations only, and is considered to be non-potable (untreated) and is fed from a branch off the golf course irrigation distribution system. This is not a municipal water service, and it will be operated seasonally, and flushed in the offseason. No municipal approval is required, and it is not required to be constructed to City Standards.

Wastewater System

No new municipal sanitary services and wastewater fixtures are proposed for the new cart storage building.

Stormwater Management

The study area is currently open space, golf course lands surrounded by the existing Stonebridge development. The parcel consists of an existing clubhouse facility and a snack shack building. The cart storage building is located in the southern area of the existing parking lot. Stormwater runoff is captured on-site through sheet drainage and landscaping and parking lot drains, which outlet to the Stonebridge Golf Course pond network, where water quality control is provided.

The on-site minor system was designed to meet the existing conditions of the original clubhouse development. Minor system flow will be conveyed to the existing Catch Basin Manhole (CBMH 3) and utilizing the same ICD as existing. Runoff C calculation of the overall site have been provided in C-550 Storm Drainage Area Plan. The C value comparison between the predevelopment and post-development of the adjusted areas within the site are demonstrated in **Table 1.1**. According to the results, the total pervious area in the adjusted areas has increased, and the overall runoff coefficient C has been reduced from 0.68 to 0.64. Therefore, the subject

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development will have no negative impacts on downstream infrastructure, and thus no additional quantity controls measures are required for this site, as there is no negative impact on the downstream network. A storm sewer calculation design sheet for the two proposed storm pipes is included in **Appendix B**.

Table 1.1 C Value Comparison

СВМН3	Pre-deve	elopment	Post-development								
	Area (ha)	С	Area (ha)	С							
Grass	0.333	0.20	0.395	0.20							
Building	0.000	0.90	0.051	0.90							
Driveway & Parking	0.744	0.90	0.631	0.90							
Total	1.077	0.68	1.077	0.64							

Water quality control has been provided by the existing SWMF located at hole #15. As a result of a decreased parking lot area, and an increase in roof and softscape areas, the redevelopment will have an improved benefit on water quality, and no additional on-site water quality measures are required.

Grading

The site will be graded to function with the new practice putting green, as well as to limit disruption to the existing landscape and parking lot areas. As a result of the general east to west slope of the parking lot, and the long flat slab of the new building, the drive aisle is elevated on the north side of the building in order to function with the garage doors at each end of the building.

A 150mm freeboard to the garage doors has been provided for the cart washing station at the east side of the building.

Sediment and Erosion Control Plan

An erosion and sediment control plan will be implemented for the construction of the new cart storage building. The plan will include, as a bare minimum the following measures;

- Silt Sacks placed under the grates of all CB's and CBMH's located within the zone of construction
- Light Duty Silt Fence located along the low-lying perimeter of the construction zone. The South property line is located at the top of an undisturbed heavily treed berm, where siltation concerns are non-existent.

Conclusion

The Stonebridge gold course cart storage building can be serviced to meet the requirements of the City of Ottawa and the MOE.

Regards,

Ryan Magladry, C.E.T Project Manager

To M. Yannoulopoulos a

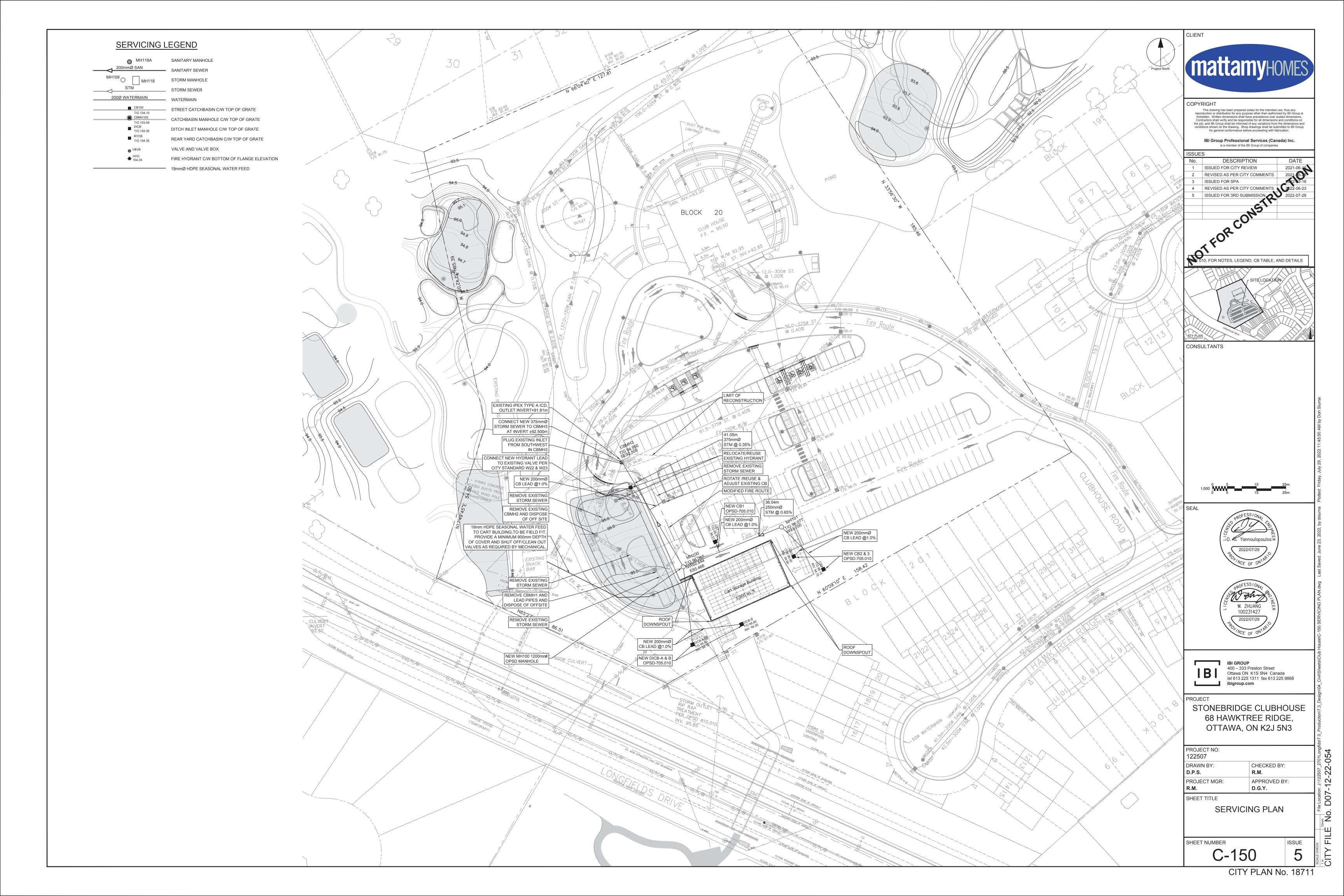
Demetrius Yannoulopoulos Director – Office Lead

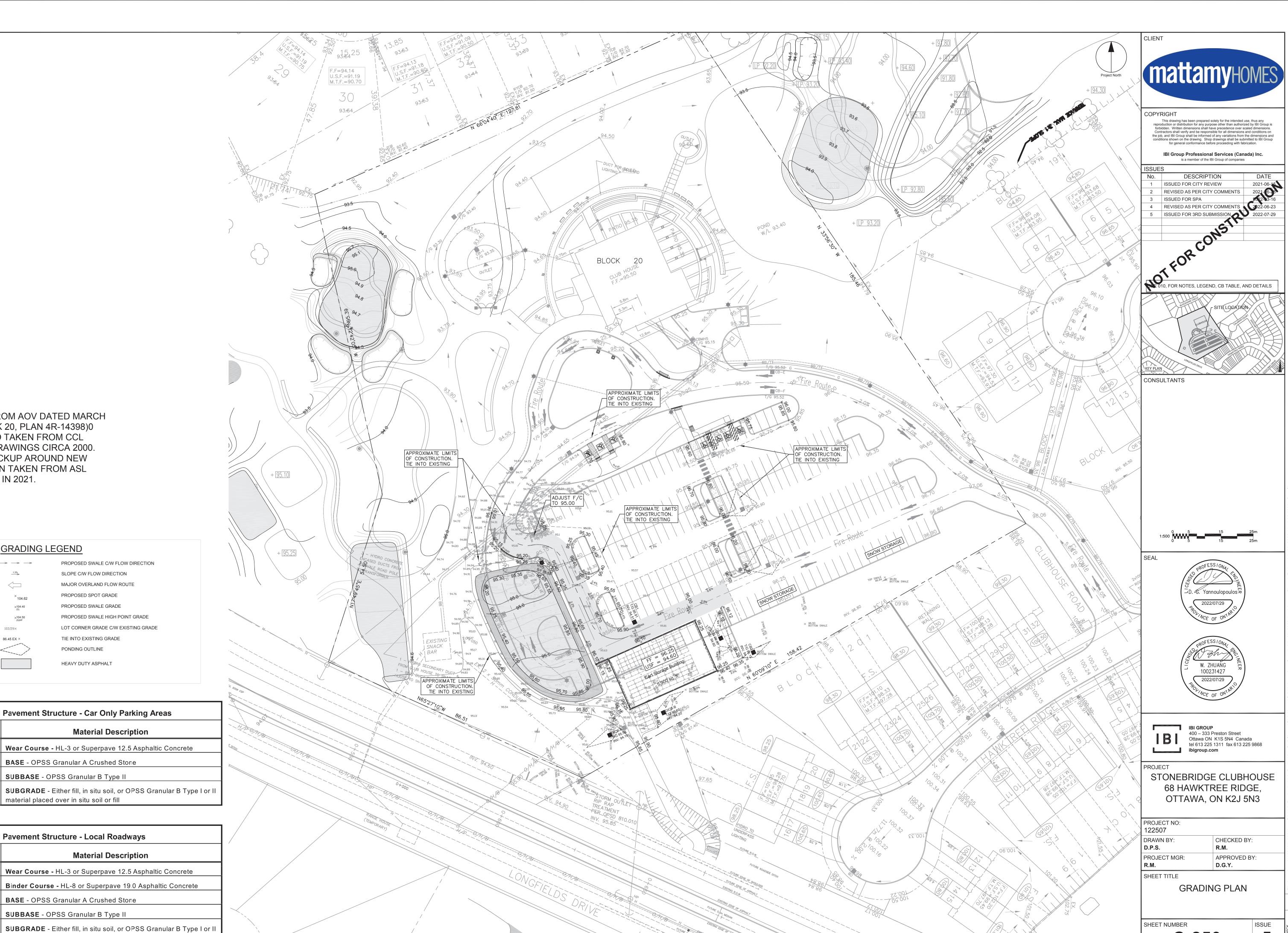


Amy Zhuang, P.Eng. Intermediate Engineer



CITY PLAN No. 18711





C-250

CITY PLAN No. 18711

NOTE:

Thickness (mm)

50

150

300

Thickness (mm)

40

50

150

400

LEGAL PLAN FROM AOV DATED MARCH

GRADING LEGEND

Table 2 - Recommended Pavement Structure - Car Only Parking Areas

Table 3 - Recommended Pavement Structure - Local Roadways

PROPOSED SWALE C/W FLOW DIRECTION

PROPOSED SWALE HIGH POINT GRADE

LOT CORNER GRADE C/W EXISTING GRADE

Material Description

Material Description

SLOPE C/W FLOW DIRECTION MAJOR OVERLAND FLOW ROUTE

PROPOSED SPOT GRADE PROPOSED SWALE GRADE

TIE INTO EXISTING GRADE

PONDING OUTLINE

BASE - OPSS Granular A Crushed Stone

SUBBASE - OPSS Granular B Type II

material placed over in situ soil or fill

BASE - OPSS Granular A Crushed Stone

SUBBASE - OPSS Granular B Type II

material placed over in situ soil or fill

HEAVY DUTY ASPHALT

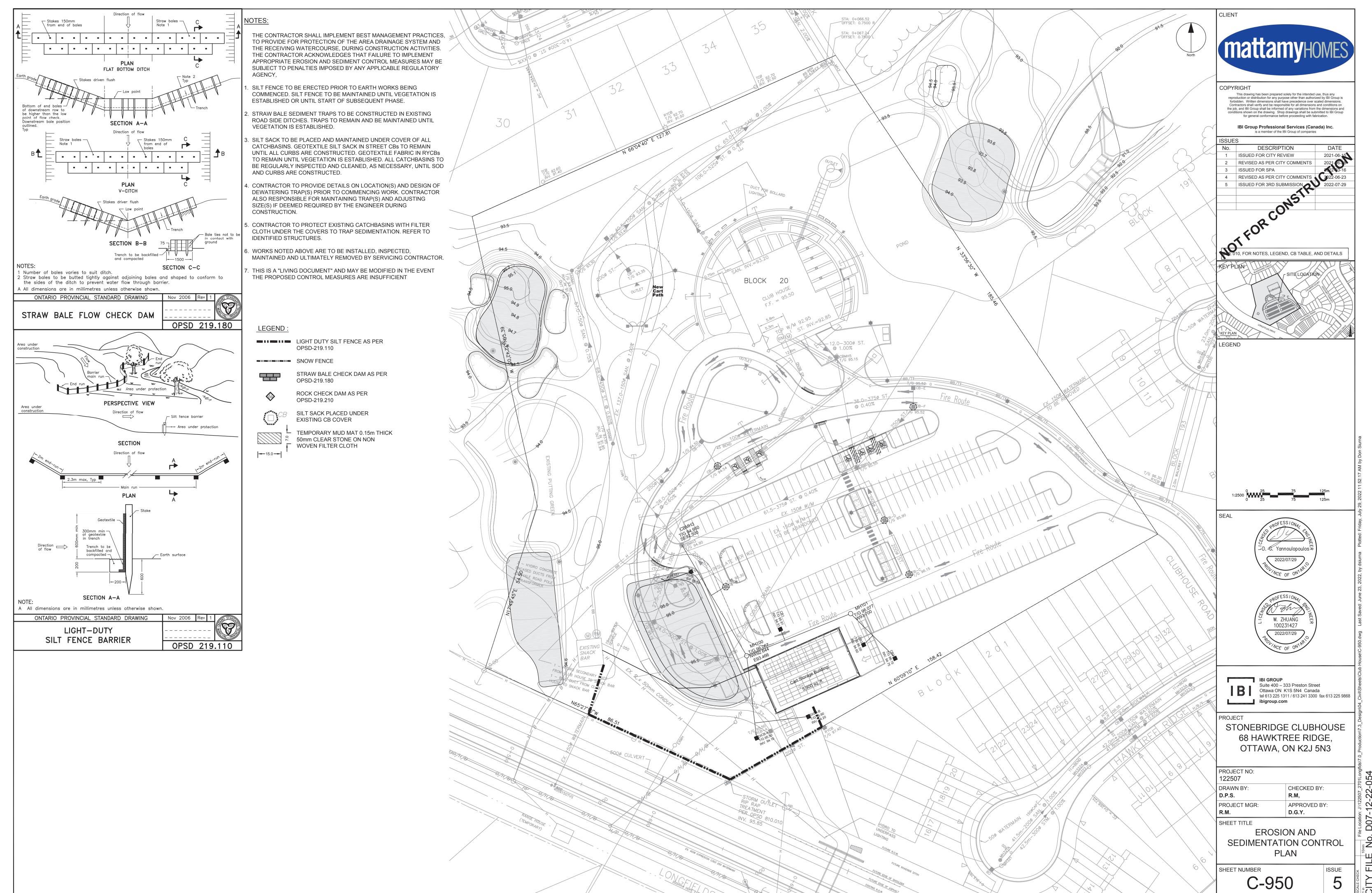
15, 2000 (BLOCK 20, PLAN 4R-14398)0

EXISTING TOPO TAKEN FROM CCL CLUBHOUSE DRAWINGS CIRCA 2000.

ADDITIONAL PICKUP AROUND NEW PUTTING GREEN TAKEN FROM ASL

PICKUPS DONE IN 2021.





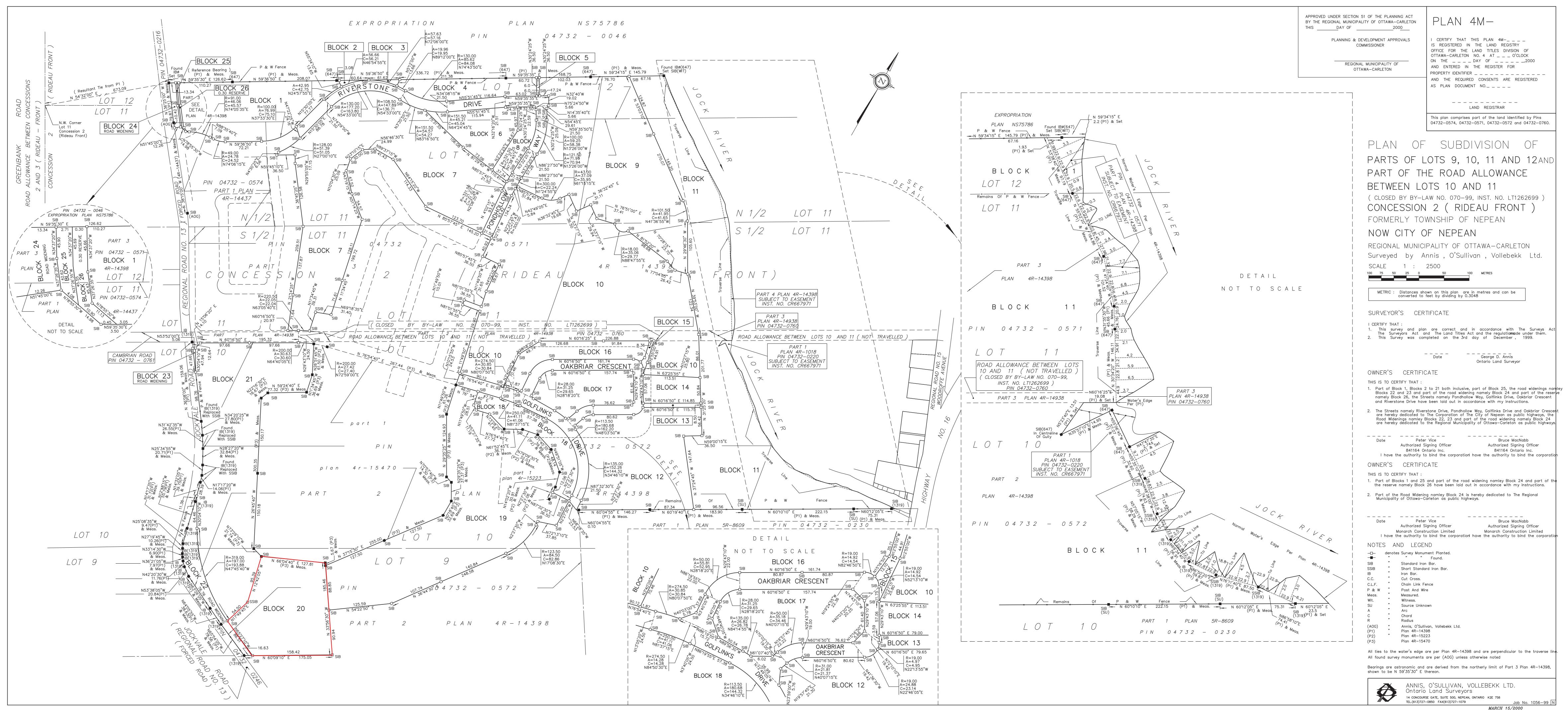
CITY PLAN No. 18711

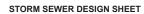
APPENDIX A

• Plan of Subdivision

APPENDIX B

• Storm Sewer Calculation Design Sheet





IBI

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Stonebridge Clubhouse City of Ottawa Mattamy Homes

LOCATION AREA (Ha)											RATIONAL DESIGN FLOW																	SEW	ER DATA									
STREET	AREA ID	FROM	то	C= 0.20	C= 0.25	C= 0.40	C= 0.50	C= 0.57	C= 0.64	C= 0 0.65 0.	;= C	= C= 76 0.8	INE 0 2.78	CUN AC 2.78	INLET (min)	TIME IN PIPE	TOTAL (min)	i (2) (mm/hr)	i (5) (mm/hr)	i (10) (mm/hr)	i (100) (mm/hr)	2yr PEAK FLOW (L/s)	5yr PEAK FLOW (L/s)	10yr PEAF FLOW (L/s	K 100yr PEAK s) FLOW (L/s)	FIXED IND		DESIGN FLOW (L/s		Y LENGTI (m)	DIA		ZE (mm) N		SLOPE (%)	VELOCITY (m/s)	AVAIL C	
ubhouse	MH101	MH101	MH100					(0.30				0.5	3 0.53	10.00	0.61	10.61	76.81	104.19	122.14	178.56	40.45	54.87	64.33	94.04	0.00	0.00	40.45	50.02	36.04	250				0.65	0.987	9.57	19.13
MH100 MH100 CBMH3					().18				0.3	2 0.85	10.61	0.72	11.33	74.54	101.08	118.48	173.18	63.13	85.61	100.34	146.67	0.00	0.00	63.13	108.21	41.05	375				0.35	0.949	45.08	41.66%			
finitions:				Notes:	I.										Designe	i:	R.M.	-			No.			1			Revi									Date		
= 2.78CiA, where:				1. Mann	ings co	efficient	t (n) =	0.013									W.Z.				1.	Servicing Memo - Submission No. 1									2022-03-16							
2 = Peak Flow in Litre	s per Second (L/s)																				2					Servicing Me	emo - Subm	ission No. 2								2022-06-14		
A = Area in Hectares (= Rainfall intensity in		ır (mm/hr)													Checked	:	D.G.Y.																					
[i = 732.951 / (TC+6		2 YEAR																																				
[i = 998.071 / (TC+6		5 YEAR													Dwg. Re	erence:	122507-50	00																				
[i = 1174.184 / (TC+		10 YEAR																				File Re	eference:					Da	te:							Sheet No:		
[i = 1735.688 / (TC+	6.014)^0.8201	100 YEAR																				12250	7-6.04.04					2022-	06-14							1 of 1		