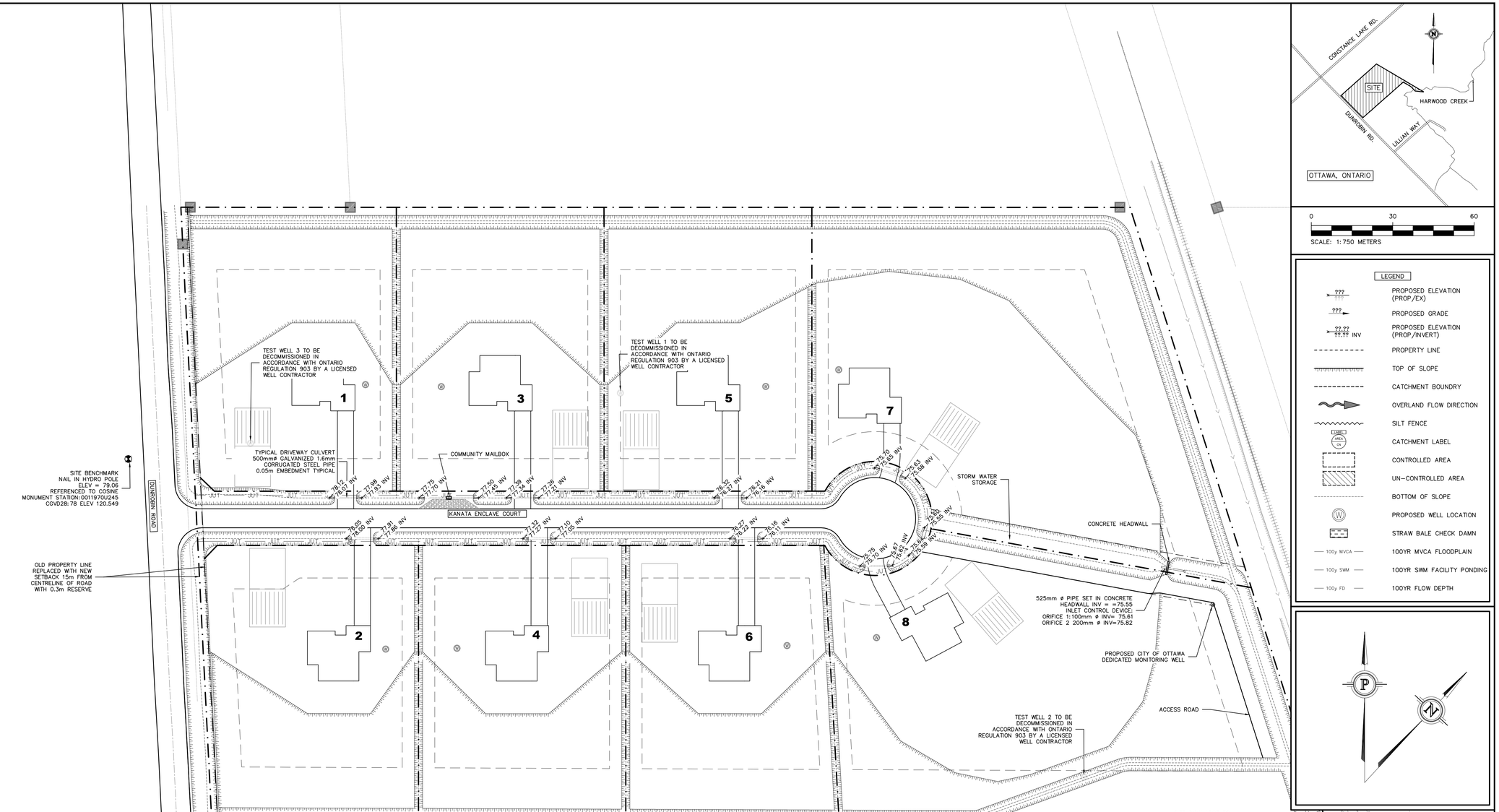
Well Construction

- Future wells drilled on the site should be constructed with a minimum 6.0 metres length of casing through the overburden and set at least 1 metre into the sound bedrock, whichever is greater.
- The steel casing placed in the boreholes should be pressure grouted or displacement grouted into place. The material used to seal the annular space could consist of either a cement grout or a commercially available bentonite grout product. Cement grout mixtures should be allowed to set for a minimum two day period for normal cement or twelve hours for a high early strength cement prior to advancing the well further into bedrock. If a bentonite grout product is used, drilling need only be suspended for a few hours depending on the product used. Bentonite grout has the additional advantage of remaining flexible when set and therefore will not crack or shrink thereby ensuring as well as possible that surface water or shallow groundwater will not migrate along the annular space and into the well bore.
- Once the casing has been sealed, the well should be advanced uncased in the bedrock until a water supply of sufficient quantity and quality is encountered. Wells should encounter sufficient water and be completed to depths of less than about 55 metres.
- The completed well should then be developed to maximize the yield.
- The well casings should be completed at least 400 millimetres above the highest point on the finished ground surface within three metres radially from the well after surface drainage is directed away from the well.
- The casing should be fitted with a pitless adapter at a minimum depth of 1.8 metres below the finished ground surface to facilitate below ground plumbing and electrical connections.

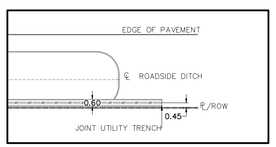
Well Decommissioning

- The existing test wells are poorly located with respect to the proposed development. These well are indicated to be decommissioned or abandoned in accordance with Ontario Regulation 903.
- This work should be carried out before any development or infilling of the backwater flood plain.
- Records of abandonment at to be provided to the Ministry of the Environment.



SITE SERVICING PLAN

SCALE = 1:750



JOINT UTILITY TRENCH

SCALE = 1:250

0 30 60

SCALE: 1:750 METERS

LEGEND

- PROPOSED ELEVATION (PROP/EX)
- PROPOSED GRADE
- PROPOSED ELEVATION (PROP/INVERT)
- PROPERTY LINE
- TOP OF SLOPE
- CATCHMENT BOUNDRY
- OVERLAND FLOW DIRECTION
- SILT FENCE
- CATCHMENT LABEL
- CONTROLLED AREA
- UN-CONTROLLED AREA
- BOTTOM OF SLOPE
- PROPOSED WELL LOCATION
- STRAW BALE CHECK DAMN
- 100y MVCA — 100YR MVCA FLOODPLAIN
- 100y SWM — 100YR SWM FACILITY PONDING
- 100y FD — 100YR FLOW DEPTH

NOTES:
1. ALL DIMENSIONS ARE IN METRES, UNLESS OTHERWISE SPECIFIED; ALL ELEVATIONS ARE IN METRES.
2. THIS IS NOT A LEGAL SURVEY.
3. EXISTING SERVICES INFORMATION SHOWN ARE BASED ON BEST CURRENT INFORMATION. CONTRACTOR TO VERIFY EXACT LOCATION AND REPORT ANY DISCREPANCIES TO KOLLAARD ASSOCIATES INC.
4. CLIENT IS RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS.
5. CONTRACTOR TO VERIFY THAT APPROPRIATE PERMITS HAVE BEEN ACQUIRED PRIOR TO ANY CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF UTILITIES.
7. ALL DIMENSIONS TO BE VERIFIED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION.
8. THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ALL APPROVALS HAVE BEEN GRANTED.
9. INSPECTION OF ROUGH GRADE BY KOLLAARD ASSOCIATES INC. AND MUNICIPALITY MUST BE CONDUCTED PRIOR TO PLACEMENT OF TOPSOIL OR SOD.
10. HYDRO SERVICE TO BE INSTALLED ACCORDING TO THE SPECIFICATIONS OF SERVICE PROVIDER AND THE MECHANICAL ENGINEER.
11. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH MUNICIPAL STANDARDS AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS
12. ANY CHANGES MADE TO THIS PLAN MUST BE VERIFIED AND APPROVED BY KOLLAARD ASSOCIATES, INC.
13. THIS DRAWING IS PART OF KOLLAARD ASSOCIATES DESIGN REPORT #200977.

No.	REVISION	DATE	BY

CONSULTANTS

Kollaard Associates Engineers
BOX 189
210 PRESCOTT STREET
KEMPTVILLE, ONTARIO
K0G 1J0
FACSIMILE (613) 258-0475
(613) 860-0923

DESIGN	AJ/SD
DRAWN	AJ
CHECKED	SD
APPROVED	SD

STAMP: LICENSED PROFESSIONAL ENGINEER — MAY 5, 2023 — S.E. deWit 100079612 — PROVINCE OF ONTARIO

CLIENT NAME	ZBIGNIEW HAUDEROWICZ
PROJECT NAME	PROPOSED RESIDENTIAL SUBDIVISION
PROJECT LOCATION	2050 DUNROBIN ROAD OTTAWA, ONTARIO
DRAWING	SITE SERVICING PLAN
PROJECT No.	200977
DATE	2023/05/05
SCALE	1:750
DRAWING No.	SVC

D02-02-22-0018