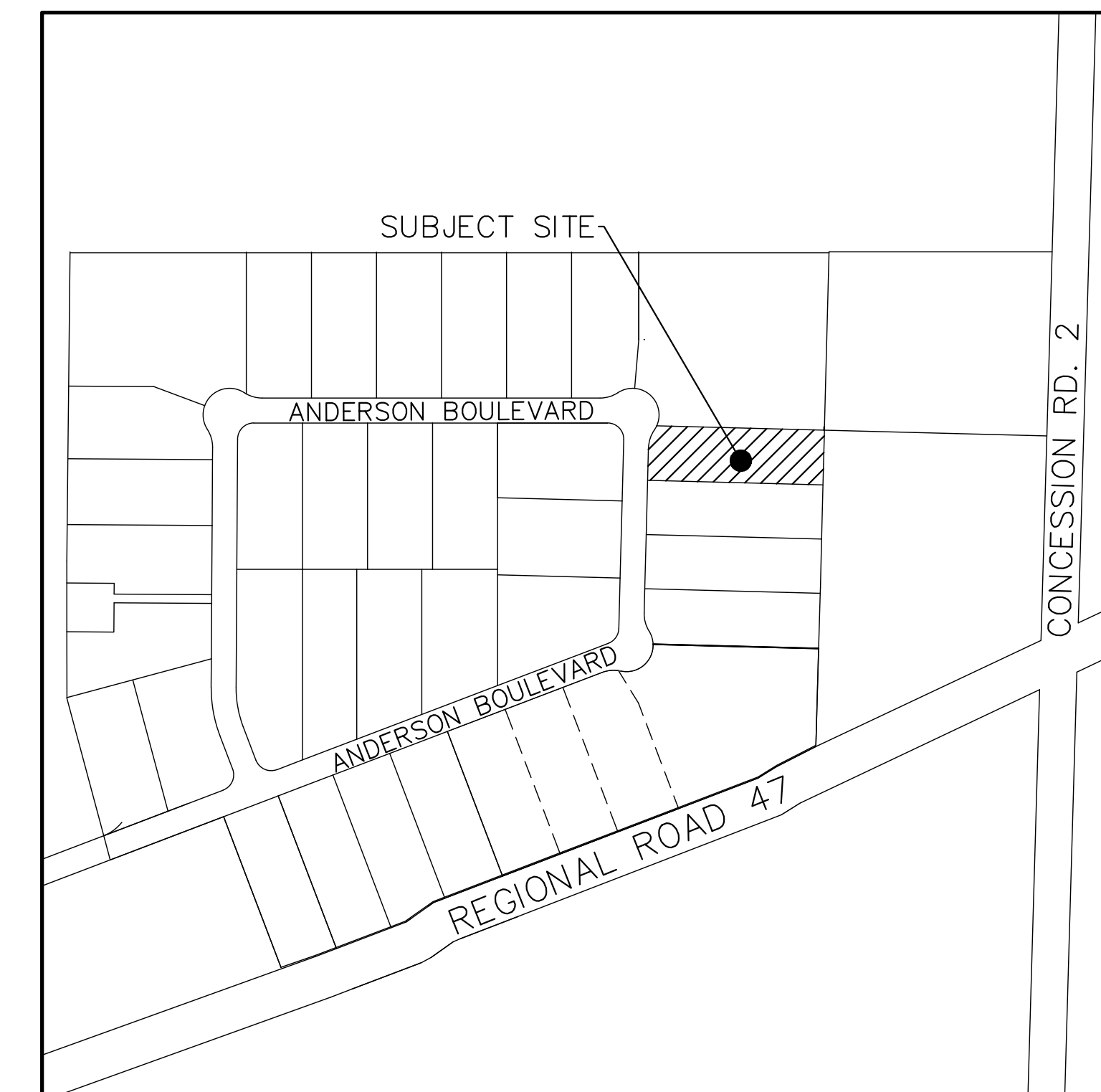


# LOT 12 ANDERSON BLVD, TOWNSHIP OF UXBRIDGE

## DRAWING LIST

ND-1	NOTES AND DETAILS
SP-1	SITE PLAN
SGS-1	SITE SERVICING AND GRADING PLAN
STM-1	PRE-DEVELOPMENT STORM CATCHMENT PLAN
STM-2	POST-DEVELOPMENT STORM CATCHMENT PLAN
EP-1	EROSION AND SEDIMENT CONTROL PLAN



TOWNSHIP OF UXBRIDGE  
51 TORONTO STREET SOUTH  
UXBRIDGE, ON  
L9P 1T1



**PEARSON**  
**ENGINEERING**  
PEARSONENG.COM PH. 705.719.4785



**GENERAL NOTES**

- DRAWINGS**
  - THE NOTES ON THIS SHEET APPLY TO ALL WORKS UNDER THIS CONTRACT UNLESS OTHERWISE NOTES ON THE PLAN AND PROFILE DRAWINGS AND/OR SPECIFIC DETAIL DRAWINGS.
  - THE STANDARD DRAWINGS OF THE TOWNSHIP OF UXBRIDGE, UXBRIDGE HYDRO DISTRIBUTION, ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS) AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) CONSTITUTE PART OF THE PLANS OF THIS CONTRACT.
  - ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY TOWNSHIP OF UXBRIDGE AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS.
  - THE STANDARD DRAWINGS INCLUDED WITH THESE PLANS ARE PROVIDED FOR CONVENIENCE ONLY AND ARE NOT TO BE CONSTRUED TO BE A COMPLETE SET FOR THE PURPOSE OF THE CONTRACT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RELEVANT STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.
- MEASUREMENTS**
  - ALL DIMENSIONS ARE IN METRES (m), EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES (mm), UNLESS SPECIFIED OTHERWISE.
  - ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- GENERAL**
  - EXISTING SERVICES AND UTILITIES SHOWN ON THE CONTRACT DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE AND THEIR LOCATIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE WISHES WITH THE UNDERSTANDING THAT THE OWNER DISCLAIMS ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
  - A ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE PUBLIC WORKS DEPARTMENT 72 HOURS PRIOR TO THE COMMENCEMENT OF WORK WITHIN ANY CITY RIGHT-OF-WAY. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER AND THE TOWNSHIP OF UXBRIDGE.
  - PRIOR TO COMMENCING ANY WORK, INSTALL SNOW FENCING ALONG THE DRIP LINE OF THE DESIGNATED TREES AS SHOWN ON THE DRAWINGS. REFERENCE SHOULD ALSO BE MADE TO THE TREE PRESERVATION REQUIREMENTS AS SHOWN ON THE LANDSCAPE ARCHITECT'S PLAN. MAINTAIN THE FENCE AT ALL TIMES TO ENSURE THAT ACCESS TO THE AREA BENEATH THE TREES IS PREVENTED. STORAGE OF EQUIPMENT AND SUPPLIES SHALL NOT BE PERMITTED WITHIN THIS AREA.
  - ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE TOWNSHIP'S DIRECTOR OF PUBLIC WORKS.
  - NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
  - GRANULAR MATERIAL, USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
  - UTILITY CROSSINGS, WHERE REQUIRED, SHALL BE SUPPORTED AS PER THE APPLICABLE UTILITY COMPANY CONCERNED.
  - THE CONTRACTOR IS RESPONSIBLE (IF REQUIRED) FOR SUPPORTING ANY EXISTING UTILITIES AND/OR STRUCTURES IN ACCORDANCE WITH THE SPECIFICATIONS OF THE UTILITY COMPANY CONCERNED.
  - ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE CITY PUBLIC WORKS DEPARTMENT. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 100mm OF SCREENED TOPSOIL AND No.1 NURSERY SOIL UNLESS NOTED OTHERWISE.
  - WRITTEN PERMISSION SHALL BE OBTAINED BY THE DEVELOPER FROM THE OWNERS OF THE LANDS EXTERNAL TO THE SUBJECT PROPERTY PRIOR TO UNDERTAKING ANY WORK ON THEIR PROPERTY. THE WORK TO BE UNDERTAKEN ON THESE LANDS INCLUDES TREE REMOVAL AND CONSTRUCTING SERVICED ROADWAYS. GRADING AS REQUIRED TO MATCH EXISTING GROUND INTO THE PROPOSED STREET LINE ELEVATIONS SHALL BE DONE AT A MAXIMUM SLOPE OF 3:1. FURTHERMORE, ALL DISTURBED AREAS WITHIN THE ADJACENT LANDS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER.
  - ALL GRADING MUST CONFORM TO THE TOWNSHIP OF UXBRIDGE LOT GRADING POLICIES CURRENTLY IN EFFECT.
  - ALL REMOVALS ARE TO BE CARRIED OUT IN ACCORDANCE WITH OPSS 510.
  - DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS 517 AND 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. ALL ENGINE DRIVEN PUMPS ARE TO BE ADEQUATELY SILENCED FOR OPERATION IN RESIDENTIAL AREAS.
- ROADS**
  - THE ROAD PAVEMENT STRUCTURE SHALL CONSIST OF THE FOLLOWING REPORT BASED THE MARCH 25, 2021 SUPPLEMENTARY ROADWAY RECOMMENDATIONS BY WPS CONSULTING ENGINEERS:
    - STANDARD PAVEMENT (CAR'S)
      - 50mm HL-4
      - 150mm GRANULAR "A"
      - 300mm GRANULAR "B"
    - ENHANCED PAVEMENT (TRUCKS)
      - 40mm HL-4
      - 50mm HL-8
      - 150mm GRANULAR "A"
      - 450mm GRANULAR "B"

4.2 NATIVE SUBGRADE SHALL HAVE A CROSSFALL OF 3%.

4.3 NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PROOF ROLLED AND APPROVED BY THE SOILS CONSULTANT PRIOR TO INSTALLATION OF GRANULAR. ALL GRANULAR MATERIAL SHALL BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

4.5 JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT AS DIRECTED BY THE ENGINEER PRIOR TO PLACEMENT OF NEW ASPHALT.

4.6 ALL CURB AND GUTTER SHALL BE CONSTRUCTED AS PER THE ENGINEERING DRAWINGS AS FOLLOWS:  
 - SINGLE STAGE CURB AS PER OPSD 600.040 FOR COLLECTOR AND ARTERIAL ROADS AND MOUNTABLE CURB WITH NARROW GUTTER AS PER 600.100 FOR LOCAL ROADS.  
 - CURB TERMINATIONS AS PER OPSD 608.010

4.7 ALL CURBS SHALL BE DEPRESSED AT ALL WALKWAY, DRIVEWAY AND SIDEWALK LOCATIONS.

4.8 ALL CURB RADII TO BE 9.0m AT THE EDGE OF ASPHALT, UNLESS SHOWN OTHERWISE.

4.9 CONCRETE STRENGTH FOR CURB AND GUTTER TO BE 35MPa AT 28 DAYS.

4.10 TEMPORARY ASPHALT CURB SHALL BE PLACE BEHIND ALL CP'S DURING BASE COURSE PLACEMENT. ASPHALT CURBS SHALL BE REPLACED WITH CONCRETE CURBS FOR THE FINAL ASPHALT LIFT.

4.11 SIDEWALKS TO COMPLY WITH OPSD 310.010 AND ARE TO BE 1.5m WIDE. MINIMUM THICKNESS AS FOLLOWS:  
 - RESIDENTIAL DRIVEWAY, 150mm  
 - COMMERCIAL DRIVEWAY, 200mm (REINFORCEMENT AS PER OPSS IF REQUIRED)  
 - WHEN NO DRIVEWAY IS PRESENT, 125mm

4.11 SIDEWALKS TO BE CONSTRUCTED ON 150mm GRANULAR "A" BEDDING UNLESS OTHERWISE SPECIFIED BY THE DIRECTOR OF PUBLIC WORKS.

4.12 CONCRETE STRENGTH FOR SIDEWALK TO BE 35MPa AT 28 DAYS.

4.13 SIDEWALK RAMPS TO COMPLY WITH OPSD 310.030.

4.14 DRIVEWAYS TO BE CONSTRUCTED WITH A MINIMUM OF 50mm HL.3 ASPHALT ON A MINIMUM OF 300mm GRANULAR "A" FOR RESIDENTIAL OR ALTERNATIVE EQUIVALENT MATERIAL AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

4.15 DRIVEWAY GRADES TO BE A MINIMUM OF 0.5% AND A MAXIMUM OF 7.0%. DRIVEWAY WIDTH TO BE:  
 RESIDENTIAL  
 SINGLE - 3.0m  
 DOUBLE - 6.0m

ENTRANCE DETAILS AS PER OPSD 351.010 AND PAVED TO STREETLINE.

ALTERNATE STANDARD HEIGHTS	ALTERNATE DIMENSION
A	1980
B	1830
C	1520
D	1380

**NOTES:**  
 1. Outlet hole size 525mm diameter maximum, location as required.  
 2. 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.  
 A. Centre reinforcing in base slab and walls  $\geq 20mm$ .  
 B. Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.  
 C. Frame, grate, and adjustment units shall be installed according to OPSD 704.010.  
 D. Pipe support shall be according to OPSD 708.020.  
 E. All dimensions are nominal.  
 F. All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3  
**PRECAST CONCRETE CATCH BASIN**  
 600x600mm  
 OPSD 705.010

Maintenance Hole Diameter	No. 1-4	No. 5 and 6	No. 8	Inlet Hole	Outlet Hole
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 4  
**MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES**  
 OPSD 701.021

**NOTES:**  
 1. The sump is measured from the lowest invert.  
 A. Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.  
 B. Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.  
 C. Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.  
 D. Pipe support according to OPSD 708.020.  
 E. For benching and pipe opening details, see OPSD 701.021.  
 F. For adjustment unit and frame installation, see OPSD 704.010.  
 G. All dimensions are nominal.  
 H. All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 5  
**PRECAST CONCRETE MAINTENANCE HOLE**  
 1200mm DIAMETER  
 OPSD 701.010

**CDS PMSU2015-4-C DESIGN NOTES**

THE STANDARD CDS PMSU2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

**CONFIGURATION DESCRIPTION**

- GRATED INLET ONLY (NO INLET PIPE)
- GRATED INLET WITH INLET PIPE OR PIPES
- CURB INLET ONLY (NO INLET PIPE)
- CURB INLET WITH INLET PIPE OR PIPES
- CUSTOMIZABLE SUMP DEPTH AVAILABLE
- ANTI-FLOUTATION DESIGN AVAILABLE UPON REQUEST

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WATER QUALITY FLOW RATE (GFS OR L/s)	PEAK FLOW RATE (GFS OR L/s)	RETURN PERIOD OF PEAK FLOW (YRS)	SCREEN APERTURE (AND OR FINE)	PIPE DATA	LE	MATERIAL	DIAMETER
INLET PIPE 1	-	-	-	-	-	-	-	-
INLET PIPE 2	-	-	-	-	-	-	-	-
OUTLET PIPE	-	-	-	-	-	-	-	-

**GENERAL NOTES:**  
 1. CONTRACTOR TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.  
 2. DIMENSIONS MARKED WITH (1) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.  
 3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERING SOLUTIONS LLC REPRESENTATIVE.  
 4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.  
 5. STRUCTURE SHALL MEET ASBESTOS (R20) AND CASTINGS SHALL MEET R200 (ASBESTOS) IN SHEL LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.  
 6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHEET AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

**INSTALLATION NOTES:**  
 A. ANY SUBGRADE BELOW DEPTH, AND/OR ANTI-FLOUTATION PROVISIONS ARE SITE SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.  
 B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.  
 C. CUTTING CLUTCHES PROVIDED.  
 D. CONTRACTOR TO MAKE JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.  
 E. CONTRACTOR TO PROVIDE, INSTALL AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.  
 F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2016 Rev 3  
**MAINTENANCE HOLE DROP STRUCTURE TEE**  
 OPSD 1003.010

SEWER ID	DROP PIPE ID	APPLICATION
200	200	Storm and Sanitary
250	200	Storm and Sanitary
300	250	Storm and Sanitary
375	300	Storm and Sanitary
450	375	Storm
525	450	Storm
600	525	Storm
675	600	Storm

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2016 Rev 3  
**CAST-IN-PLACE MAINTENANCE HOLE DROP STRUCTURE TEE**  
 OPSD 1003.010

**LEGEND:**  
 S = Rate of pavement super-elevation in percent, %.

**NOTES:**  
 1. When curb and gutter is adjacent to concrete pavement or base, this drawing shall be used in conjunction with OPSD 552.010 and 552.020.  
 2. Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.  
 3. For slipforming procedure a 5% batter is acceptable.  
 A. Treatment at entrances shall be according to OPSD 351.010.  
 B. Outlet treatment shall be according to the OPSD 610 Series.  
 C. The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.  
 D. All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2  
**CONCRETE BARRIER CURB WITH WIDE GUTTER**  
 OPSD 600.010

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NO.	REVISION NOTE	DATE	BY

BENCHMARK			

KENNEDY  
 LOT 12 ANDERSON BLVD.  
 UXBRIDGE TOWNSHIP

NOTES AND DETAILS

**PEARSON ENGINEERING**  
 PEARSONENGINEERING.COM PH. 705.719.4785

DESIGNED BY	NW/MWD	HORIZ SCALE	HORIZ	PROJECT #	22017
DRAWN BY	NW	VERT SCALE	VERT	DRAWING #	ND-1
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0



**Enviro-STEP** Technologies Inc. **eljen**

Project: Warehouse  
Location: UXBRIDGE

VALUE ENTERED BY USER  
CALCULATED VALUE OR MESSAGE  
KEY DESIGN INFORMATION

**IMPORTANT TO READ THE FOLLOWING NOTE:**  
This worksheet allows for the design of ELJEN GSF Systems using rectangular dispersal beds. The worksheet helps in determining the area and dimensions of the dispersal bed, the number of rows and the number of ELJEN modules required. The designer has a lot more flexibility in the design which is not covered in this worksheet but detailed in the Ontario Design and Installation Manual. For example, modules in a row can be placed end to end, spaced one another or can form smaller groups of even number of modules. ELJEN GSF Systems can also be designed using irregular shape dispersal beds, multiples beds. ELJEN GSF design also allows for uneven distribution of the modules over the dispersal bed when it is required to comply with minimum clearances as per article 8.2.1.6 of the OBC.

For any design not covered by this worksheet, please refer to the ELJEN GSF Ontario Design and Installation Manual or contact Enviro-STEP Technologies Technical Support at 877-925-7496 or support@enviro-step.ca

**ESTABLISHING DAILY DESIGN FLOW**

Number of Bedrooms:	Enter value	1 bedrooms	
Flow Rate for bedroom between 1 and 5		750	165.2 gpd
Additional flow rate for bedroom over 5		0 L/d	0.0 gpd
Total number of fixture units	Enter value	20 Total fixture units	
Additional flow as per fixture units		0 L/d	0.0 gpd
Floor space	Enter value	200 m <sup>2</sup> floor space	
Additional flow as per floor space		0 L/d	0.0 gpd
<b>Total daily design flow</b>		<b>750 L/d</b>	<b>165.2 gpd</b>
Safety factor (at designer's discretion)	Enter value	0 L/d	0.0 gpd
<b>Total daily design flow</b>		<b>750 L/d</b>	<b>165.2 gpd</b>

**SOIL PERCOLATION, VERTICAL SEPARATION AND SIZE OF DISPERSAL AREA**

Percolation time of native soil (T)	Enter value	30 min/cm	
Required vertical separation based on T		450 mm	18 inch
Vertical separation available on site	Enter value	450 mm	18 inch
Validation of vertical separation		OK	REF. ON SKETCH "D"
Sand to add to meet vertical separation		0 mm	0 inch
Slope of natural ground	Enter value	0 %	
Validation of slope (must be <25%)		OK	
<b>Minimal Dispersal Area required (QT/400)</b>		<b>56.3 m<sup>2</sup></b>	<b>606 ft<sup>2</sup></b>

**NUMBER OF ELJEN MODULES**

Minimal number of ELJEN GSF A42 Modules	8 Modules	(Based on 95 L/mod)
<b>Selected number of ELJEN GSF A42 modules</b>	<b>4 Modules</b>	ed on the nb of rows selected)

ELJEN GSF Design tool by Enviro-STEP Technologies Version: 2021-03

**Enviro-STEP** Technologies Inc. **eljen**

**SYSTEM LAYOUT (CAN BE ADAPTED BY THE DESIGNER IF NEEDED)**

Raised system required	NO		
Type of distribution	Select GRAVITY		
Distribution feeding point	Select EXTREMITY of rows		
Max length of distribution pipe criteria	18 m MAX	59.1 ft	
Length of System	Enter value	12 m	39.4 ft
Length of distribution pipe (max 18 or 30m)		2.44 m	
Length of distribution pipe criteria verification		OK	
Minimum required width of System		4.7 m	15.4 ft
Selected Width of System	Enter value	4.7 m	15.4 ft
<b>Dispersal Area provided</b>		<b>56 m<sup>2</sup></b>	<b>607 ft<sup>2</sup></b>
Validation of area		OK	
Number of ELJEN GSF rows	Enter value	2 Rows	
Number of groups per row	Enter value	2 Groups/row	
Number of modules per group		2 Mod/group	REF. ON SKETCH
Total number of modules per row		4 Mod/row	
Spacing between rows (side to side of module)		1.75 m	68.9 in
Spacing at end of rows (end of module to end of sand)		1.78 m	70.1 in
Lateral spacing (side of module to lateral edge of sand)		0.88 m	34.6 in
Spacing of groups of modules		1.76 m	69.3 in
<b>Total length of dispersal area</b>		<b>12.0 m</b>	<b>39.4 ft</b>
<b>Total width of dispersal area</b>		<b>4.7 m</b>	<b>15.5 ft</b>
Height of backfill over modules (min 300mm)		300 mm	12.0 in

**SYSTEM LAYOUT (CONTINUED): Additional information for raised or partially raised beds ONLY**

Is the system partially or fully raised ?	NO
Height above natural ground (uphill side)	0 mm
Height above natural ground (downhill side)	0 mm (based on slope entered above)
Slope of side berms	1 Vertical to 3 Horizontal
Total length including berms (approximative)	12.0 m
Total width including berms (approximative)	4.7 m

ELJEN GSF Design tool by Enviro-STEP Technologies Version: 2021-03

**Enviro-STEP** Technologies Inc. **eljen**

**MINIMUM ASTM C33 SPECIFIED SAND AND IMPORTED SAND REQUIREMENTS**

**IMPORTANT TO READ THE FOLLOWING NOTE:**  
ELJEN GSF modules shall be installed with a minimum amount 150 mm of ASTM C33 Specified Sand on each sides and 150mm under the modules. Once these minimums requirement for ASTM C33 Specified Sand are provided, the remaining of the dispersal area can be filled using ASTM C33 Specified Sand or Imported Sand having a T time between 6 and 10 min/cm and not more than 5% fines passing 0.0074mm (sieve 200). Vertical separation can also be provided using ASTM C33 Specified Sand or Imported Sand. For final backfill over the dispersal area or forming side berm a clean and permeable fill shall be used.

**Volume of granular material if using only ASTM C33 sand for both dispersal area and vertical separation:**  
Estimated volume of ASTM C33 17.9 m<sup>3</sup> +/- 30,43 tons

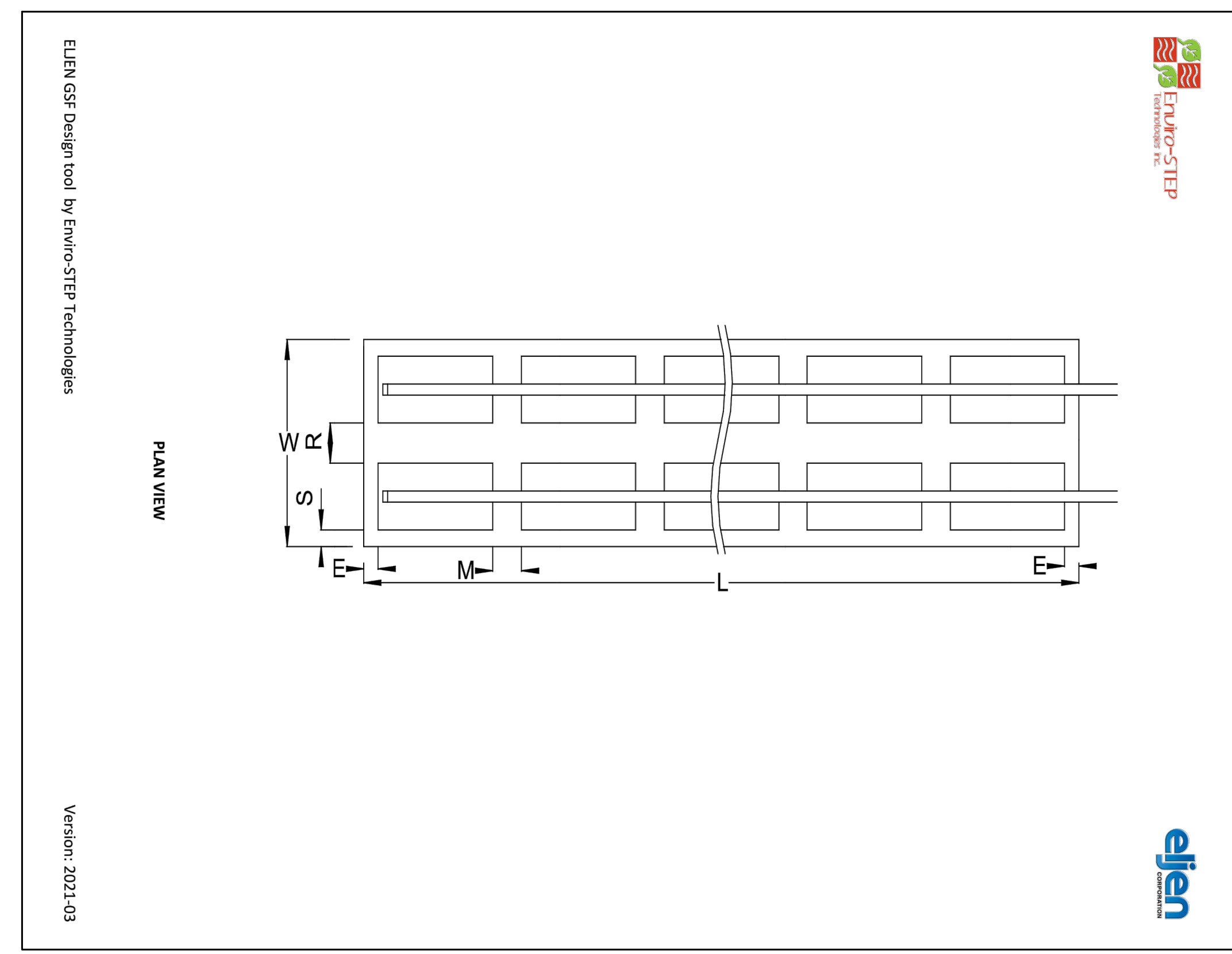
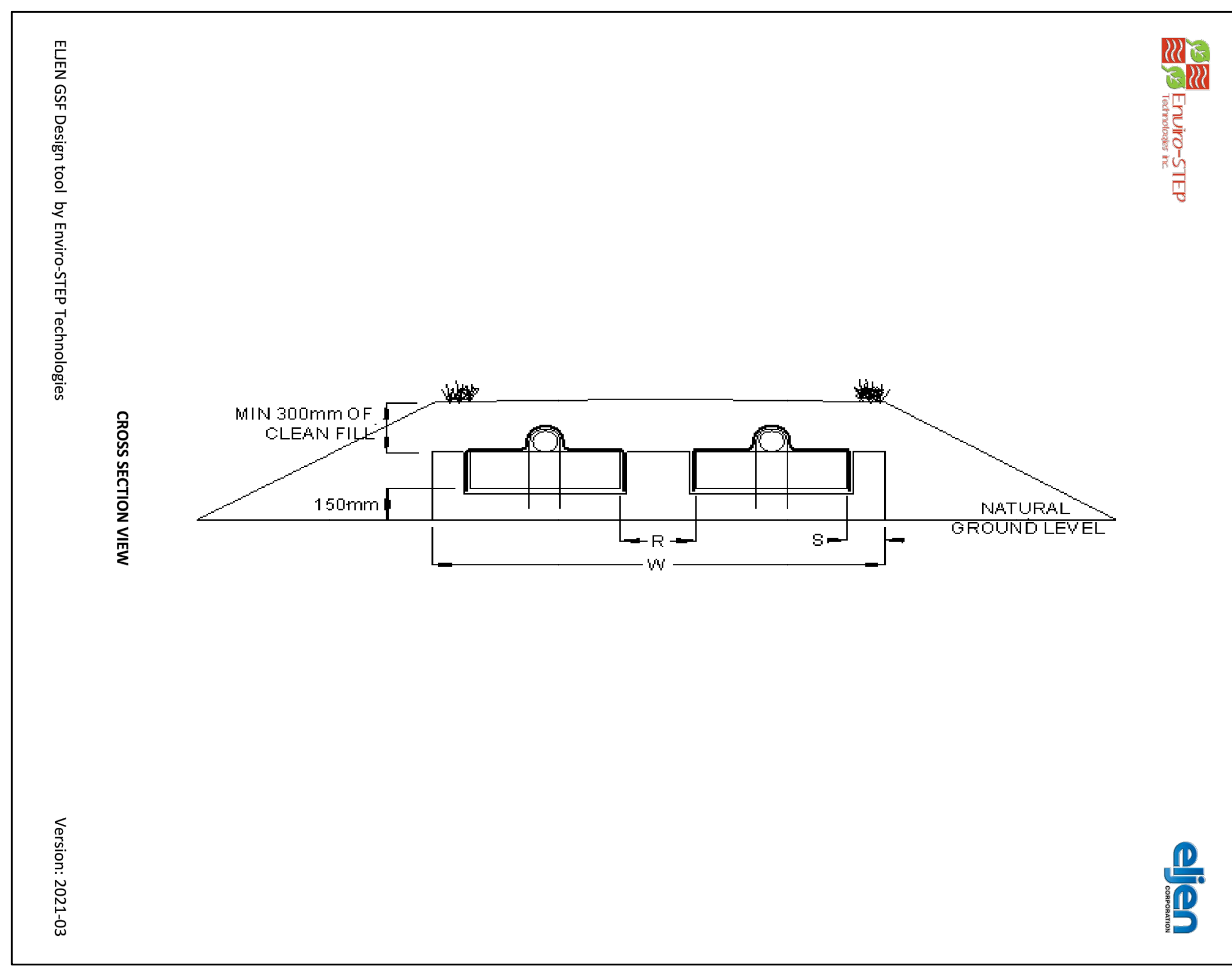
**Volume of granular material if using ASTM C33 sand for dispersal area and imported sand for vertical separation:**  
Estimated volume of ASTM C33 17.9 m<sup>3</sup> +/- 30,43 tons  
Estimated volume of imported sand for vertical separation 0.0 m<sup>3</sup> +/- 0 tons

**Volume of granular material if using minimum ASTM C33 sand with imported sand for remaining of dispersal area:**  
Estimated volume of ASTM C33 7.0 m<sup>3</sup> +/- 11,9 tons  
Estimated volume of imported sand 11.3 m<sup>3</sup> +/- 19,261 tons

**Volume for backfill over the dispersal area and side berms (if raised or partially raised)**  
Estimated volume of backfill over the absorption bed 17.0 m<sup>3</sup> +/- 28,9 tons  
Estimated volume of backfill for the berms (if raised) 0.0 m<sup>3</sup> +/- 0 tons

**DISCLAIMER :**  
This worksheet is a design tool to help in configuring ELJEN GSF Systems. The designer is responsible for adapting the design with the characteristics of the site and any regulation in place as well as complying with Eljen BMEC Authorization and Design and Installation Manual. Volume of granular material are estimations only and should be considered minimal volume.

ELJEN GSF Design tool by Enviro-STEP Technologies Version: 2021-03



				BENCHMARK
NO.	REVISION NOTE	DATE	BY	

KENNEDY  
LOT 12 ANDERSON BLVD.  
UXBRIDGE TOWNSHIP

NOTES AND DETAILS

**PEARSON ENGINEERING**  
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	NW/MWD	HORIZ SCALE	HORIZ	PROJECT #	22017
DRAWN BY	NW	VERT SCALE	VERT	DRAWING #	ND-2
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0



**LEGEND**

- CATCH BASIN
- ▣ DOUBLE CATCH BASIN
- ⊕ CATCH BASIN
- STORM MANHOLE
- MH
- SANITARY MANHOLE
- SERVICE CAP
- ◆ HYD.
- ◆ FIRE HYDRANT
- ▽ VB
- ▽ WATER VALVE
- CURB STOP W/ SERVICE

254.63 PROPOSED ELEVATION  
254.09 EXISTING ELEVATION

1.5% PROPOSED DIRECTION AND GRADE

— BACK OF CURB

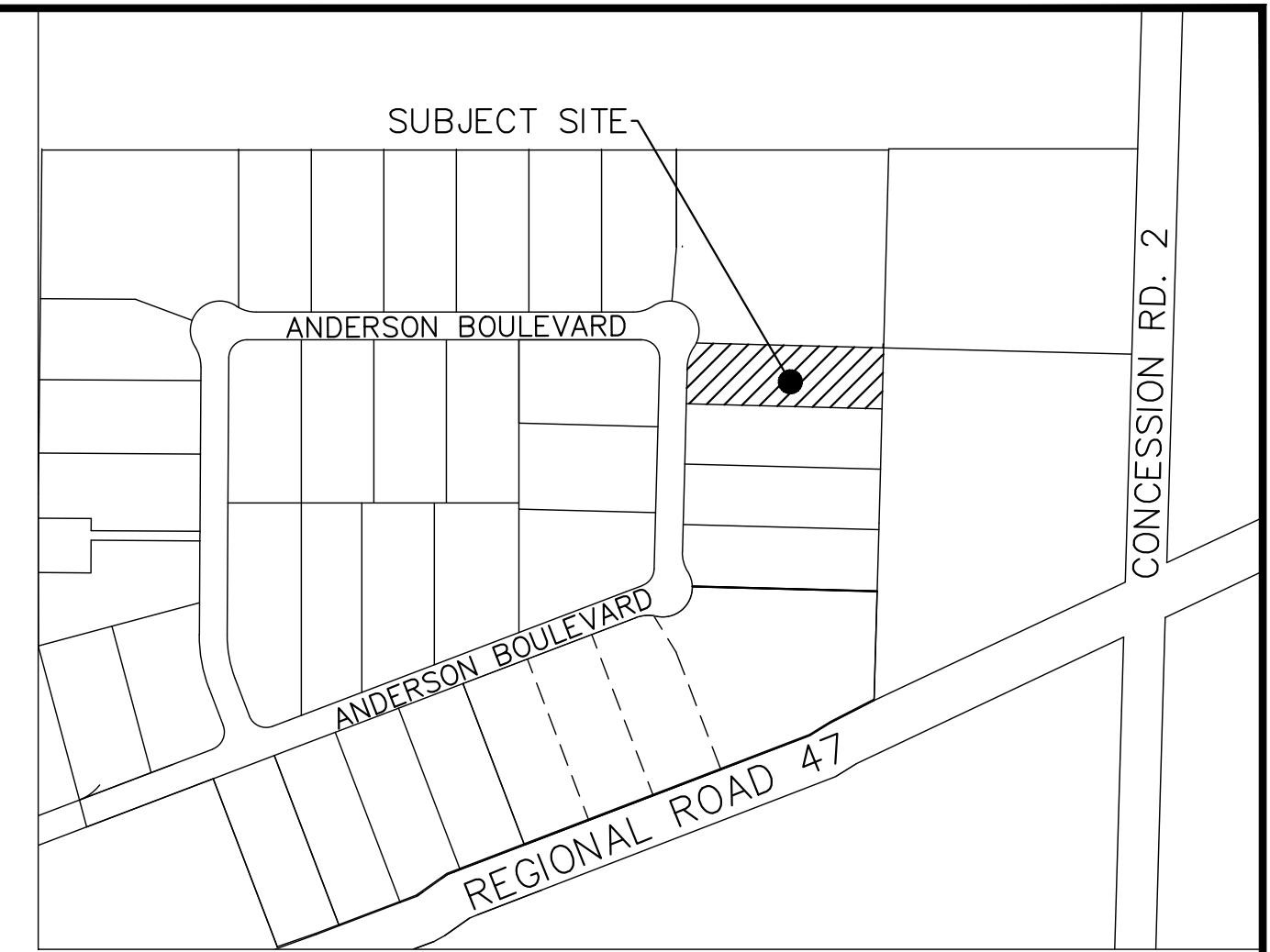
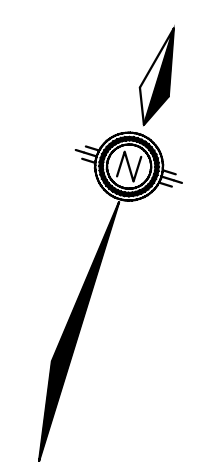
— EDGE OF PAVEMENT

— CURB CUT LOCATION

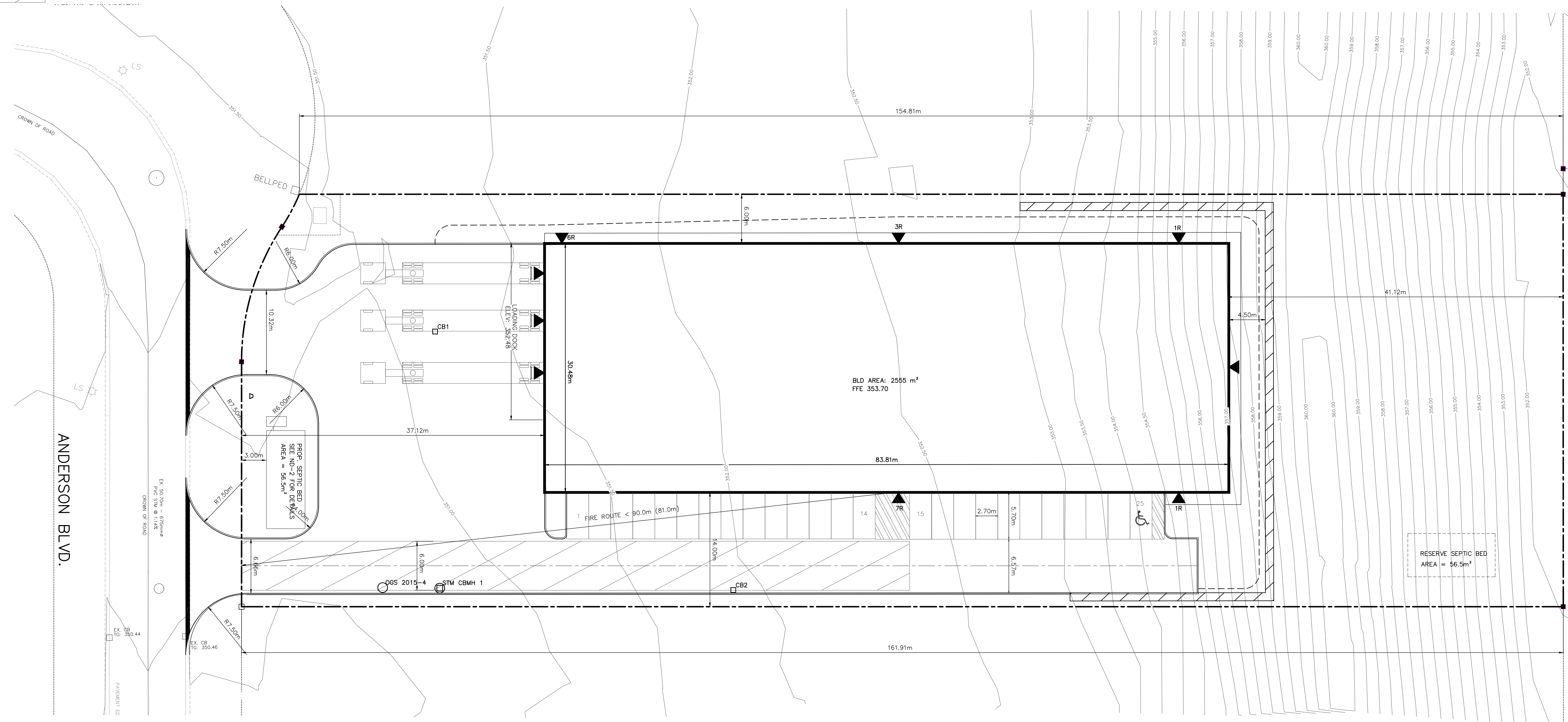
) ( HIGH POINT

▨ 6.0m WIDE FIRE ROUTE

ZONING MATRIX		
DESCRIPTION	STANDARD	PROVIDED
CLASSIFICATION	W1-36	
LOT AREA	8000m <sup>2</sup>	8126m <sup>2</sup>
LOT FRONTAGE	40m	50.5m
FRONT YARD	15.0m	37.1m
INTERIOR SIDE	6.0m	6.0m
EXTERIOR SIDE	15.0m	N/A
REAR YARD	15.0m	41.1m
LOT COVERAGE	40 %	31.4%
LANDSCAPE	30 %	37.5%
PARKING (1/100m <sup>2</sup> )	25	25
BARRIER FREE	1%	1



KEY PLAN N.T.S.



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NO.	REVISION	DATE	BY

**BENCHMARK**  
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO MTO VERTICAL BENCHMARK NUMBER 00819778477 HAVING AN ORTHOMETRIC ELEVATION OF 312.926 METERS. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1978 ADJUSTMENT (CGVD-1928: 1978).

STEEL ROD WITH BRASS CAP ON THE NORTH SIDE OF HIGHWAY No. 47, 7.6 KM EAST OF THE JUNCTION OF HIGHWAY Nos. 47 & 48 AT RINGWOOD, 1.1 KM EAST OF THE C.C.R. CROSSING, 1.1 KM WEST OF BLOOMINGTON ROAD, AND 15.2 M NORTH OF THE CENTERLINE OF HIGHWAY No. 47. LOCATED 9.6 M EAST OF THE CENTERLINE OF THE GRAVEL FARM LANE, 46 CM SOUTH OF THE NORTH RIGHT-OF-WAY FENCE AND 61 CM WEST OF A BLACK AND YELLOW MARKER POST.

BENCHMARK INFORMATION PROVIDED BY R-PE SURVEYING LTD., FROM SURVEY COMPLETED ON 06-28-2020.

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KENNEDY  
LOT 12 ANDERSON BLVD.  
UXBRIDGE TOWNSHIP

SITE PLAN

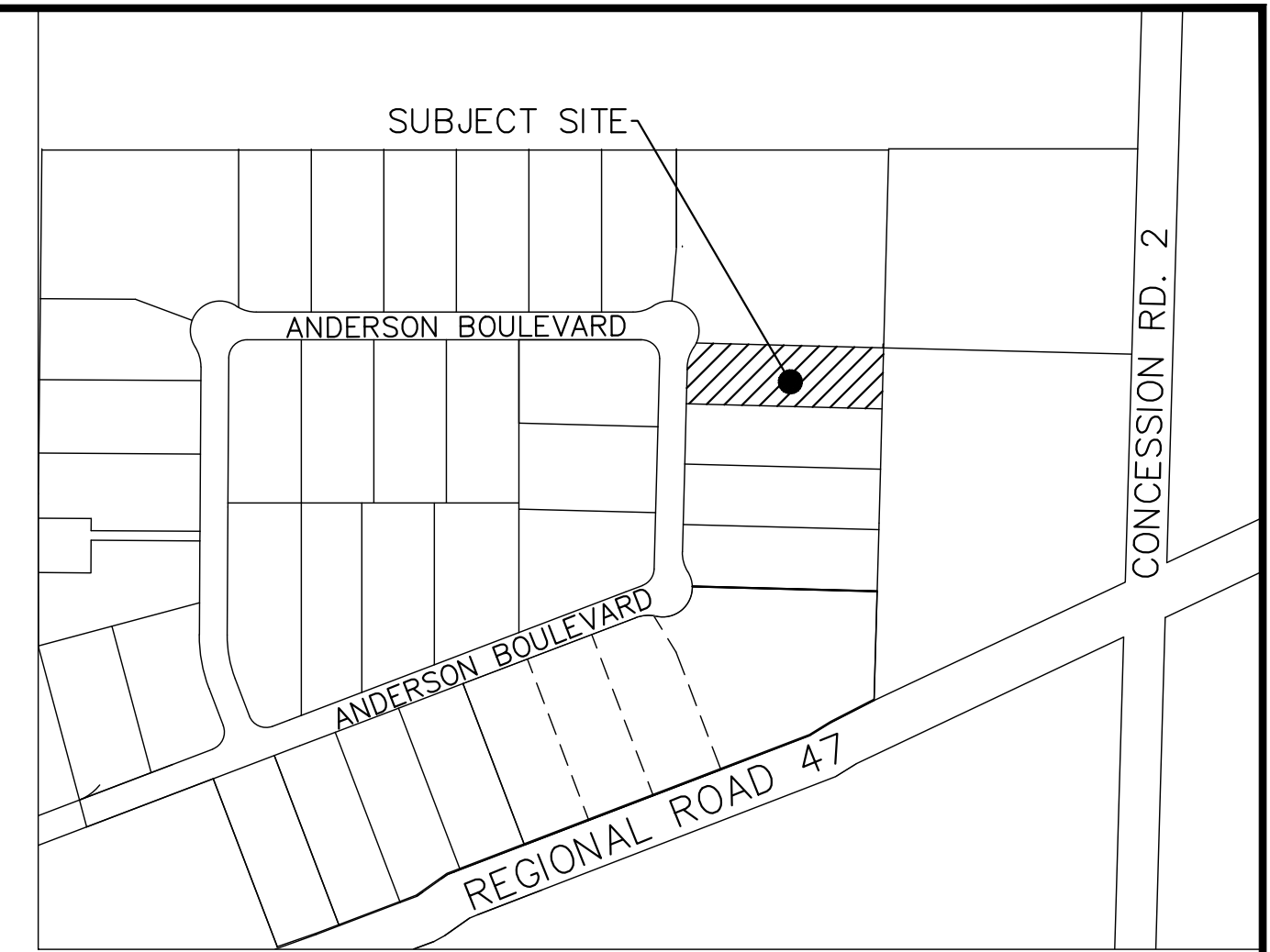
**PEARSON ENGINEERING**  
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	NW/MWD	HORIZ SCALE	1:250	PROJECT #	22017
DRAWN BY	NW	VERT SCALE	N/A	DRAWING #	SP-1
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0

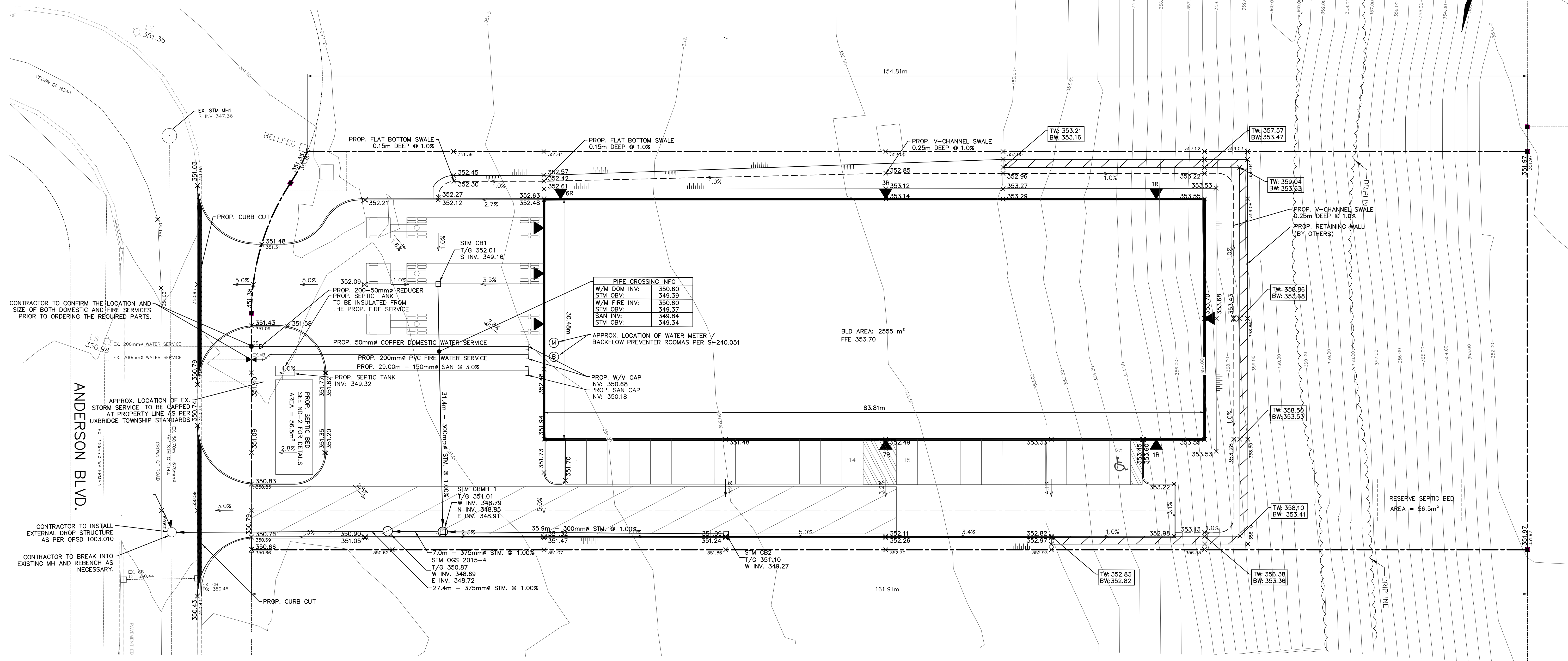
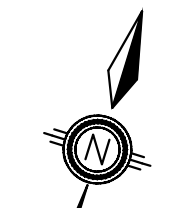


**LEGEND**

- CATCH BASIN
- ▣ DOUBLE CATCH BASIN
- ⊙ CATCH BASIN
- STORM MANHOLE
- MH
- SANITARY MANHOLE
- SERVICE CAP
- ◆ HYD.
- ◆ FIRE HYDRANT
- ▼ VB
- ▼ WATER VALVE
- CS
- CURB STOP W/ SERVICE
- 254.63  
254.09
- PROPOSED ELEVATION  
EXISTING ELEVATION
- 1.5%
- PROPOSED DIRECTION AND GRADE
- BACK OF CURB
- EDGE OF PAVEMENT
- CURB CUT LOCATION
- ) (
- HIGH POINT
- 6.0m WIDE FIRE ROUTE
- (M)
- WATER METER
- (B)
- BACKFLOW PREVENTOR



KEY PLAN N.T.S.



CONTRACTOR TO CONFIRM THE LOCATION AND SIZE OF BOTH DOMESTIC AND FIRE SERVICES PRIOR TO ORDERING THE REQUIRED PARTS.

ANDERSON BLVD.

CONTRACTOR TO INSTALL EXTERNAL DROP STRUCTURE AS PER OPSD 1003.010

CONTRACTOR TO BREAK INTO EXISTING MH AND REBENCH AS NECESSARY.

PROP. SEPTIC BED SEE NO. 7 FOR DETAILS AREA = 56.5m<sup>2</sup>

PIPE CROSSING INFO

W/M DOM INV:	350.60
STM OBV:	349.39
W/M FIRE INV:	350.60
STM OBV:	349.37
SAN INV:	349.84
STM OBV:	349.34

APPROX. LOCATION OF WATER METER / BACKFLOW PREVENTOR ROOMS PER S-240.051

BLD AREA: 2555 m<sup>2</sup>  
FFE 353.70

RESERVE SEPTIC BED AREA = 56.5m<sup>2</sup>

NO.	REVISION NOTE	DATE	BY

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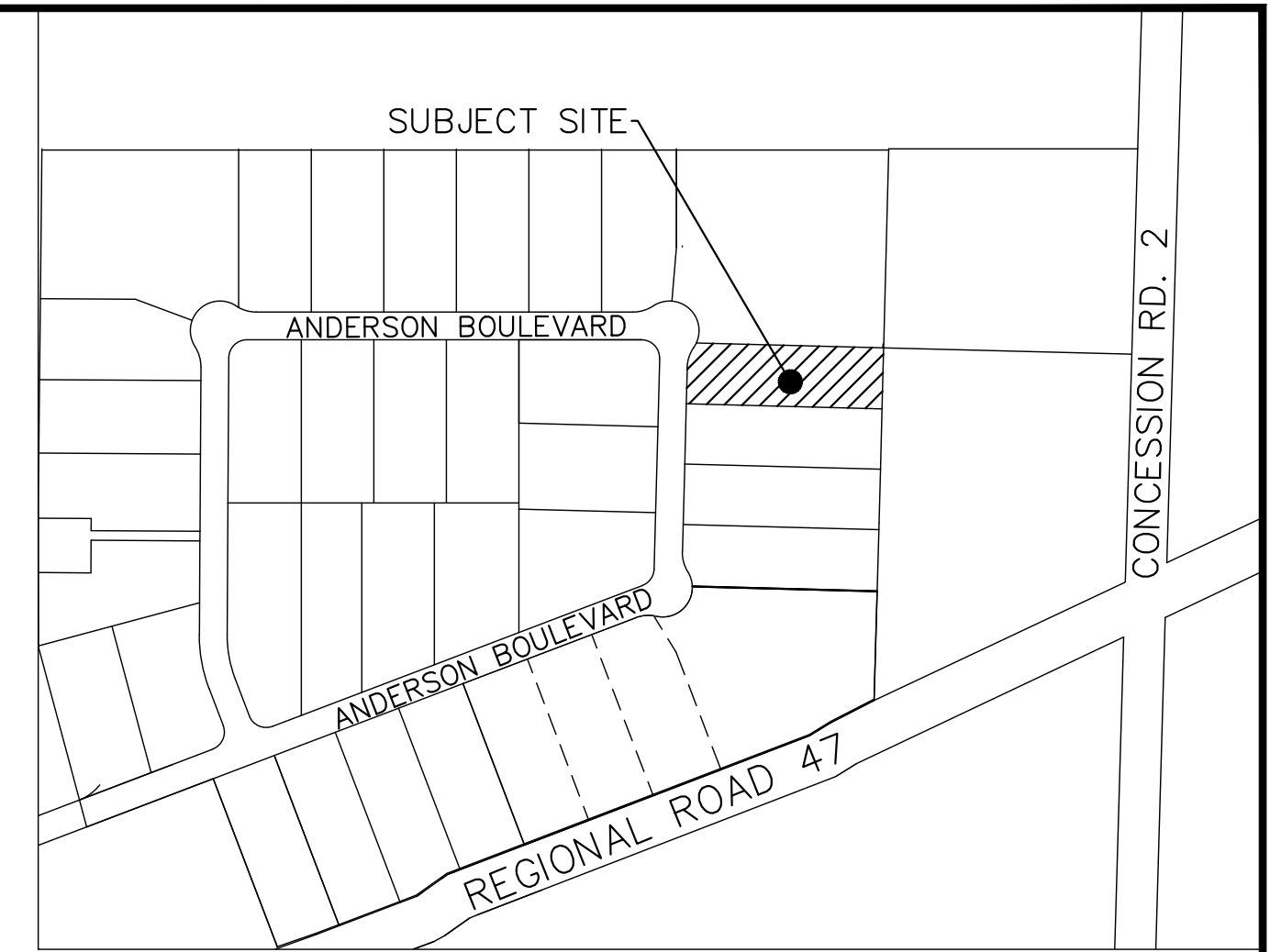
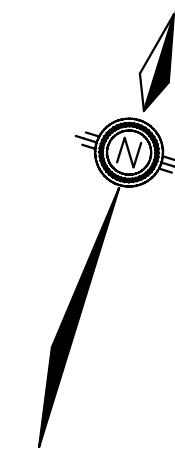
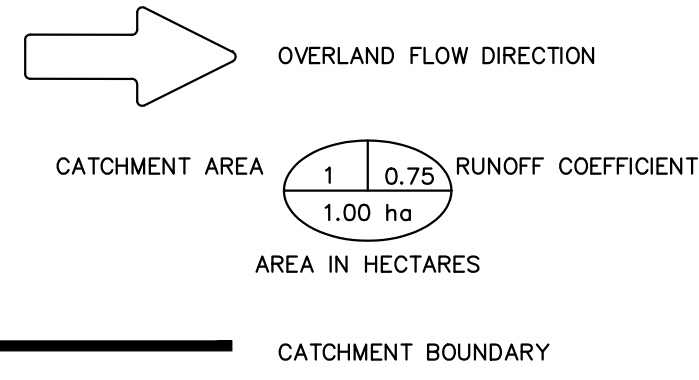
KENNEDY  
LOT 12 ANDERSON BLVD.  
UXBRIDGE TOWNSHIP  
**SITE SERVICING AND GRADING PLAN**

PEARSON ENGINEERING  
PEARSONENG.COM PH. 705.719.4785

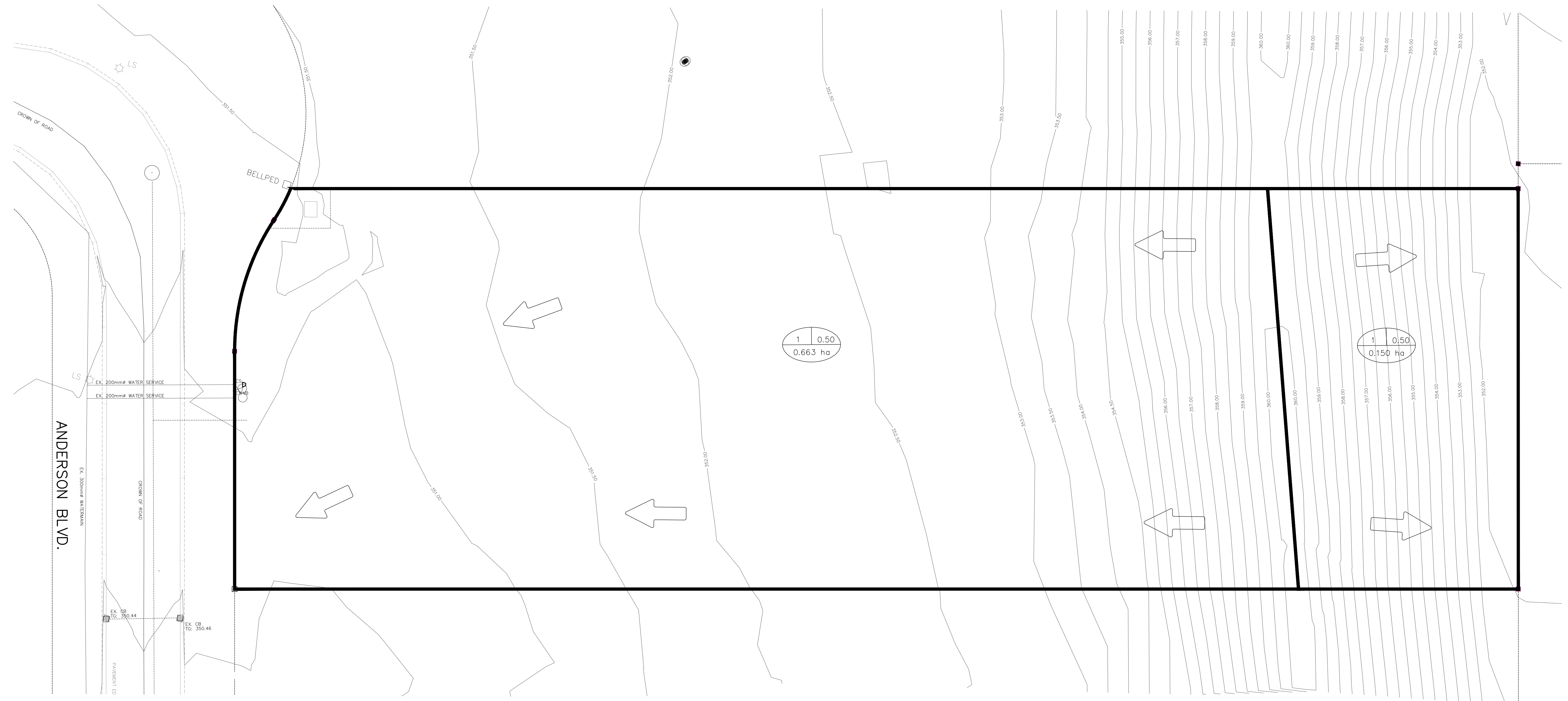
DESIGNED BY	NW/MWD	HORIZ SCALE	1:250	PROJECT #	22017
DRAWN BY	NW	VERT SCALE	N/A	DRAWING #	SGS-1
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0



**LEGEND**



KEY PLAN N.T.S.



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NO.	REVISION NOTE	DATE	BY

BENCHMARK			

KENNEDY  
LOT 12 ANDERSON BLVD.  
UXBRIDGE TOWNSHIP

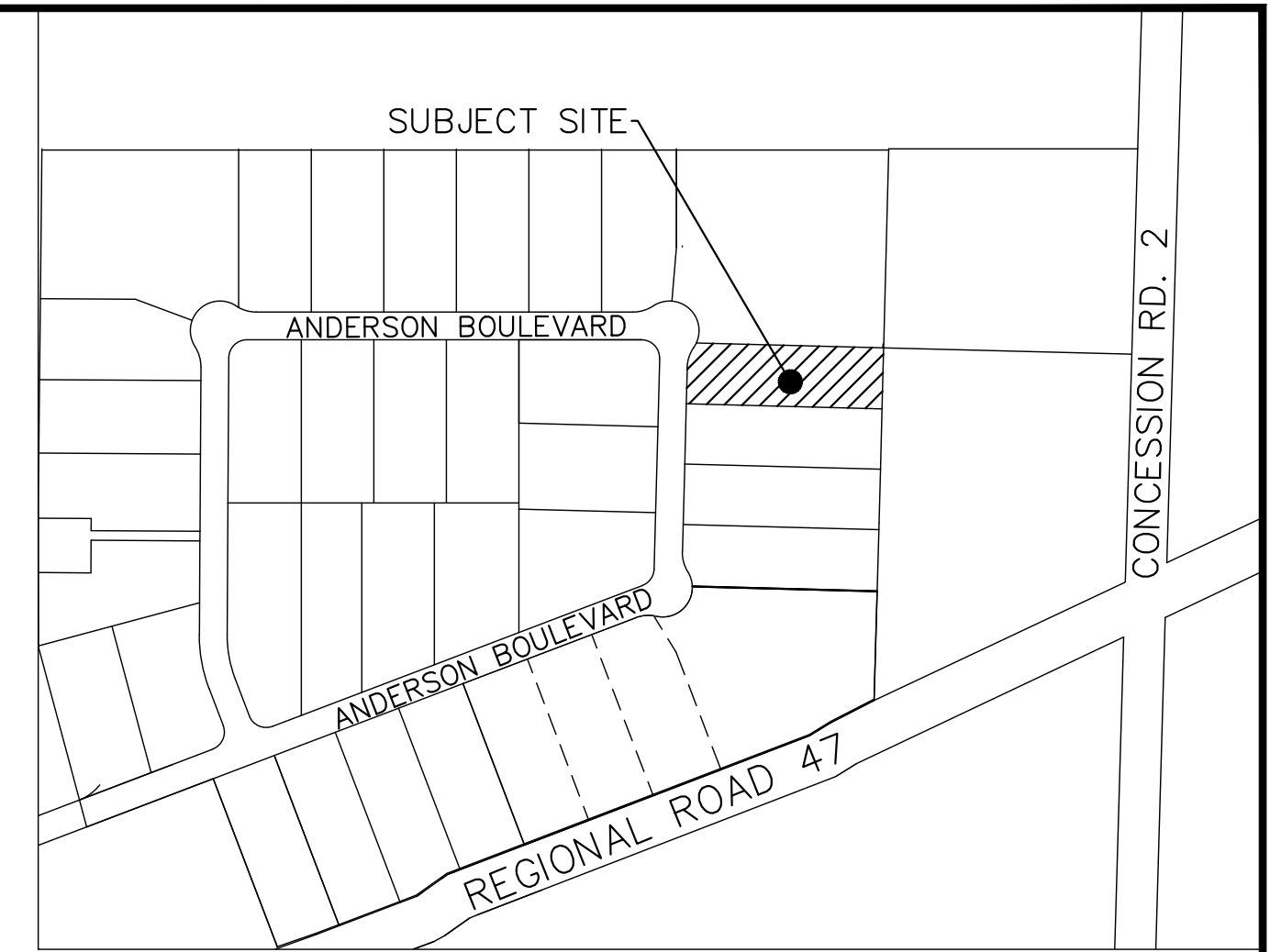
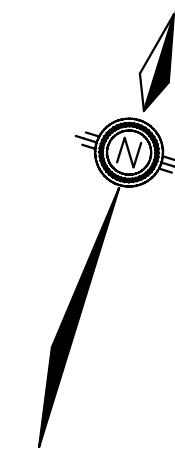
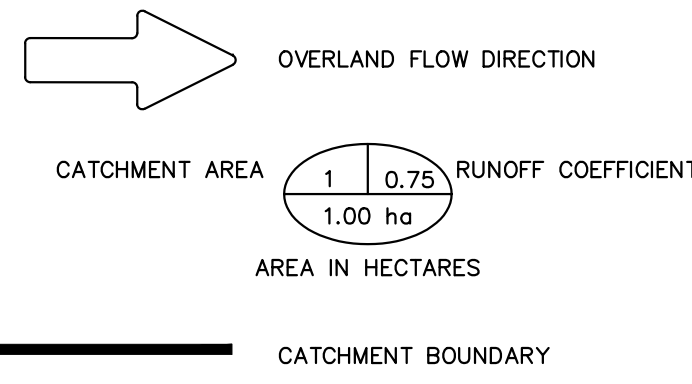
PRE-DEVELOPMENT STORM  
CATCHMENT PLAN

**PEARSON ENGINEERING**  
PEARSONENG.COM PH. 705.719.4785

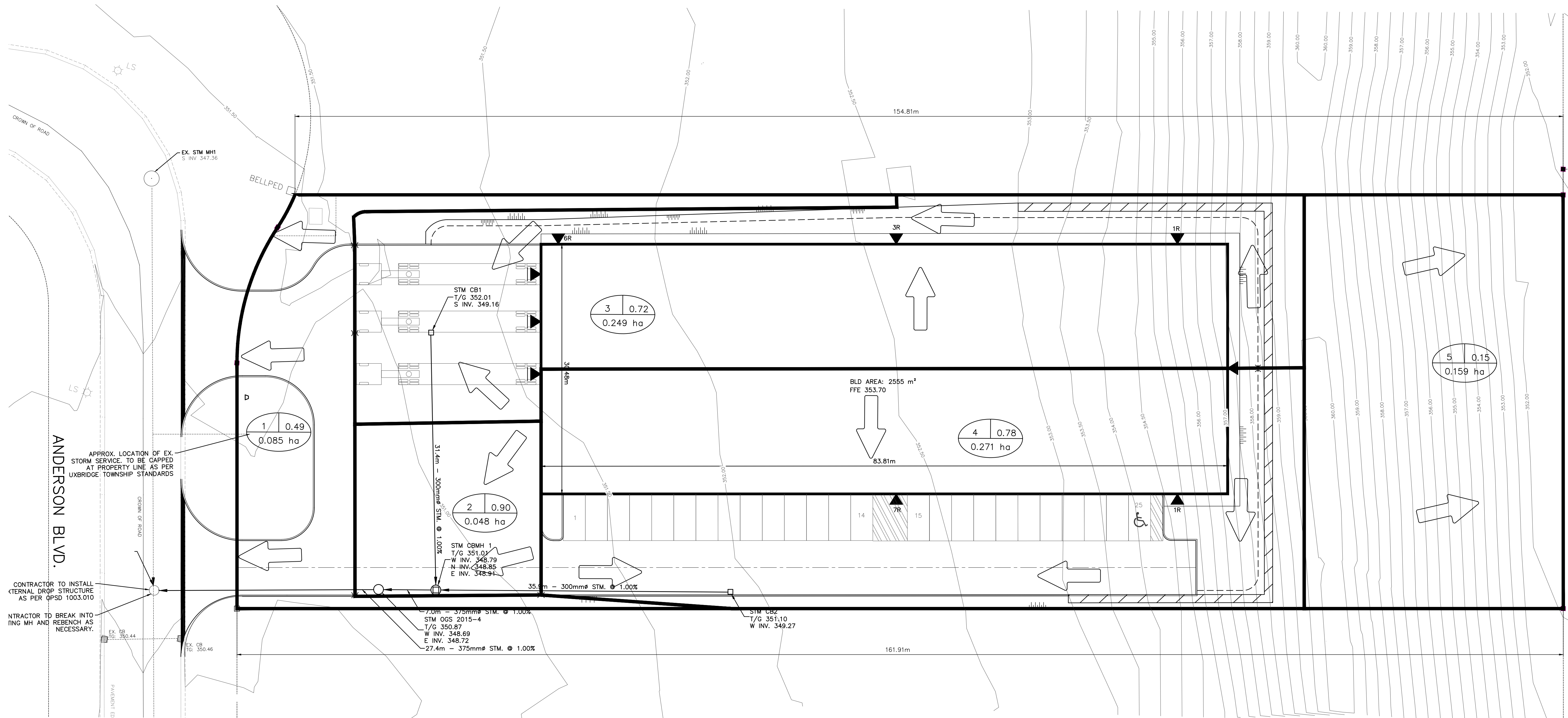
DESIGNED BY	NW/MWD	HORIZ SCALE	1:250	PROJECT #	22017
DRAWN BY	NW	VERT SCALE	N/A	DRAWING #	STM-1
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0



**LEGEND**



KEY PLAN N.T.S.



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NO.	REVISION NOTE	DATE	BY

BENCHMARK			

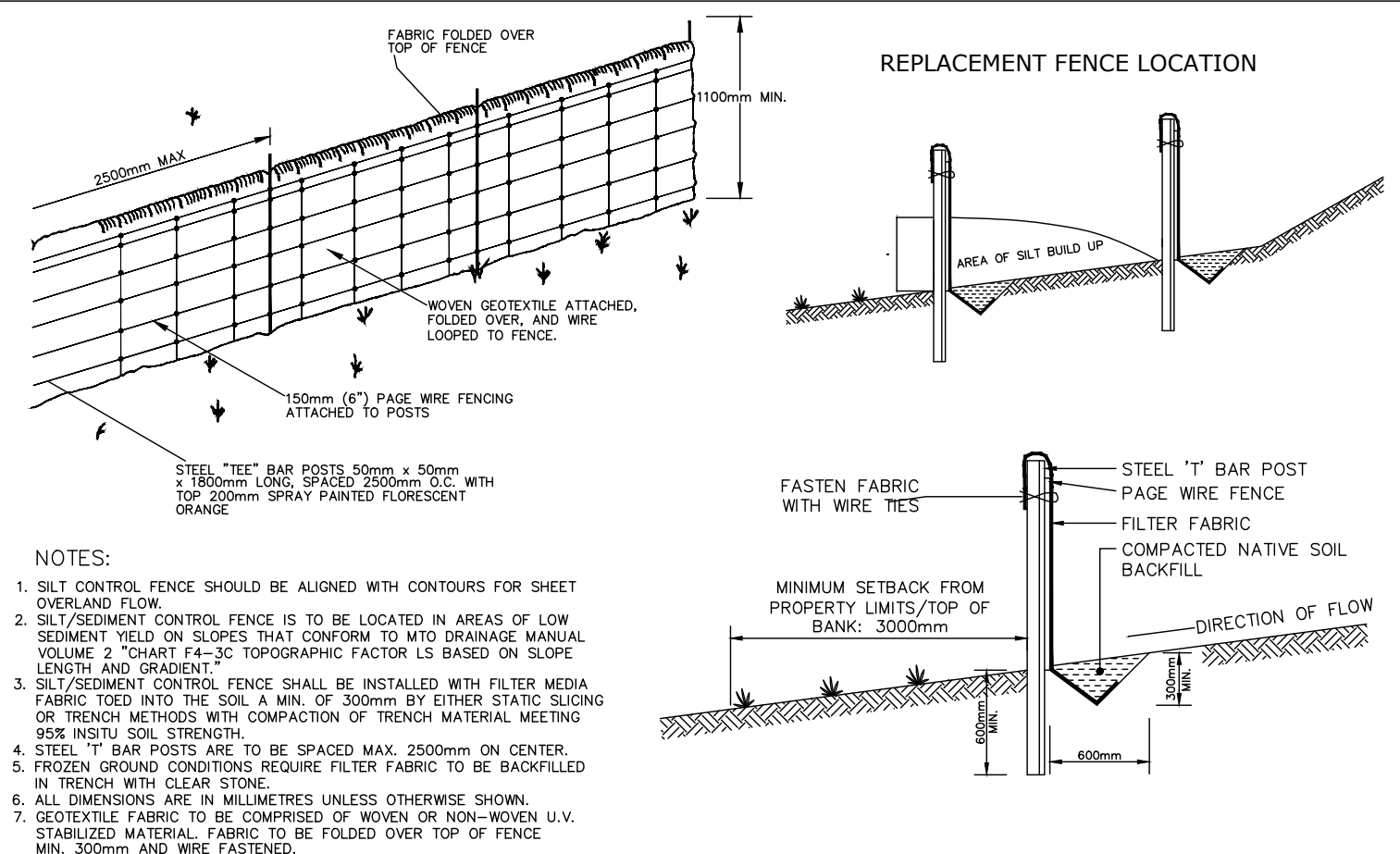
KENNEDY  
LOT 12 ANDERSON BLVD.  
UXBRIDGE TOWNSHIP

POST-DEVELOPMENT STORM  
CATCHMENT PLAN

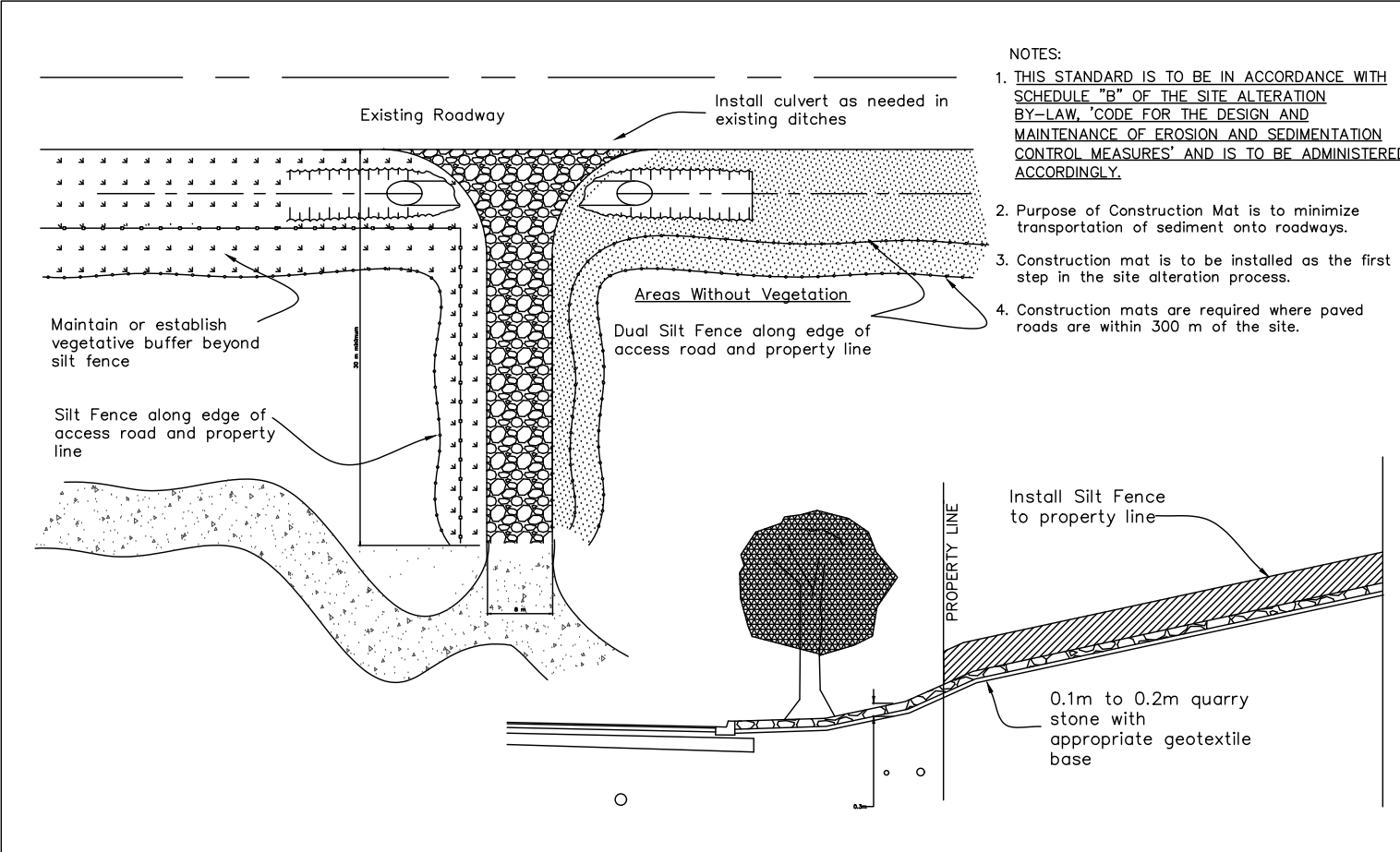
**PEARSON ENGINEERING**  
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DESIGNED BY	NW/MWD	HORIZ SCALE	1:250	PROJECT #	22017
DRAWN BY	NW	VERT SCALE	N/A	DRAWING #	STM-2
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0





APPRO: R.G.N.		DATE: 03.03.06	
DRAWN: A.S.C.		SCALE: N.T.S.	
NO.	REVISION	APPR'D	DATE



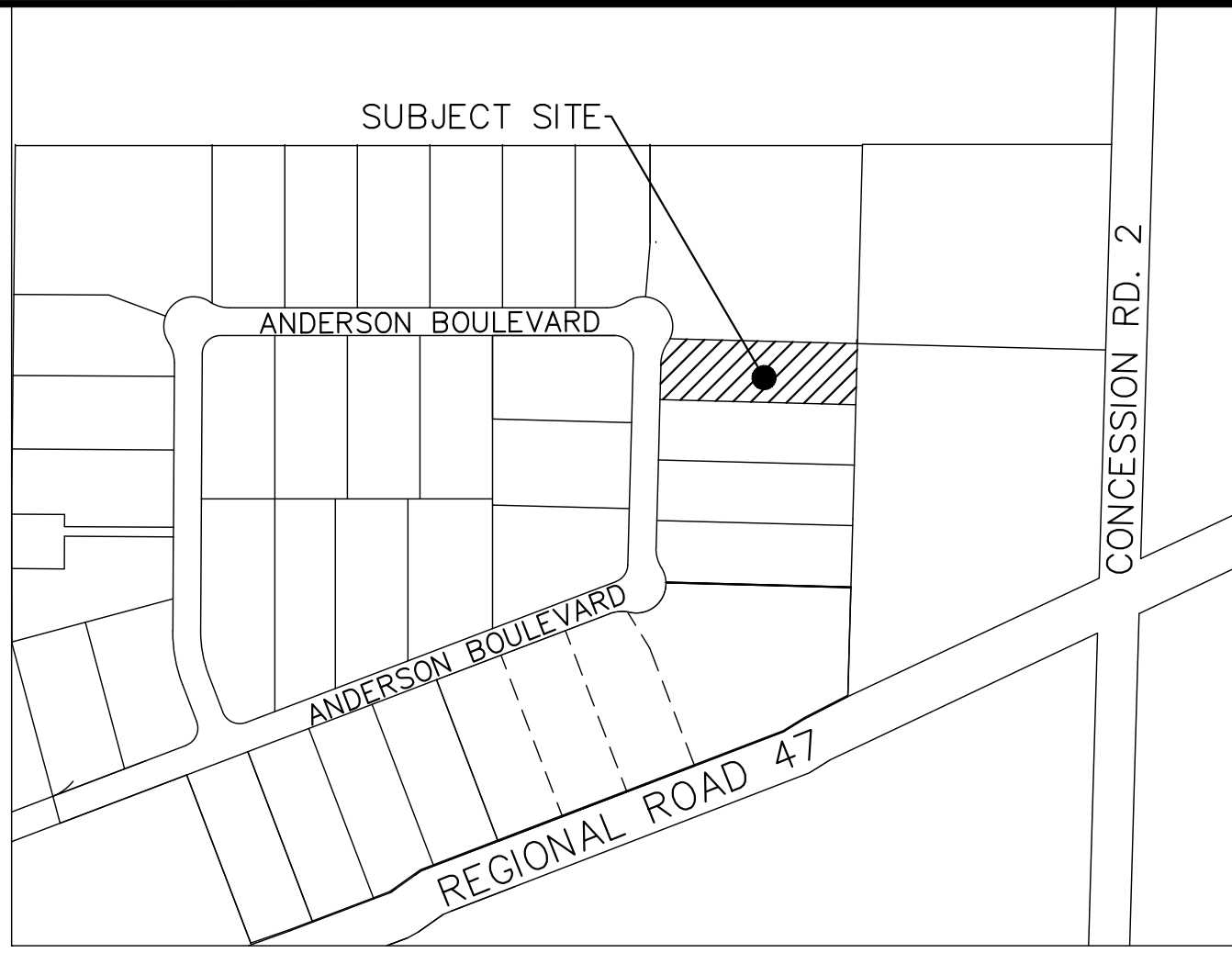
APPRO: R.G.N.		DATE: 04.03.16	
DRAWN: A.S.C.		SCALE: N.T.S.	
NO.	REVISION	APPR'D	DATE

**SEQUENCE OF CONSTRUCTION**

- ENGINEER TO BE NOTIFIED PRIOR TO INITIATION OF ANY ON SITE WORKS.
- SILT FENCE AS PER DETAILS.
- VEGETATION REMOVAL MAY COMMENCE AFTER ALL SILT FENCE IS INSTALLED AND APPROVED BY THE ENGINEER.
- COMMENCE WITH EARTH WORKS AND SITE SERVICING.
- INSTALLATION OF PROPOSED INFILTRATION FACILITIES TO THE TIME OF LANDSCAPING WORKS.
- EROSION CONTROL MEASURES TO BE MAINTAINED AS DIRECTED BY THE ENGINEER DURING THE CONSTRUCTION PERIOD. ADDITIONAL CONTROL MEASURES MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
- ALL DISTURBED GROUND LEFT INACTIVE FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH SEED, SOD, MULCH OR OTHER ADEQUATE COVERING, AS INSTRUCTED BY THE ENGINEER.

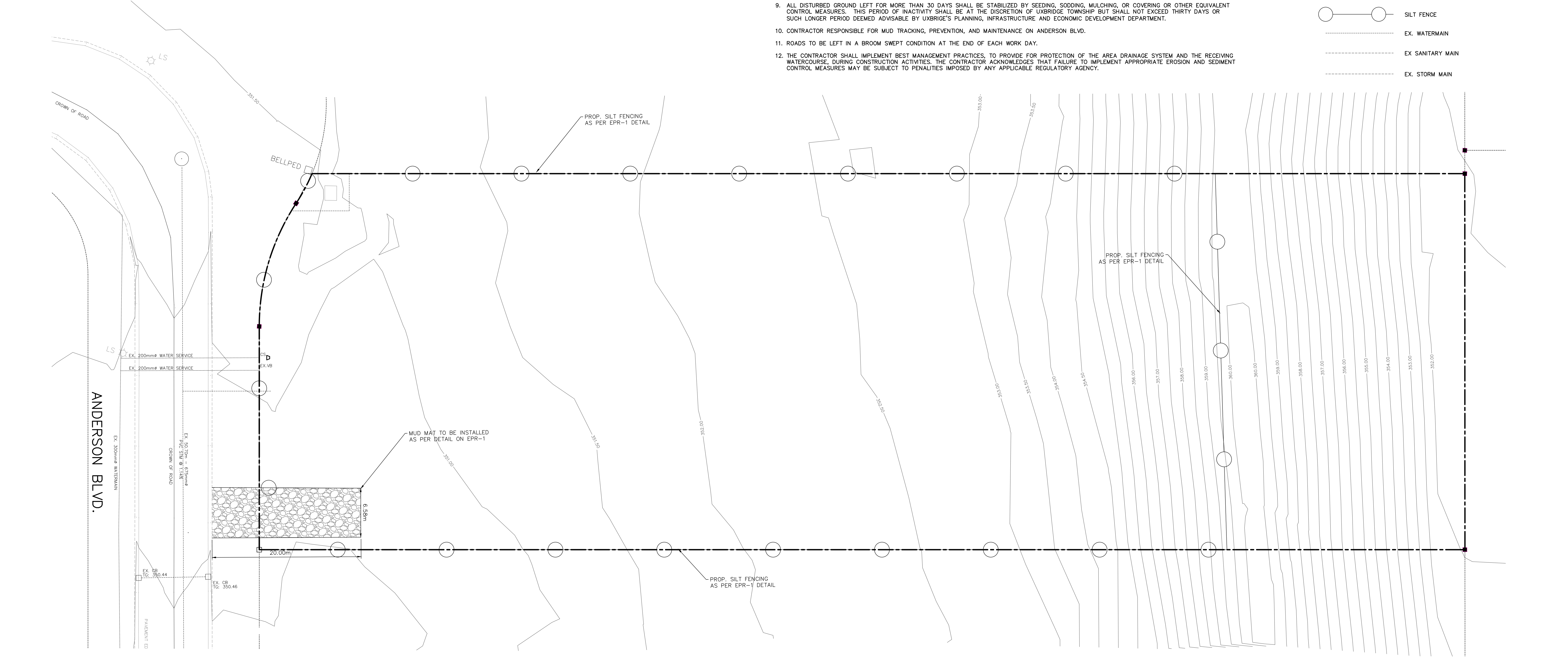
**NOTES FOR SEDIMENT & EROSION CONTROL**

- DISTURBED AREAS THAT HAVE FAILED TO HAVE STABLE GROUND COVER ESTABLISHED BY OCTOBER 30TH SHALL BE PROTECTED WITH A SILTATION CONTROL FENCE OR STRAW MULCH ETC. AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION BECOMES ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
- ANY Dewatering waste shall be discharged to a vegetated area at least 30m from any watercourse and filtered. Filtering methods must be approved by the site administrator.
- SILT FENCE SHALL BE PUT IN PLACE PRIOR TO AND MAINTAINED DURING ALL GRADING. SILT FENCE TO BE INSPECTED PRIOR TO COMMENCEMENT OF EARTH GRADING ACTIVITIES. SILT FENCE TO BE INSPECTED AND REPAIRED OR REPLACED IF DAMAGED AS DIRECTED BY THE SITE ADMINISTRATOR. SILT CONTROLS TO BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY RAIN EVENT. INSTALLATION SHALL BE TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS.
- THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK, AND AFTER EVERY RAINFALL EVENT.
- THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES SHOULD BE PRESENTED IN WRITING FOR APPROVAL OF THE SITE ADMINISTRATOR AND MUST BE APPROVED IN WRITING BY THE MUNICIPALITY AND CONSERVATION AUTHORITY.
- THE TOPS OF ALL FILTER FABRIC MUST BE A MINIMUM OF 1.0 METRES ABOVE THE GROUND LEVEL AND ATTACHED TO THE FENCE WITH A CONTINUOUS STEEL WIRE. ALTERNATIVELY, THE FILTER FABRIC MUST BE FOLDED OVER THE TOP OF THE FENCE AND ATTACHED TO THE FENCE WITH WIRE LOOPED THROUGH THE FABRIC ON BOTH SIDES OF THE FENCE. FILTER FABRIC IS TO BE TERRAFIX 270R OR EQUIVALENT.
- ALL DISTURBED GROUND LEFT FOR MORE THAN 30 DAYS SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING, OR COVERING OR OTHER EQUIVALENT CONTROL MEASURES. THIS PERIOD OF INACTIVITY SHALL BE AT THE DISCRETION OF UXBRIDGE TOWNSHIP BUT SHALL NOT EXCEED THIRTY DAYS OR SUCH LONGER PERIOD DEEMED ADVISABLE BY UXBRIDGE'S PLANNING, INFRASTRUCTURE AND ECONOMIC DEVELOPMENT DEPARTMENT.
- CONTRACTOR RESPONSIBLE FOR MUD TRACKING, PREVENTION, AND MAINTENANCE ON ANDERSON BLVD.
- ROADS TO BE LEFT IN A BROOM SWEEPED CONDITION AT THE END OF EACH WORK DAY.
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.



**LEGEND**

- — ○ SILT FENCE
- EX. WATERMAIN
- EX. SANITARY MAIN
- EX. STORM MAIN



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				BENCHMARK			
				KENNEDY LOT 12 ANDERSON BLVD. UXBRIDGE TOWNSHIP			
				EROSION PROTECTION AND REMOVALS PLAN			
DESIGNED BY	NW/MWD	HORIZ SCALE	1:250	PROJECT #	22017		
DRAWN BY	NW	VERT SCALE	N/A	DRAWING #	EPR-1		
CHECKED BY	MWD	DATE	APRIL 2022	REVISION #	0		
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