

THE REGIONAL MUNICIPALITY OF DURHAM

WORKS DEPARTMENT

DESIGN, CONSTRUCTION & ASSET MANAGEMENT

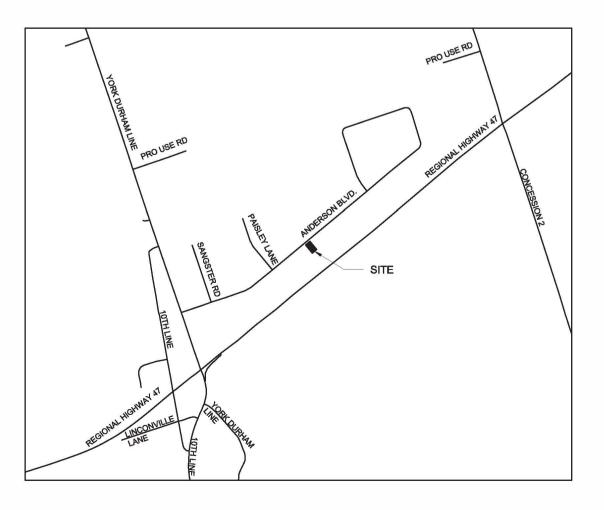


P.O. Box 325, 52 Hunter Street East Peterborough, Ontario, K9H 1G5 Tel: (705) 742.7900 Fax: (705) 742.7907 www.cambium-inc.com



UXVILLE WELL - HOLDING TANK RELOCATION

15 ANDERSON BLVD, UXBRIDGE



KEY PLAN SCALE 1:20,000

DRAWING INDEX

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C-001 EXISTING SITE PLAN AND DEMOLITION

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C-003 DETAILS
C-004 NOTES

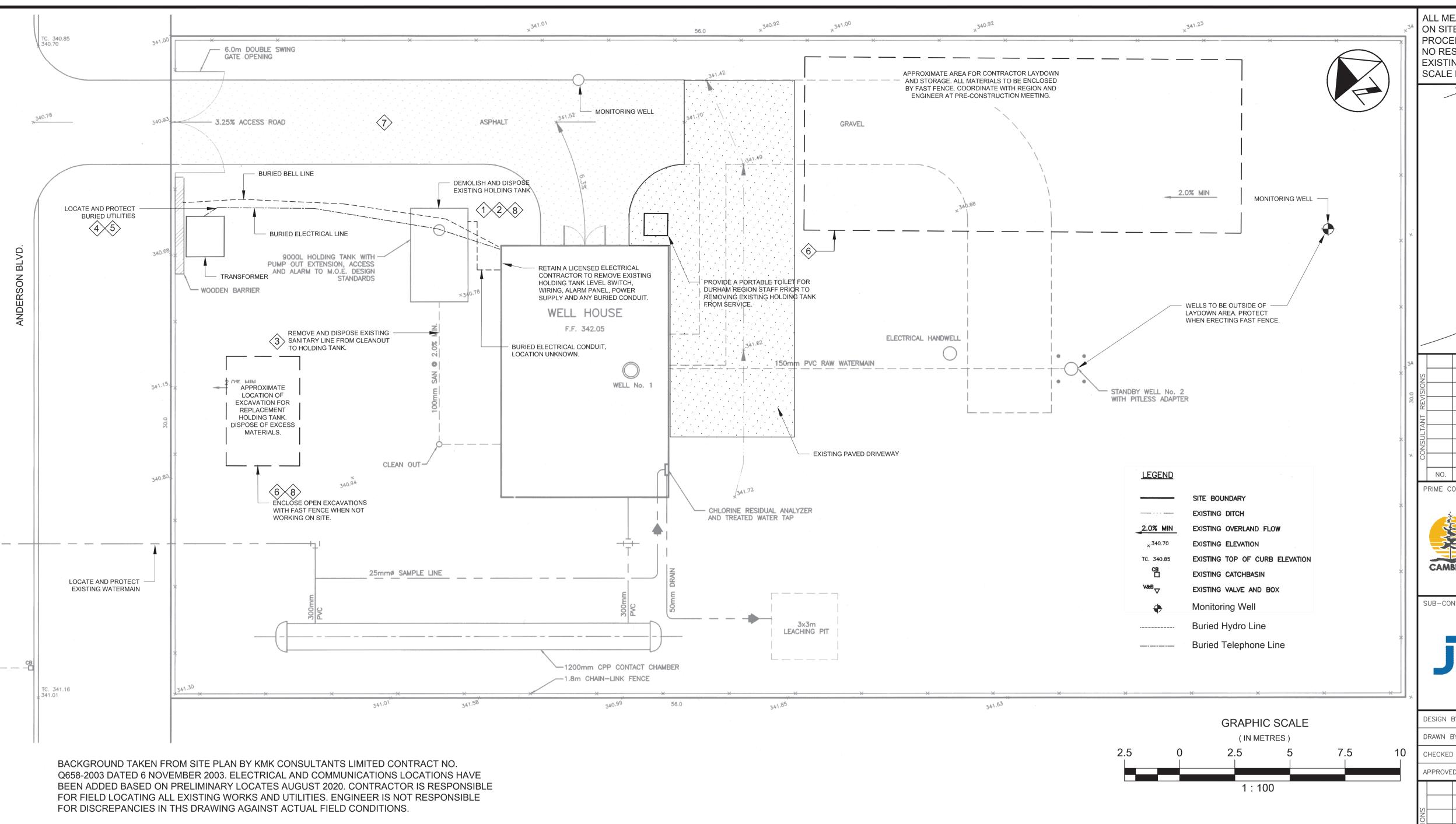
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PROPERTY NO. WSP-AA2-0040					FACILITY CODE WELL-U-003	7000

FACILITIES PROJECT NO.

WELL-U-003-20-0

CONTRACT NO.

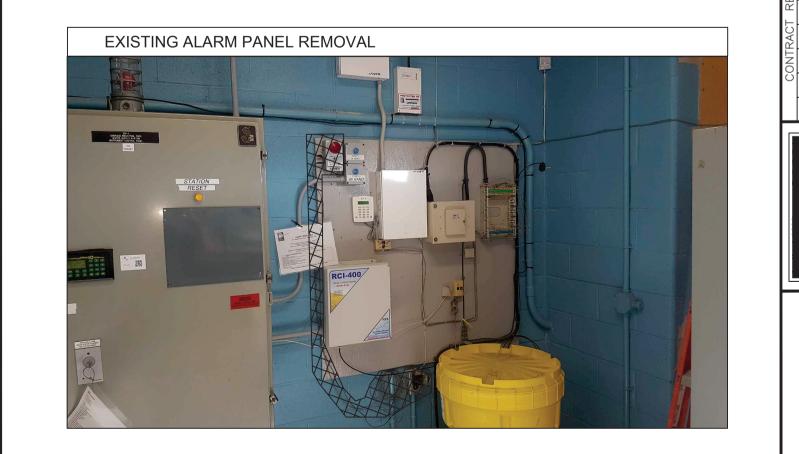
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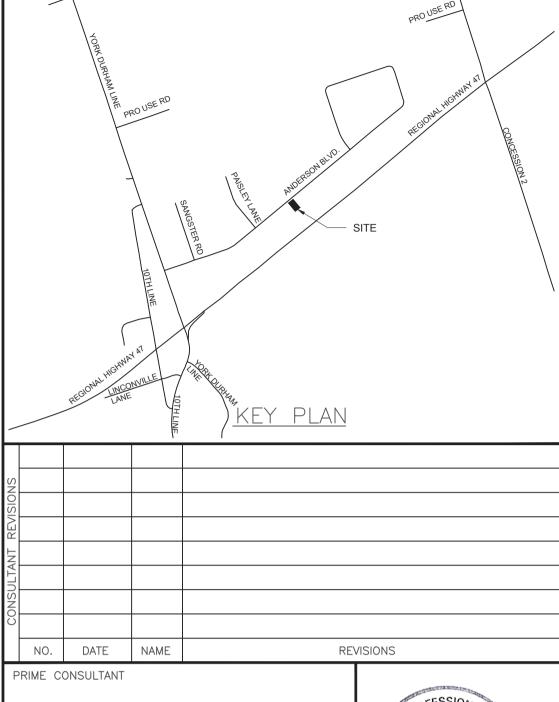
- 1. The Region will arrange and pay for a licensed hauler to pump out the existing sewage holding tank. Coordinate with Engineer to schedule pump out and provide sufficient notice so as to not delay the work.
- 2. Dispose of existing holding tank in accordance with applicable regulations.
- 3. Disconnect and dispose of existing sewer from cleanout to holding tank. Remove and dispose of cleanout.
- 4. Obtain private utility locates in the vicinity of the proposed work prior to construction.
- 5. Protect existing utilities during construction.
- 6. Provide temporary construction fence (fast fence) around the laydown area and open excavations for the duration of construction.
- 7. Contractor shall not use driveway for storage, parking or queuing, and shall allow continuous access for Region staff to enter well house.
- 8. Remove and dispose all garbage and excess soils.





NOTE: ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.

ALL MEASUREMENTS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE AND ANY DISCREPANCIES ARE TO BE REPORTED BEFORE PROCEEDING WITH THE WORK. THE REGION OF DURHAM ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF EXISTING SERVICES AS INDICATED ON THIS DRAWING. DO NOT SCALE DRAWINGS.



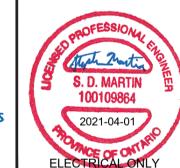
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SUB-CONSULTANT





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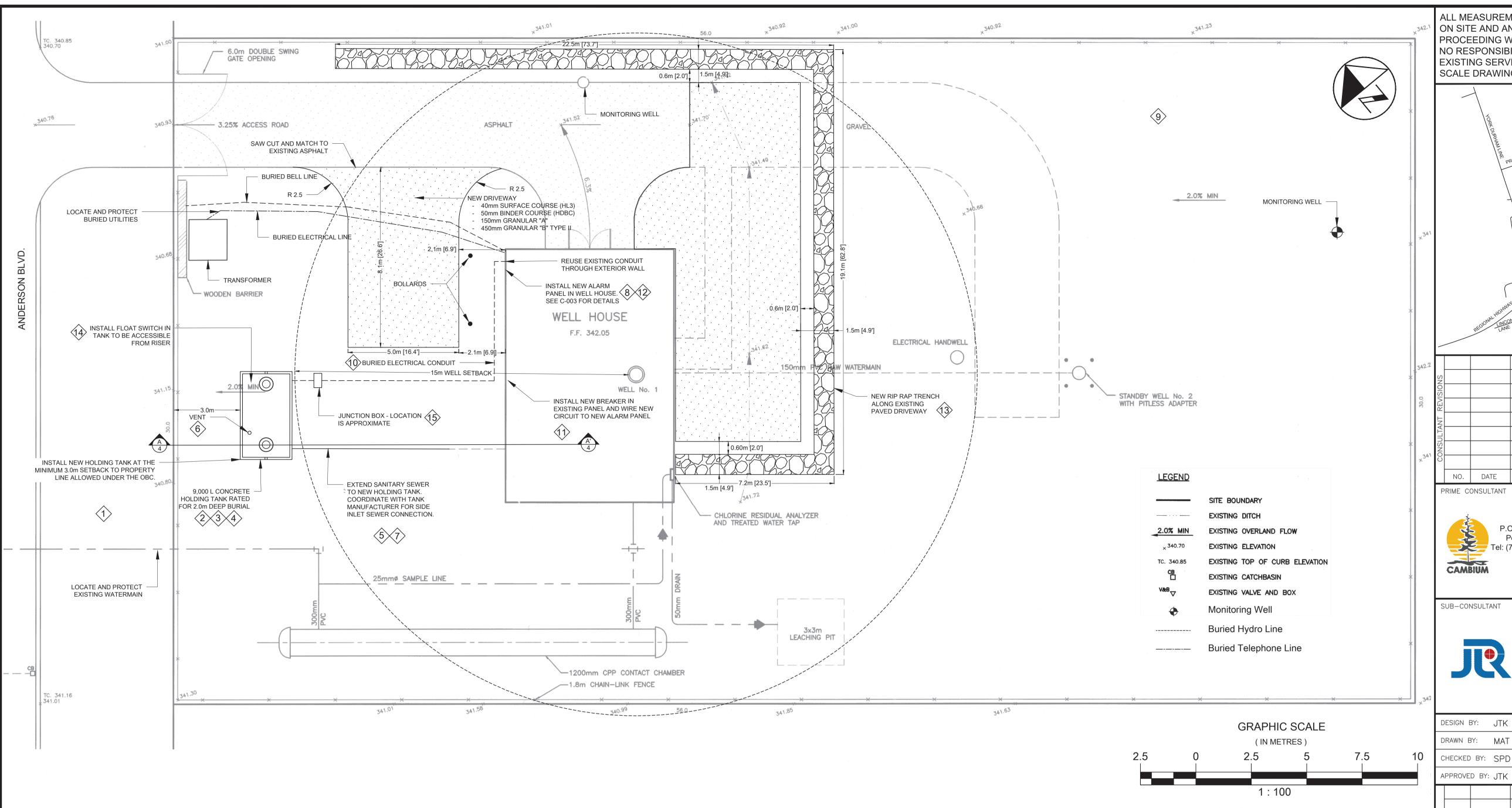


THE REGIONAL MUNICIPALITY
OF DURHAM

WORKS DEPARTMENT
DESIGN, CONSTRUCTION & ASSET MANAGEMENT

UXVILLE WELL
HOLDING TANK RELOCATION
EXISTING SITE PLAN
AND DEMOLITION

PROPERTY NO. WSP-AA2-0040	FACILITY CODE WELL-U-003	FACILITIES PROJECT NO. WELL-U-003-20-01
CONTRACT NO.	DRAWING NO.	SHEET NO.
Q-303-2020-A-005-DCAM	C-001	2 OF 5

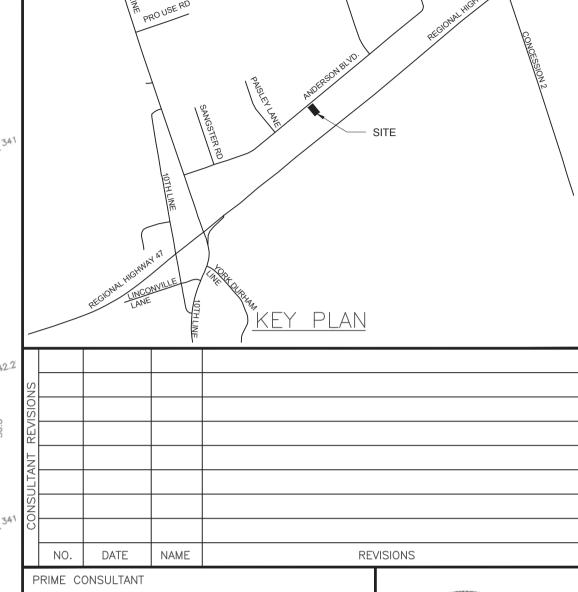


1. Retain a licensed Ontario Land Surveyor (OLS) to locate and stake the western property boundary.

- Supply and install new 9,000 L single-compartment sewage holding tank meeting the requirements of OBC 8.2.2.2. and 8.2.2.4. Tank shall be rated for 2 m deep burial and include two (2) access openings equipped with 600 mm diam. risers extending to MIN. 100 mm above finished grade. Coordinate with tank manufacturer for side inlet location for sewer connection.
- 3. Provide, if required, crane to offload wastewater system tanks.
- 4. Install tank in accordance with manufacturer's instructions on prepared granular base.
- 5. Coordinate with tank manufacturer and field verify required tank base elevation in order to achieve MIN. 2.0% slope on new sewer line. Base elevation will be different for each tank manufacturer.
- 6. Holding tank shall be equipped with a vent meeting OBC 8.8.2.1.(3). Vent shall terminate MIN 600 mm above finished grade and terminate with an activated carbon odour control vent cap.
- 7. Install new 100 mm PVC sanitary sewer from existing sewer to new holding tank.
- 8. Furnish and install standard float switch and level alarm panel with audible and visual alarms. Alarm panel shall be located in well house and mounted on existing plywood panel. See details on Drawing C-003. Set float switch to activate alarms when tank is 75% full of sewage.
- 9. Restore all disturbed areas. See reinstatement notes on Sheet 5

- 10. Electrical connection from float switch in tank to new alarm panel in building shall be RW90 rated conductor in buried PVC conduit. All electrical work to be performed by a licensed electrical contractor in accordance with the Ontario Electrical Safety Code.
- 11. Install new 120 V circuit from new alarm panel to existing electrical panel. Install new 15A circuit breaker (to match existing) in existing panel (either slot 19 or 21). Conductors shall be #12AWG RW90 in PVC conduit. See C-003 for details.
- 12. New alarm panel shall be SJE Rhombus Tank Alert XT or approved equal.
- 13. Construct a new Rip Rap drainage trench along edge of existing driveway. See detail on drawing C-003.
- 14. New float switch shall be standard SJE SignalMaster control float switch or approved equal. Install cable in buried PVC conduit to outdoor Junction Box.
- 15. Provide a NEMA 4X Plastic Junction Box with 4 terminal blocks, sized to suit. See mounting detail on drawing C-003. Provide 4/C #14AWG RW90 wiring in buried PVC conduit to alarm panel in well house. Provide one (1) EYS conduit fitting with potting below the Junction Box for the conduit run to the alarm panel.

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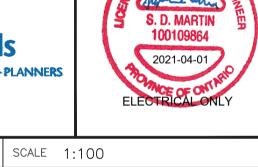






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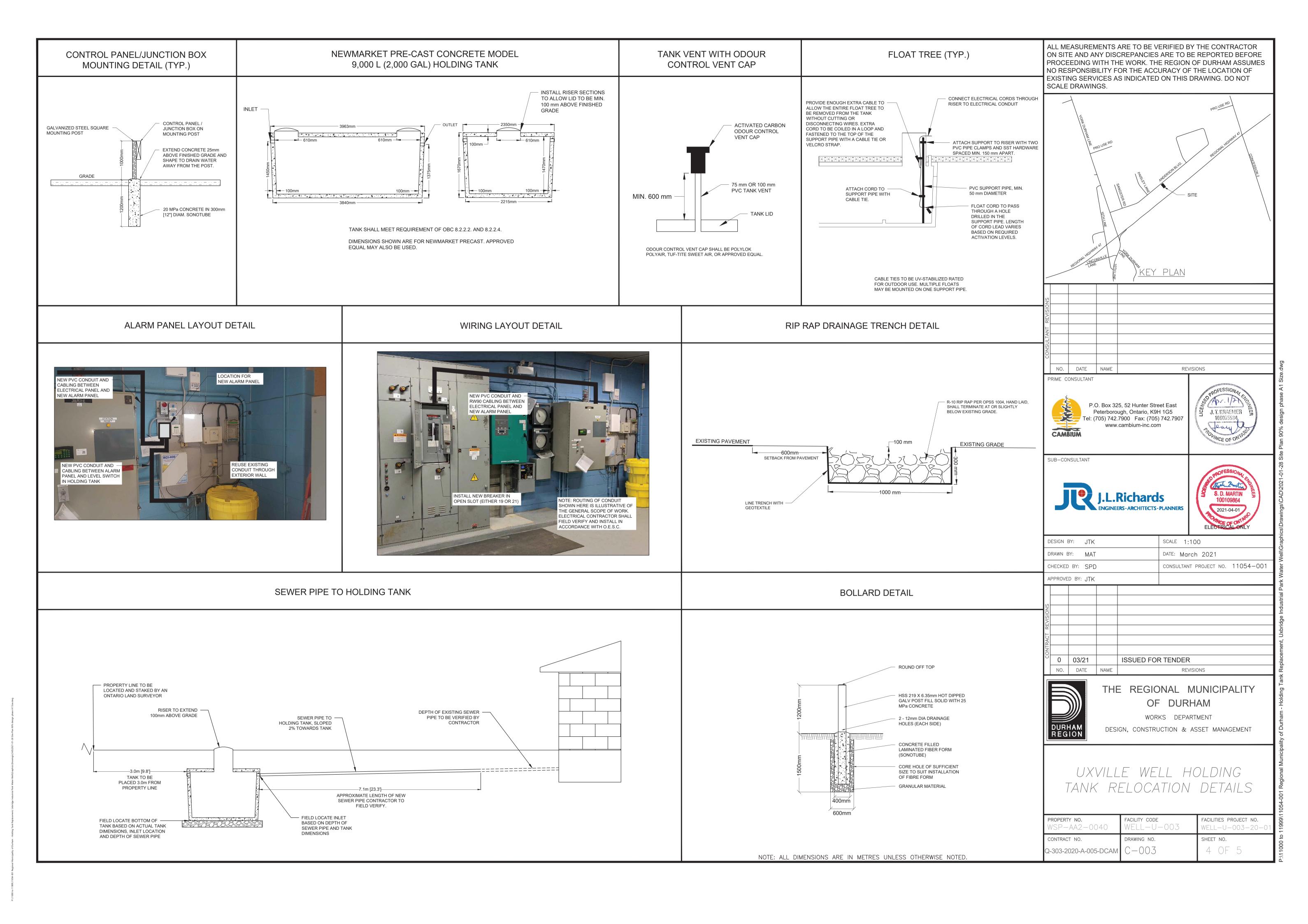
THE REGIONAL MUNICIPALITY OF DURHAM

DATE: March 2021

WORKS DEPARTMENT DESIGN, CONSTRUCTION & ASSET MANAGEMENT

uxville well HOLDING TANK RELOCATION PROPOSED SITE PLAN

PROPERTY NO. WSP-AA2-0040	FACILITY CODE WELL-U-003	FACILITIES PROJECT NO. WELL-U-003-20-01
CONTRACT NO.	DRAWING NO.	SHEET NO.
Q-303-2020-A-005-DCAM	C-002	3 OF 5



General Notes:

- Provide all labour, materials, equipment and temporary works to complete all
- 2. Provide own temporary water & sewage services; owner facilities shall not be
- 3. Enclose all work areas containing equipment, materials, open excavations and/or potential exposure to sewage contamination with wire panel temporary construction fencing and signage warning of danger.
- 4. Dispose of all garbage and excess materials in accordance with applicable regulations. The owner's garbage bins shall not be used.
- Holding tank installer shall be licensed by the Ministry of Municipal Affairs and Housing (MMAH) under Part 8 of the Ontario Building Code (OBC).
- 6. Where standards or codes are referenced, the most recent shall apply.
- 7. Where changes to the design or contract requirements are proposed, follow the procedures as outlined in the contract to obtain Owner approval prior to implementing any such changes.
- 8. Attend the site for a coordination meeting prior to mobilization to allow inspecting the property, assessing restrictions, and clarifying all specified requirements including finalizing installation locations of the tanks, and control panel. Verify extent of the Contractor's controlled work area per Ministry of Labour requirements. Coordinate with Owner regarding impacts to owner's operations.
- 9. Provide at least 2 working days' notice prior to desired day of inspection by Engineer for the following milestones:
 - a. Completion of granular base preparation for new tank.
- b. New tank has been installed.
- c. Completion of plumbing & electrical. Leave plumbing exposed for inspection.d. Commissioning.
- 10. The locations of existing utilities shown on the drawings are approximate only and must be verified in the field prior to start of construction.
- 11. Maintain up-to-date as-built drawings on site and submit to the Consultant after construction is complete.
- 12. Maintain the site in a clean condition free from the accumulation of waste products and debris.
- Be responsible for the site layout as well as horizontal and vertical control.
- 14. Pay for all permits and fees.
- 15. Comply with the Occupational Health and Safety Act and regulations for construction projects and all other applicable safety regulations in force.

Removals:

- All civil removals and associated excavations shall be completed in accordance with OPSS 216 and OPSS 510.
- All existing pavement edges to be saw cut where new pavement to be connected.
- 3. Contractor shall implement all necessary measures and techniques to protect existing underground services, structures, piping and associated appurtenances during removal and reinstatement operations. Any damage during construction shall be replaced at no cost to the Owner.

Constructio

- Locate and protect all utilities prior to construction.
- Check and verify all dimensions before proceeding with work and be responsible for the same.
- 3. All work must be completed in accordance with relevant codes and guidelines.
- 4. The project specifications shall be read in conjunction with design drawings.
- equivalent and meet all relevant codes and guidelines.

5. All equipment and materials shall be installed as specified or approved

- Tracer wire and/or other means of subsurface detection must be tested prior to backfill.
- 7. Testing shall be completed prior to start-up of the wastewater system.

Tanks

- Material: precast concrete in accordance with CAN/CSA B66, unless otherwise noted.
- Coordinate all risers, openings and connection locations with holding tank manufacturer, as applicable.
- Install on suitable base in accordance with tank manufacturer's installation instructions.
- 4. If groundwater is encountered during excavation and tank base preparation, consult with Engineer on anchoring requirements to prevent uplift.
- Equip with 610 mm access risers extending at least 100mm above finished grade to allow access from grade to service any inlets, outlets and/or treatment components.

Alarm Panel (Standard):

- Furnish SJE Rhombus Tank Alert XT Alarm System with standard SJE SignalMaster control float switch, or approved equal.
- 2. Panel to include the following features:
 - a. 120 V, 60 Hz
 - b. Weatherproof enclosure rated for indoor or outdoor installation
 - c. Power on indicator light
 - d. Alarm horn and alarm beacon which both activate when the control float switch reaches the designed high liquid level in the holding tank
 - e. Horn silence switch
 - f. Alarm test switch
 - g. Alarm automatically resets when the high liquid level condition is cleared

Electrical:

- 1. All electrical work to be completed by licensed electrical contractor.
- 2. Electrical contractor to obtain and pay for ESA permit, arrange for inspections, and submit copy of Certificate of Acceptance to Engineer.
- Electrical Contractor shall be present to coordinate removal of the tank in order to protect existing utility cables (power and Bell). If required, cables may be disconnected and/or pulled back during tank removal. If disconnection is required, refer to Div 1 specifications for notification requirements and time restrictions. Utilities shall be fully reinstated (installed similar to existing, reconnected, and re-powered).
- 4. Existing utilities are assumed to be in conduit and not concrete duct banks. It is assumed that reinstatement of utilities will not require longer cables. Any issues with the utilities during construction shall be immediately brought to the Owner's attention.
- 5. For all buried cable or conduit installations, provide suitable marker tape and use screened sand to protect the cables or conduits. Screened sand layer shall be minimum 75mm above, below, and to either side of cables or conduits. Conduit spacing shall be 190mm center to center. Underground conductor splices are not permitted. If cables are damaged or are of insufficient length, new cables or conductors are required to be run.
- For the portion of the re-buried utilities beneath the new driveway, provide treated planks for protection per OESC 12-012. If sand for conduit run is within the granular layer, provide geotextile wrap fully enclosing the sand layer. Geotextile to be Class II, Non-Woven in accordance with OPSS 1860.

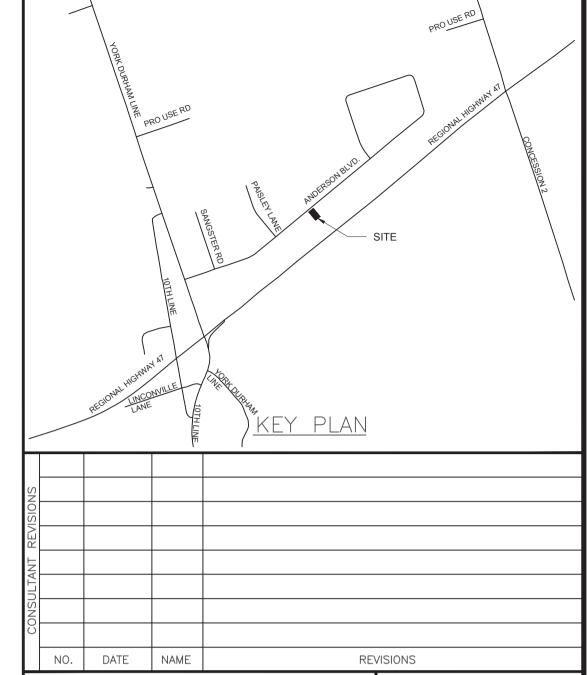
Reinstatement:

- Reinstate all affected areas to a condition equal to or better than existing, and repair any damage caused during construction to the satisfaction of the Consultant and Owner.
- 2. Backfill tank with Granular B Type II.
- 3. Supply and place all granular materials in conformance with OPSS 206, OPSS 314, and OPSS 1010.
- Compact all materials in accordance with OPSS.MUNI 501 (Method B) and have approved by a Geotechnical Consultant. The target density shall be based on the Standard Proctor Maximum Dry Density (SPMDD).
- 5. Place and compact asphalt in accordance with OPSS 310.
- 6. Apply polymer-modified bitumen product (Densoband size 15 x 45mm or approved equal) and its associated primer to all pavement edges at the surface asphalt lift only, as per the manufacturer's specifications.
- 7. Reinstate topsoil and grass in accordance with Specifications 32 91 19.13 and 32 92 00.

Material Testing:

- 1. Retain and pay for a geotechnical consultant for granular and asphalt testing.
- Coordinate and perform QA/QC testing in accordance with the applicable OPSS and specifications.
- 3. Submit all test reports to the Consultant for approval.
- 4. Supply materials in accordance with stipulated OPSS standards.
- 5. Coordinate for a geotechnical consultant to perform compaction testing and submit all test reports to the Consultant for approval.
- Where material supplied or installation fails to meet the specified requirements, remove and reinstall compliant material in accordance with the specifications at no cost to the Owner.

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PRIME CONSULTANT



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SUB-CONSULTANT





DESIGN BY: JTK

DRAWN BY: MAT

CHECKED BY: SPD

CONSULTANT PROJECT NO. 11054-001

APPROVED BY: JTK

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THE REGIONAL MUNICIPALITY

OF DURHAM

WORKS DEPARTMENT

DESIGN, CONSTRUCTION & ASSET MANAGEMENT

UXVILLE WELL HOLDING TANK RELOCATION NOTES

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