

**BENCH MARK 1 ELEV.**  
TOP OF NUT ON HYDRANT  
LOCATED 8.8m EAST OF EXMH15  
ELEVATION: 200.06m

**BENCH MARK 2 ELEV.**  
TOP OF NUT ON HYDRANT  
LOCATED 5.25m SOUTH OF EXCB1  
ELEVATION: 200.16m

**TRUE NORTH**

**KEY PLAN**

**REVISIONS**

No.	Description	Date
1	ISSUED FOR TENDER	SEP. 17/15

**METRIC**  
Dimensions are in METRES and/or MILLIMETRES unless otherwise shown  
TO BE READ IN CONJUNCTION WITH OPSD 100 SERIES

**LEGEND**

- EX./PR. SIDEWALK
- EX./PR. BUILDING
- EX./PR. EDGE OF PAVEMENT
- EX./PR. CURB
- EX./PR. ROAD CENTERLINE
- EX./PR. EDGE OF SHOULDER/GRAVEL
- EX./PR. SANITARY MANHOLE
- EX./PR. CATCH BASIN MANHOLE
- EX./PR. STORM MANHOLE
- EX./PR. CATCH BASIN
- EX./PR. FIRE HYDRANT
- EX./PR. WATER VALVE
- EXISTING LIGHT STANDARD
- EXISTING HYDRO POLE
- EXISTING BELL POLE
- EXISTING POLE ANCHOR
- EX./PR. BELL/CABLE PEDESTAL
- FOUND IRON BAR
- EX./PR. ELEVATION
- PROPOSED GRADE
- EXISTING GASMAIN
- EX. OVERHEAD BELL
- EX. UNDERGROUND BELL
- EX. OVERHEAD HYDRO
- EX. UNDERGROUND HYDRO
- EX. HYDRO MH
- EX. BELL MH
- EX. GAS VALVE
- EX./PR. CULVERT
- EX./PR. DITCH
- EX./PR. STORM SEWER
- EX./PR. SANITARY SEWER
- EX./PR. WATERMAIN
- EX./PR. STORM SERVICE
- EX./PR. SANITARY SERVICE
- EX./PR. WATER SERVICE
- EX./PR. FENCE
- EX. R.O.W./PROPERTY BOUNDARY
- EXISTING PROPERTY LINE
- EXISTING VEGETATION

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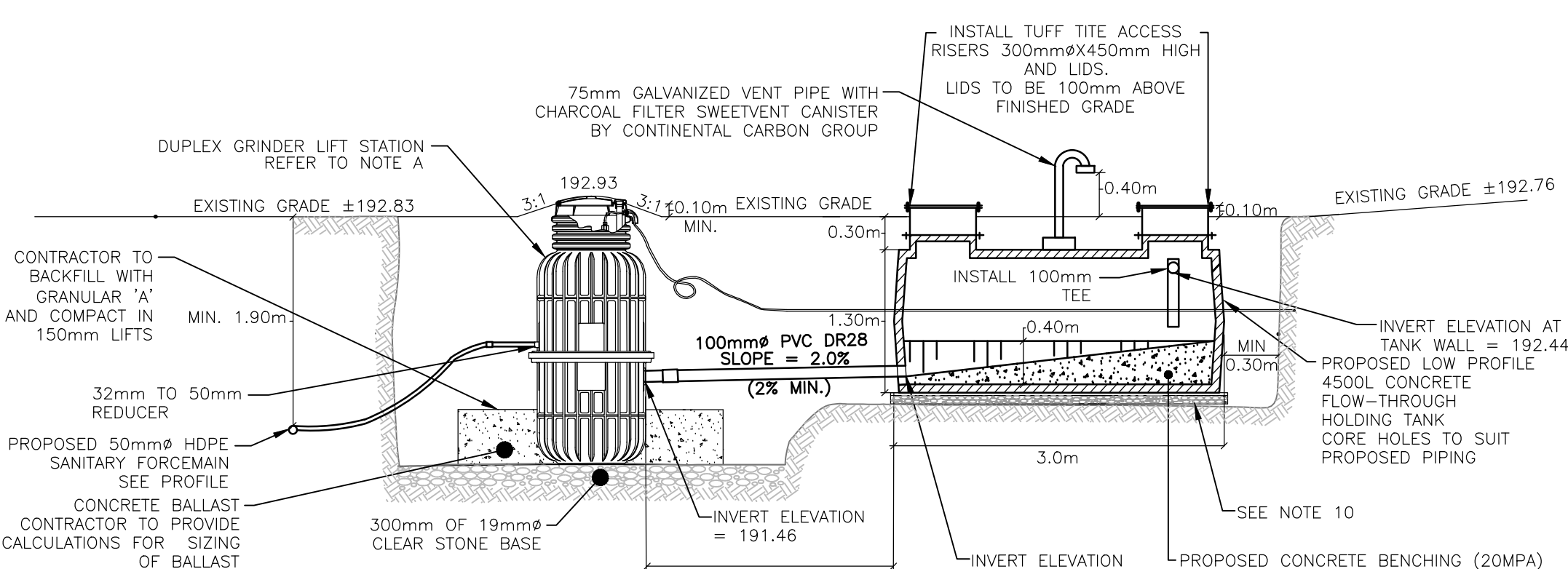
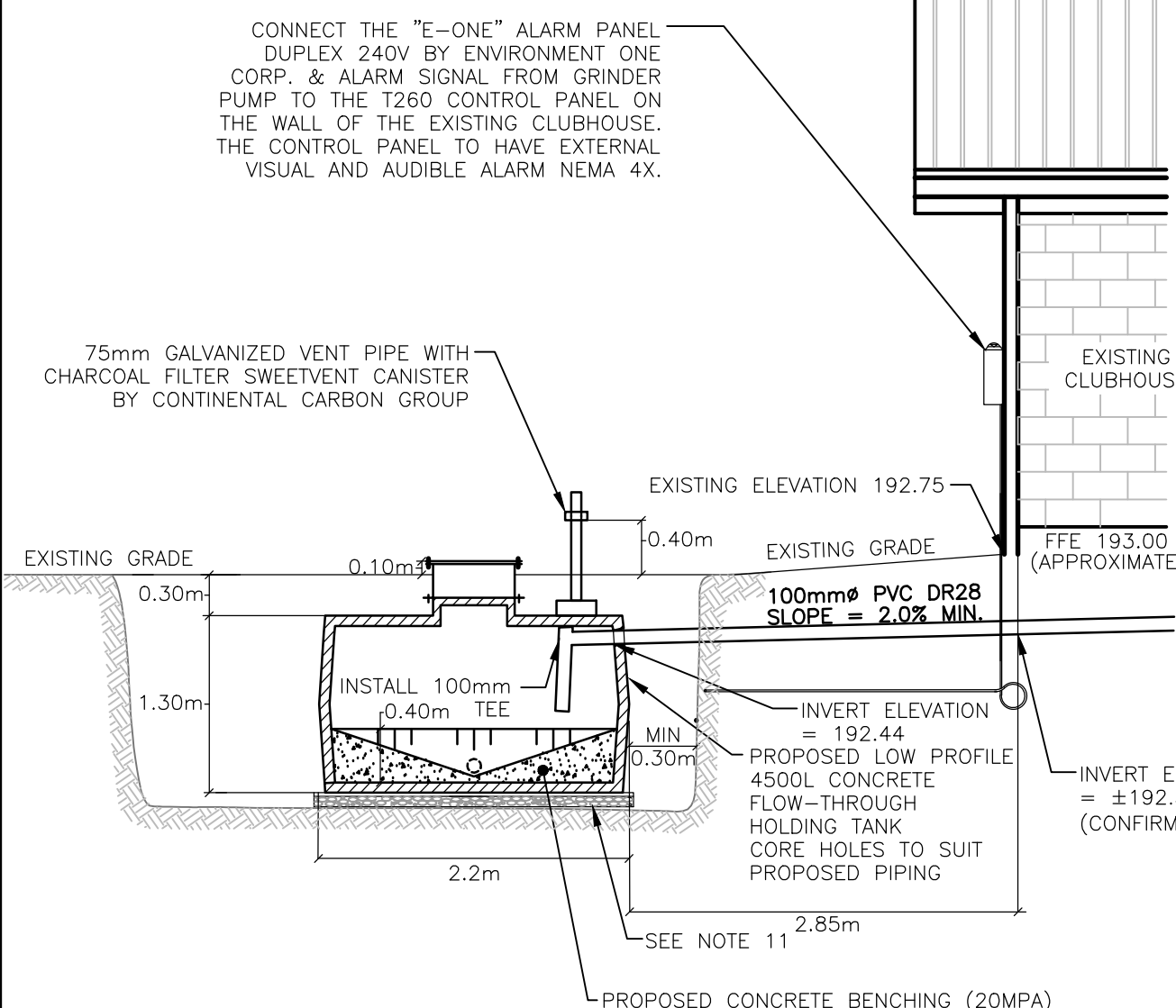
**Project Name/Location**  
**QUAKER TENNIS FORCEMAIN**  
CITY OF PETERBOROUGH

**Drawing Title**  
**SITE PLAN**

**Drawn By:** T.R.    **SCALE:** Horz: 1:250    **Vert.:** -  
**Designed By:** -    **Plot Date:** SEPTEMBER 16, 2015  
**Checked By:** D.W.    **Project No.:** 15-10679    **Sht. No.:**  
**Engineer:** -    **Dwg File No.:** 10679MP    **01**

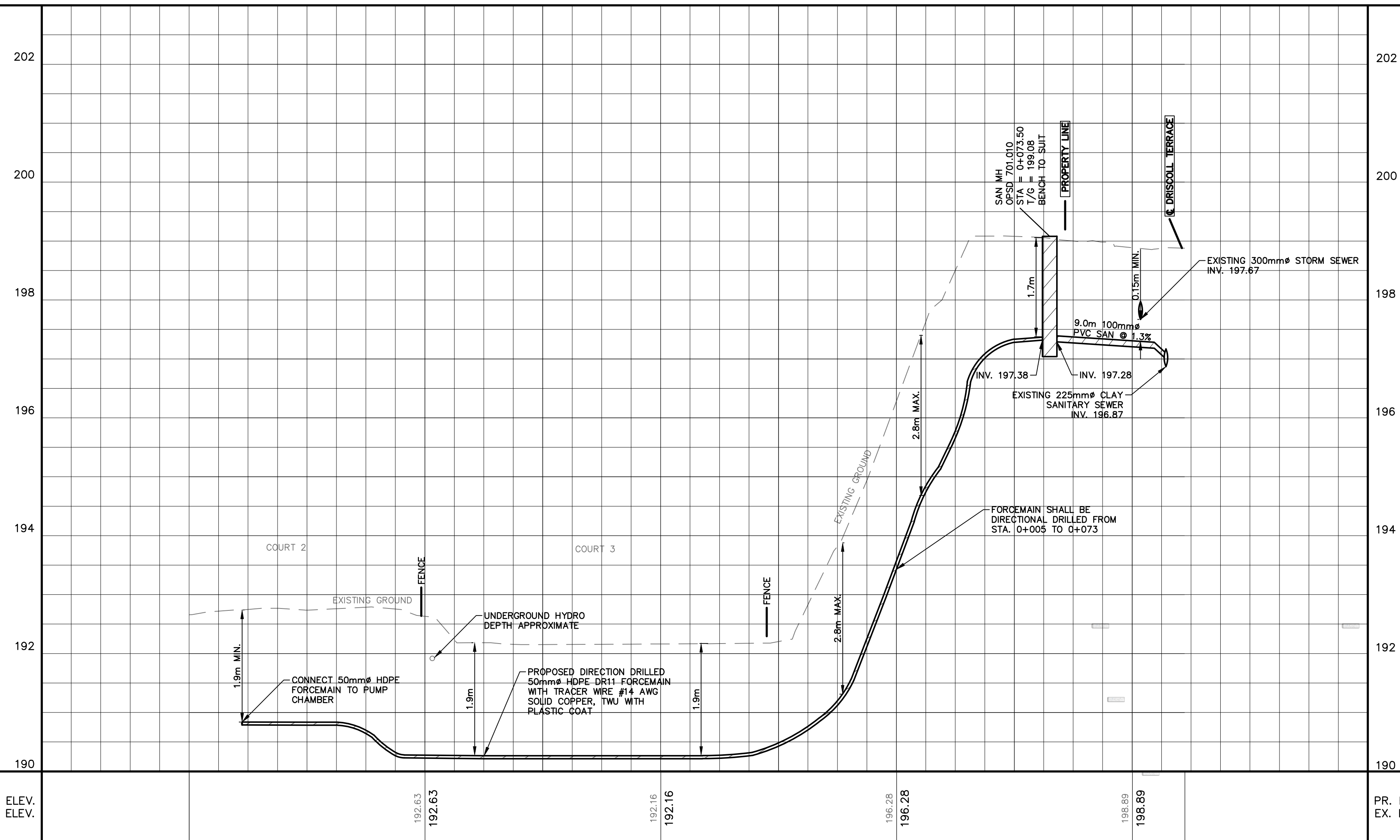


DETAIL NOTES:  
 A. E-ONE DUPLEX GRINDER PUMP P1, ONE (1) REQ'D,  
 MODEL NO. DH152-93  
 Q= 41.1 L/min = 10.94 (US)GPM  
 TDH= 27.7m = 91ft.  
 SINGLE PHASE, 120/240 V, 1 HP.  
 DISCHARGE: 32 DIA.  
 E/ONE POWER CABLE = 30m (100ft.)  
 MANUFACTURER: ENVIRONMENT ONE CORPORATION  
 SUPPLIER: JOHN BROOKS



**1A** **PP01** **DETAIL - SECTION A-A - CLUBHOUSE & FLOW-THROUGH TANK**  
 SCALE = 1:50

**1B** **PP01** **DETAIL - SECTION B-B - GRINDER LIFT STATION AND FLOW-THROUGH TANK**  
 SCALE = 1:50



PR. ELEV.	192.63	192.63	192.16	192.16	196.28	196.28	196.89	196.89	196.89	196.89	PR. ELEV.
EX. ELEV.											EX. ELEV.
CHAINAGE	0+000	0+020	0+040	0+060	0+080	0+084.45					CHAINAGE

**NOTES**

**GENERAL**

- ACTUAL LENGTH OF PIPES AND NUMBER OF FITTINGS TO BE VERIFIED ON SITE.
- ENSURE MINIMUM 2m CLEARANCE FROM ALL UTILITY POLES, GUY WIRES AND STRUCTURES, UNLESS OTHERWISE SPECIFIED.
- ALL WORKS SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
- ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- FORCEMAIN SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF OPSS 450.
- CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
- CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER BEFORE COMMENCING THE WORK.
- DO NOT SCALE DRAWINGS.
- ANY CHANGES MUST BE APPROVED BY THE ENGINEER.
- INSTALL PIPES ALONG PROPOSED ALIGNMENT BY DEFLECTING THE RECOMMENDED MANUFACTURERS RADI.
- BASE OF 50mm LOOSE SAND SPREAD EVENLY ON MIN. 300mm CRUSHED STONE COMPACTED TO 95% PROCTOR DENSITY IS RECOMMENDED UNDER HOLDING TANK TO ELIMINATE ANY STRESS DUE TO SETTLING.
- PIPE CONNECTIONS TO TANK SHALL BE SEALED AS PER TANK MANUFACTURER'S RECOMMENDATIONS.
- ALL P.V.C. FITTINGS, VALVES AND PIPES ARE SCH.40 UNLESS OTHERWISE SPECIFIED.
- ALL HDPE PIPES AND FITTINGS ARE OF DR11 UNLESS OTHERWISE SPECIFIED.
- ALL GALVANIZED STEEL PIPES AND FITTINGS ARE MADE BY: "CONTINENTAL CARBON GROUP" OR EQUIVALENT UNLESS OTHERWISE SPECIFIED.
- THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR THE FIELD LOCATION OF ALL UTILITIES PRIOR TO COMMENCING EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS TO CONFIRM THE LOCATION AND SIZE OF EXISTING UTILITIES WITH THE APPROPRIATE AUTHORITY AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- EXISTING SANITARY INFORMATION WITHIN DRISCOLL TERRACE PROVIDED BY THE CITY OF PETERBOROUGH EXISTING WATERMAIN INFORMATION WITHIN DRISCOLL TERRACE STREET PROVIDED BY P.U.S.I.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND HAVING ON SITE, A COPY OF THE ONTARIO PROVINCIAL STANDARDS, THE LOCAL MUNICIPAL SPECIFICATIONS AND THE LOCAL UTILITY SERVICES SPECIFICATIONS RELEVANT TO THIS CONTRACT.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS RELATED TO SERVICE CONNECTIONS INCLUDING THIRD PARTY UTILITY COSTS. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES. GENERAL CONTRACTOR TO PROVIDE AS CONSTRUCTED DRAWINGS OF ALL SITE SERVICE INSTALLATION WORKS. CONTRACTOR TO UNCOVER EXISTING UTILITIES WELL IN ADVANCE OF PIPE LAYING IN ORDER TO CORRECT GRADE PROBLEMS AS REQUIRED, IF REQUIRED, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ENGINEER BEFORE PROCEEDING WITH THE WORKS. THE APPROVAL OF THE PLANS DOES NOT EXEMPT THE CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: PERMITS TO TAKE WATER, ROAD CUT, SEWER PERMIT, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH PERMITS, ETC...
- GENERAL CONTRACTOR TO PROVIDE AS CONSTRUCTED DRAWINGS OF ALL SITE SERVICE INSTALLATION WORKS.
- ALL SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST CITY OF PETERBOROUGH OR PROVINCIAL STANDARDS.
- THE CITY OF PETERBOROUGH STANDARDS SHALL TAKE PRECEDENCE OVER OPSS. THE DETAILS ON THIS DRAWING SHALL TAKE PRECEDENCE OVER THE LATEST OPSS DETAILS WHERE APPLICABLE.
- ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS. ALL SIGNS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS IN THE ONTARIO TRAFFIC MANUAL, BOOK 7, TRAFFIC CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY WASHROOM FACILITIES FOR CLUB PATRONS (SEPARATE FROM CONTRACTOR) INCLUDING SEWAGE HAULAGE FROM THE TIME THE EXISTING SEPTIC SYSTEM OR SEPTIC BED ARE REMOVED FROM OPERATION UNTIL THE NEW PUMP SYSTEM IS FULLY OPERATIONAL AND ON-LINE. THE CLUB MANAGER WILL INSTRUCT WHERE THEY ARE TO BE LOCATED.
- ALL AREAS DISTURBED BY THE CONTRACTOR'S CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS AS INDICATED ON THE OWNER'S CONTRACT DRAWINGS AND IN ACCORDANCE WITH OPSS 507.
- LIMITS OF GRADING MAY VARY FROM THAT INDICATED, DEPENDING ON THE FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- ANY HYDRO POLES OR BELL POLES THAT ARE IN DANGER OF BEING UNDERMINED ARE TO BE BRACED. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE POLES BRACED TO THE SATISFACTION OF THE APPROPRIATE UTILITY. ALL COSTS ASSOCIATED WITH THE BRACING OF POLES SHALL BE CARRIED BY THE CONTRACTOR.
- ALL ELEVATIONS ARE REFERENCED TO BENCH MARK No. 1 AND UTILIZE METRIC UNITS.
- JOB BENCH MARK - CONTRACTOR TO PROVIDE D.M. WILLS ASSOCIATES LTD. WITH SURVEY DATA TO CONFIRM SITE BENCH MARK PRIOR TO UTILIZATION.
- TOPOGRAPHICAL AND LEGAL INFORMATION PROVIDED BY J.B. FLEGUEL SURVEYORS. (DATED JULY 1, 2015) PROJECT # 4903.
- REFER TO ARCHITECT'S SITE PLAN FOR BUILDING DIMENSIONS AND SITE LAYOUT. DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- AFTER INSTALLATION, THE FORCEMAIN SHALL BE PRESSURE TESTED AT 120psi FOR 2 HOURS WITH WATER. THE CONTRACTOR TO PROVIDE ALL TEMPORARY VALVES AND APPARATUS FOR TESTING.
- THE CONTRACTOR SHALL SUBMIT:
  - SHOP DRAWINGS FOR PUMP CHAMBER AND ALL ACCESSORIES, 4500L TANK, FORCEMAIN INCLUDING SPECIFICATIONS AND FORCEMAIN.
  - WARRANTY INFORMATION FOR PUMPS, CHAMBER, CONTROLLERS, TANKS, AND FORCEMAIN.

**SEWER**

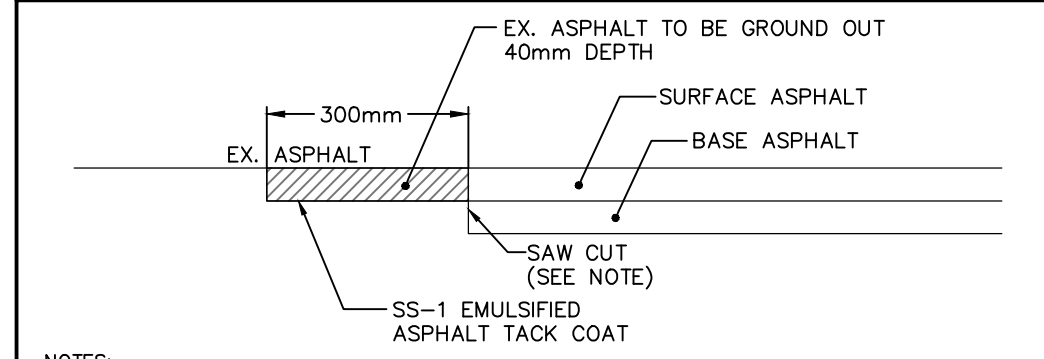
- LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
- THE CITY OR APPROVED SITE SERVICING CONTRACTOR IS TO CONNECT TO EXISTING SANITARY SEWER.
- BEDDING AND BACKFILL FOR STORM AND SANITARY SEWER SHALL BE AS PER OPSS 802.010 (MODIFIED).
- THE CONTRACTOR SHALL PERFORM A PRESSURE TEST ON ALL STORM AND SANITARY SEWERS IN ACCORDANCE WITH THE CITY OF PETERBOROUGH STANDARDS. THE CONTRACTOR SHALL NOTIFY D.M. WILLS 48HRS PRIOR TO CONDUCTING THE AIR TEST. THE AIR TEST SHALL NOT BE INITIATED WITHOUT D.M. WILLS' INSPECTOR ON SITE. THE AIR TEST SHALL BE CONDUCTED PRIOR TO PLACEMENT OF CONCRETE, CURB AND ASPHALT.
- ALL SANITARY AND STORM SEWER, BOTH EXISTING AND NEW, SHALL BE CCTV INSPECTED, AS PER CITY OF PETERBOROUGH STANDARD, AFTER CONSTRUCTION IS COMPLETE AND AFTER THE SEWERS HAVE BEEN CLEANED (NOTE 32). THE CONTRACTOR SHALL PROVIDE THREE COPIES OF THE VIDEOS AND REPORTS ON CD TO THE CONSULTANT (D.M. WILLS ASSOCIATES LIMITED) AND ONE COPY TO THE CITY ENGINEER FOR HIS APPROVAL PRIOR TO THE RELEASE OF SITE SECURITIES.
- EXISTING STORM AND SANITARY INVERT INFORMATION PROVIDED BY J.B. FLEGUEL SURVEYORS (OLS). CONTRACTOR TO VERIFY INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

**SITE**

- ALL MATERIALS (CONCRETE ASPHALT, SOIL, ETC.) THAT ARE TO BE REMOVED FROM SITE MUST BE DISPOSED OF IN ACCORDANCE WITH THE LATEST MINISTRY OF THE ENVIRONMENT GUIDELINES AND LOCAL MUNICIPAL BYLAWS. SOIL SAMPLES MUST HAVE CHEMICAL LABORATORY TESTING TO CLASSIFY SOILS FOR DISPOSAL. SEE SECTION 00 31 34 OF CONTRACT DOCUMENTS.
- ALL LANDSCAPED AREAS DISTURBED BY CONSTRUCTION, OR CONTRACTORS ACTIVITIES, SHALL BE RESTORED WITH 150mm TOPSOIL AND NURSERY SOD UNLESS OTHERWISE NOTED. ALL SLOPES GREATER THAN 5:1 REQUIRE THE SOD TO BE STAKED.
- ALL SERVICES AND UTILITIES ARE TO BE SUPPORTED AS PER CITY OF PETERBOROUGH REQUIREMENT.
- ALL EXISTING ASPHALT EDGES SHALL BE SAW CUT CLEAN PRIOR TO ANY PAVING OPERATION. REFER TO DETAIL 2.

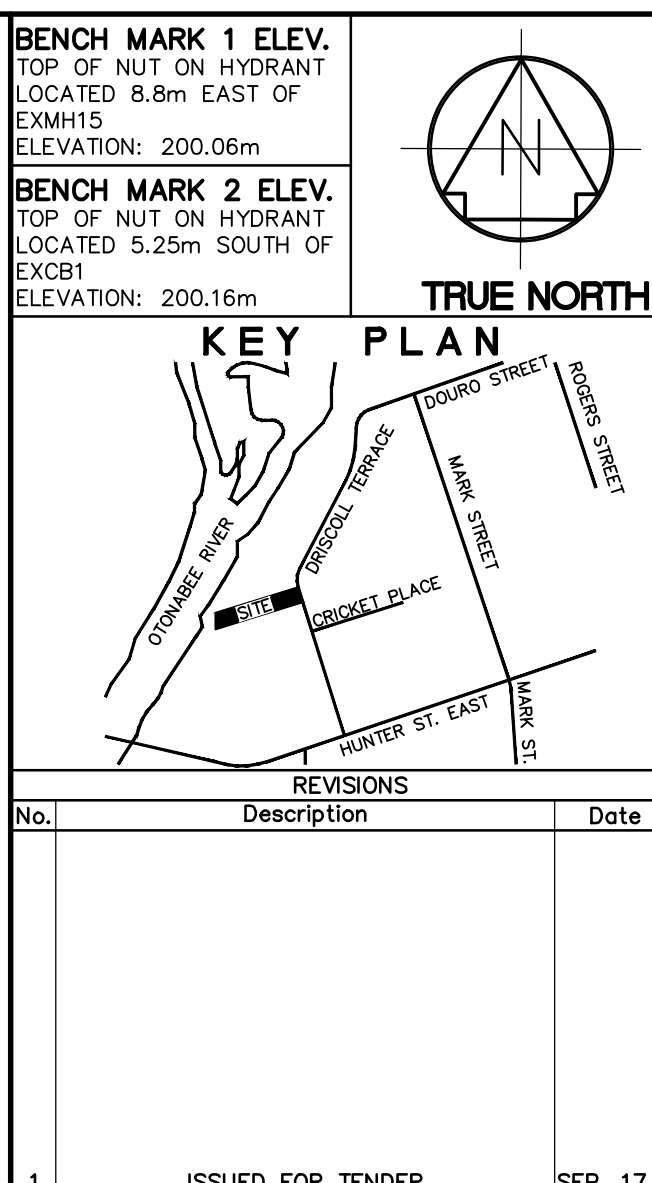
**EROSION AND SEDIMENT CONTROL NOTES**

- ALL TEMPORARY SILTATION CONTROL DEVICES ARE TO BE PLACED AND MAINTAINED BEFORE CONSTRUCTION STARTS. CONTROL DEVICES SHALL BE REMOVED ONCE ALL CONSTRUCTION HAS BEEN COMPLETED, ALL VEGETATION HAS BEEN ESTABLISHED AND AT THE DIRECTIONS OF THE ENGINEER (D.M. WILLS).
- LIGHT DUTY SILT FENCING WILL BE AS PER OPSS 219.110(MODIFIED). THE PROPOSED SILT FENCE MUST BE INSPECTED AFTER EVERY RAINFALL TO IDENTIFY FAILED SECTIONS. ANY FAILURES MUST BE REPAIRED IMMEDIATELY. WHEN SEDIMENT ACCUMULATES TO HALF THE HEIGHT OF THE GEOTEXTILE IT IS TO BE REMOVED AND DISPOSED OF IN A CONTROLLED AREA. A SUPPLY OF SILT FENCE IS TO BE KEPT ON SITE TO PROVIDE FOR QUICK REPAIRS OR TO INSTALLATION OF ADDITIONAL FENCE IF REQUIRED.



- NOTES:
- WHEREVER THROUGH-OUT THE CONTRACT A BUTT JOINT IS CREATED A TRANSITION TREATMENT SHALL APPLY. THE EXISTING PAVEMENT EDGES SHALL BE "SAW CUT" TO FORM A STRAIGHT, CLEAN VERTICAL FACE.
  - ALL FACES AT WHICH JOINTS ARE MADE SHALL BE PAINTED WITH A THIN UNIFORM & CONTINUOUS COATING OF SS-1 EMULSIFIED TACK COAT.

**2** **PP02** **DETAIL - TRANSITION TREATMENT**  
 SCALE = N.T.S.



**REVISIONS**

No.	Description	Date
1	ISSUED FOR TENDER	SEP. 17/15

**METRIC**

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**LEGEND**

EX./PR. SIDEWALK	EX./PR. BUILDING	EX./PR. ELEVATION	EX./PR. CATCH BASIN	EX./PR. CATCH BASIN	EX./PR. FIRE HYDRANT	EX./PR. WATER VALVE	EXISTING LIGHT STANDARD	EXISTING HYDRO POLE	EXISTING BELL POLE	EXISTING POLE ANCHOR	EX./PR. BELL/CABLE PEDESTAL	FOUND IRON BAR	EX./PR. ELEVATION	PROPOSED GRADE	EXISTING GASMAIN	EX. OVERHEAD BELL	EX. UNDERGROUND BELL	EX. OVERHEAD HYDRO	EX. UNDERGROUND HYDRO	EX. HYDRO MH	EX. BELL MH	EX. GAS VALVE	EX./PR. CULVERT	EX./PR. DITCH	EX./PR. STORM SEWER	EX./PR. SANITARY SEWER	EX./PR. WATERMAIN	EX./PR. STORM SERVICE	EX./PR. SANITARY SERVICE	EX./PR. WATER SERVICE	EX./PR. FENCE	EX. R.O.W/PROPERTY BOUNDARY	EXISTING PROPERTY LINE	EXISTING VEGETATION
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**QUAKER TENNIS FORCEMAIN AND LIGHTING CITY OF PETERBOROUGH**

**PROFILE AND DETAILS**

Drawn By: T.R.	SCALE: Horz. 1:250	Vert. 1:50
Designed By: -	Plot Date: SEPTEMBER 16, 2015	
Checked By: D.W.	Project No.: 15-10679	Sht. No.:
Engineer: -	Dwg File No.: 10679MP	02