

**GENERAL NOTES:**

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPALITY OF PORT HOPE BEFORE COMMENCING CONSTRUCTION. AN EXCAVATION PERMIT WILL BE REQUIRED FROM THE MUNICIPALITY PRIOR TO ANY WORKS ON PUBLIC PROPERTY.
- BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$2,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED AND THE MUNICIPALITY OF PORT HOPE AS THIRD PARTY.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE MUNICIPALITY OF PORT HOPE.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ALL ORGANIC MATERIAL AND DEBRIS. ALL CONTAMINATED MATERIAL (IF ANY) SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS' DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
- SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES AND GRADING PLAN INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS, ANY ALIGNMENT CHANGES, AND ALL SURFACE ELEVATION AS BUILT GRADES.
- ASPHALT REINSTATEMENT LIMITS SHALL BE MARKED IN THE FIELD AND APPROVED BY THE MUNICIPALITY OF PORT HOPE PRIOR TO ASPHALT REINSTATEMENT COMMENCING.
- ALL ELEVATIONS ARE GEODETIC. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO THE CGVD1928: 1978 GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK AND 00819658142 HAVING PUBLISHED ORTHOMETRIC ELEVATION OF 55.64. REFER TO ELLIOTT AND PARR (PETERBOROUGH, LTD. TOPOGRAPHIC PLAN OF LOTS 21-31 SMITH ESTATE PLAN IN THE MUNICIPALITY OF PORT HOPE COUNTY OF NORTHUMBERLAND.
- REFER TO GEOTECHNICAL INFORMATION PROVIDED BY TERRAPROBE INC., FILE NO. 1-19-0660-01 DATED DECEMBER 11, 2019 FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT NO. R-2021-091, DATED JUNE 14, 2021 PREPARED BY NOVATECH.
- REFER TO THE MUNICIPALITY OF PORT HOPE MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND APPROVAL OF MUNICIPAL INFRASTRUCTURE AND RESIDENTIAL, COMMERCIAL AND INDUSTRIAL DEVELOPMENT, SECTION 4 FOR ALL REQUIRED ROAD REINSTATEMENTS.

**WATERMAIN NOTES:**

- SPECIFICATIONS:
 

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	701	OPSS
THERMAL INSULATION IN SHALLOW TRENCHES	1109.030	OPSD
HYDRANT INSTALLATION	1105.010	OPSD
WATERMAIN (50mmØ +)	PVC DR 18 (UNLESS SPECIFIED OTHERWISE)	
WATERMAIN (<50mmØ)	PEX SDR9	
WATER SERVICES	PEX SDR9	
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL, RESTORATION, CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR.
- WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- PROVIDE MINIMUM 0.25m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- DEVELOPERS CONTRACTOR IS TO FOLLOW THE MUNICIPALITY'S WATER COMMISSIONING PROTOCOL.
- IT WILL BE THE RESPONSIBILITY OF THE DEVELOPER'S CONTRACTOR TO PERFORM ANY WATERMAIN CONNECTIONS REQUIRED. THIS SHALL BE COMPLETED IN THE PRESENCE OF A DESIGNATED MUNICIPAL WATER OPERATOR AND THE SELECTED CONTRACTOR SHALL PROVE TO THE SATISFACTION OF THE MUNICIPALITY THAT THEY ARE COMPETENT TO PERFORM THE WORKS.

**SEWER NOTES:**

- SPECIFICATIONS:
 

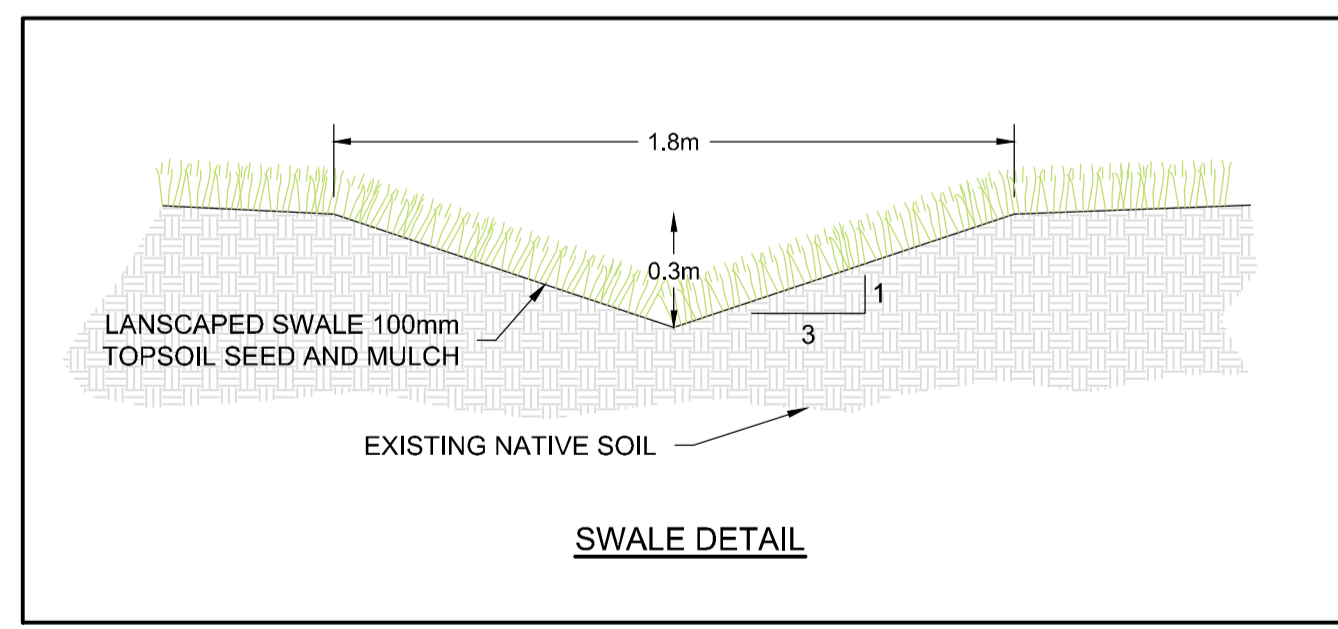
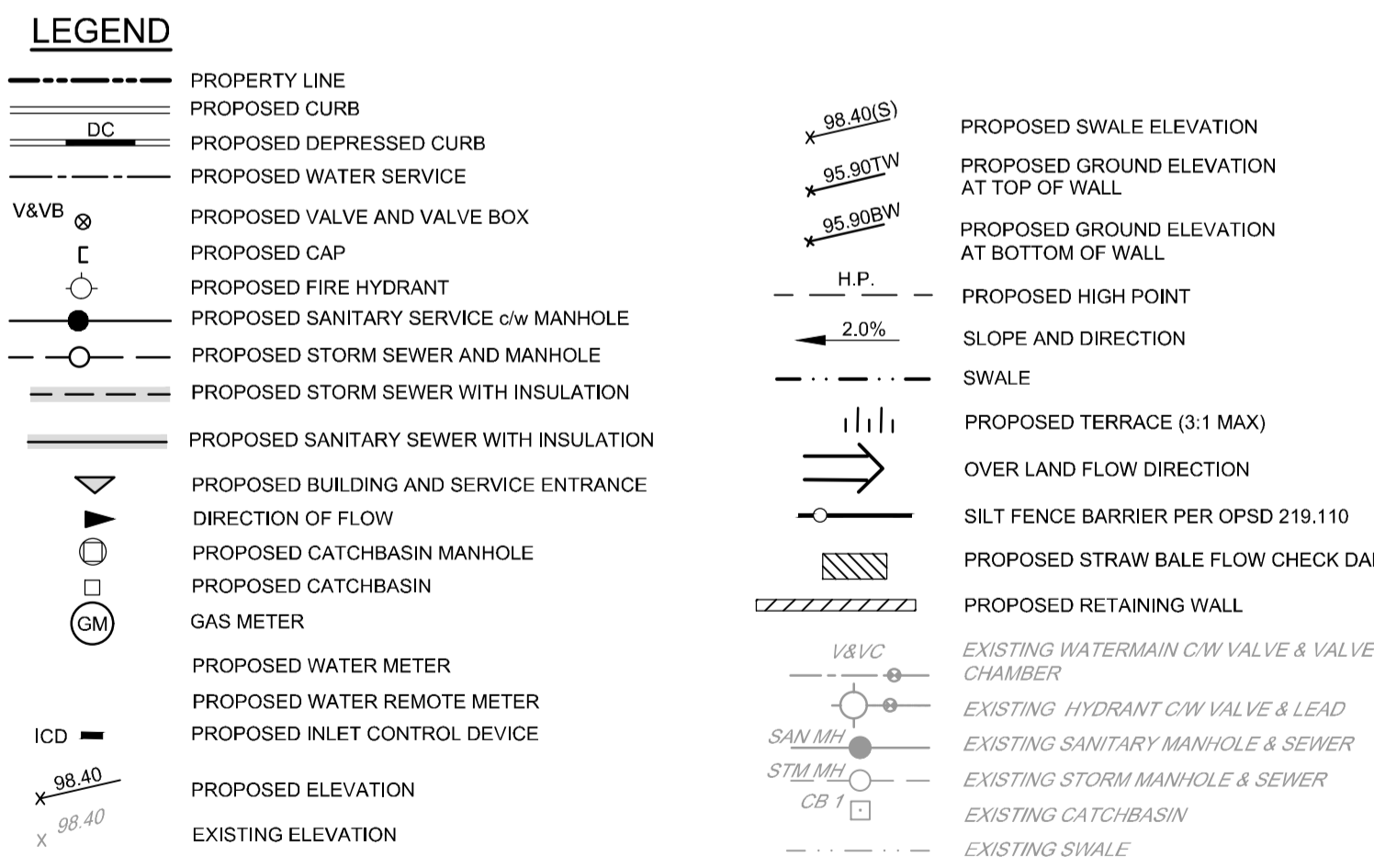
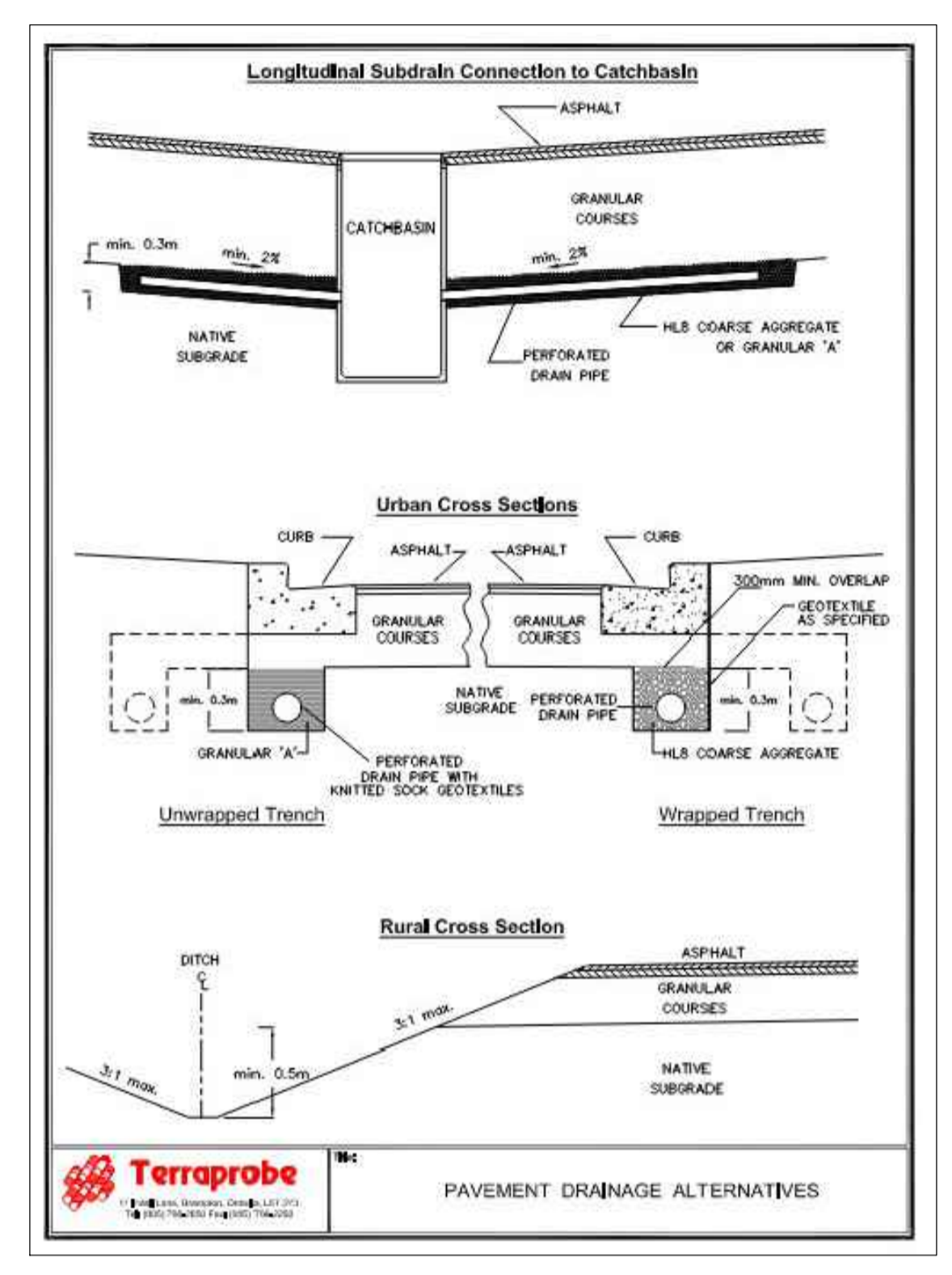
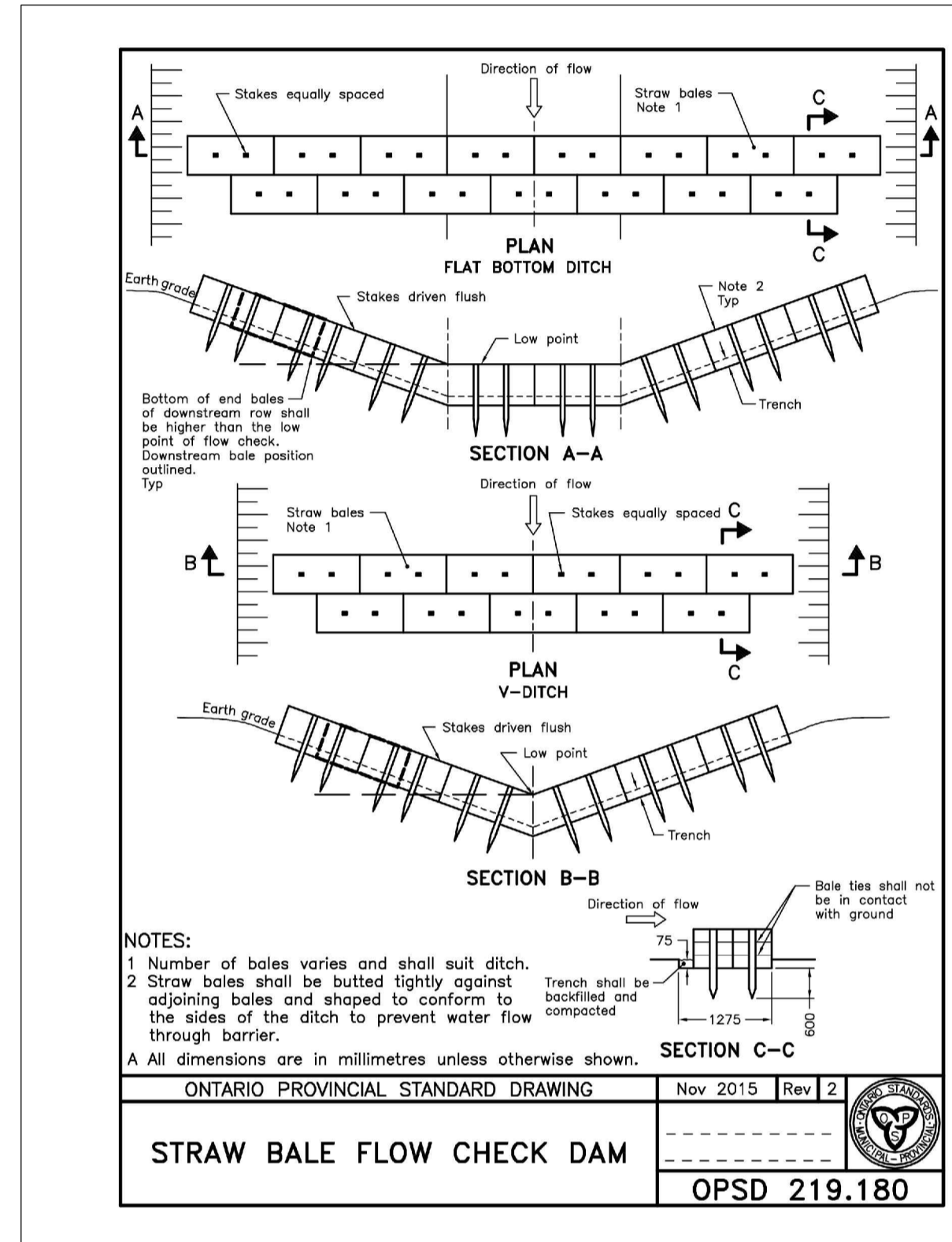
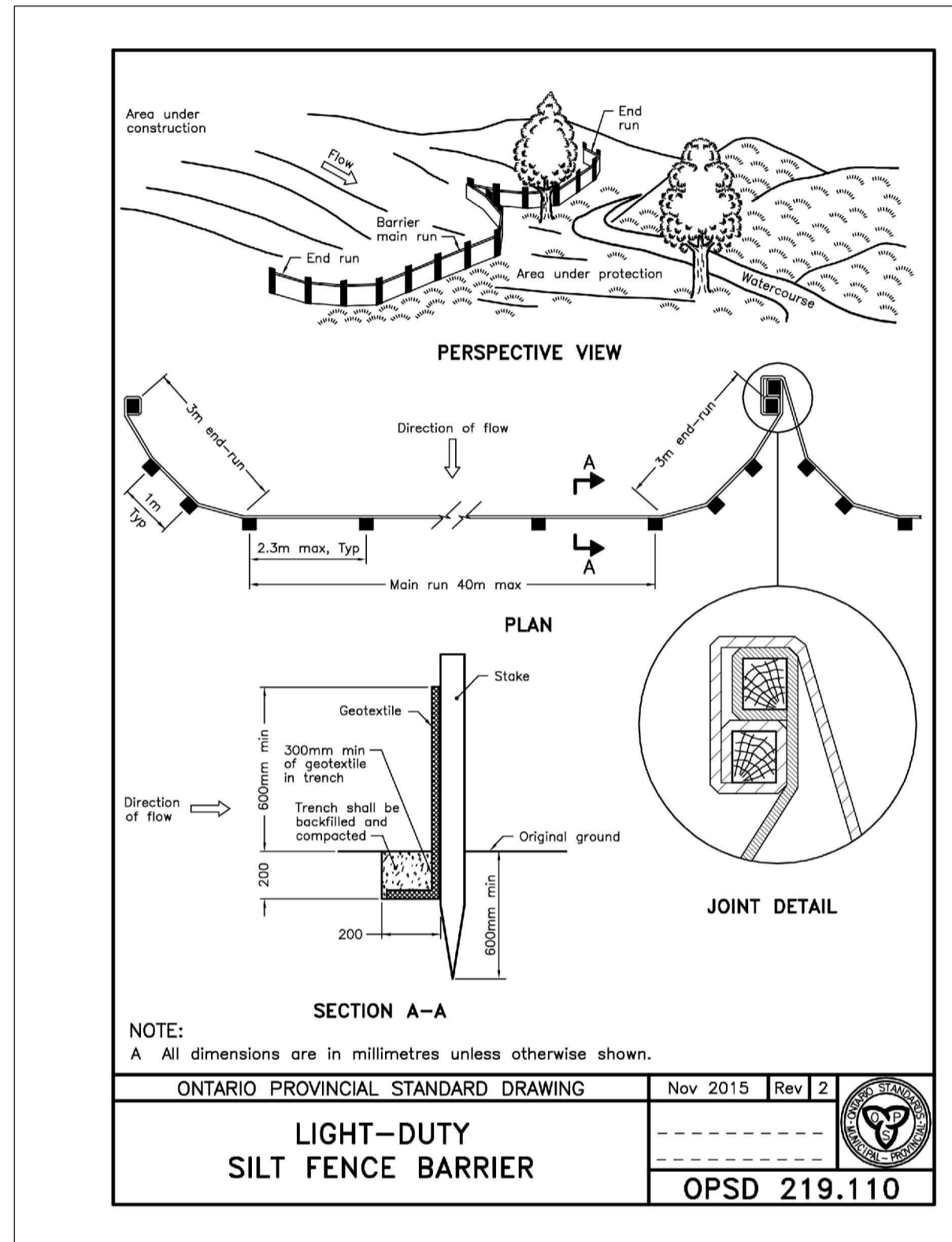
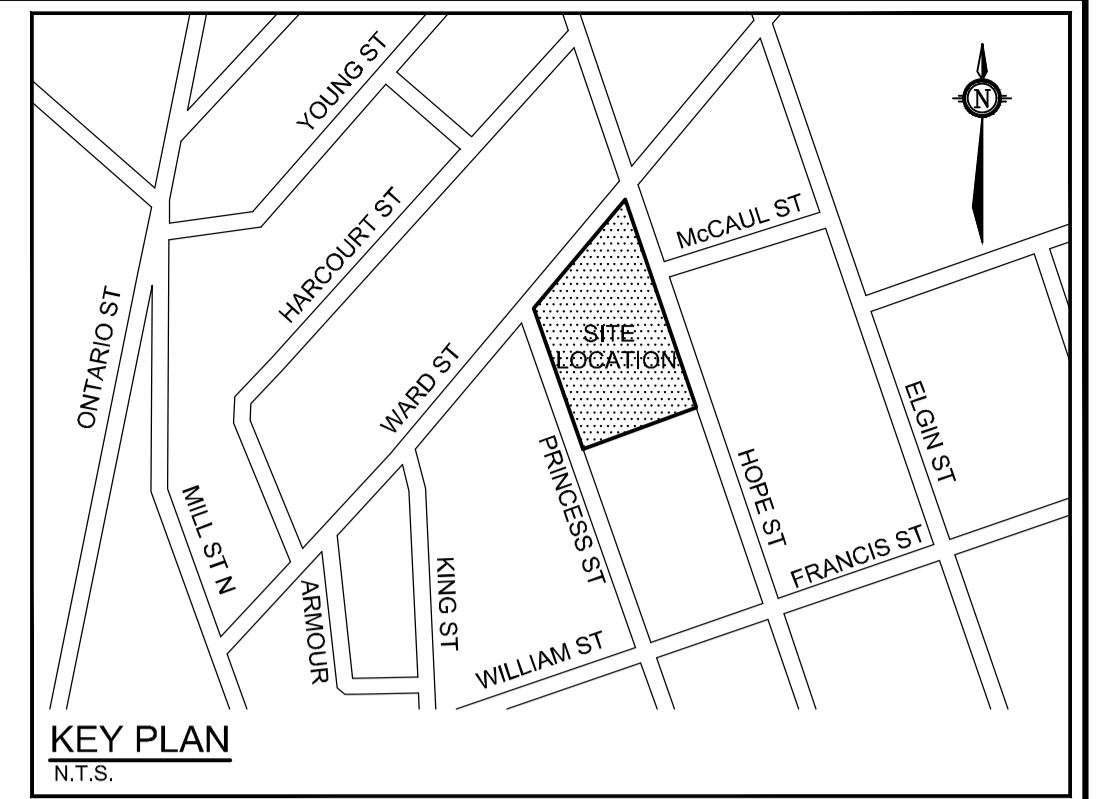
ITEM	SPEC. No.	REFERENCE
STORM / SANITARY MANHOLE (1200Ø)	701.010	OPSD
CATCHBASIN (600x600mm)	705.010	OPSD
CB, FRAME & COVER	400.020	OPSD
STORM / SANITARY MH FRAME & COVER	401.010	OPSD
SANITARY COVER	401.020	OPSD
SEWER TRENCH	410	OPSS
SANITARY SEWER	PVC SDR 35 (UNLESS SPECIFIED OTHERWISE)	
STORM SEWER (<450mmØ)	PVC SDR 35 (UNLESS SPECIFIED OTHERWISE)	
STORM SEWER (450mmØ +)	CONC CLASS 650 (UNLESS SPECIFIED OTHERWISE)	
WATERTIGHT FRAME & COVER	401.030	OPSD
HDPE CULVERT	SOLENO NON PERFORATED SOLFO MAX OR APPROVED EQUIVALENT	
SEWER INSULATION SHALLOW TRENCH	1109.030	OPSD
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX-POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- DYE TESTING IS TO BE COMPLETED ON SANITARY SERVICE TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN.
- STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SLUMPS UNLESS OTHERWISE INDICATED.
- SUBDRAIN INVERTS SHOULD BE APPROXIMATELY 300mm BELOW SUBGRADE LEVEL. THE SUBGRADE SURFACE SHOULD BE SHAPED TO PROMOTE WATER FLOW TO THE DRAINAGE LINES.
- CONTRACTOR TO TELEVISION (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
- LEAKAGE TESTING AS PER OPSS 410.07.16, 410.07.18.04 AND 407.07.24, IS TO BE COMPLETED ON ALL SANITARY SERVICES AND THE RESULTS ARE TO BE SUBMITTED TO THE MUNICIPALITY OF PORT HOPE - PUBLIC WORKS DEPARTMENT FOR CONSIDERATION IN SECURITY RELEASE FOLLOWING CONSTRUCTION.

**EROSION AND SEDIMENT CONTROL NOTES:**

- THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE MUNICIPALITY OF PORT HOPE, APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL SUCH AS BUT NOT LIMITED TO INSTALLING FILTER CLOTHS ACROSS MANHOLE/CATCHBASIN LIDS TO PREVENT SEDIMENTS FROM ENTERING STRUCTURES AND INSTALL AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
- THE CONTRACTOR SHALL PLACE FILTER SOCKS UNDER THE EXISTING AND PROPOSED CATCHBASIN AND MANHOLE GRATES FOR THE DURATION OF CONSTRUCTION AND WILL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
- LIGHT DUTY SILT FENCE AS PER OPSD 219.110 SHALL BE INSTALLED FOR ENTIRE PERIMETER OF SITE. SHALL BE UTILIZED TO CONTROL EROSION FROM THE SITE DURING CONSTRUCTION.
- THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- PROVIDE MUD MATS AT ALL CONSTRUCTION ACCESS POINTS TO MINIMIZE SEDIMENT TRANSPORT OFFSITE.

**GRADING NOTES:**

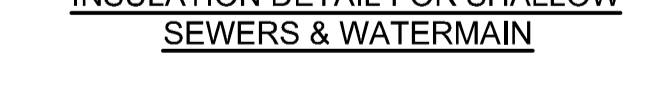
- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS.
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL CONSULTANT.
- ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUBEXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS.
- THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE.
- MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER OPSD 600.110.



**PAVEMENT STRUCTURE:**



**INSULATION DETAIL FOR SHALLOW SEWERS & WATERMAIN**



**SEWER & WATERMAIN INSULATION NOTES:**

- INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 1.5m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSD 1109.030.
- WHERE INSULATION IS REQUIRED PROVIDE MINIMUM 100mm THICKNESS. WATERMANS TO HAVE NO LESS THAN 1.5m OF COVER AND SEWERS TO HAVE NO LESS THAN 1.2m OF COVER AT ANY POINT.

NOTE:  
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

No.	REVISION	DATE	BY
4	REVISED PER MUNICIPALITY COMMENTS	JAN 28/22	CJR
3	REVISED PER TOWN COMMENTS	NOV 12/21	CJR
2	ISSUED FOR BUILDING PERMIT	AUG 31/21	CJR
1	ISSUED FOR SITE PLAN APPLICATION	JUNE 14/21	CJR

SCALE: N.T.S.

DESIGN: LSC

CHECKED: CJR

DRAWN: LSC

CHECKED: CJR

APPROVED: CJR

**FOR REVIEW ONLY**

LICENSED PROFESSIONAL ENGINEER  
C.J. RUDDLE  
PROVINCE OF ONTARIO

**NOVATECH**  
Engineers, Planners & Landscape Architects  
Suite 200, 240 Michael Cowpland Drive  
Ottawa, Ontario, Canada K2M 1P6  
Telephone: (613) 254-9643  
Facsimile: (613) 254-5867  
Website: www.novatech-eng.com

LOCATION:  
MUNICIPALITY OF PORT HOPE  
65 WARD STREET / 20 HOPE STREET SOUTH

DRAWING NAME:  
SOUTHBRIDGE CARE HOMES  
PORT HOPE NURSING HOME

NOTES AND DETAILS PLAN

PROJECT No: 120226  
REV: REV 4  
DRAWING No: 120226-NDP

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