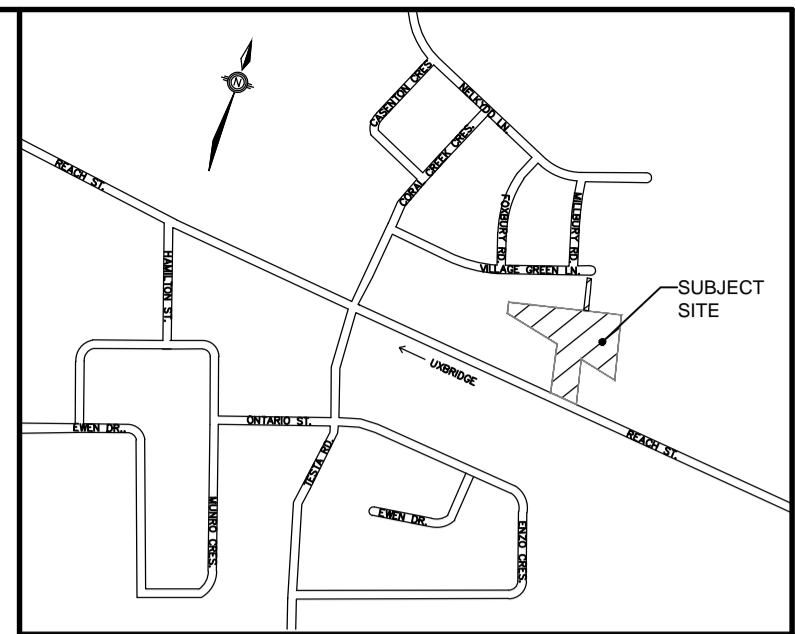




NOTE: THESE DETAILS ARE SHOWN AS PROVIDED BY ADS CANADA AND HAVE NOT BEEN DESIGNED BY SABOURIN KIMBLE & ASSOCIATES LTD.



KEYMAP N.T.S.

PROJECT INFORMATION table with columns for ENGINEERED PRODUCT MANAGER, ADS SALES REP, and PRODUCT NO.



REACH STREET LANDS - 2A UXBRIDGE, ONTARIO

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS. CHAMBERS SHALL BE CERTIFIED TO CSA B14, POLYMER SUBSURFACE STORMWATER MANAGEMENT STRUCTURES, AND MEET THE REQUIREMENTS OF ASTM F2151...

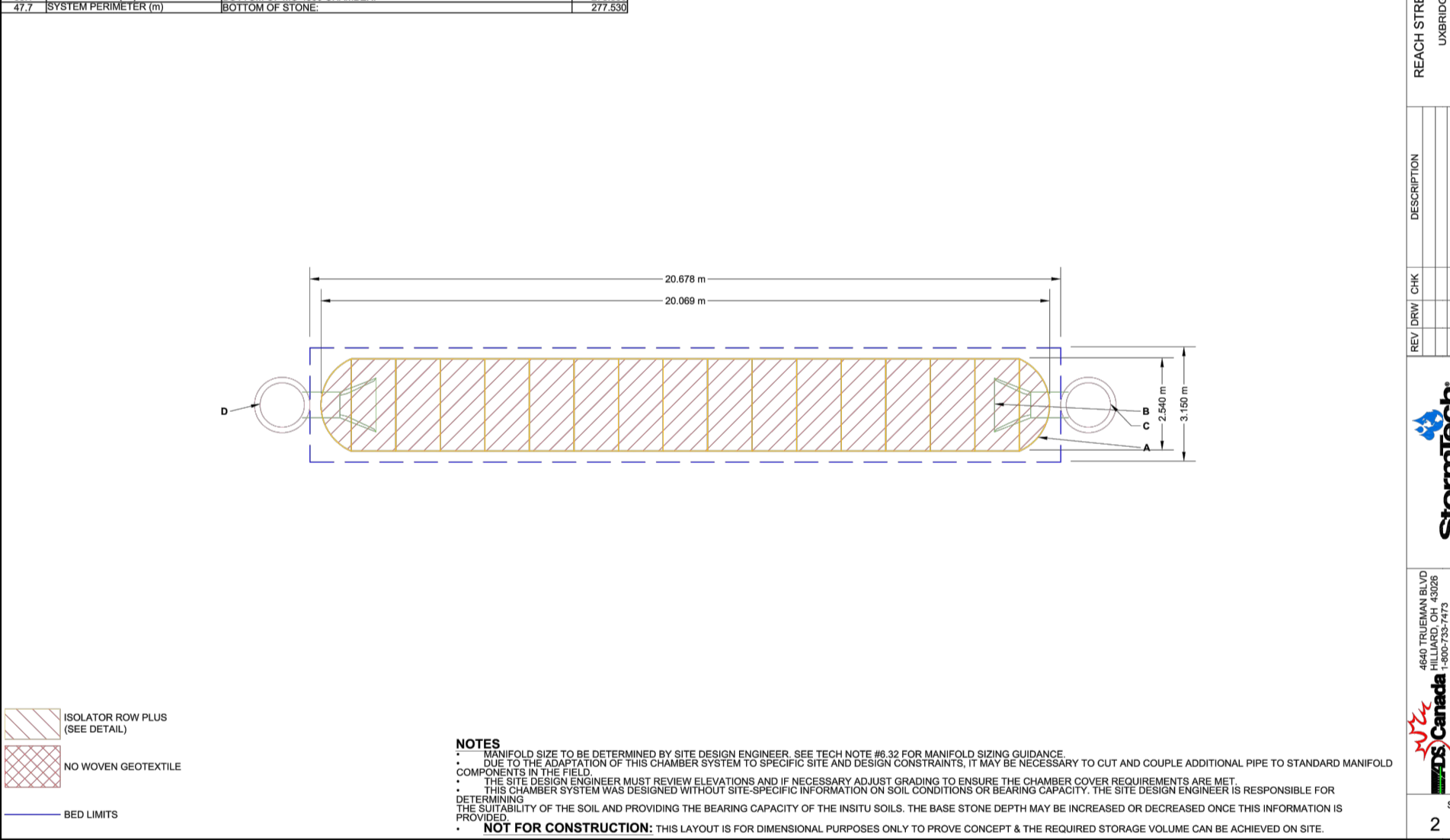
IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE SET-OUTS. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE". CHAMBERS ARE NOT TO BE BACKFILL WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS...

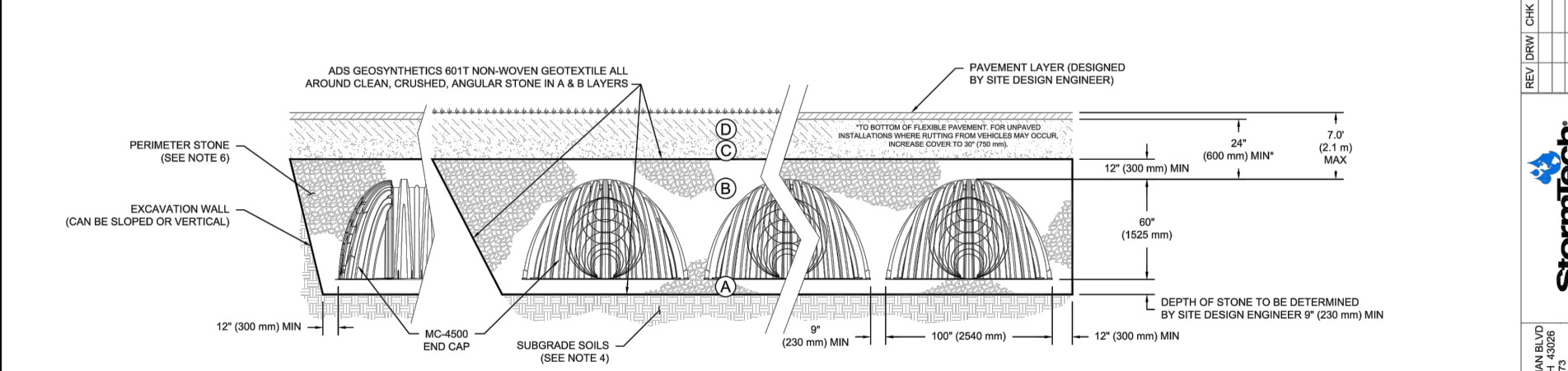
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE". THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED. NO RUBBER TYRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".

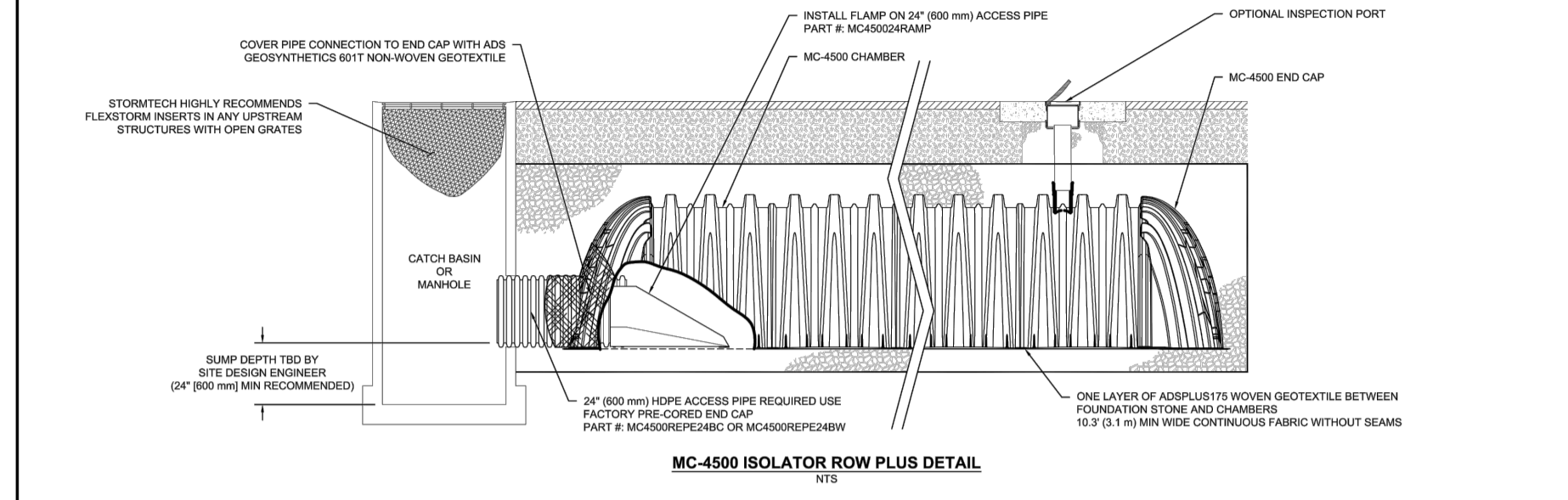
PROPOSED LAYOUT and PROPOSED ELEVATIONS tables showing chamber locations and invert elevations.



ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS table with columns for MATERIAL LOCATION, DESCRIPTION, AASHTO MATERIAL CLASSIFICATIONS, and COMPACTION / DENSITY REQUIREMENT.



- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2151-16, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2151 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"...



- INSPECTION & MAINTENANCE STEP 1: INSPECT ISOLATOR ROW PLUS FOR SEDIMENT. A. INSPECTION POINT IS PRESENT. A.1. REMOVE COVER ON MC-4500 END CAP. A.2. REMOVE AND CLEAN FLEXSTONE FILTER IF INSTALLED. A.3. USING A FLASHLIGHT AND STAIN-ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG...

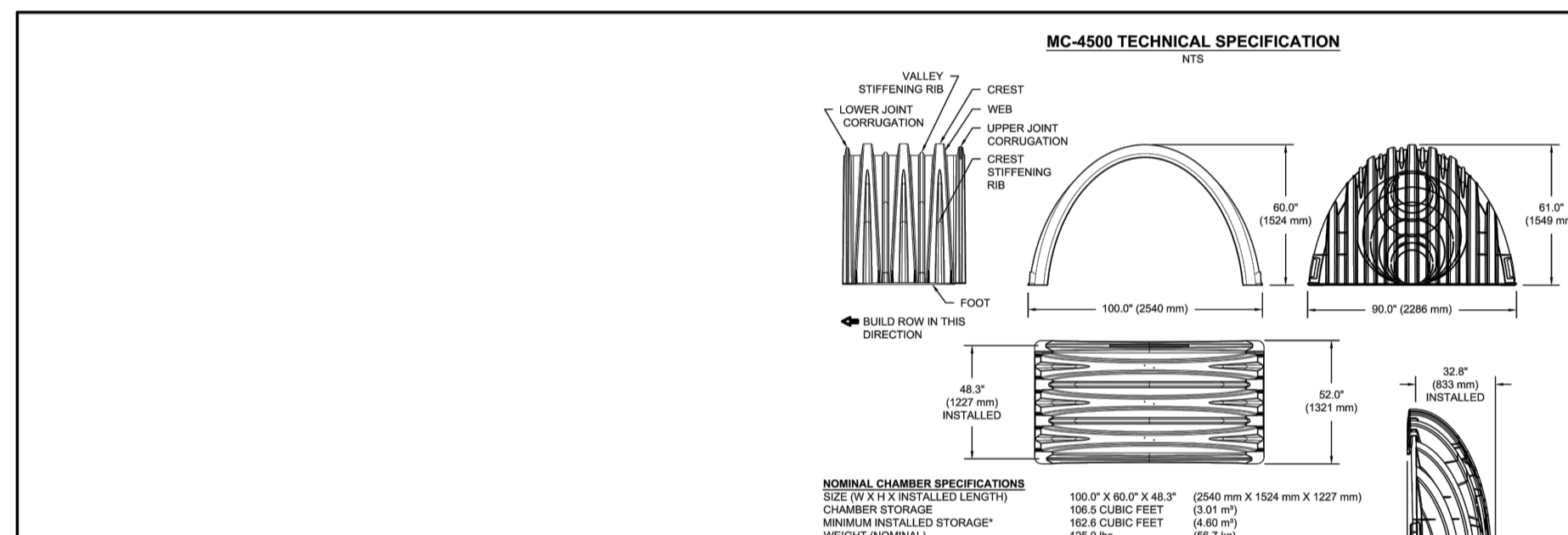


Table of NOMINAL CHAMBER SPECIFICATIONS and NOMINAL END CAP SPECIFICATIONS, listing part numbers, sizes, and weights.

REVIEWED BY: TOWNSHIP OF UXBRIDGE

APPROVED BY: REGION OF DURHAM

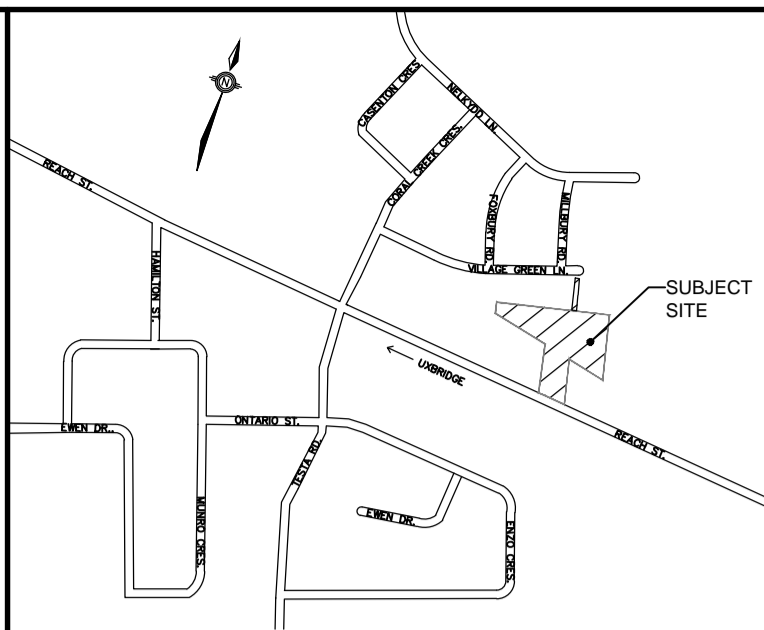
BENCHMARK table listing elevation points and their MTO monument numbers.

Project metadata including client name (VENITIAN GROUP), municipality (TOWNSHIP OF UXBRIDGE), project title (REACH STREET LANDS), sheet title (ADS STORMTECH CHAMBER 2A), and drawing information (DESIGNED KLD, DRAWN RAV, CHECKED ABK, SCALE 1:500, DATE JAN 2021, PROJECT NUMBER 17:386, DWG. NUMBER ADS-2A).









**KEYMAP** N.T.S.

REVIEWED BY	TOWNSHIP OF UXBRIDGE
DATE	
TOWNSHIP ENGINEER FOR THE TOWNSHIP OF UXBRIDGE	
APPROVED BY	REGION OF DURHAM
DATE	

**BENCHMARK:**  
ELEVATIONS ARE GEODETIC AND REFERRED TO THE MTO MONUMENT NO. 778488, ELEVATION = 267.903 M.

NOTE: ALL DIMENSIONS AND ELEVATIONS IN METRES UNLESS NOTED OTHERWISE. ALL PIPE SIZES IN MILLIMETRES.

No.	REVISIONS TO DRAWING	BY	DATE	APPR.
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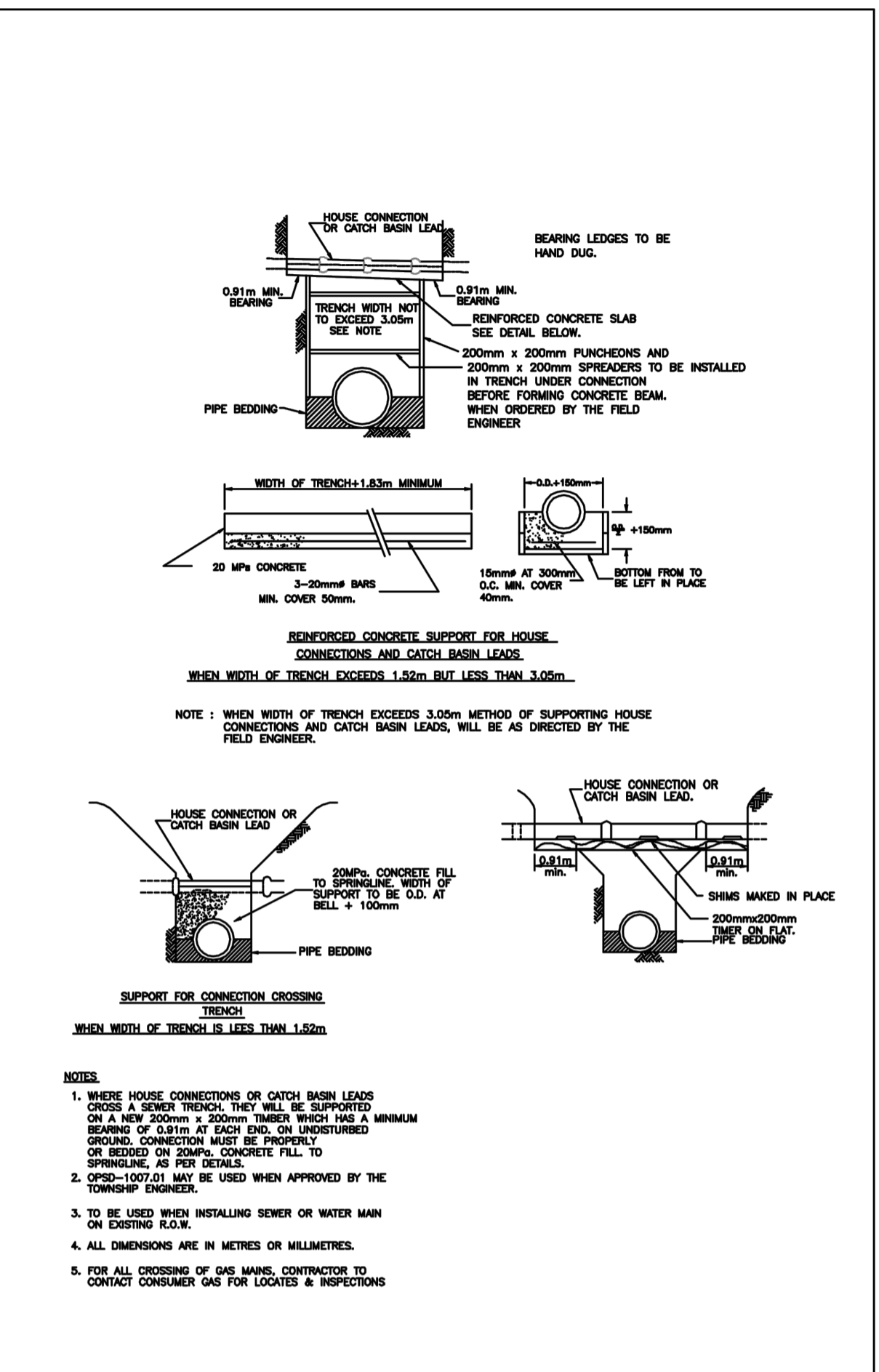
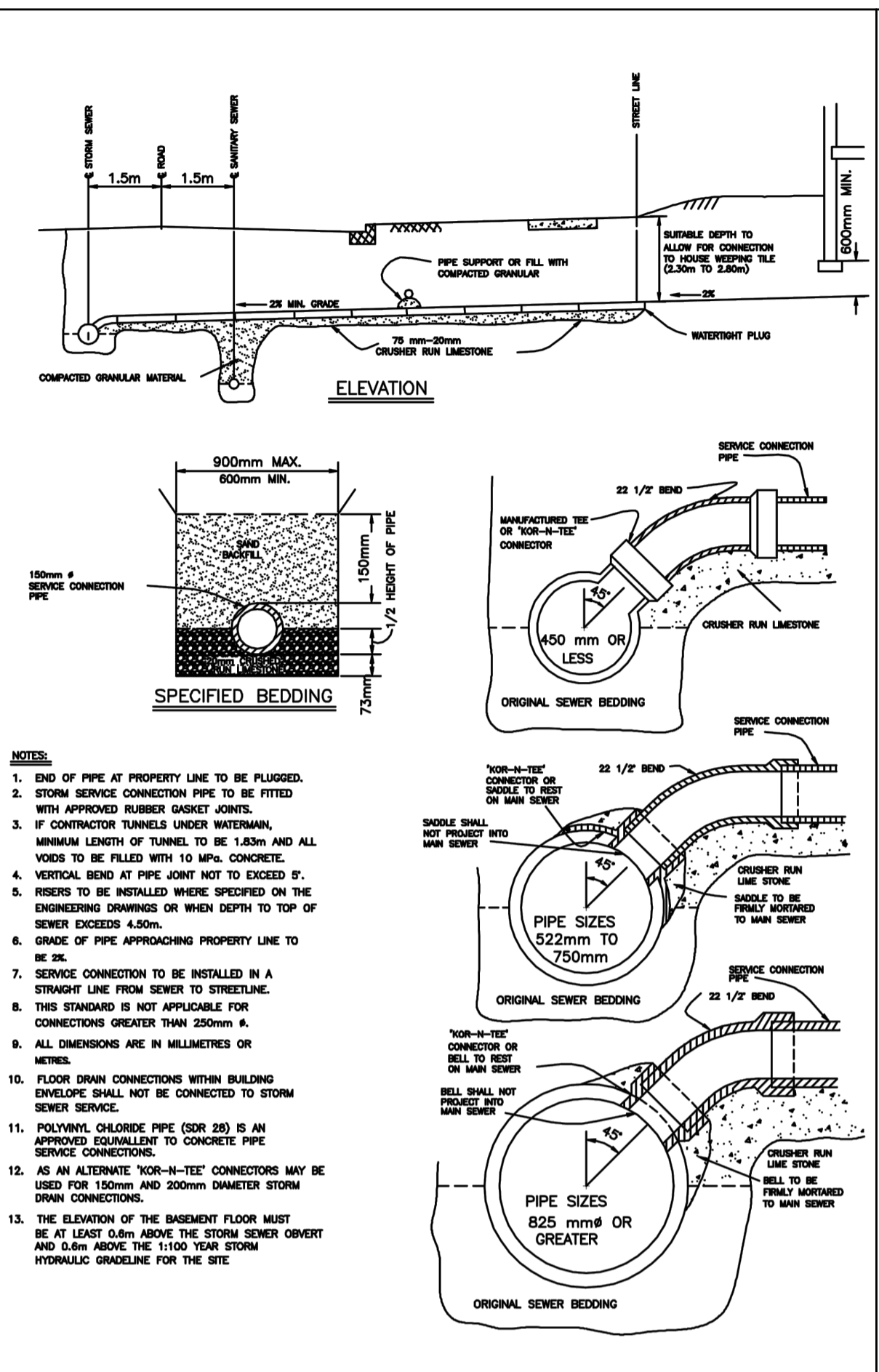
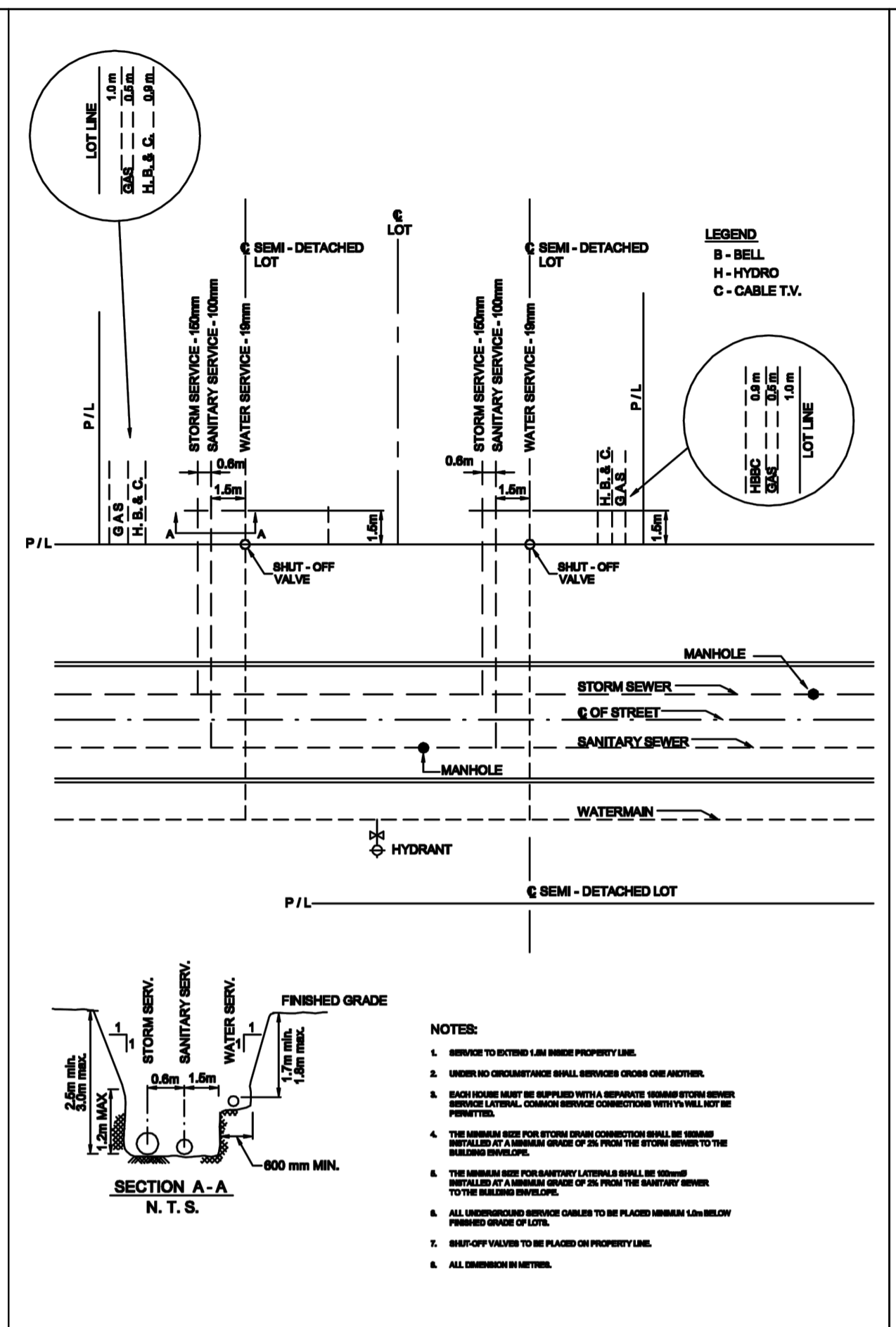
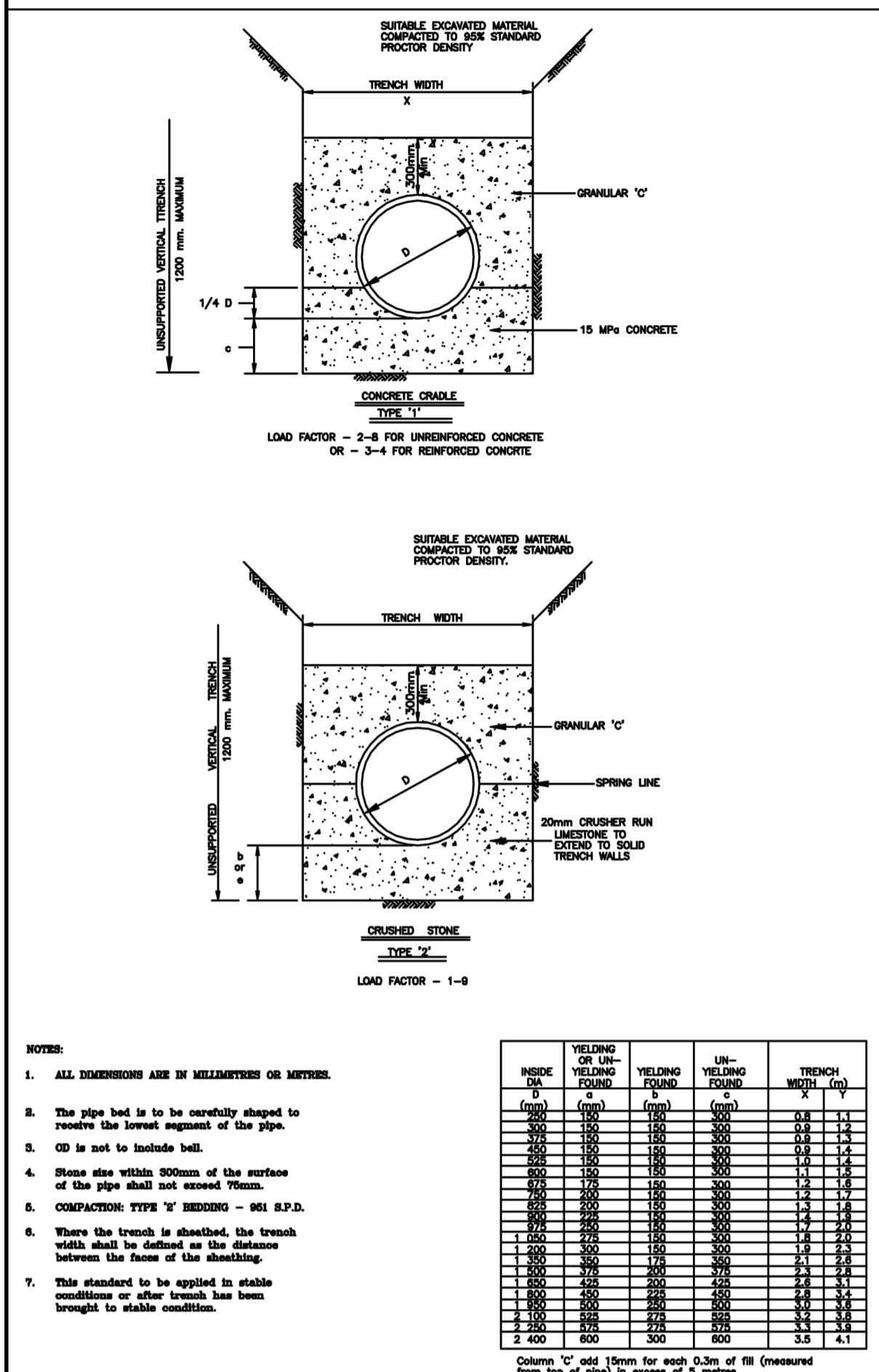
ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED

CLIENT	<b>VENITIAN GROUP</b>
MUNICIPALITY	TOWNSHIP OF UXBRIDGE REGION OF DURHAM
PROJECT TITLE	REACH STREET LANDS
SHEET TITLE	TOWNSHIP OF UXBRIDGE STANDARDS



DESIGNED	KLD	DRAWN	RAV	CHECKED	ABK
SCALE	SCALE 1:500		DATE	JAN 2021	
PROJECT NUMBER	17:386	DWG. NUMBER	DET-1		

T-Number



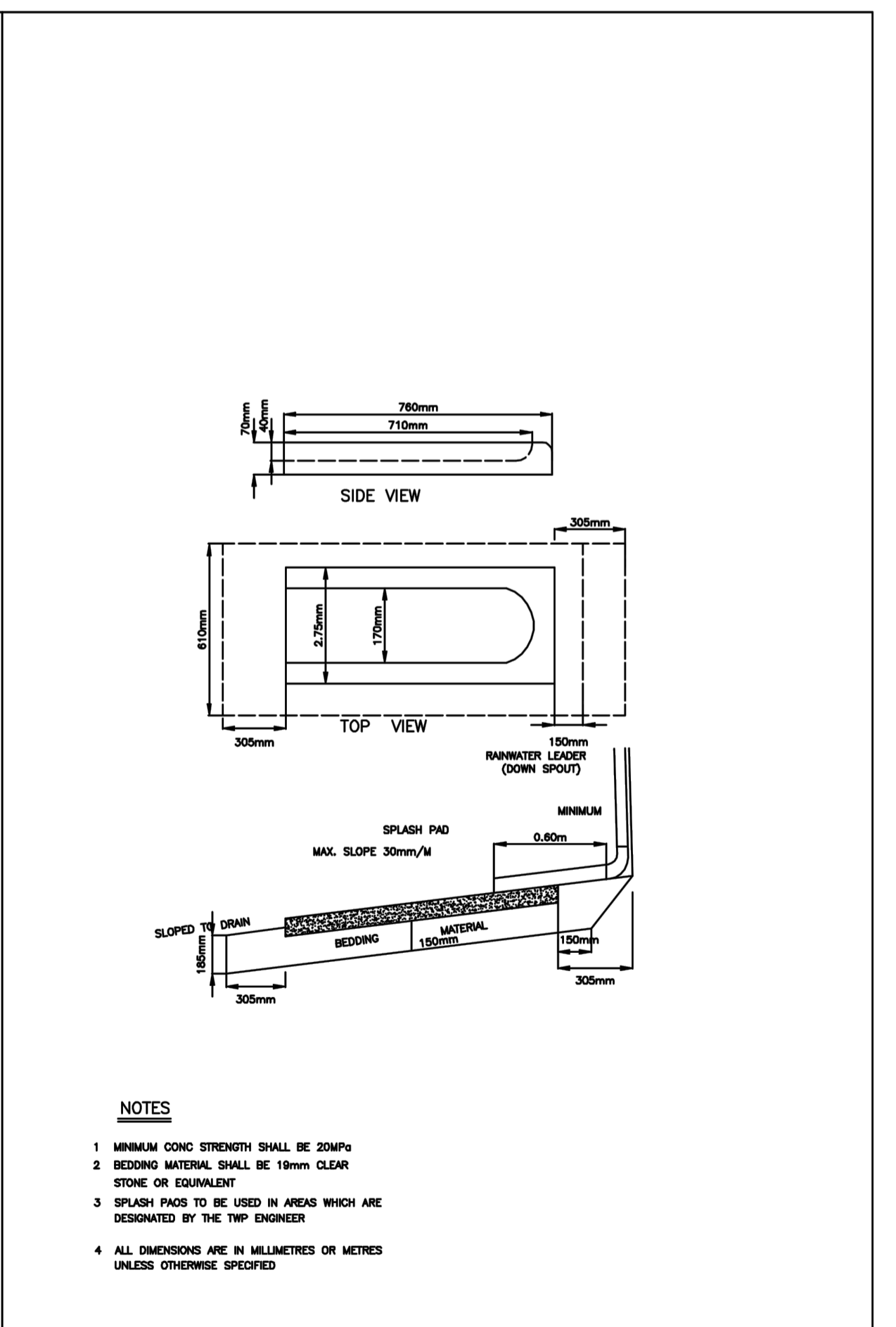
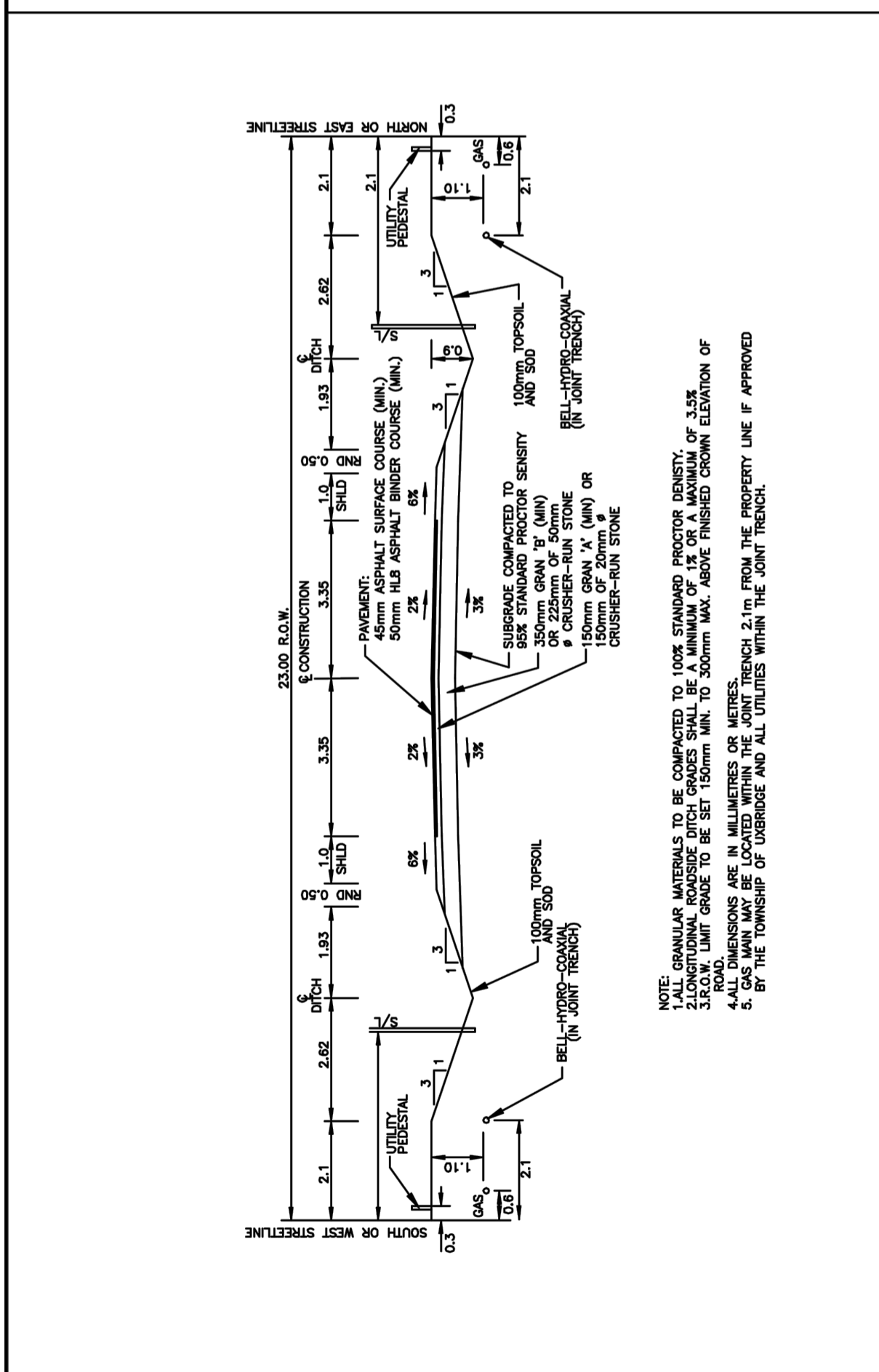
YIELDING	OR UN-	UN-	TRENCH
(mm)	YIELDING	YIELDING	DEPTH
(mm)	(mm)	(mm)	(mm)
100	150	150	0.8
150	150	150	1.2
200	150	150	1.6
250	150	150	2.0
300	150	150	2.4
350	150	150	2.8
400	150	150	3.2
450	150	150	3.6
500	150	150	4.0
550	150	150	4.4
600	150	150	4.8
650	150	150	5.2
700	150	150	5.6
750	150	150	6.0
800	150	150	6.4
850	150	150	6.8
900	150	150	7.2
950	150	150	7.6
1000	150	150	8.0

Notes: 1. ALL DIMENSIONS ARE IN MILLIMETRES OR METRES. 2. The pipe bed is to be carefully sloped to receive the lowest segment of the pipe. 3. OD is not to include bell. 4. Show size within 500mm of the surface of the pipe shall not exceed 10mm. 5. COMPACTED TYPE 'Y' BEDDING - 861 S.P.D. 6. Where the trench is shelled, the trench walls shall be defined as the distance between the base of the shellings. 7. This standard to be applied in stable conditions or after trench has been brought to stable condition.

APPROVED	TOWNSHIP OF UXBRIDGE	DATE OF ISSUE	JANUARY 1980
REVISION	2	DRAWING NO.	US-135
DATE OF REVISION	MAY, 2005		

APPROVED	TOWNSHIP OF UXBRIDGE	DATE OF ISSUE	MARCH, 1989
REVISION	1	DRAWING NO.	US-162
DATE OF REVISION	MAY, 2005		

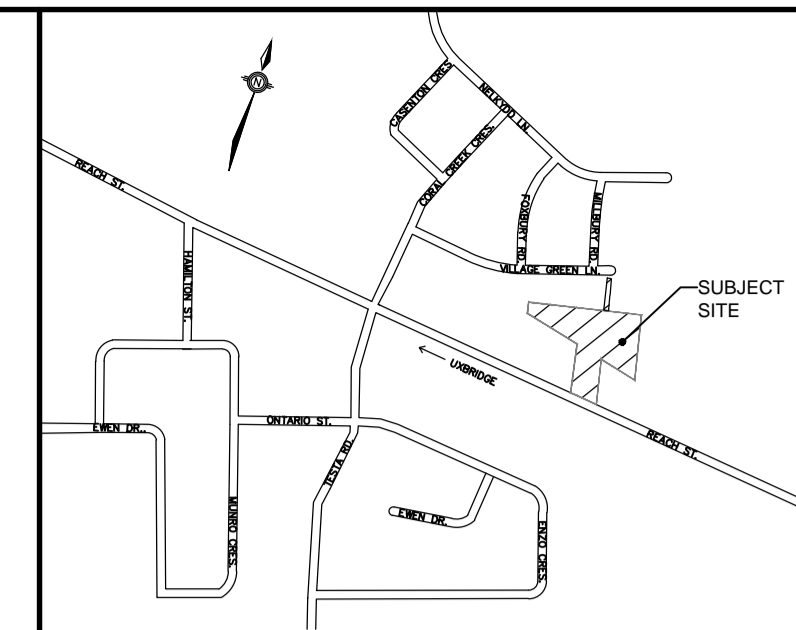
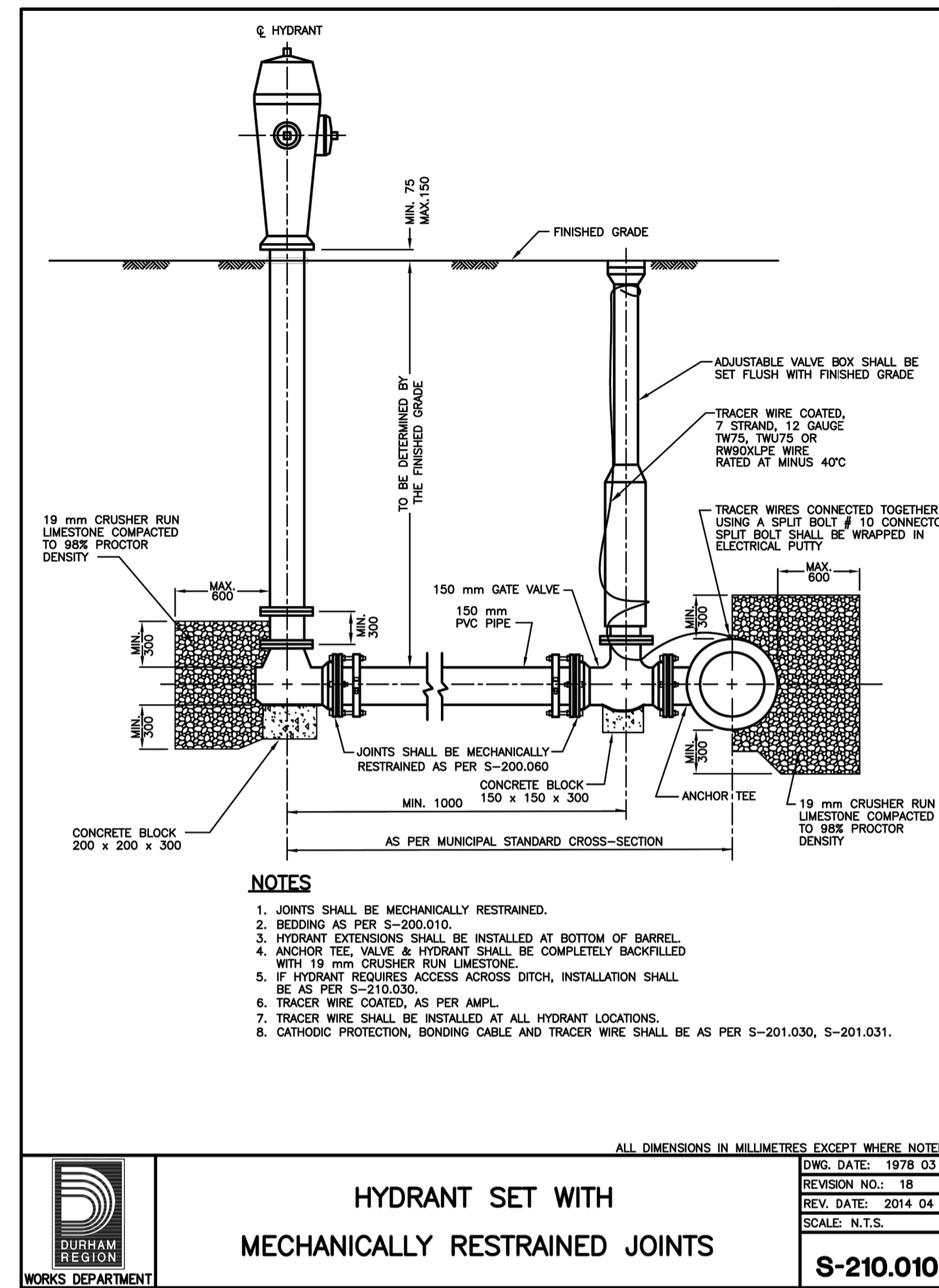
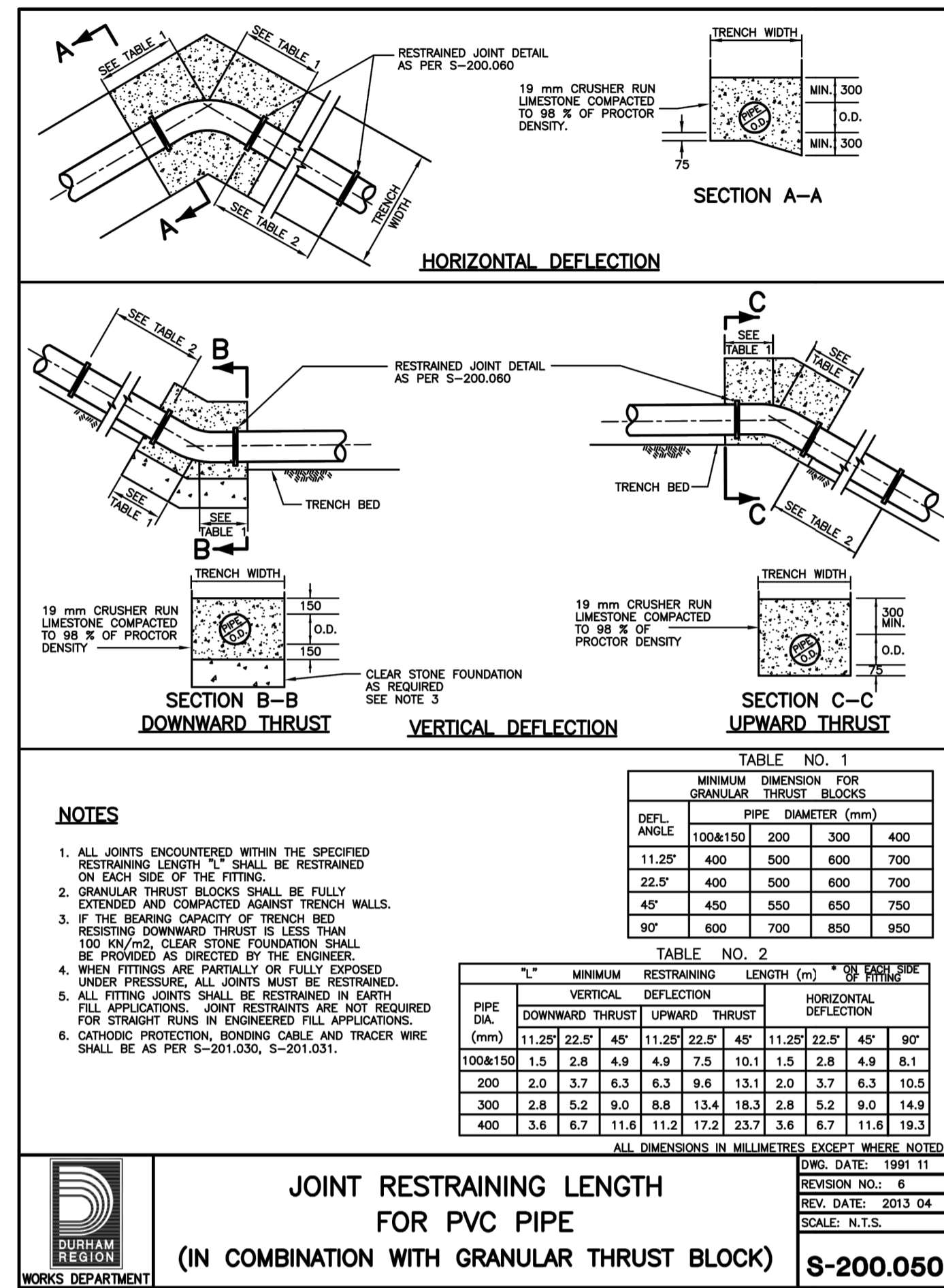
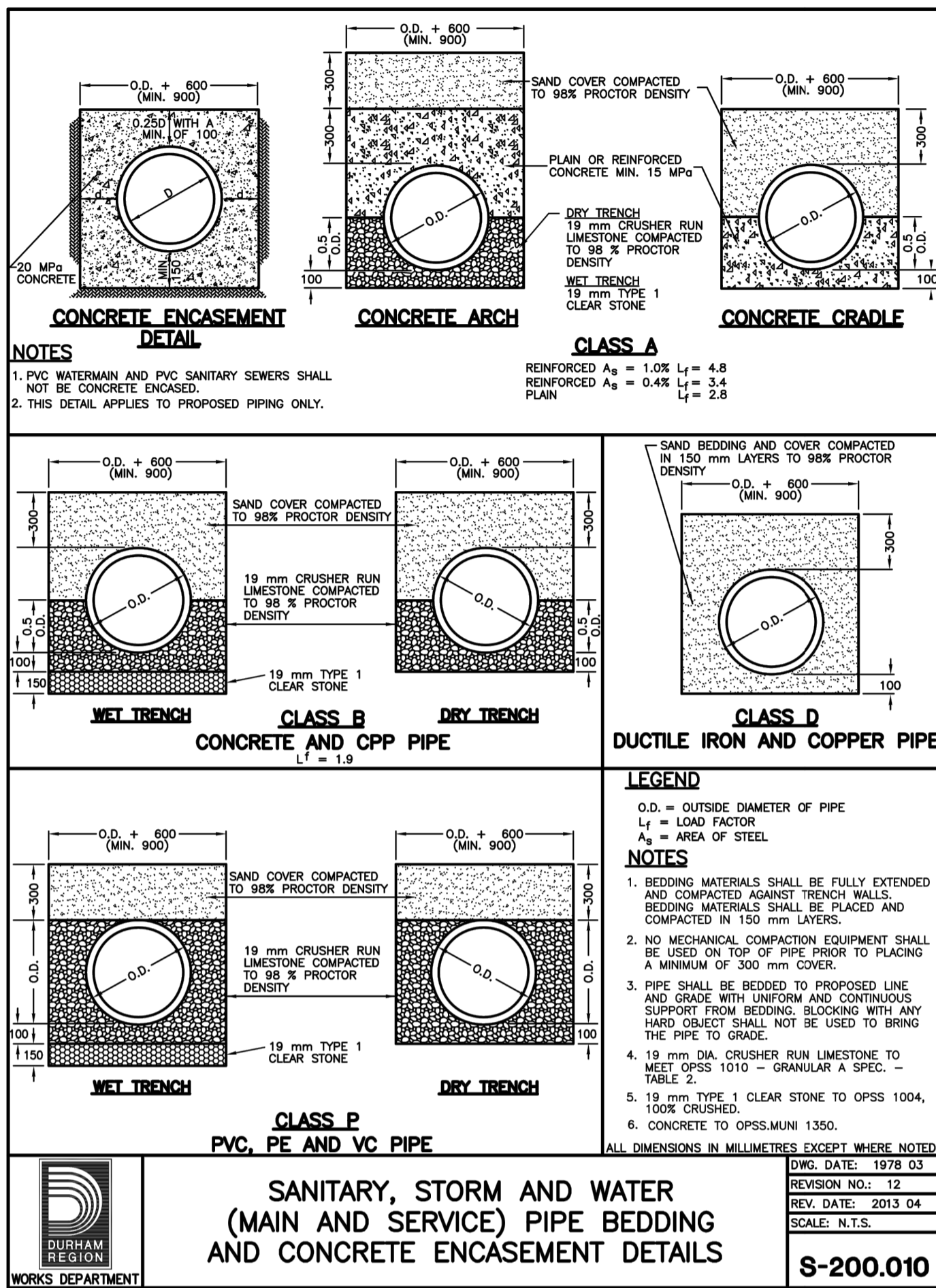
APPROVED	TOWNSHIP OF UXBRIDGE	DATE OF ISSUE	JANUARY 1980
REVISION	1	DRAWING NO.	US-171
DATE OF REVISION	MARCH, 1989		



- NOTES**
1. MINIMUM CONC STRENGTH SHALL BE 20MPa
  2. BEDDING MATERIAL SHALL BE 19mm CLEAR STONE OR EQUIVALENT
  3. SPLASH PADS TO BE USED IN AREAS WHICH ARE DESIGNATED BY THE TWP ENGINEER
  4. ALL DIMENSIONS ARE IN MILLIMETRES OR METRES UNLESS OTHERWISE SPECIFIED

APPROVED	TOWNSHIP OF UXBRIDGE	DATE OF ISSUE	JANUARY 1999
REVISION	1	DRAWING NO.	US-201
DATE OF REVISION	MAY, 2005		

APPROVED	TOWNSHIP OF UXBRIDGE	DATE OF ISSUE	JANUARY 1980
REVISION		DRAWING NO.	US-302
DATE OF REVISION			



REVIEWED BY \_\_\_\_\_

TOWNSHIP ENGINEER FOR THE TOWNSHIP OF UXBRIDGE

APPROVED BY \_\_\_\_\_

REGION OF DURHAM

**BENCHMARK:** ELEVATIONS ARE GEODETIC AND REFERRED TO THE MTO MONUMENT NO. 778488, ELEVATION = 267.903 M.

**NOTE:** ALL DIMENSIONS AND ELEVATIONS IN METRES UNLESS NOTED OTHERWISE. ALL PIPE SIZES IN MILLIMETRES.

No.	REVISIONS TO DRAWING	BY	DATE	APPR.

ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED

**CLIENT**

**VENITIAN GROUP**

**MUNICIPALITY**

TOWNSHIP OF UXBRIDGE  
REGION OF DURHAM

**PROJECT TITLE**

REACH STREET LANDS

**SHEET TITLE**

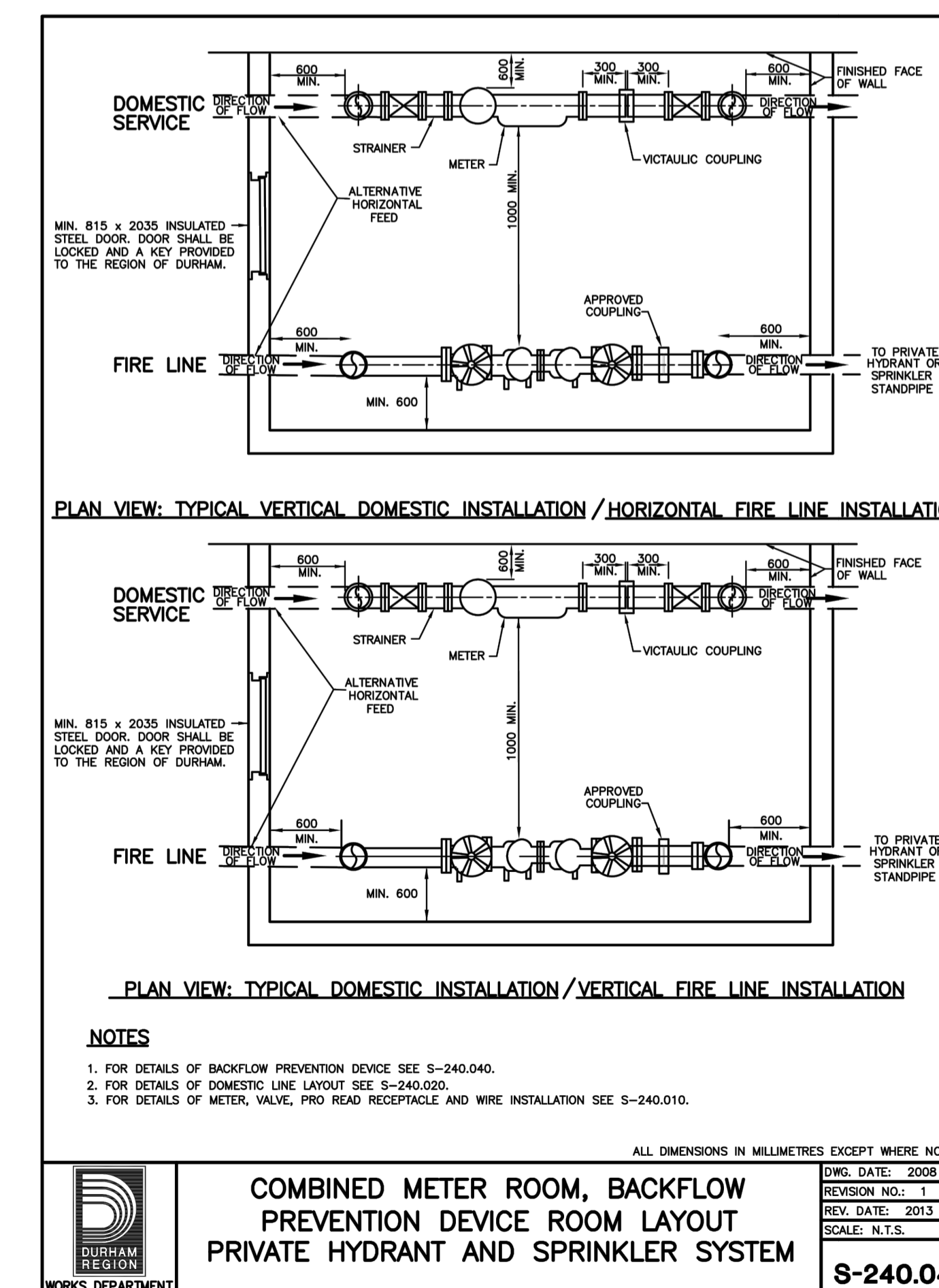
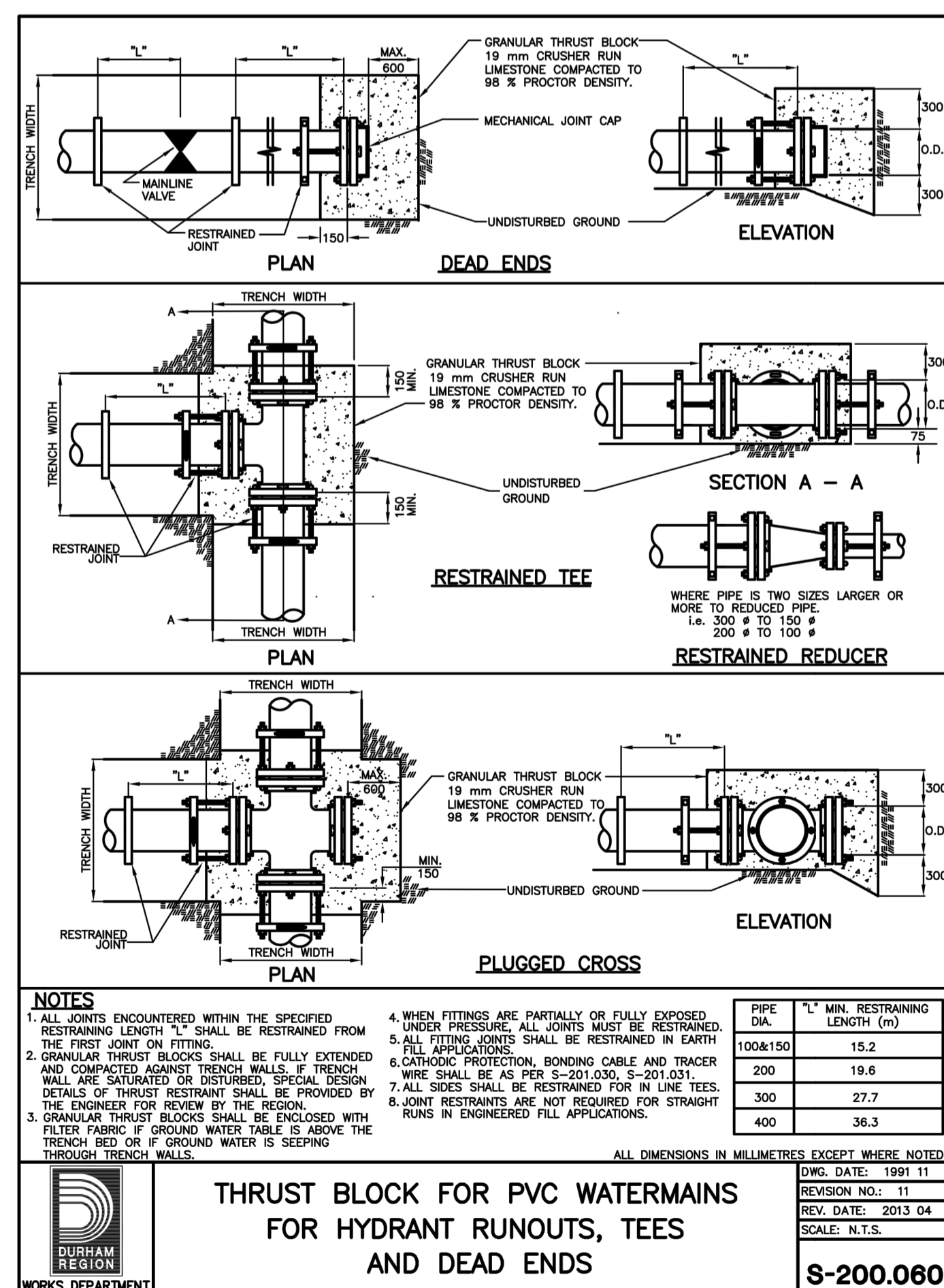
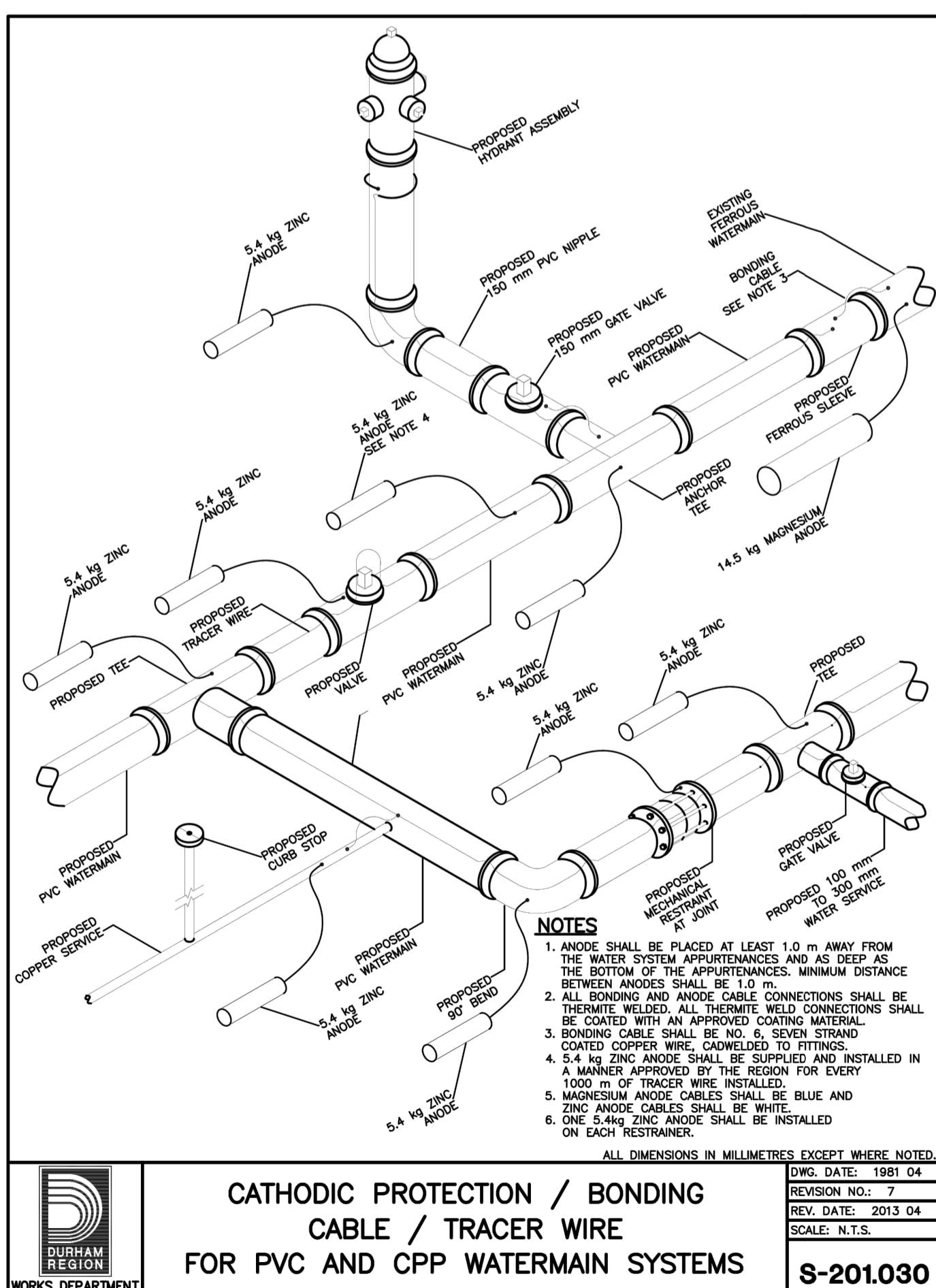
REGION OF DURHAM STANDARDS

**SKA SABOURIN KIMBLE & ASSOCIATES LTD. CONSULTING ENGINEERS**

DESIGNED	KLD	DRAWN	RAV	CHECKED	ABK

SCALE: SCALE 1:500 DATE: JAN 2021

PROJECT NUMBER: 17:386 DWG. NUMBER: DET-2



**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.

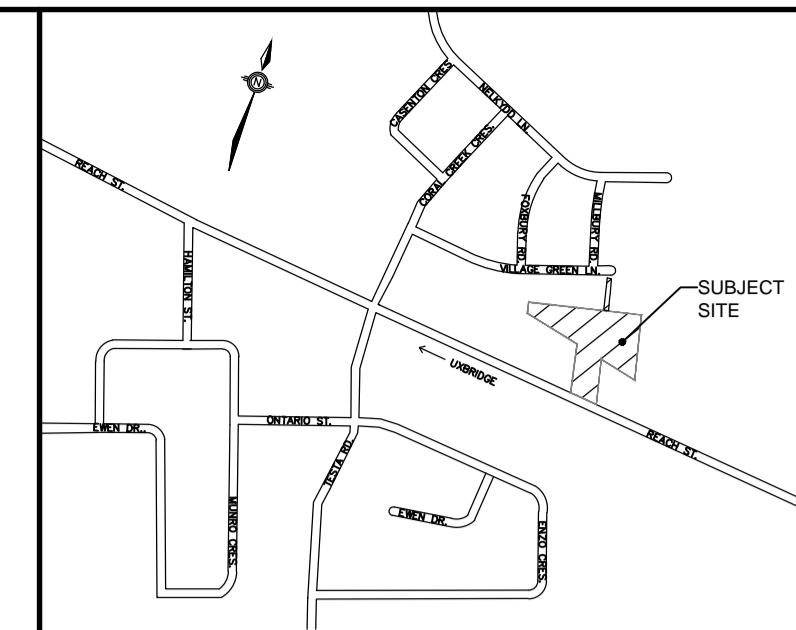
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 5  
**PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER**  
 OPSD 701.010

**NOTES:**  
 1 For sump detail, see OPSD 701.010.  
 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, 701.031, 701.040, 701.041, 703.011, 703.021, and 706.010.  
 C Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.021.  
 D Pipe support shall be 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 1500mm DIAMETER**  
 OPSD 701.011

**NOTES:**  
 1 For sump detail, see OPSD 701.010.  
 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, 701.050, 701.051, 703.012, 703.022, and 706.020.  
 C Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.022.  
 D Pipe support shall be 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 1800mm DIAMETER**  
 OPSD 701.012



REVIEWED BY TOWNSHIP OF UXBRIDGE  
 DATE \_\_\_\_\_  
 TOWNSHIP ENGINEER FOR THE TOWNSHIP OF UXBRIDGE

APPROVED BY REGION OF DURHAM  
 DATE \_\_\_\_\_

**BENCHMARK:**  
 ELEVATIONS ARE GEODETIC AND REFERRED TO THE MTO MONUMENT NO. 778488, ELEVATION = 267.903 M.

**NOTE:** ALL DIMENSIONS AND ELEVATIONS IN METRES UNLESS NOTED OTHERWISE. ALL PIPE SIZES IN MILLIMETRES.

No.	REVISIONS TO DRAWING	BY	DATE	APPR.

Maintenance Hole Diameter	No. 1-4	No. 5 and 6	No. 8	No. 7	
				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

**NOTES:**  
 1 Slopes shall be maintained from the outlet hole opening for top of benching.  
 A Concrete for benching shall be 30MPa.  
 B When benching is hand-finished, it shall be given wood float finish, channel shall be given steel trowel finish.  
 C Benching slope and height shall be as specified.  
 D When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be prebenched at the manufacturer with standardized benching slope and channel orientation.  
 E All dimensions are nominal.  
 F All dimensions are in millimetres unless otherwise shown.

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

**NOTE:** The company undertaking welded fabricating shall be according to CSA W47.1. All welding shall be according to CSA W59. A All aluminum components shall be 6000 series structural aluminum. B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 4  
**RECTANGULAR STAINLESS STEEL MAINTENANCE HOLE STEPS HOLLOW**  
 OPSD 405.010

**NOTES:**  
 A Covers shall be Type A or Type B, as specified.  
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 4  
**CAST IRON SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES**  
 OPSD 401.010

VENITIAN GROUP

TOWNSHIP OF UXBRIDGE  
 REGION OF DURHAM

REACH STREET LANDS

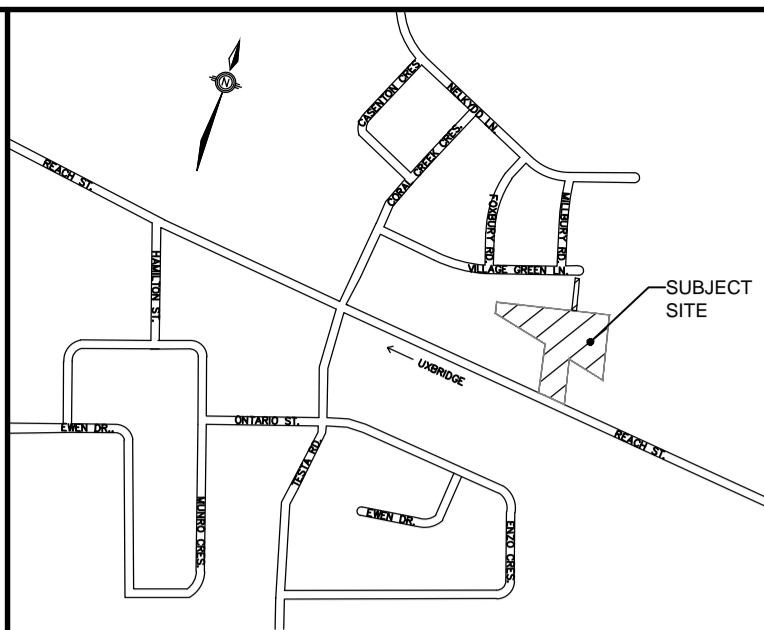
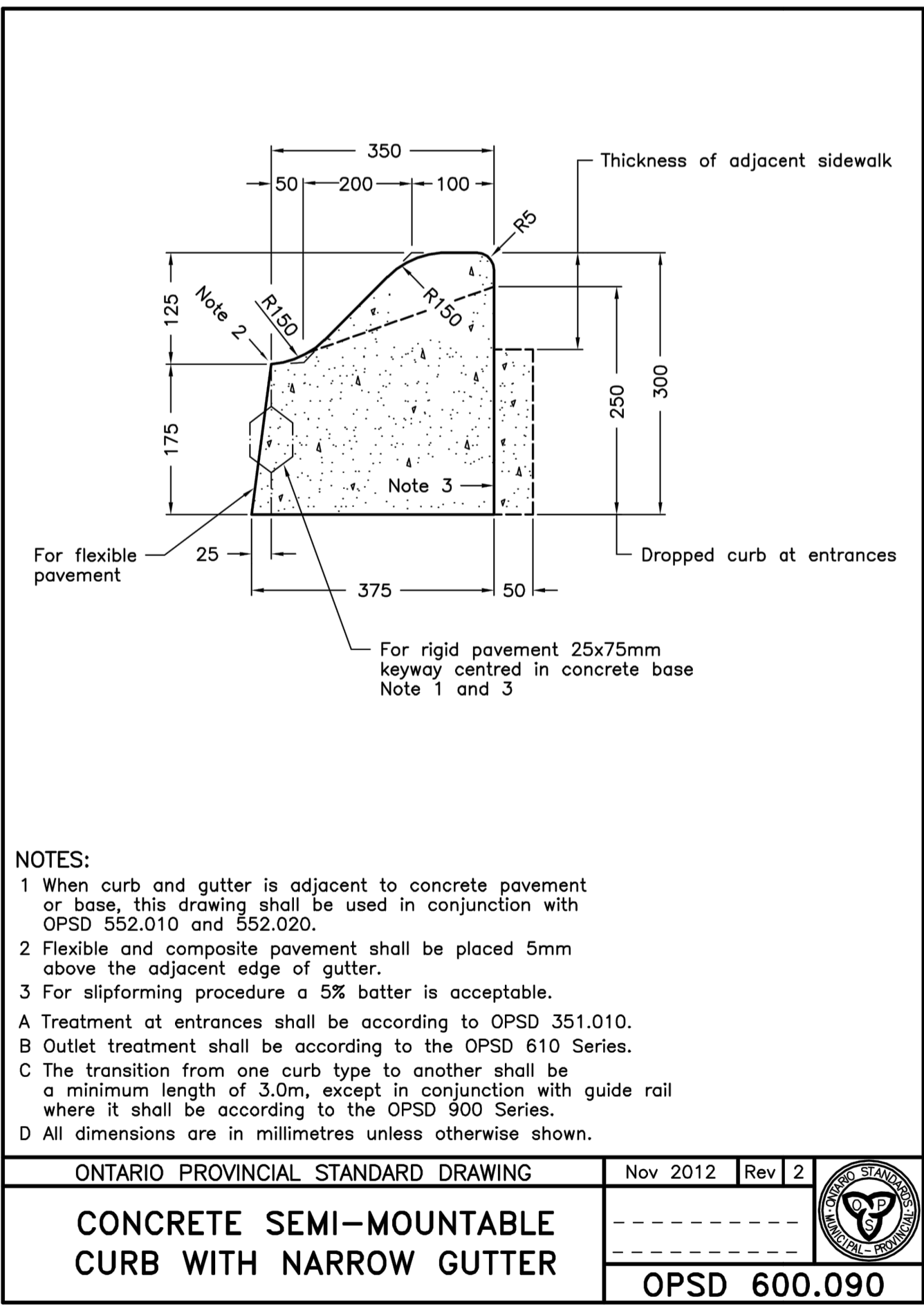
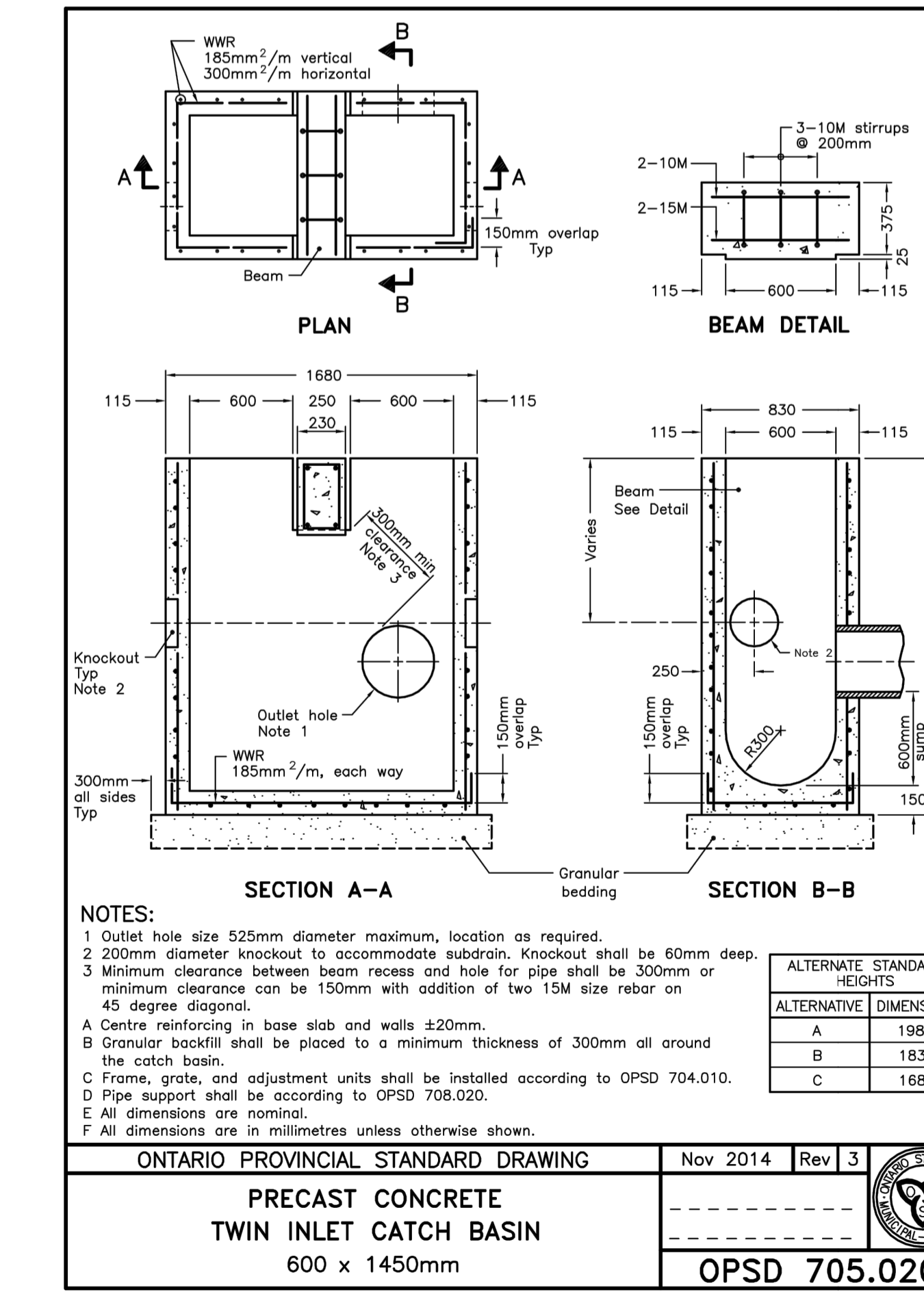
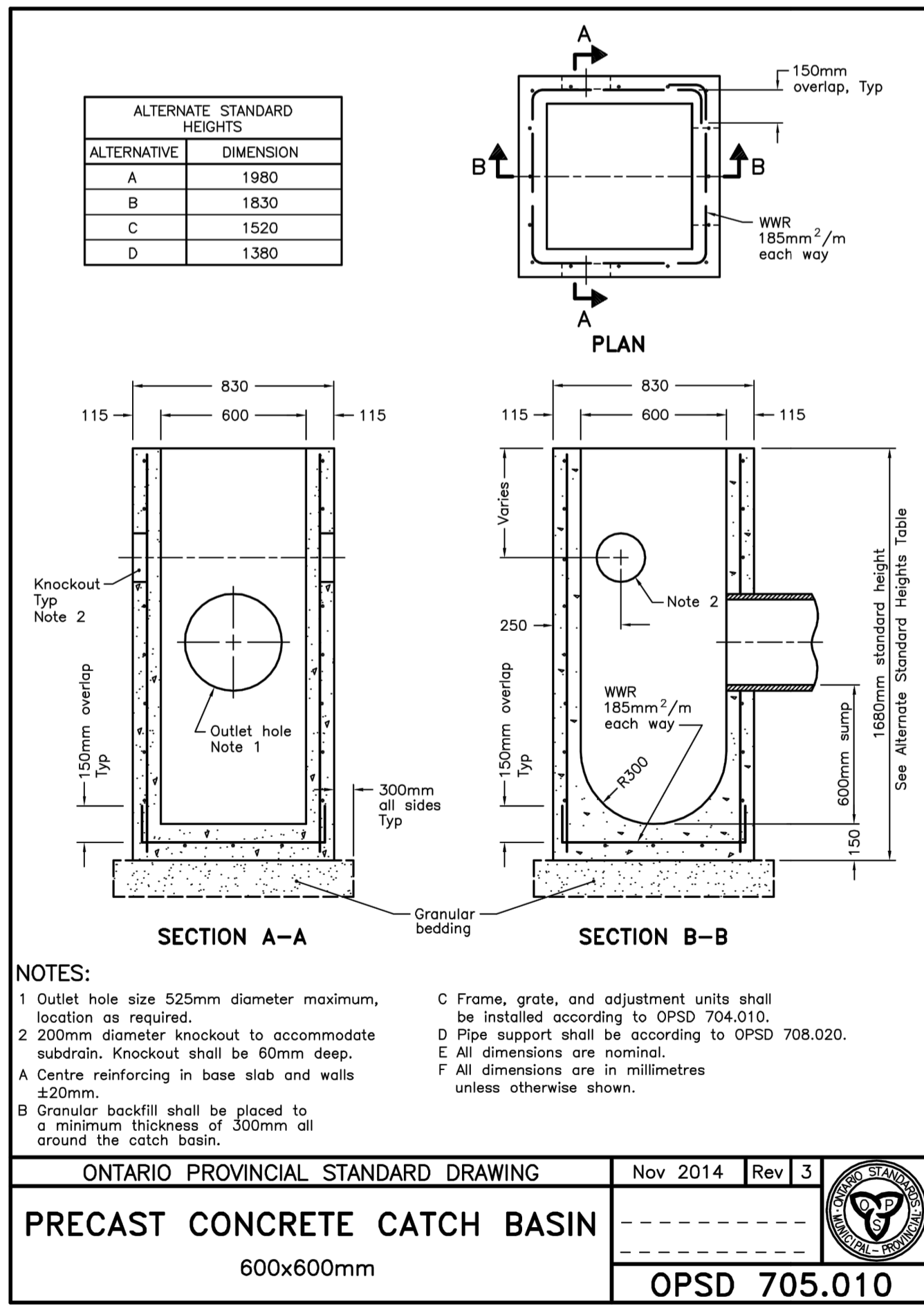
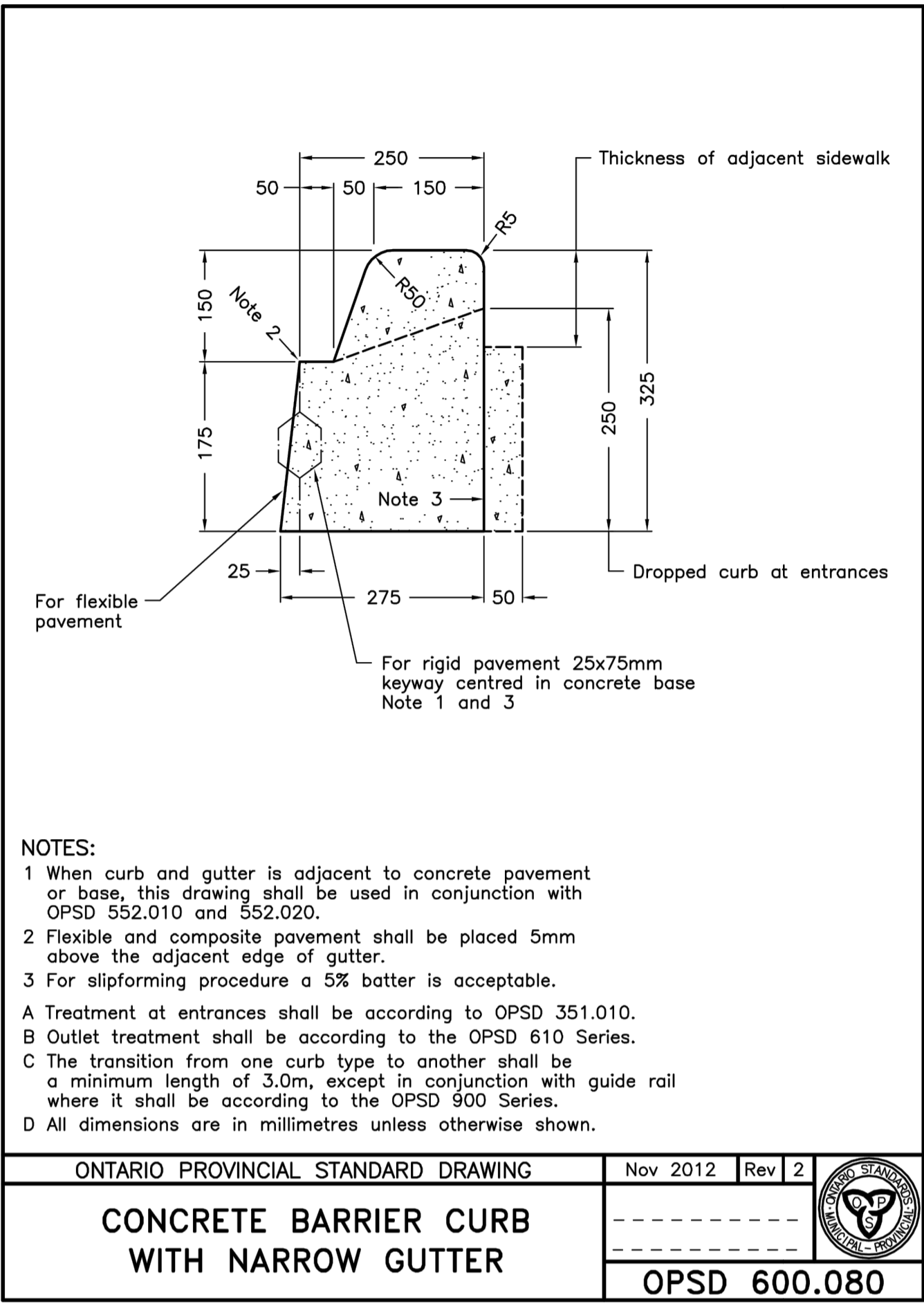
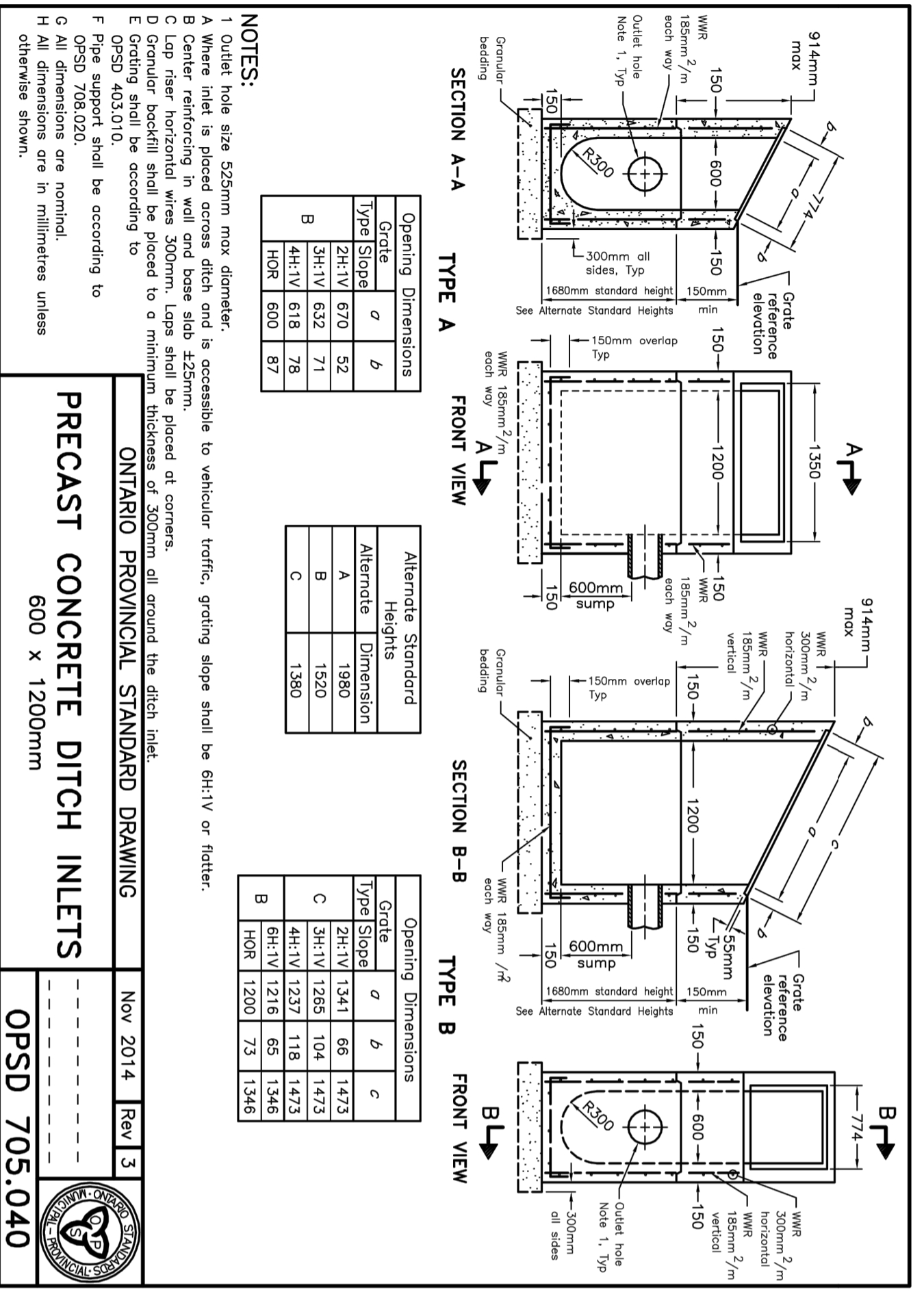
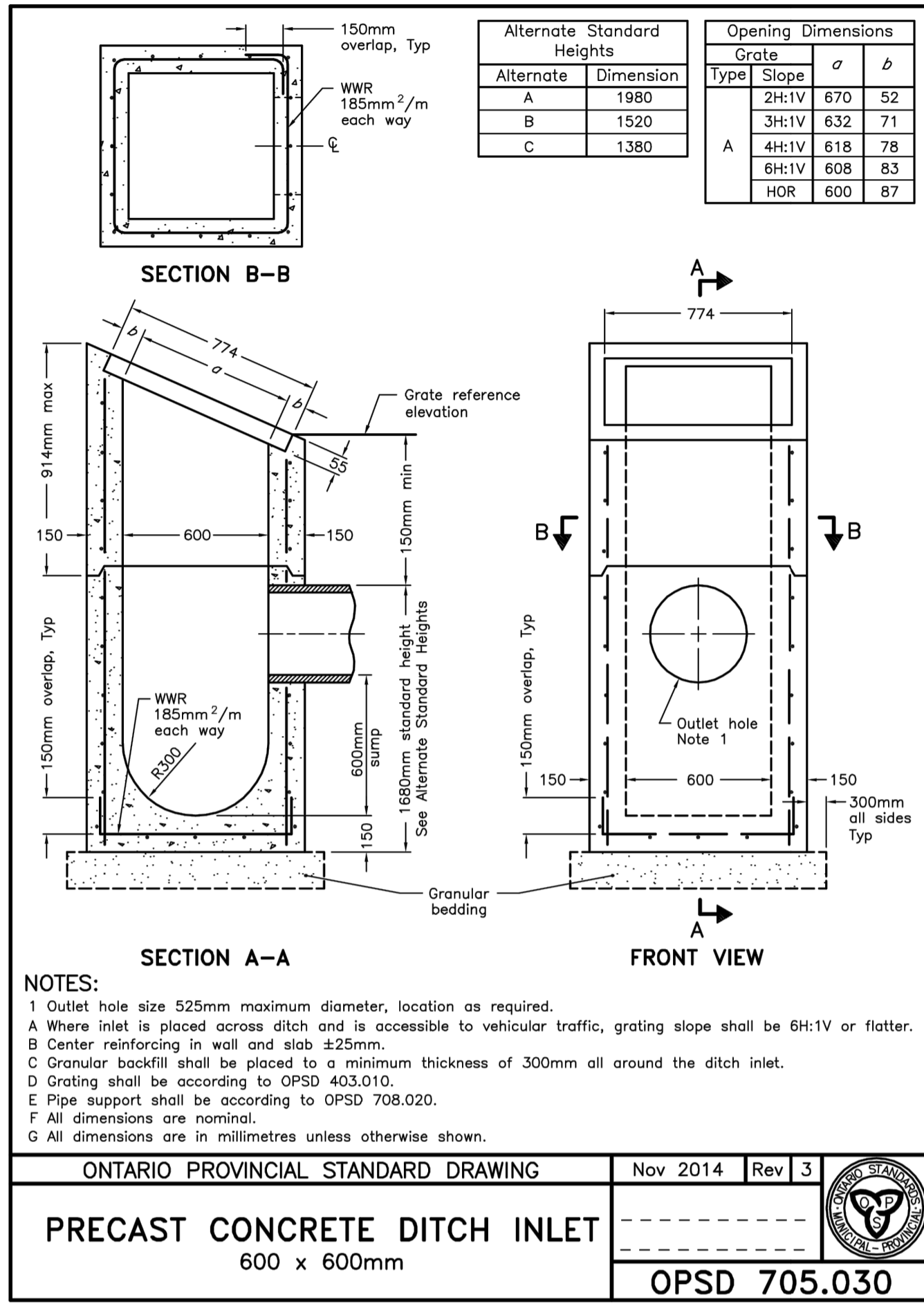
OPSD STANDARDS

**SKA SABOURIN KIMBLE & ASSOCIATES LTD. CONSULTING ENGINEERS**

DESIGNED KLD DRAWN RAV CHECKED ABK  
 SCALE SCALE 1:500 DATE JAN 2021  
 PROJECT NUMBER 17:386 DWG. NUMBER DET-3

CAD FILE: P:\17386\Drawing Files\Phase 1\Substation Drawing\386 - Detail.dwg





**REVIEWED BY**  
TOWNSHIP OF UXBRIDGE

**DATE**

**TOWNSHIP ENGINEER FOR THE TOWNSHIP OF UXBRIDGE**

**APPROVED BY**  
REGION OF DURHAM

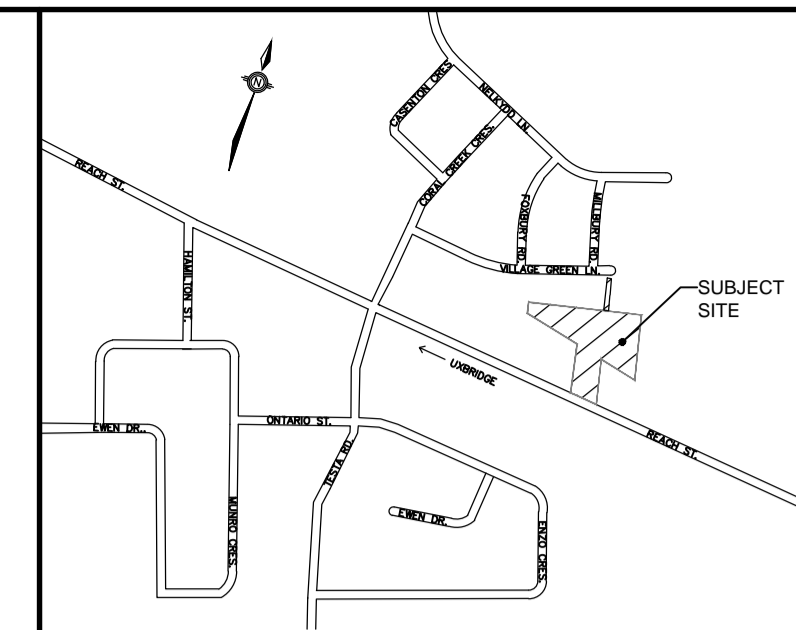
**DATE**

**BENCHMARK:**  
ELEVATIONS ARE GEODETIC AND REFERRED TO THE MTO MONUMENT NO. 778488, ELEVATION = 267.903 M.

**NOTE: ALL DIMENSIONS AND ELEVATIONS IN METRES UNLESS NOTED OTHERWISE. ALL PIPE SIZES IN MILLIMETRES.**

No.	REVISIONS TO DRAWING	BY	DATE	APPR.
ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED				
<b>CLIENT</b> VENITIAN GROUP				
<b>MUNICIPALITY</b> TOWNSHIP OF UXBRIDGE REGION OF DURHAM				
<b>PROJECT TITLE</b> REACH STREET LANDS				
<b>SHEET TITLE</b> OPSD STANDARDS				
<b>SKA SABOURIN KIMBLE &amp; ASSOCIATES LTD. CONSULTING ENGINEERS</b>				
<b>DESIGNED</b> KLD	<b>DRAWN</b> RAV	<b>CHECKED</b> ABK		
<b>SCALE</b> SCALE 1:500	<b>DATE</b> JAN 2021			
<b>PROJECT NUMBER</b> 17:386	<b>DWG. NUMBER</b> DET-4			

CAD FILE: P:\17386\Drawings\Drawings\17386 - Details.dwg



KEYMAP N.T.S.

REVIEWED BY  
TOWNSHIP OF  
UXBRIDGE  
DATE  
TOWNSHIP ENGINEER FOR THE TOWNSHIP OF UXBRIDGE

APPROVED BY  
REGION OF DURHAM  
DATE

**BENCHMARK:**  
ELEVATIONS ARE GEODETIC AND REFERRED TO THE MTO  
MONUMENT NO. 778488, ELEVATION = 267.903 M.

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No.	REVISIONS TO DRAWING	BY	DATE	APPR.

ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED

CLIENT  
**VENITIAN GROUP**

MUNICIPALITY  
TOWNSHIP OF UXBRIDGE  
REGION OF DURHAM

PROJECT TITLE  
REACH STREET LANDS

SHEET TITLE  
OPSD STANDARDS



DESIGNED KLD DRAWN RAV CHECKED ABK

SCALE SCALE 1:500 DATE JAN 2021

PROJECT NUMBER 17:386 DWG. NUMBER DET-5

T-Number

