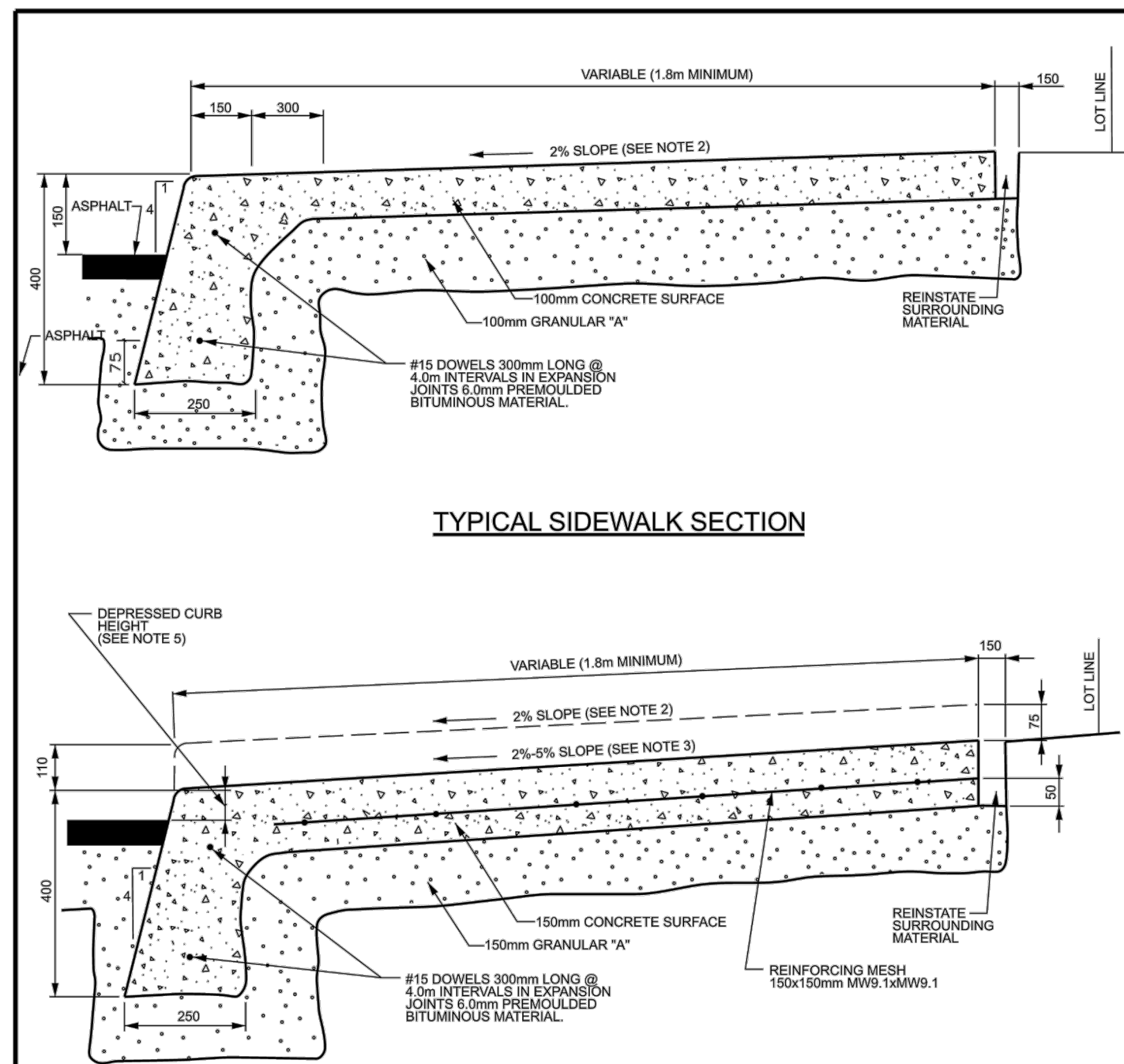


CONCRETE BARRIER CURB

- NOTES:
1. THE FULL CURB DEPTH SHALL BE CARRIED THROUGH THE DEPRESSED ACCESS CROSSING.
 2. A CONCRETE SUPPORT IS REQUIRED WHEN BUILT ADJACENT TO THE SIDEWALK.
 3. IF AN EXTRUSION CURBING MACHINE IS USED, THE EXPANSION BITUMINOUS MATERIAL AND THE #15 DOWELS ARE TO BE PLACED AT THE END OF THE EXTRUSION.
 4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
 5. DUMMY JOINTS SHALL BE 25mm DEEP, FRONT, BACK AND TOP OF SECTION AT 4m SPACING OR MATCH JOINTING WHERE SIDEWALK IS ADJACENT.
 6. FOR DEPRESSED CURB AT ENTRANCES USE 250.
 7. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 13mm.

Ottawa CONCRETE BARRIER CURB FOR GRANULAR BASE PAVEMENT (MODIFIED OPSD-600.110)

DATE: JANUARY 2003
REV. DATE: MARCH 2021
DWG. No.: SC1.1



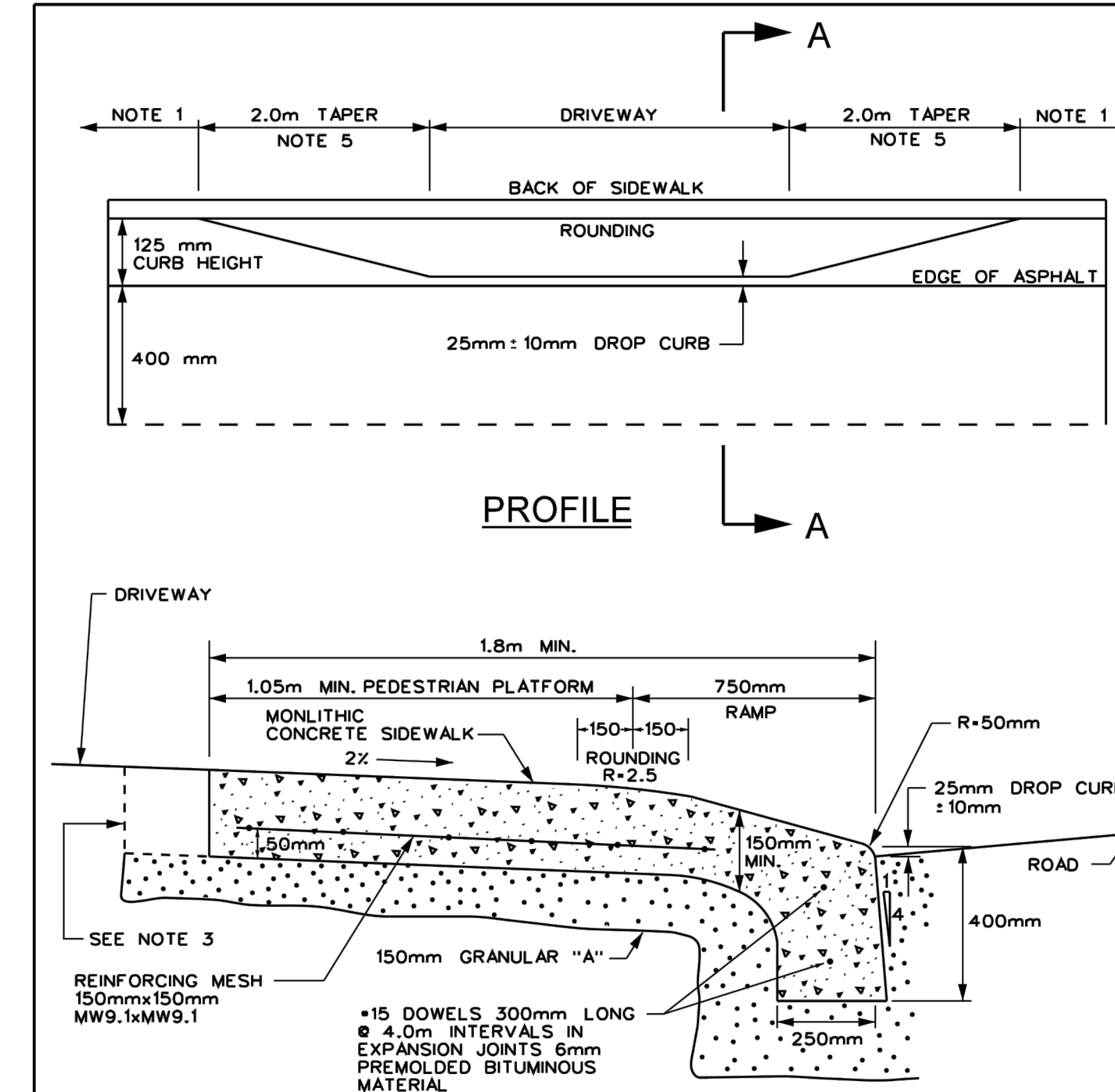
TYPICAL SIDEWALK SECTION

SECTION AT PRIVATE ENTRANCE AND PEDESTRIAN RAMPS

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
 2. THE MAXIMUM SLOPE IS NOT TO EXCEED 2%.
 3. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
 4. EXPANSION AND DUMMY JOINTS AS PER SC5.
 5. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 13 mm.

Ottawa MONOLITHIC CONCRETE CURB AND SIDEWALK

DATE: MAY 2001
REV. DATE: MAY 2021
DWG. No.: SC2



PROFILE

SECTION A - A

- NOTES:
1. TYPICAL MONOLITHIC CONCRETE CURB AND SIDEWALK AS PER SC2, EXCEPT USE 125mm CURB HEIGHT.
 2. DEPRESSIONS AT INTERSECTIONS AS PER SC6.
 3. FOR WIDER SIDEWALKS, PEDESTRIAN PLATFORM TO BE INCREASED ACCORDINGLY.
 4. NOT APPLICABLE FOR PROFILE GRADES OVER 5%.
 5. TAPERS TO BE 1.5m WHEN ON-STREET PARKING IS PERMITTED.
 6. WHERE VEHICLE ACCESS FOR ADJACENT PROPERTIES IS LESS THAN 3.0m APART, DO NOT APPLY TAPER; RAMP ACCESS IS CONTINUOUS - SEE SC13.1.

Ottawa RAMP STYLE VEHICLE ACCESS CROSSING

DATE: MARCH 2006
REV. DATE: MARCH 2015
DWG. No.: SC13

Andrew McCreight
ANDREW MCCREIGHT
MANAGER (A), DEVELOPMENT REVIEW CENTRAL
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT
DEPARTMENT, CITY OF OTTAWA

APPROVED
By Andrew McCreight at 1:14 pm, Mar 02, 2023

No.	Date	Description	By
4	23/01/20	RE-ISSUED FOR SITE PLAN CONTROL	T.K
3	22/11/07	RE-ISSUED FOR SITE PLAN CONTROL	T.K
2	22/10/14	RE-ISSUED FOR SITE PLAN CONTROL	T.K
1	22/04/07	ISSUED FOR SITE PLAN CONTROL	T.K

STAMPS:

LICENSED PROFESSIONAL ENGINEER
J. C. ADAMS
100519478
20 January 2023
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER
T. G. KENNEDY
100173201
January 20, 2023
PROVINCE OF ONTARIO

DESIGNED BY: **CIMA+**

APPROVED BY:

PROJECT NAME:
The Hazelton Westboro

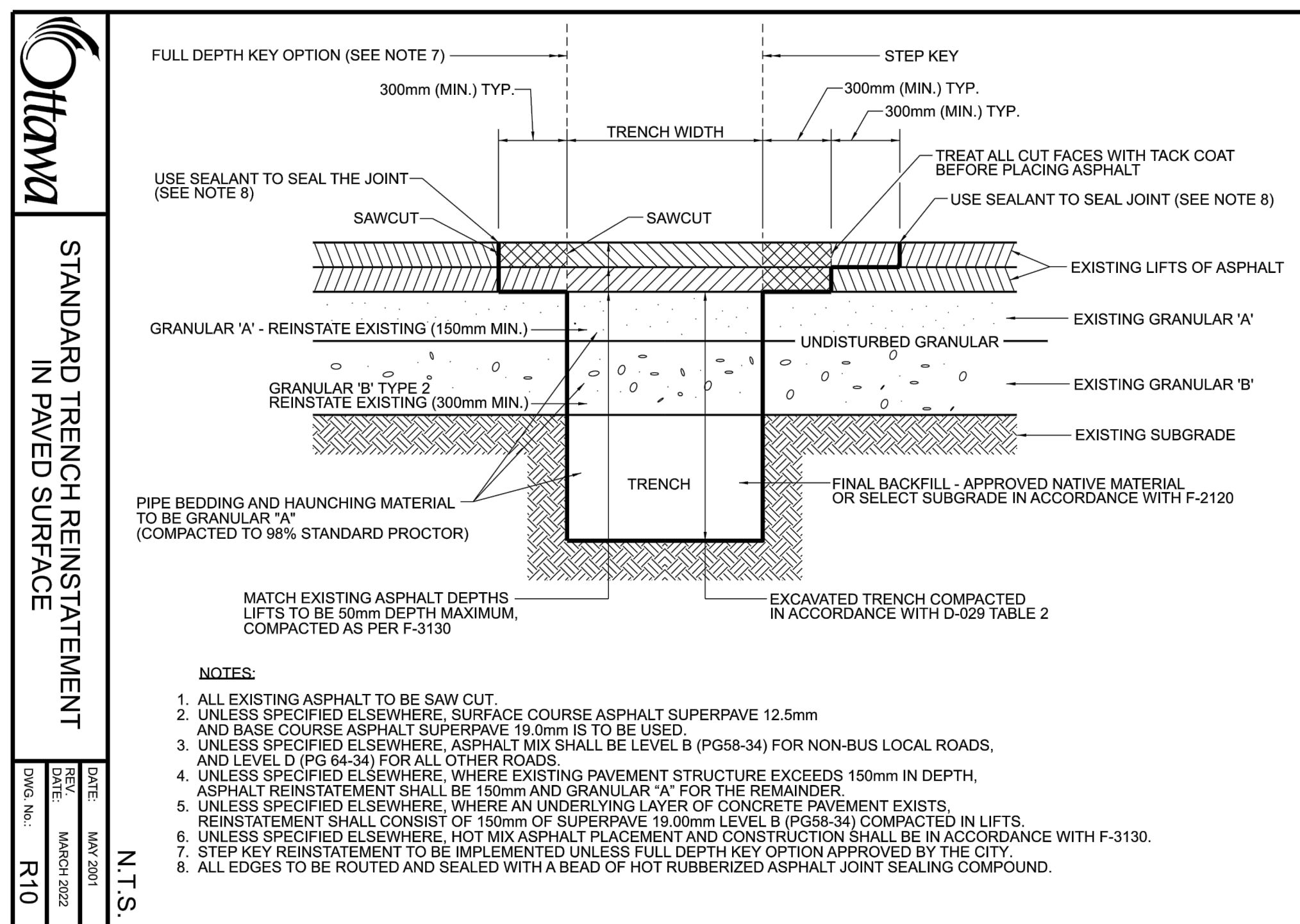
403 RICHMOND ROAD &
389 ROOSEVELT AVENUE

SHEET TITLE:
DETAILS PLAN

DISCIPLINE:
CIVIL

DRAWER: S.C. POGGIOLI
DESIGNER: T. KENNEDY
APPROVER: T. KENNEDY
PROJECT No.: A001046
SHEET No.: 8 of 12

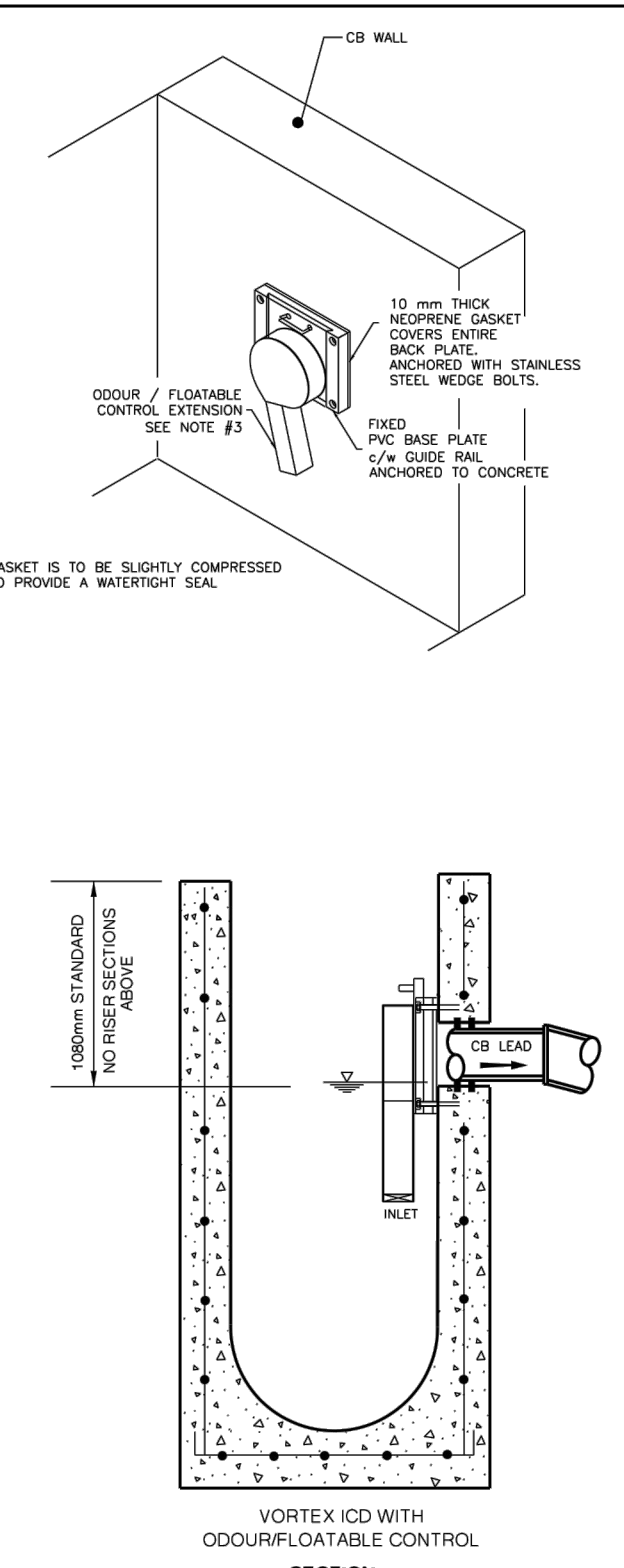
SCALE:
DATE: 2022/04/07
APPROVER: T. KENNEDY
DRAWING No.: C008



- NOTES:
1. ALL EXISTING ASPHALT TO BE SAW CUT.
 2. UNLESS SPECIFIED ELSEWHERE, SURFACE COURSE ASPHALT SUPERPAVE 12.5mm AND BASE COURSE ASPHALT SUPERPAVE 19.0mm IS TO BE USED.
 3. UNLESS SPECIFIED ELSEWHERE, ASPHALT MIX SHALL BE LEVEL B (PG58-34) FOR NON-BUS LOCAL ROADS, AND LEVEL D (PG 64-34) FOR ALL OTHER ROADS.
 4. UNLESS SPECIFIED ELSEWHERE, WHERE EXISTING PAVEMENT STRUCTURE EXCEEDS 150mm IN DEPTH, ASPHALT REINSTATEMENT SHALL BE 150mm AND GRANULAR 'A' FOR THE REMAINDER.
 5. UNLESS SPECIFIED ELSEWHERE, WHERE AN UNDERLYING LAYER OF CONCRETE PAVEMENT EXISTS, REINSTATEMENT SHALL CONSIST OF 150mm OF SUPERPAVE 19.0mm LEVEL B (PG58-34) COMPACTED IN LIFTS.
 6. UNLESS SPECIFIED ELSEWHERE, HOT MIX ASPHALT PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH F-3130.
 7. STEP KEY REINSTATEMENT TO BE IMPLEMENTED UNLESS FULL DEPTH KEY OPTION APPROVED BY THE CITY.
 8. ALL EDGES TO BE ROUTED AND SEALED WITH A BEAD OF HOT RUBBERIZED ASPHALT JOINT SEALING COMPOUND.

Ottawa STANDARD TRENCH REINSTATEMENT IN PAVED SURFACE

DATE: MAY 2001
REV. DATE: MARCH 2022
DWG. No.: R10

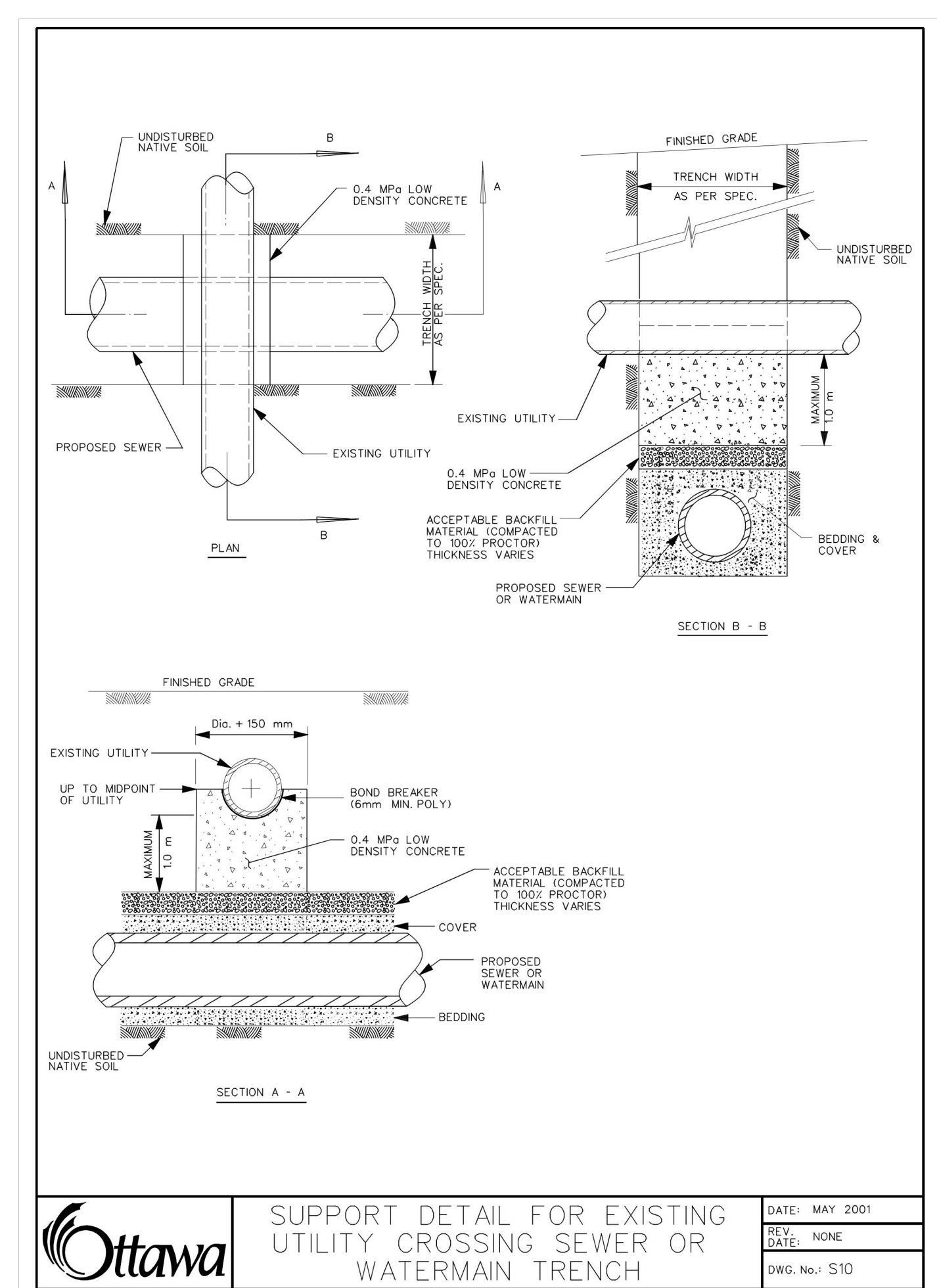


VORTEX ICD WITH OODUR/FLATABLE CONTROL

- NOTES:
1. VORTEX ICD'S ARE USED TO RESTRICT FLOWS BELOW 15L / s. THE LOWEST RESTRICTION ALLOWED TYPICALLY IS 6L / s. PRODUCTS MAY SLIGHTLY DIFFER AS SHOWN ABOVE.
 2. CURVES ARE AVAILABLE FROM THE MANUFACTURER. SEE MS - 22-15 FOR APPROVED PRODUCTS.
 3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

Ottawa VORTEX ICD INSTALLATION

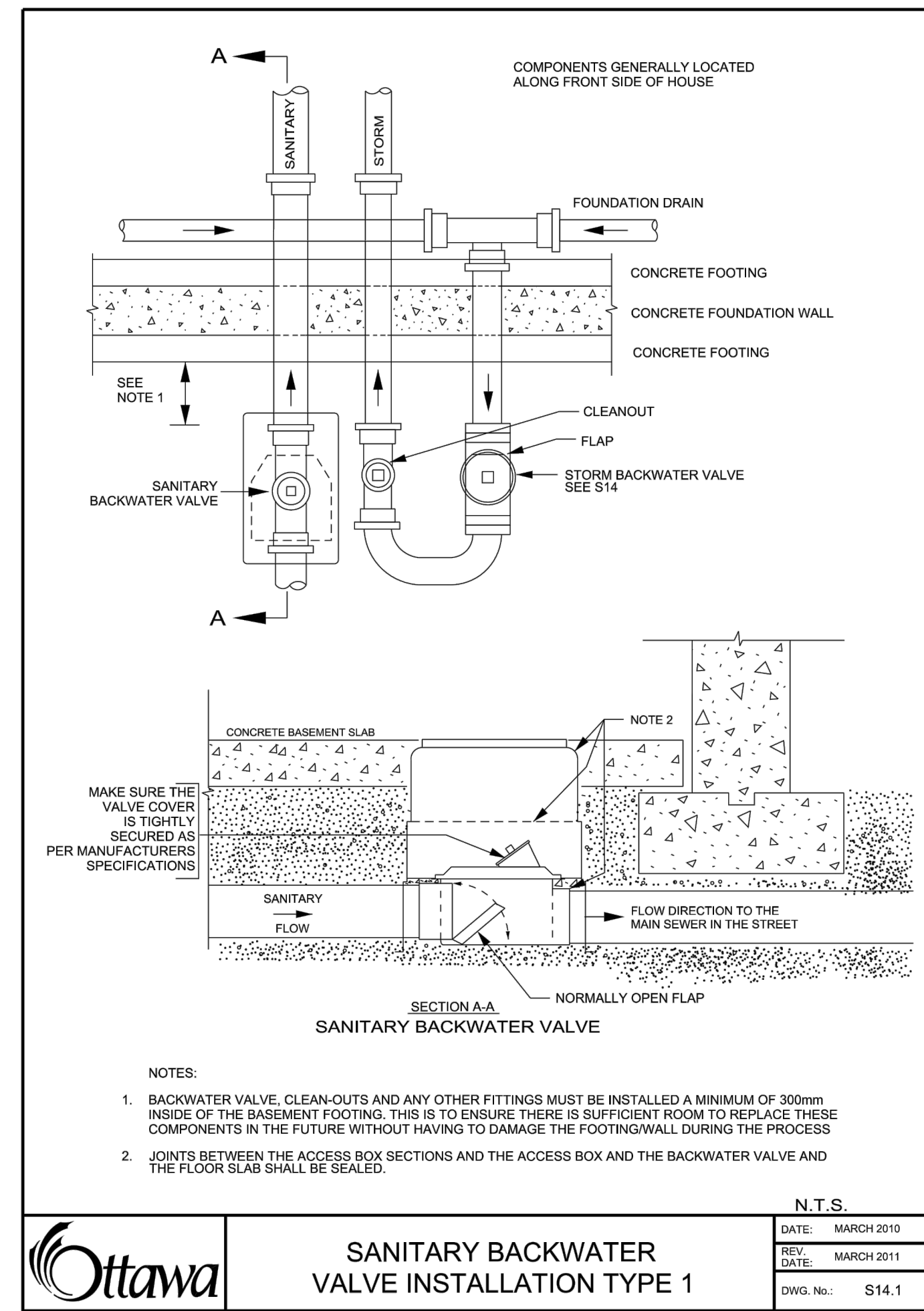
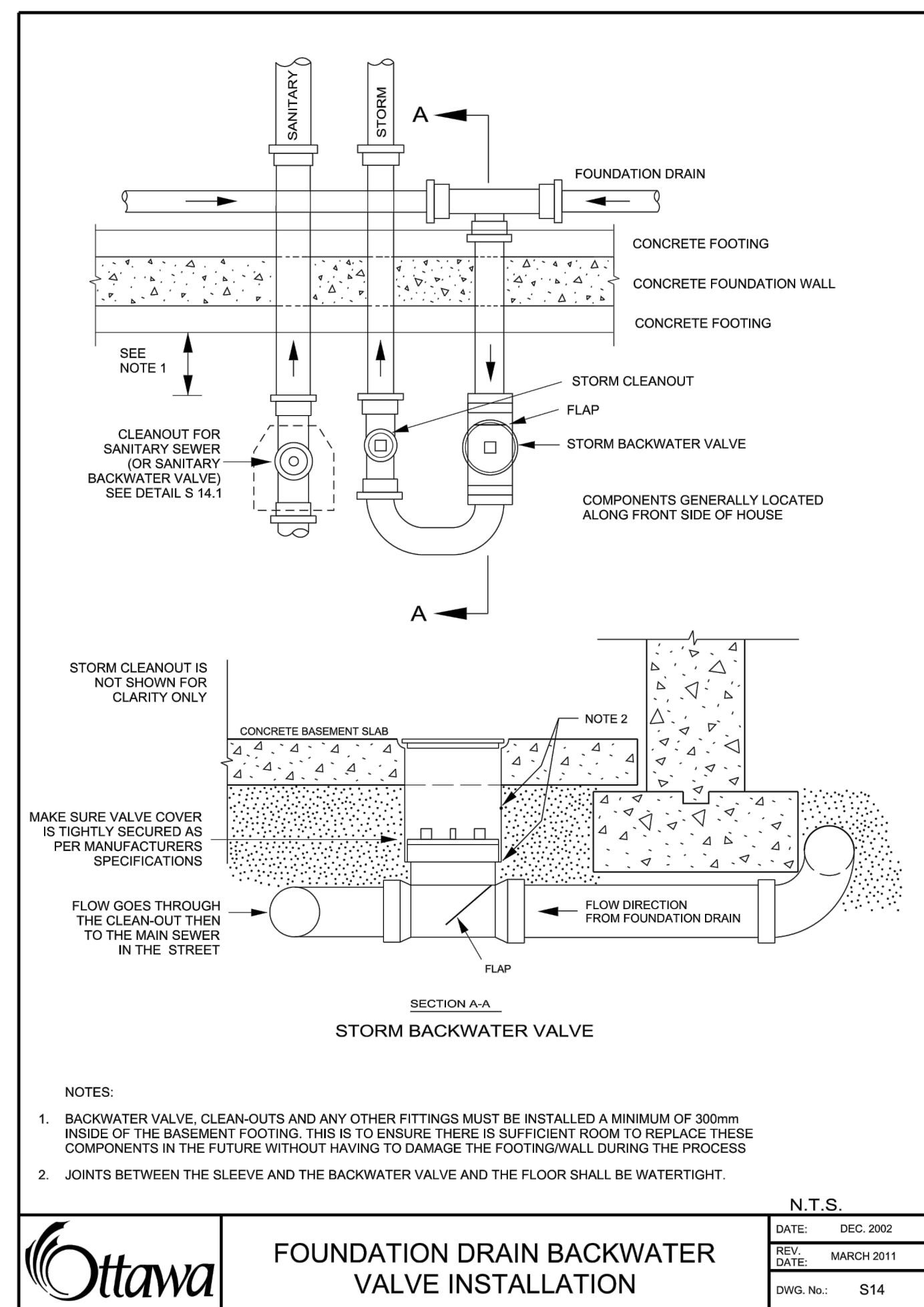
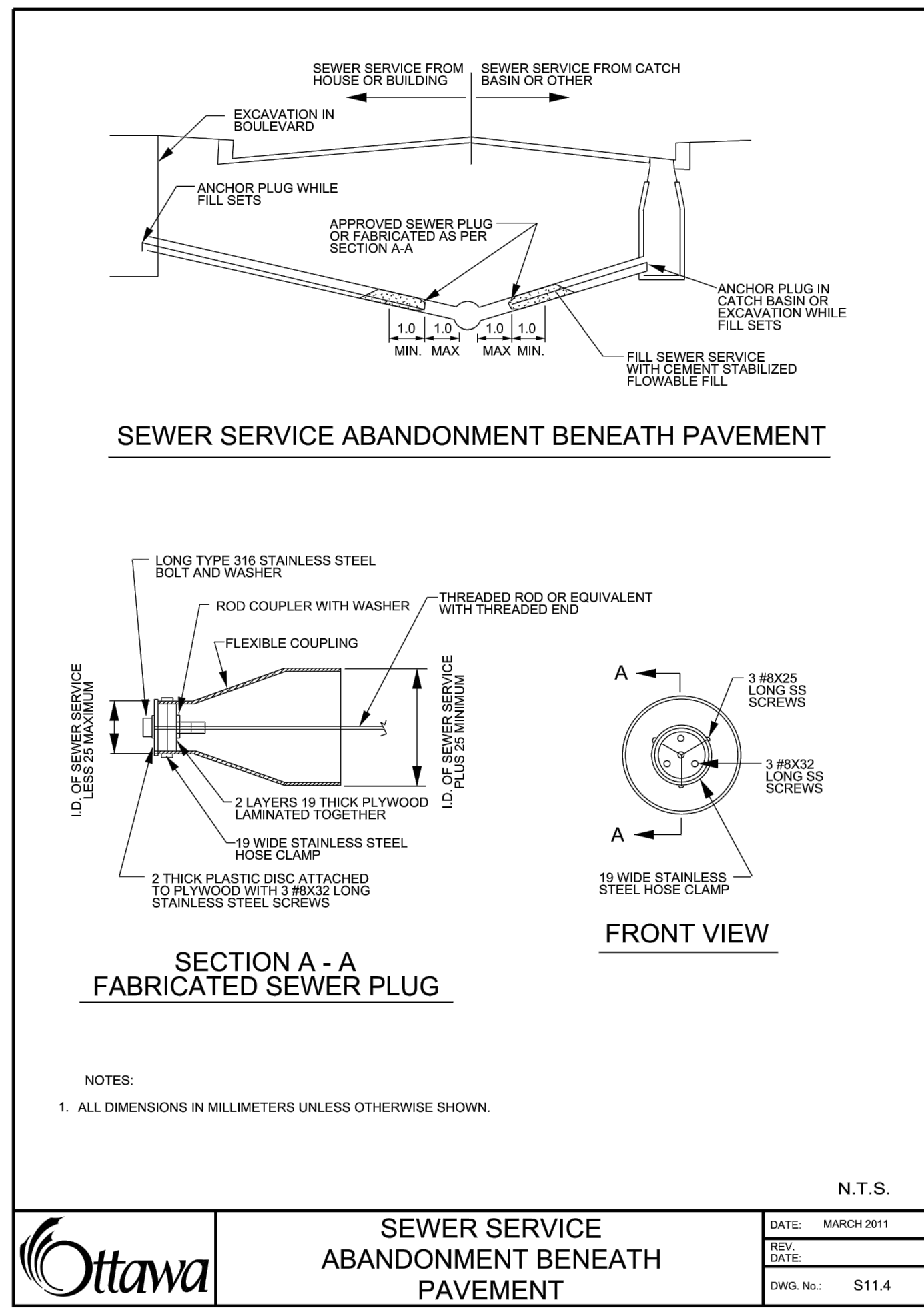
DATE: MARCH 2008
REV. DATE: MARCH 2019
DWG. No.: S4.1



SUPPORT DETAIL FOR EXISTING UTILITY CROSSING SEWER OR WATERMAIN TRENCH

Ottawa

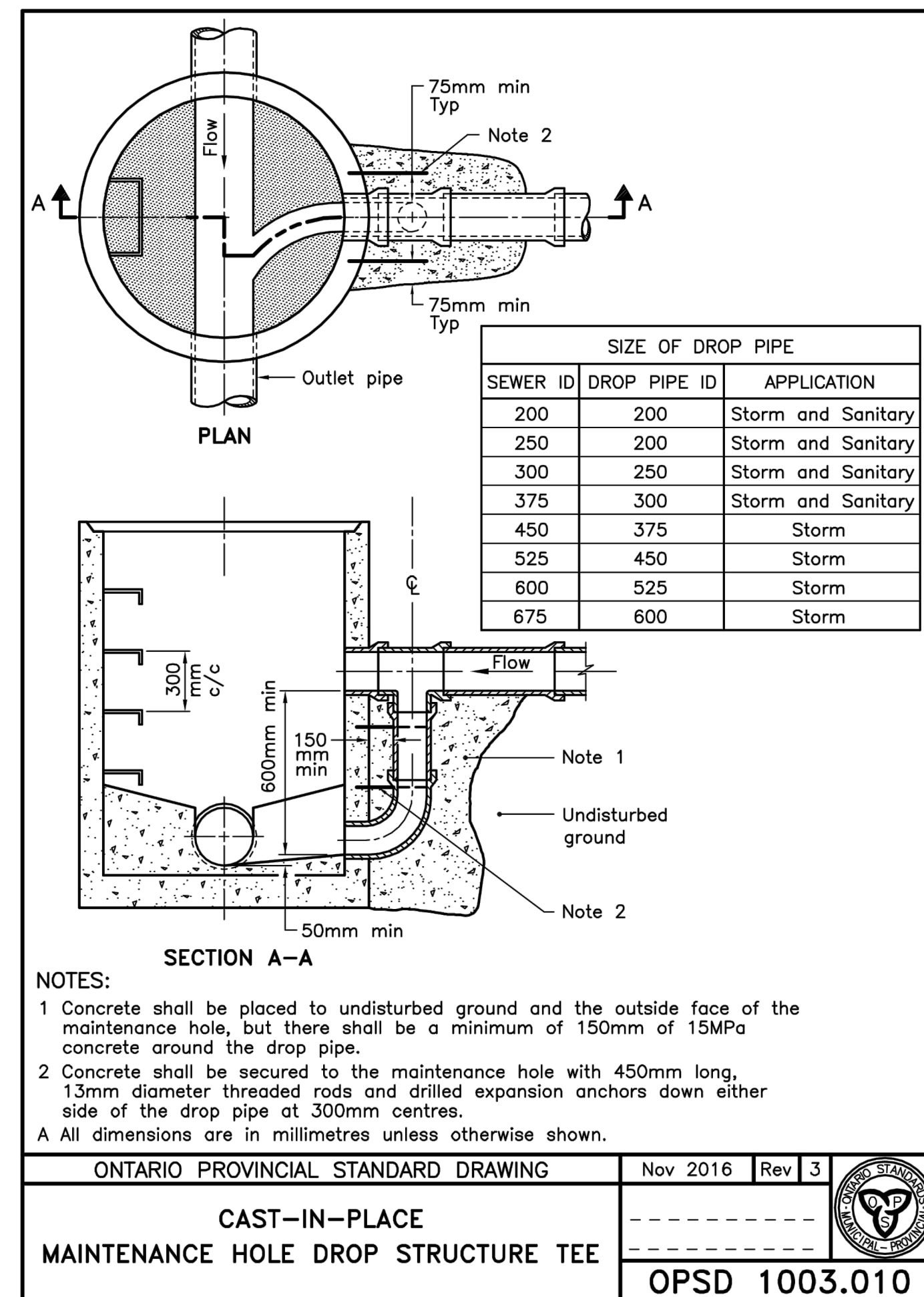
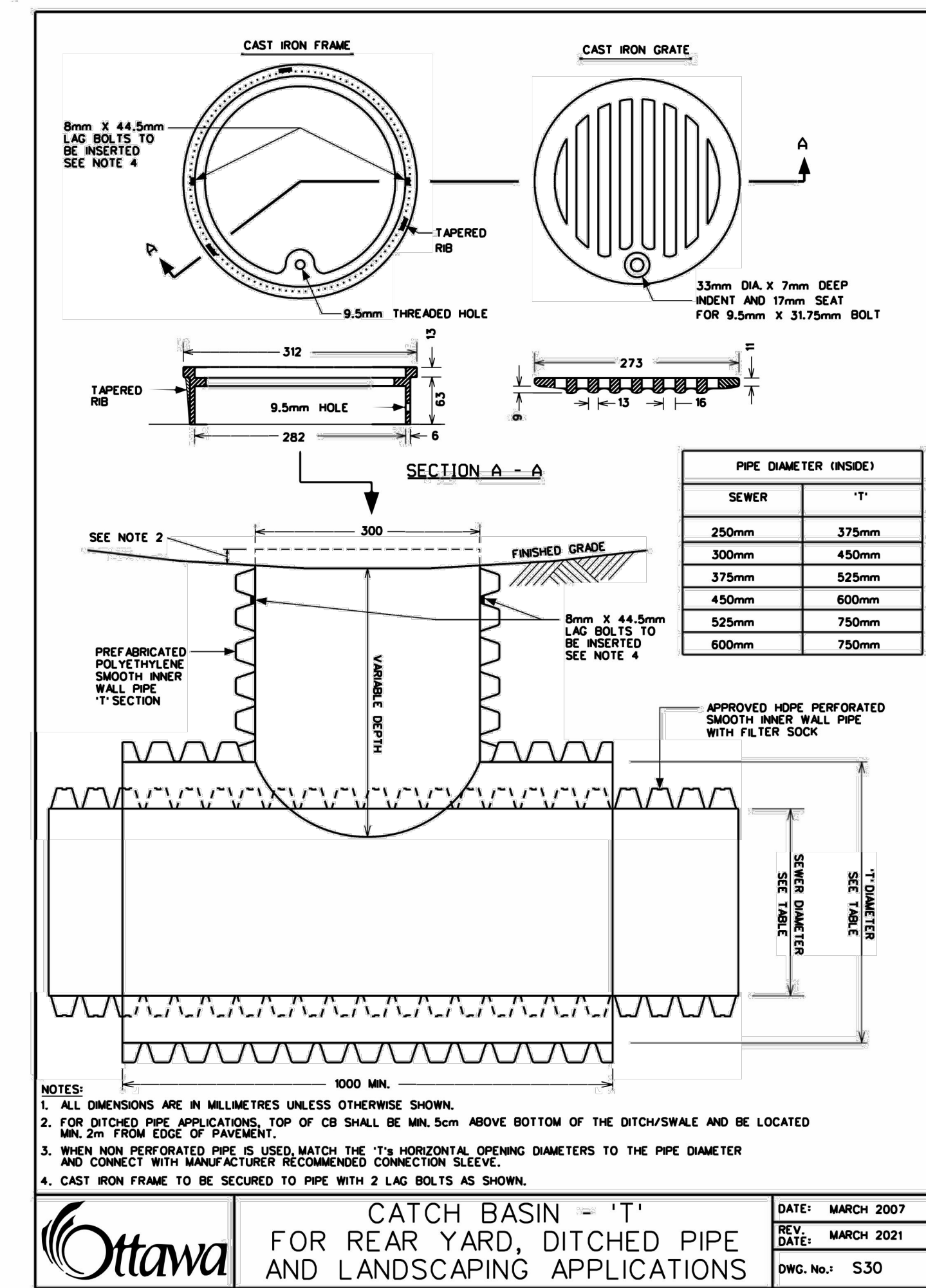
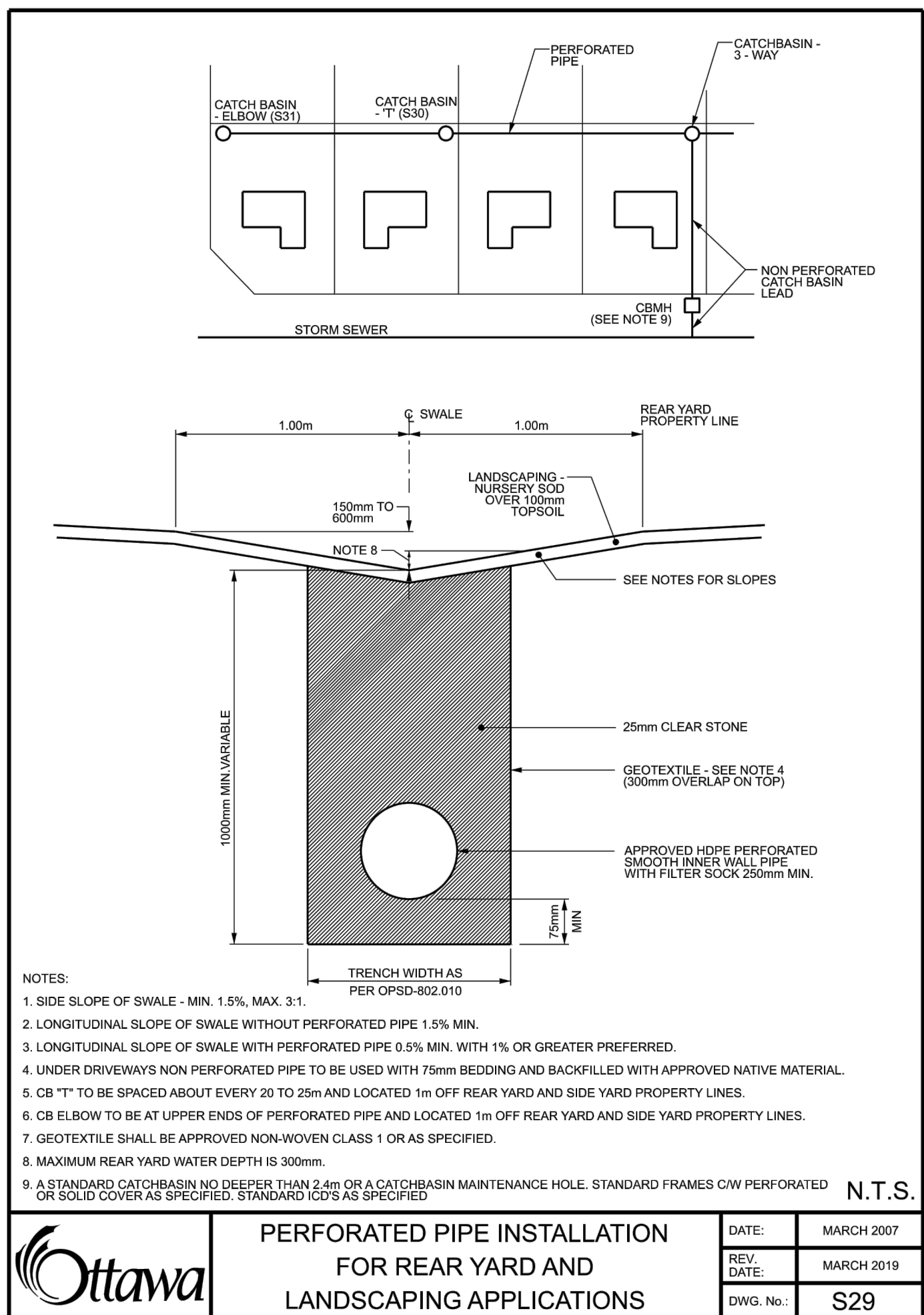
DATE: MAY 2001
REV. DATE: NONE
DWG. No.: S10



Andrew McCreight

ANDREW MCCREIGHT
MANAGER (A), DEVELOPMENT REVIEW CENTRAL
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT
DEPARTMENT, CITY OF OTTAWA

APPROVED
By Andrew McCreight at 1:14 pm, Mar 02, 2023



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1	22/04/07	ISSUED FOR SITE PLAN CONTROL	T.K

DESIGNED BY:

APPROVED BY:

CIMA+

ENGINEER

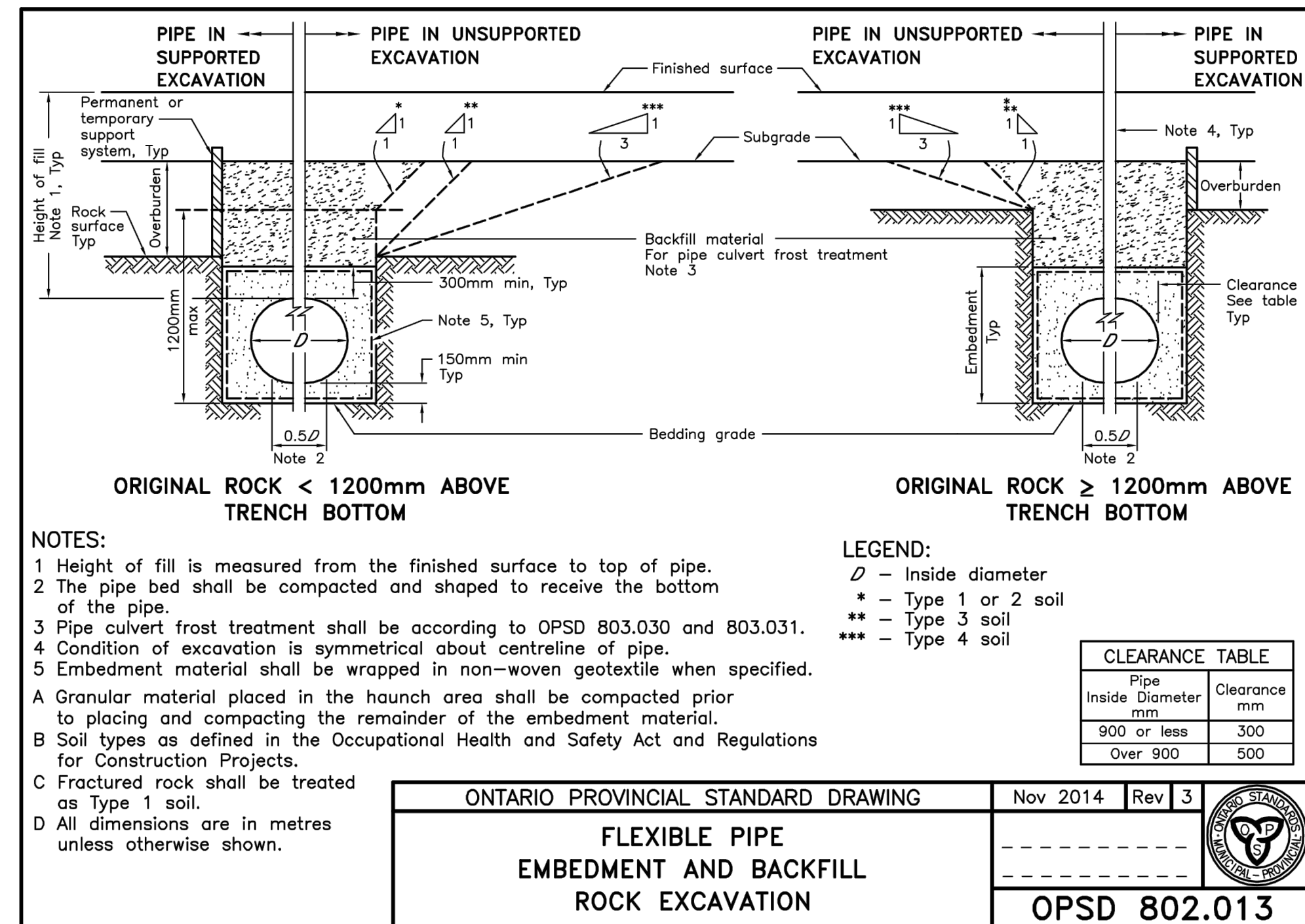
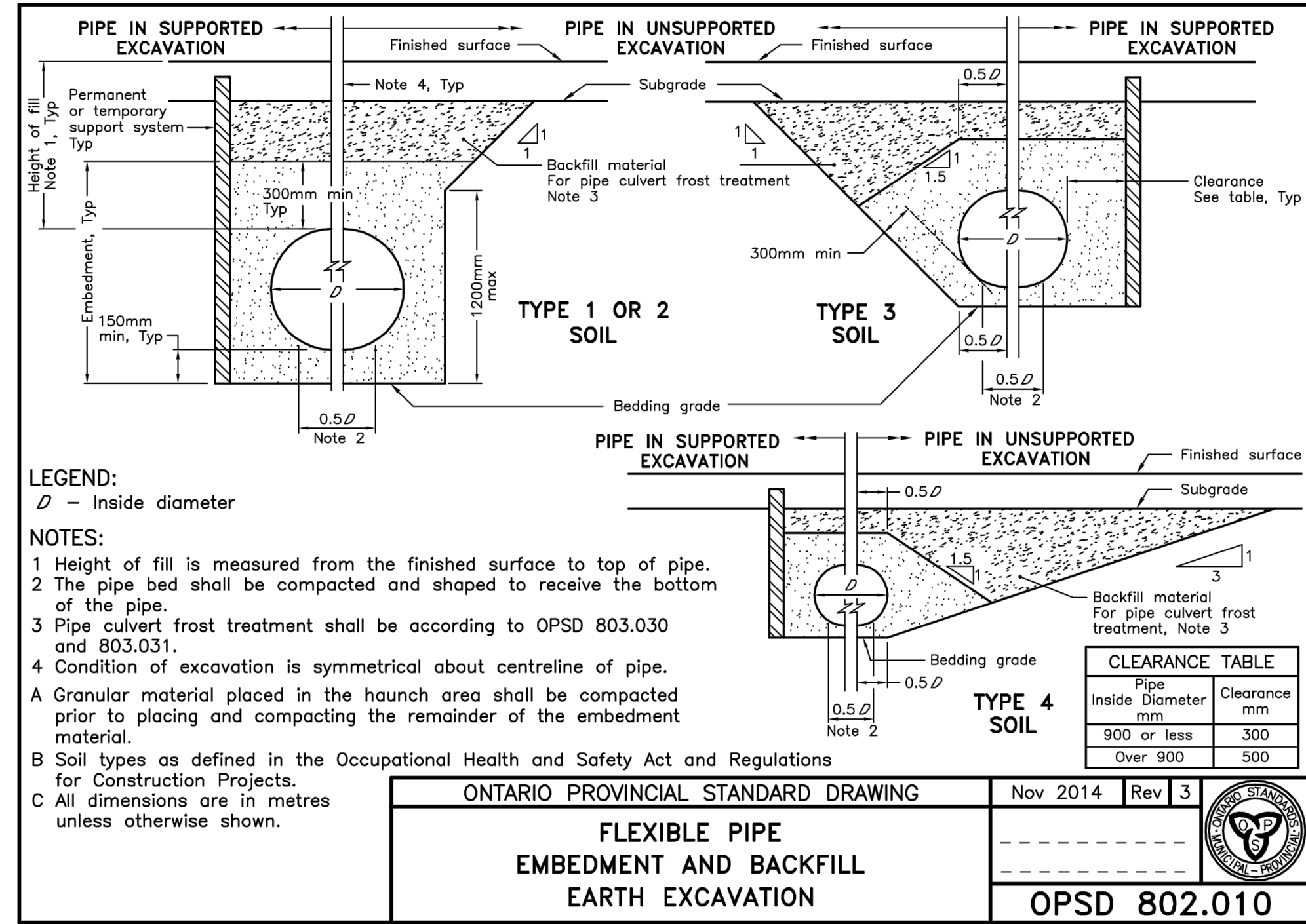
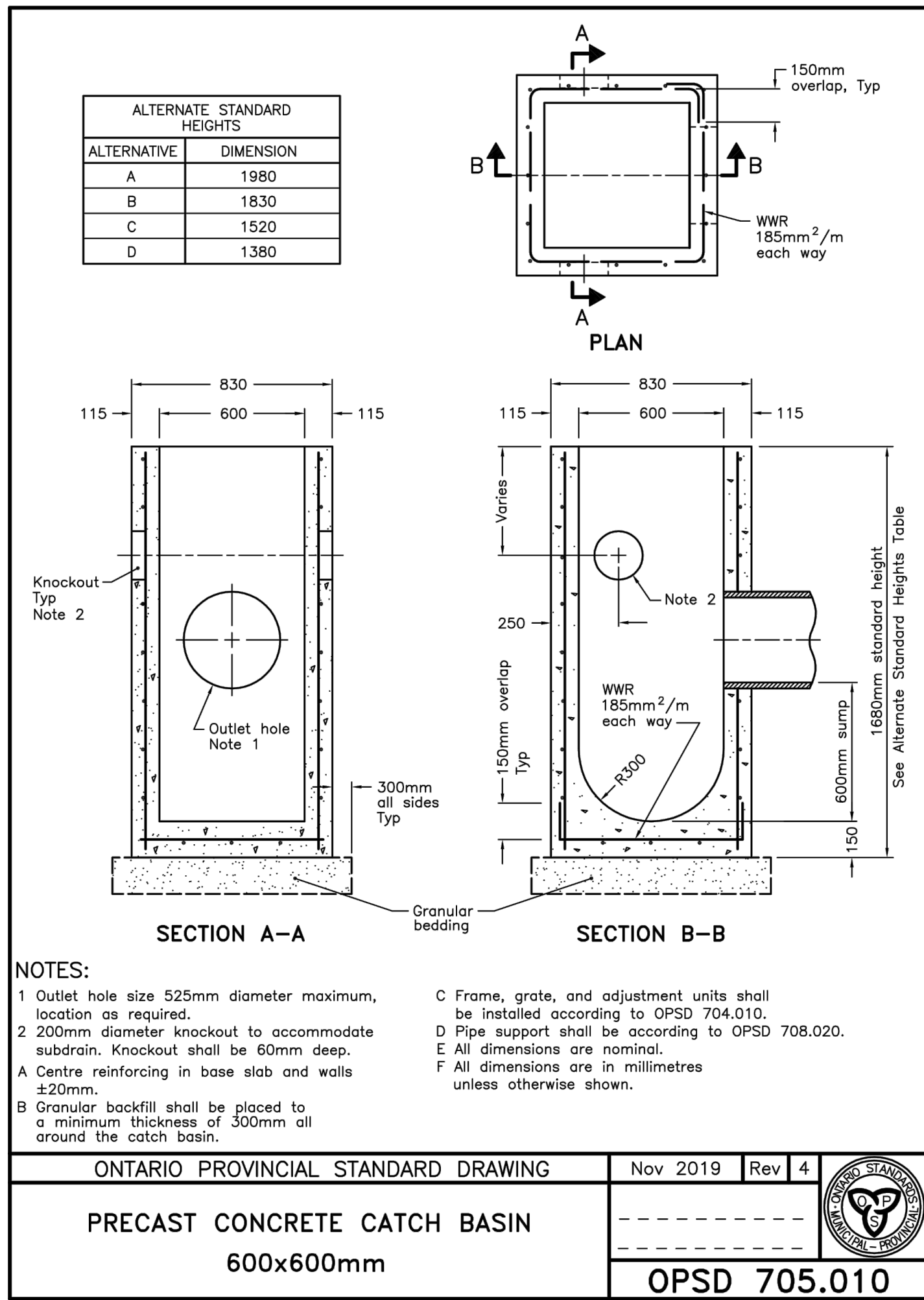
CUSTOMER:

The Hazelton Westboro

PROJECT NAME:
403 RICHMOND ROAD & 389 ROOSEVELT AVENUE

SHEET TITLE:
DETAILS PLAN

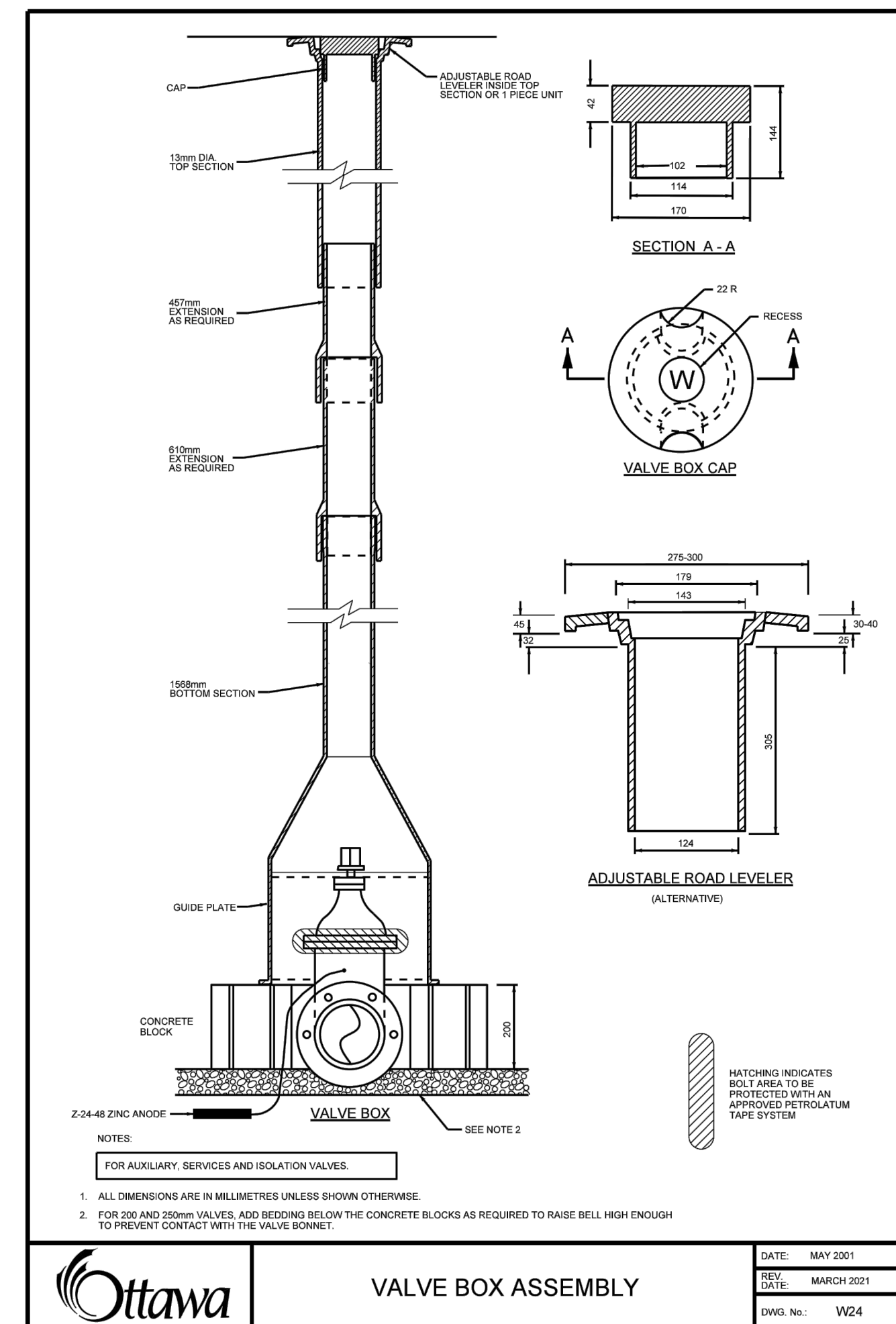
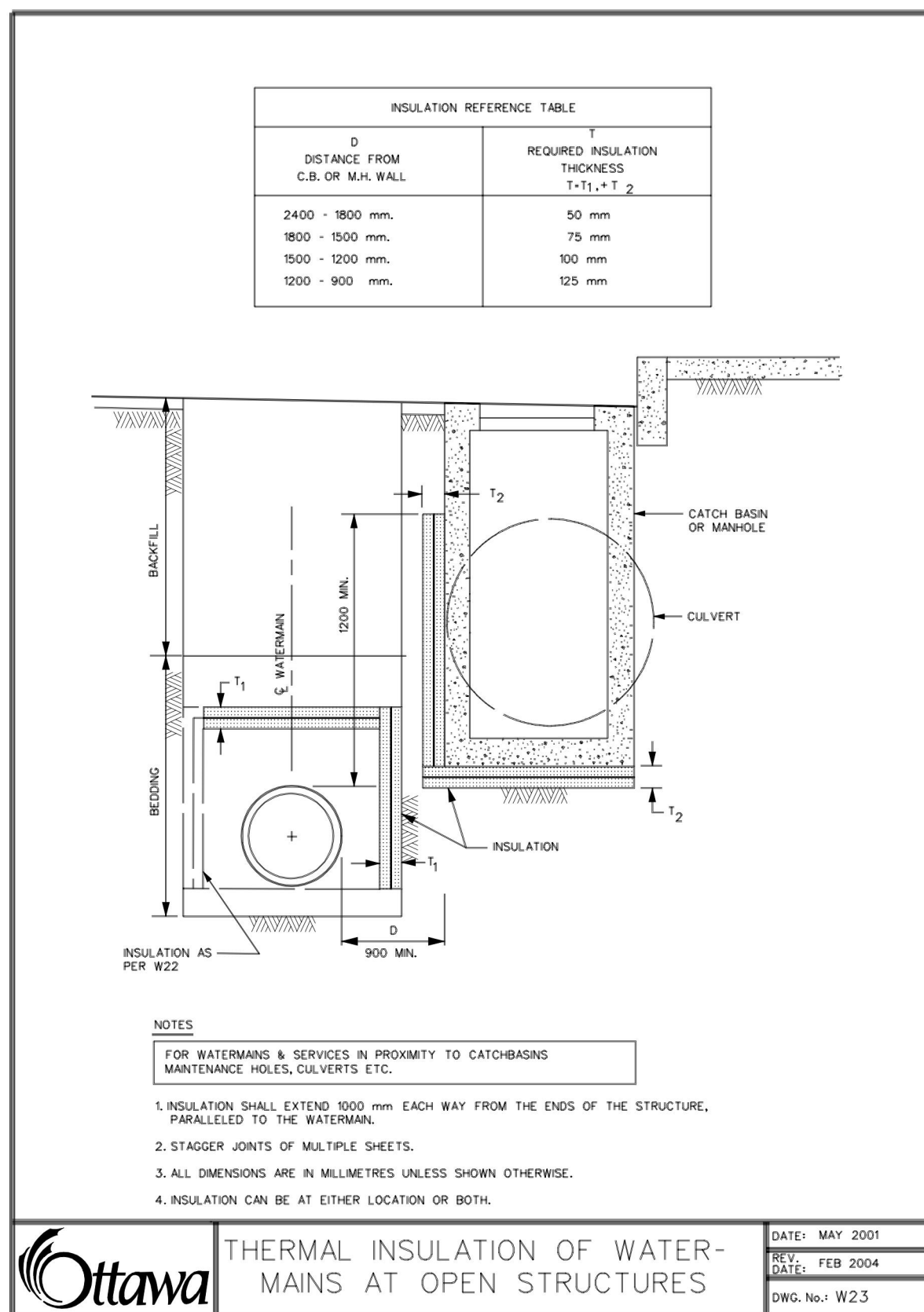
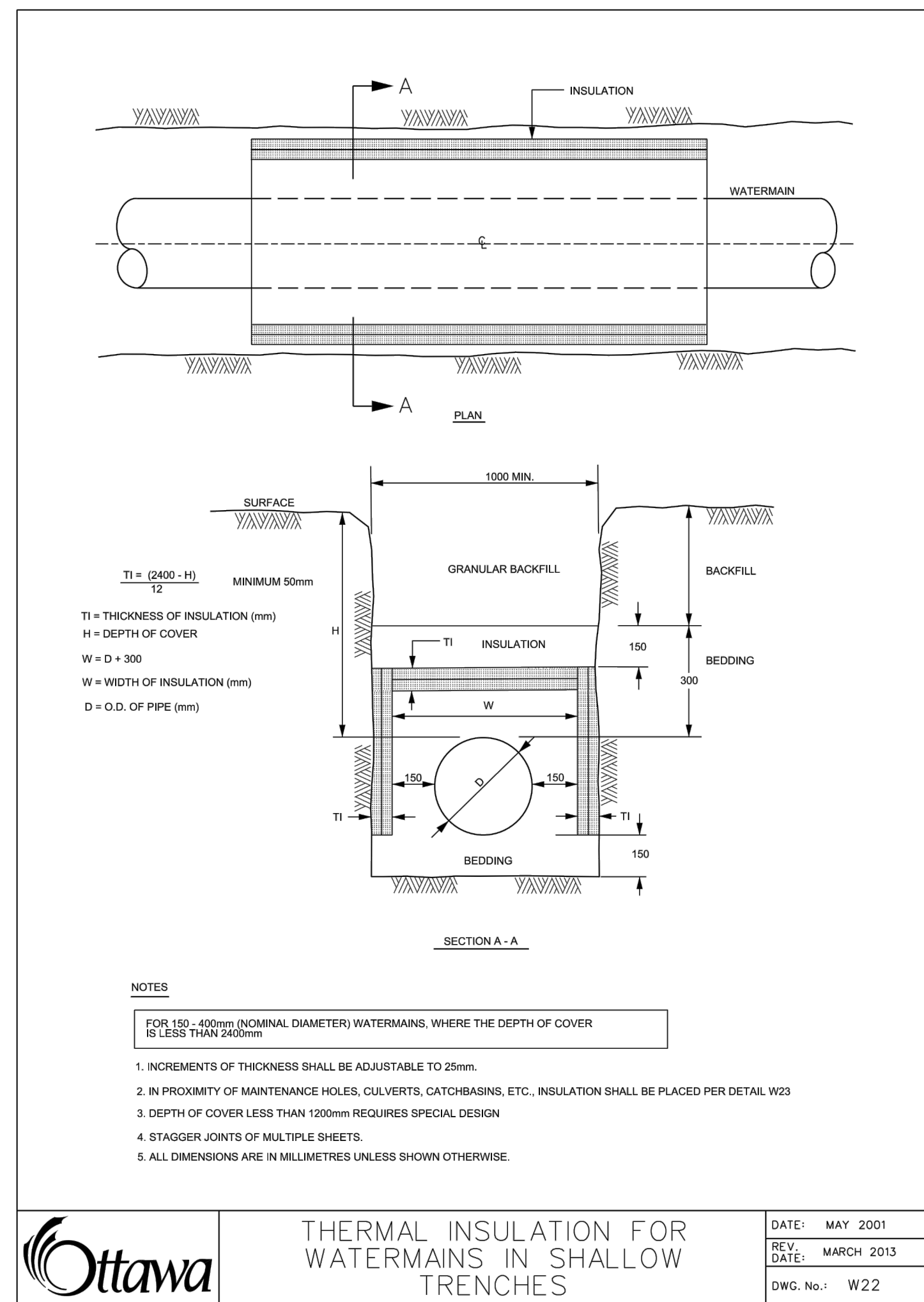
DISCIPLINE:	CIVIL
DRAWER:	S.C. POGGIOLI
DESIGNER:	T. KENNEDY
APPROVER:	T. KENNEDY
PROJECT No.:	A001046
SHEET No.:	9 of 12
SCALE:	
DATE:	2022/04/07
APPROVER:	T. KENNEDY
DRAWING No.:	C009



Andrew McCreight

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PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT
DEPARTMENT, CITY OF OTTAWA

APPROVED
By Andrew McCreight at 1:14 pm, Mar 02, 2023



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1	22/04/07	ISSUED FOR SITE PLAN CONTROL	T.K

DESIGNED BY: **J. C. ADAMS**
APPROVED BY: **T. G. KENNEDY**

CIMA+

The Hazelton Westboro

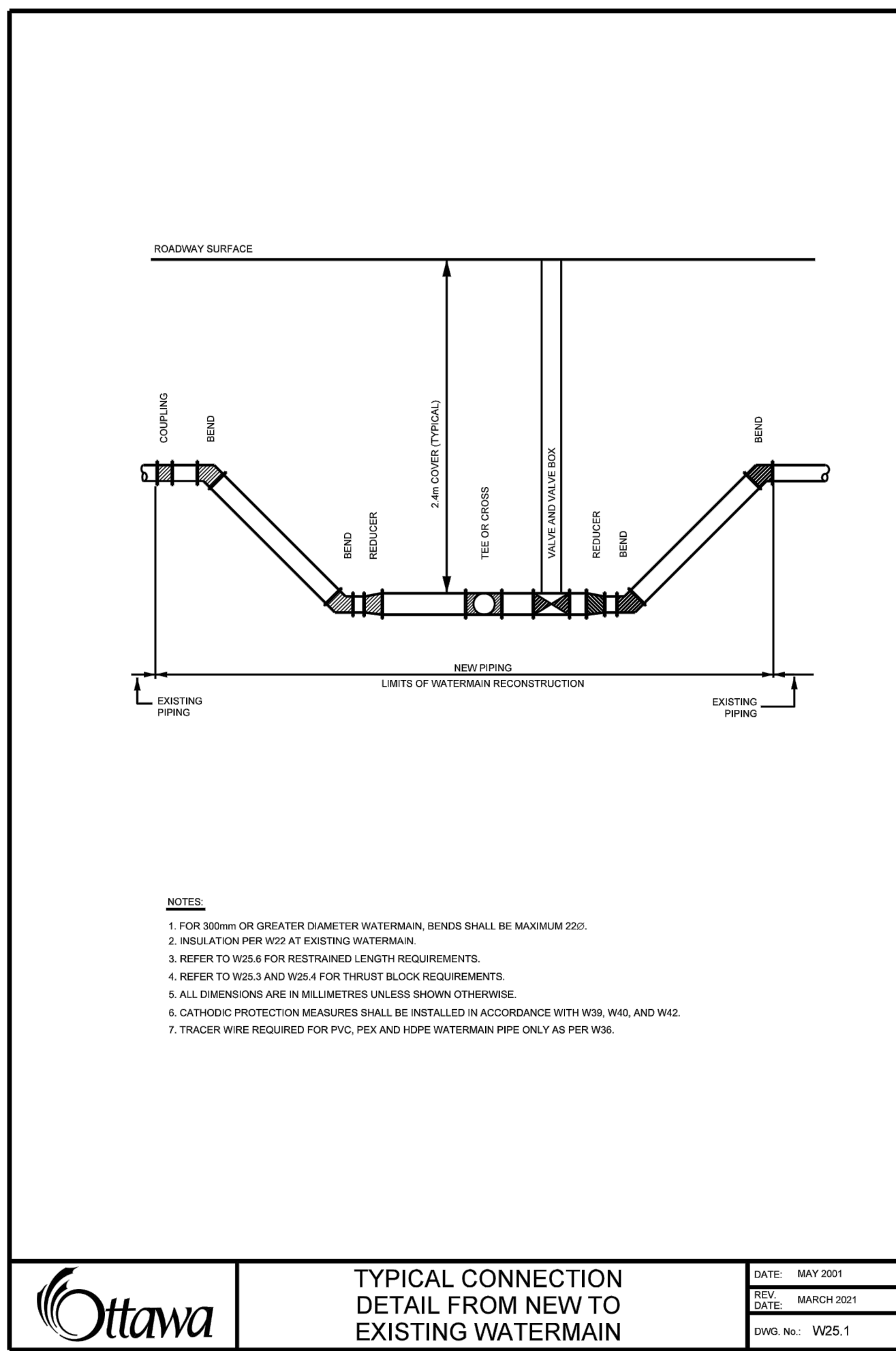
PROJECT NAME:
403 RICHMOND ROAD & 389 ROOSEVELT AVENUE

SHEET TITLE:
DETAILS PLAN

DISCIPLINE:
CIVIL

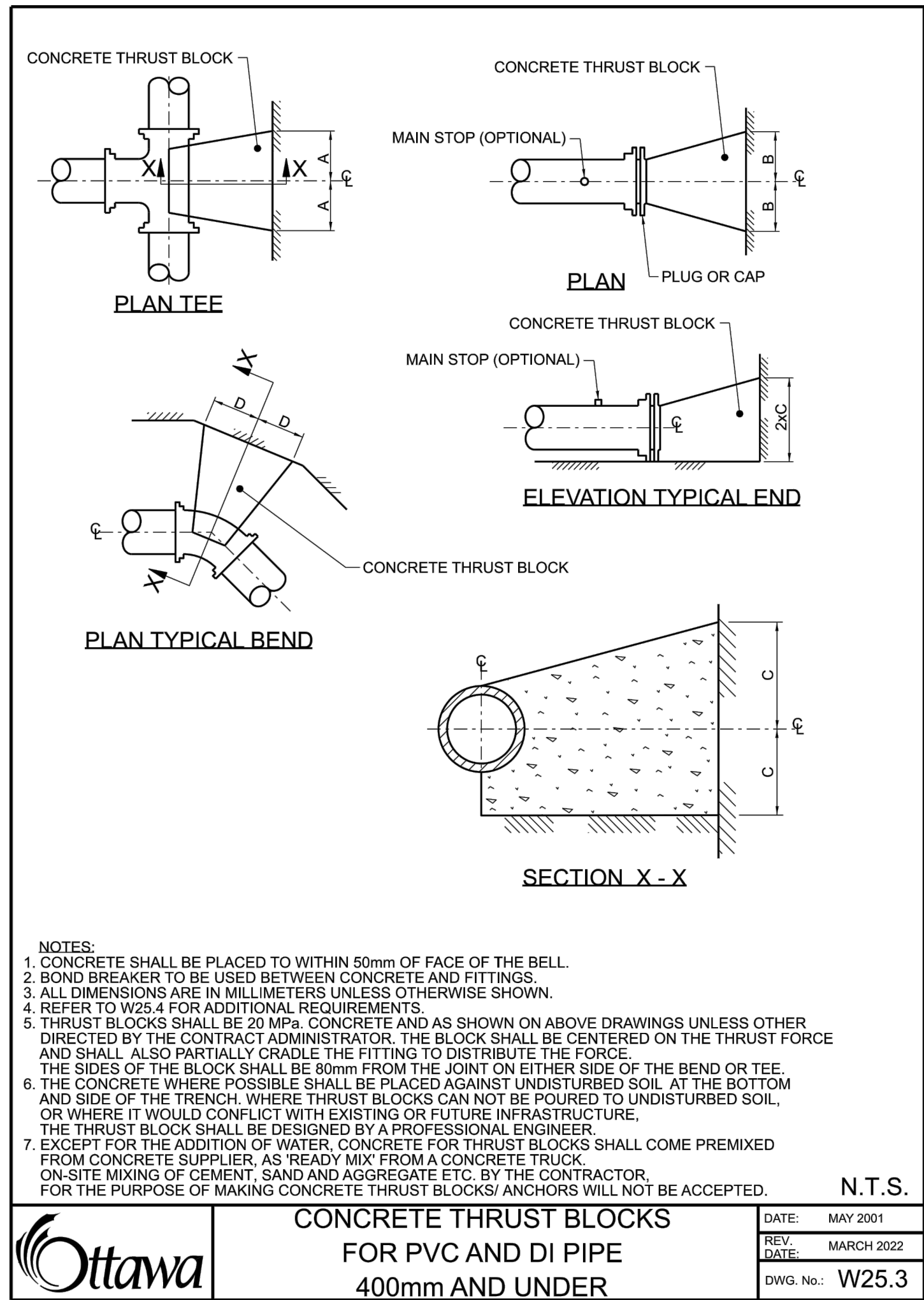
DRAWER: S.C. POGGIOLI
DESIGNER: T. KENNEDY
APPROVER: T. KENNEDY
PROJECT No.: A001046
SHEET No.: 11 of 12

SCALE:
DATE: 2022/04/07
APPROVER: T. KENNEDY
DRAWING No.:
C011



Ottawa TYPICAL CONNECTION DETAIL FROM NEW TO EXISTING WATERMAIN

DATE: MAY 2001
REV. DATE: MARCH 2011
DWG. No.: W25.1



Ottawa CONCRETE THRUST BLOCKS FOR PVC AND DI PIPE 400mm AND UNDER

DATE: MAY 2001
REV. DATE: MARCH 2022
DWG. No.: W25.3

THRUST BLOCK DIMENSION TABLES FOR PVC AND DI PIPE 400mm AND UNDER

DATE: MAY 2001
REV. DATE: MARCH 2011
DWG. No.: W25.4

1. SOIL DESCRIPTION: VERY FINE SANDS, SANDY CLAYS, CLAYS
SOILS WITH TYPICAL BEARING STRENGTH OF 100 TO 199 KPa

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	250	250	200	200
152	400	400	250	300
203	550	550	300	450
254	650	650	400	500
305	800	800	450	650
406	1050	1050	600	850

2. SOIL DESCRIPTION: SILTY SAND GRAVELS OR CLAYEY SAND GRAVEL MIXTURES, MODERATE AMOUNT OF FINES.
SOILS WITH TYPICAL BEARING STRENGTH OF 200 TO 299 KPa

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	200	200	150	150
152	250	250	200	200
203	350	350	250	270
254	450	450	300	350
305	500	500	350	400
406	750	750	400	600

3. SOIL DESCRIPTION: SANDS, GRAVELS AND GRAVEL-SAND MIXTURES.
SOILS WITH TYPICAL BEARING STRENGTH OF 300 KPa AND OVER

PIPE DIAMETER	DIMENSION NOTED ON W25.3			
	A	B	C	D
102	150	150	150	150
152	200	200	200	200
203	300	300	200	230
254	400	400	250	270
305	450	450	300	300
406	650	650	350	450

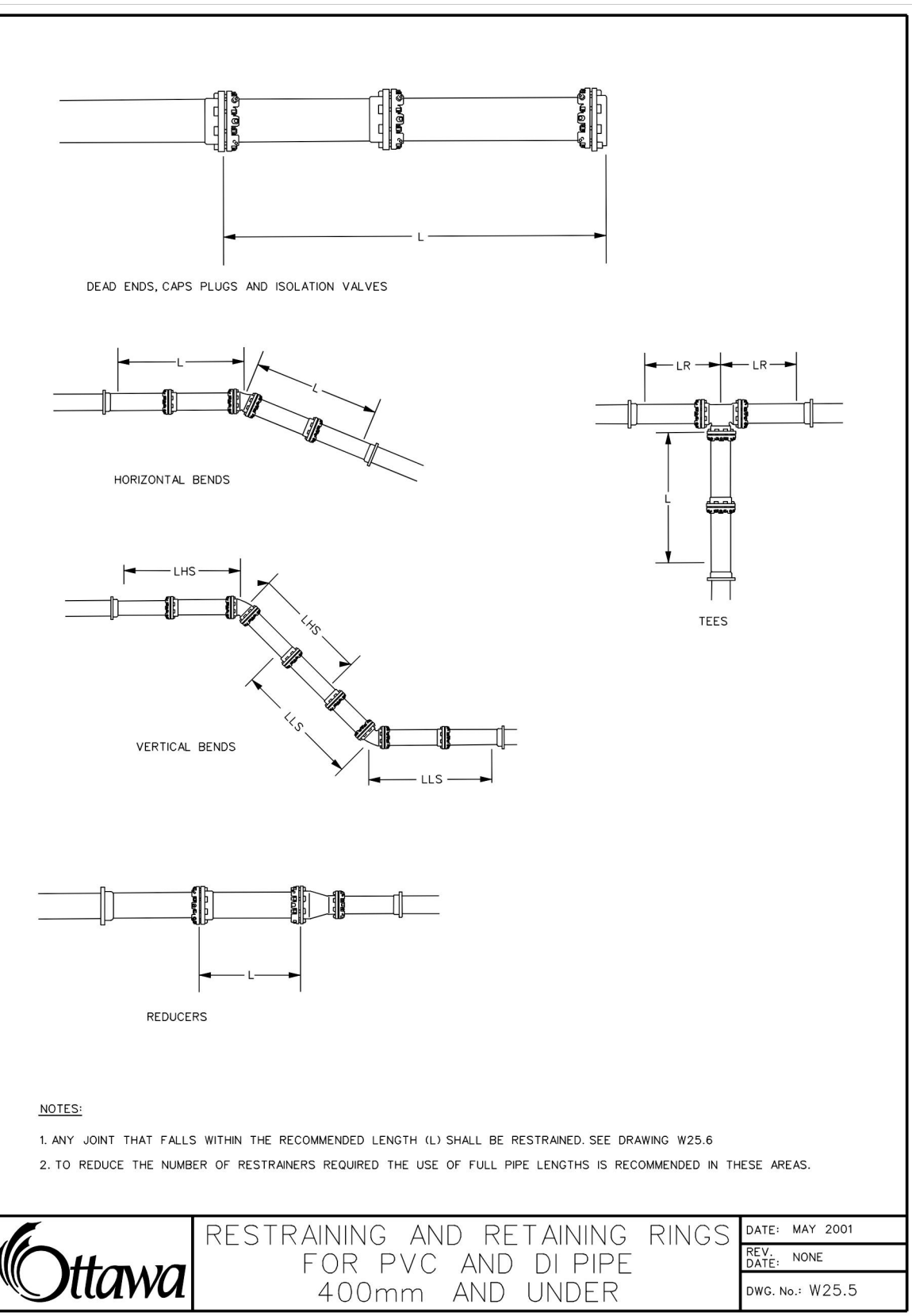
NOTES:

- THE ABOVE THRUST BLOCK DIMENSIONS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.
- THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:
 - a) MAXIMUM OPERATING PRESSURE OF 100 psi
 - b) MAXIMUM SURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.6 m/s OF 115 psi (115 psi FOR CLASS S2 DI AND FOR PVC MAX. SURGE IS 35 psi)
- THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
- DIMENSIONS MAY BE ADJUSTED TO LONG AS THE BEARING SURFACE AREA OF THE THRUST BLOCK IS NOT REDUCED.
- TO BE USED IN CONJUNCTION WITH W25.3.

Andrew McCreight

ANDREW MCCREIGHT
MANAGER (A), DEVELOPMENT REVIEW CENTRAL
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DEPARTMENT, CITY OF OTTAWA

APPROVED
By Andrew McCreight at 1:14 pm, Mar 02, 2023



Ottawa RESTRAINING AND RETAINING RINGS FOR PVC AND DI PIPE 400mm AND UNDER

DATE: MAY 2001
REV. DATE: NONE
DWG. No.: W25.5

TABLE OF RESTRAINED LENGTHS FOR DI AND PVC WATERMAIN PIPE IN STANDARD GRANULAR 'A' EMBEDMENT IN SOILS OF BEARING CAPACITY OF 100 KPa AND OVER

REDUCERS	LARGER DIAMETER SIDE (TO BE RESTRAINED)					
	100mm	150mm	200mm	250mm	300mm	400mm
100mm	N/A	3	6	8	10	14
150mm	N/A	N/A	4	6	9	13
200mm	N/A	N/A	N/A	3	6	11
250mm	N/A	N/A	N/A	N/A	4	9
300mm	N/A	N/A	N/A	N/A	N/A	7
400mm	N/A	N/A	N/A	N/A	N/A	N/A

PIPE DIAMETER	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
DEAD ENDS, CAPS, PLUGS, VALVES	5	6	9	10	12	16

VERTICAL BENDS	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
LENGTH HIGH SIDE - LHS	3	4	5	6	7	9
LENGTH LOW SIDE - LLS	1.5	2	2.5	3	3.5	4.5

TEES	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
LENGTH ALONG THE BRANCH - L	1	1	1	1	1	1
LENGTH ALONG THE RUN - Lr	3	3	3	3	3	3

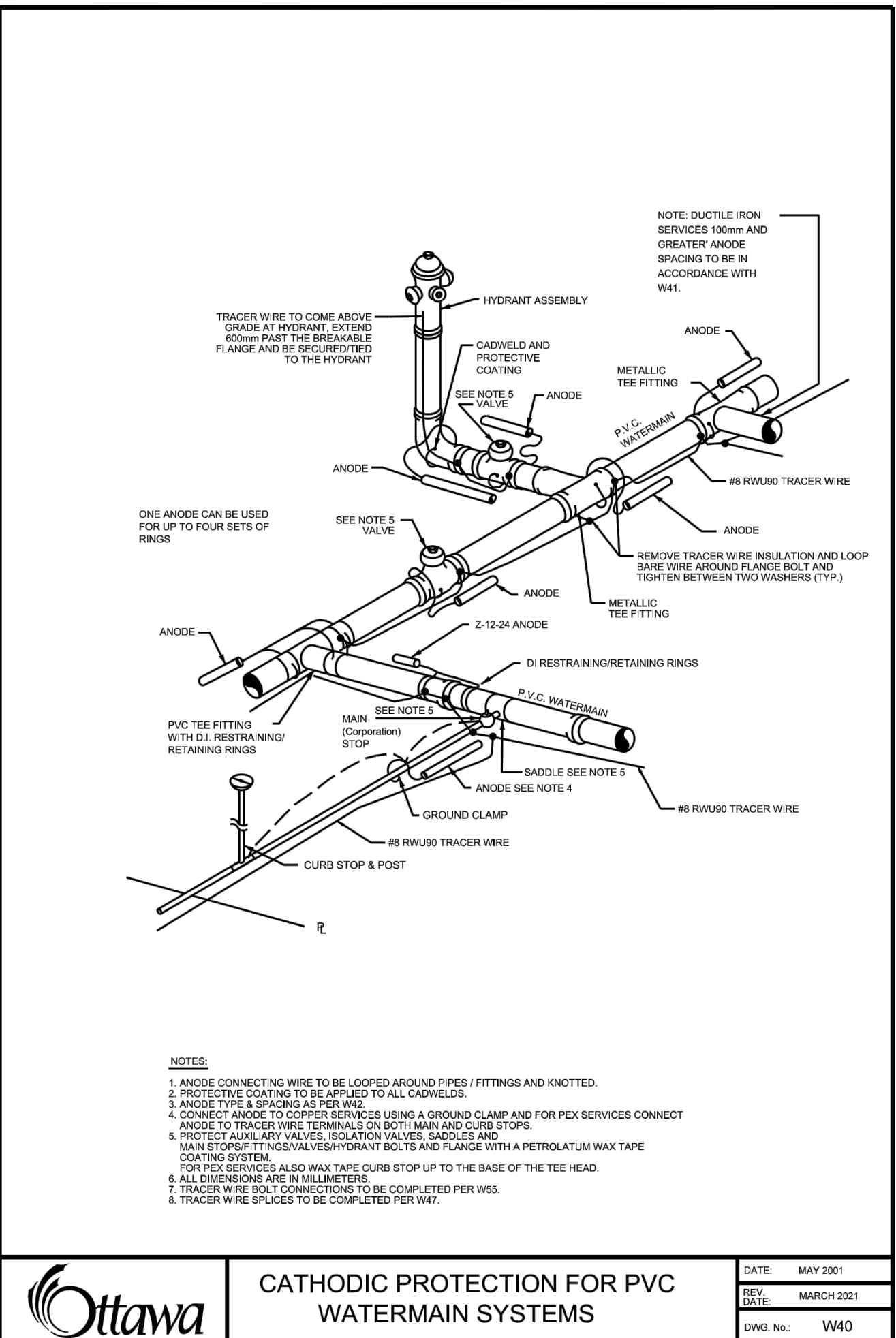
HORIZONTAL BENDS	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
11.25, 22.5, AND 45 DEGREE BENDS	1	1.5	1.5	2	2	2.5

NOTES:

- THE ABOVE RESTRAINED LENGTHS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.
- THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:
 - a) MAXIMUM OPERATING PRESSURE OF 100 psi
 - b) MAXIMUM SURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.6 m/s OF 115 psi (115 psi FOR CLASS S2 DI AND FOR PVC MAX. SURGE IS 35 psi)
- FOR SOFTWARE CALCULATIONS A TEST PRESSURE OF 150 psi AND A SAFETY FACTOR OF 1.5 WAS USED WHICH RESULTS IN 225 psi MAXIMUM PRESSURE.
- TYPE 5 TRENCH BEDDING.
- DEPTH TO BURY 2.4 METRES EXCEPT FOR VERTICAL BENDS WHERE THE HIGH SIDE IS AT 1.8 METRES.
- EMBEMENT MATERIAL GRANULAR 'A' WITH CHARACTERISTICS OF ASTM D2457 GP.
- GP SOILS ARE DESCRIBED AS POORLY GRADED GRAVEL AND SAND-GRAVEL MIXES WITH LITTLE OR NO FINES.
- GP MUST BE OF SOLID PIPE WITHOUT JOINTS, FITTINGS, ETC.
- THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
- RESTRAINED LENGTHS ARE IN METRES.

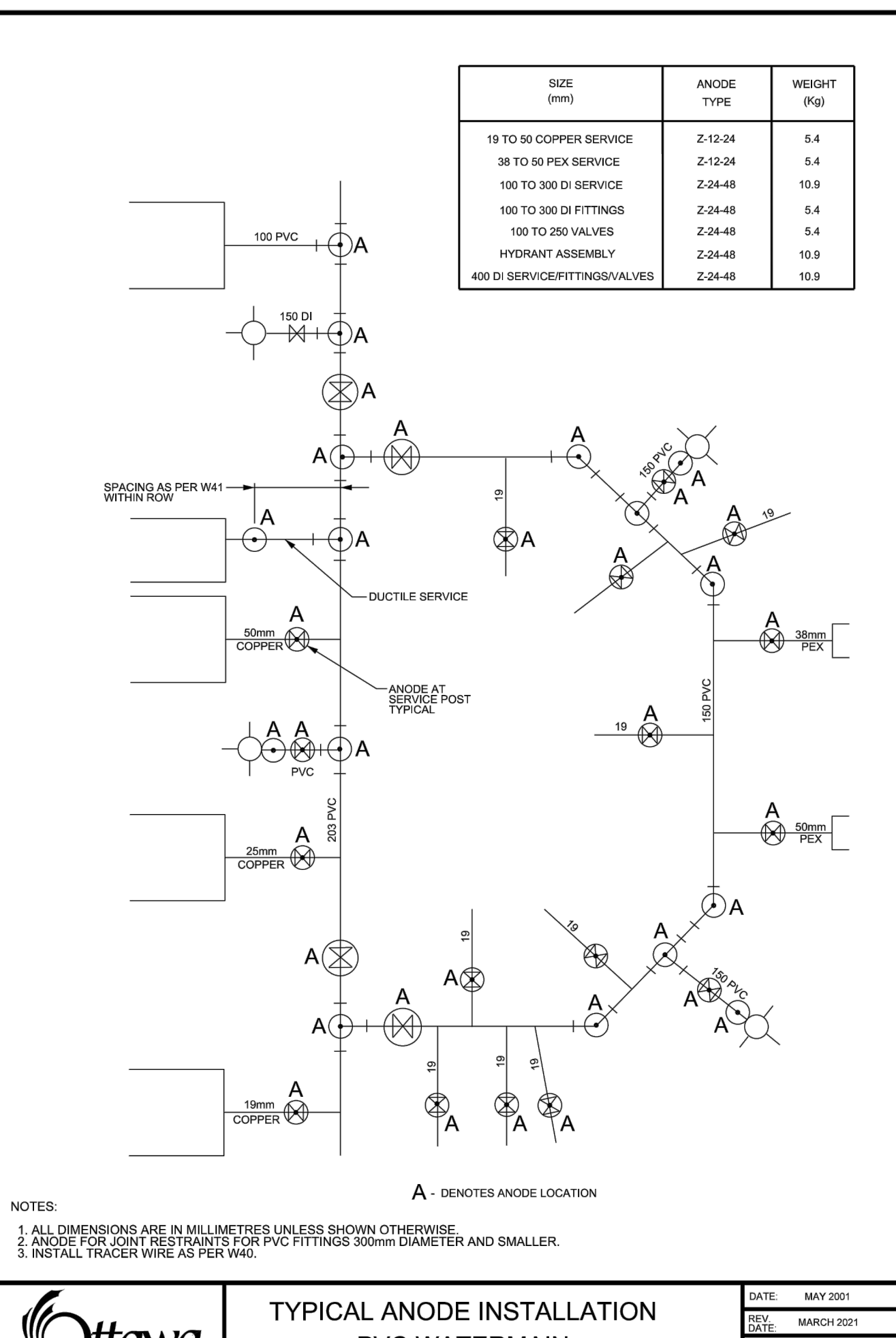
Ottawa TABLES OF RESTRAINED LENGTHS FOR PVC AND DI PIPE 400mm AND UNDER

DATE: MAY 2001
REV. DATE: MARCH 2011
DWG. No.: W25.6



Ottawa CATHODIC PROTECTION FOR PVC WATERMAIN SYSTEMS

DATE: MAY 2001
REV. DATE: MARCH 2021
DWG. No.: W440



Ottawa TYPICAL ANODE INSTALLATION PVC WATERMAIN

DATE: MAY 2001
REV. DATE: MARCH 2021
DWG. No.: W442

No.	Date	Description	By
4	23/01/20	RE-ISSUED FOR SITE PLAN CONTROL	T.K
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1	22/04/07	ISSUED FOR SITE PLAN CONTROL	T.K

DESIGNED BY: **J. C. ADAMS**
100519478
20 January 2023

APPROVED BY: **T. G. KENNEDY**
100173201
January 20, 2023

CIMA+

The Hazelton Westboro

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403 RICHMOND ROAD & 389 ROOSEVELT AVENUE

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DISCIPLINE:
CIVIL

DRAWER:
S.C. POGGIOLI

DESIGNER:
T. KENNEDY

APPROVER:
T. KENNEDY

PROJECT No.:
A001046

SCALE:
DATE: 2022/04/07

APPROVED:
T. KENNEDY

DRAWING No.:

SHEET No.:
12 of 12

C012