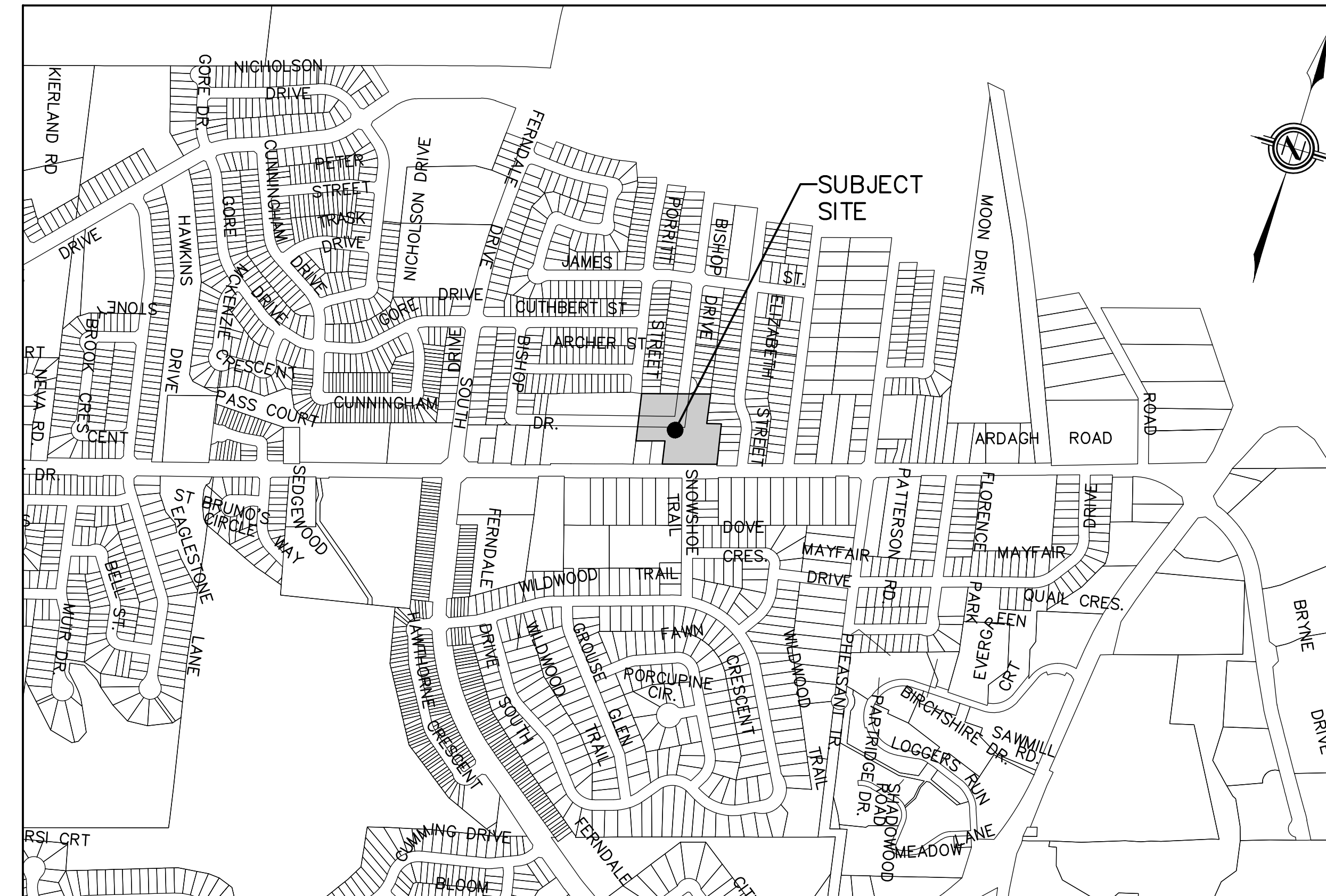


BISHOP DRIVE CITY OF BARRIE D28-007-2018

DRAWING LEGEND

TITLE	TITLE PAGE
GN-1	GENERAL NOTES
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
ESC-2	EROSION AND SEDIMENT CONTROL PLAN NOTES AND DETAILS
G-1	GENERAL SERVICING PLAN
GP-1	GRADING PLAN
STM-1	ALLOWABLE DEVELOPMENT STORM DRAINAGE PLAN
STM-2	POST DEVELOPMENT STORM DRAINAGE PLAN
SAN-1	SANITARY DRAINAGE PLAN
PP-1	BISHOP DRIVE PLAN AND PROFILE
DET-1	STANDARD DETAILS
DET-2	STANDARD DETAILS
DET-3	STANDARD DETAILS



**PRELIMINARY ONLY
NOT FOR CONSTRUCTION**

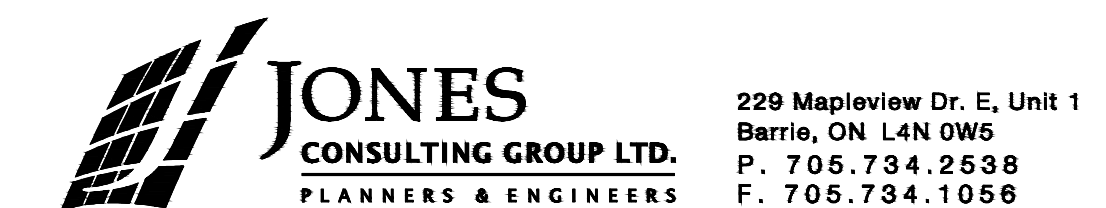
MUNICIPALITY:

CITY OF BARRIE
70 COLLIER STREET (BOX 400)
BARRIE, ON L4M 4T5
PH. 705.726.4242
FAX 705.739.4243

CLIENT:

HEDBERN DEVELOPMENT CORPORATION
1833 QUANTZ CRESCENT
INNISFIL, ON L9S 1X2

DEVELOPER'S ENGINEER:



229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

GENERAL NOTES

1. DRAWINGS

A. ALL DRAWINGS SHALL BE PRODUCED IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARDS & SYMBOLS FOR PLAN & PROFILE DRAWINGS, GENERAL SERVICE PLANS AND LOT GRADING PLANS.

2. MEASUREMENTS

A. ALL DIMENSIONS ARE IN METRES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES, UNLESS SPECIFIED OTHERWISE.

3. GENERAL

A. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARD DRAWINGS (BSD) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).

B. ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY CITY OF BARRIE STANDARD DRAWINGS (BSD) AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).

C. LOCATION OF EXISTING SERVICES ARE NOT GUARANTEED. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.

D. A ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE ROADS AND PARKS OPERATIONS BRANCH PRIOR TO THE COMMENCEMENT OF WORK WITHIN ANY CITY RIGHT-OF-WAY.

E. A SITE ALTERATION PERMIT IS REQUIRED FROM THE ENGINEERING DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY SANITARY WORKS ON THE SITE.

F. NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.

G. GRANULAR MATERIAL, USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH, MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

H. ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE CITY ENGINEERING DEPARTMENT.

I. ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.

Table with 2 columns: CITY OF BARRIE STANDARD, GENERAL NOTES. Includes revision table and approval stamp for BSD-N6.

Table with 2 columns: Barrie STANDARD DETAIL, GENERAL NOTES ROADWORKS. Includes revision table and approval stamp for BSD-N2.

EROSION CONTROL NOTES

- 1. THE ACCOMPANYING PLANS SET OUT THE MEASURES THAT WILL BE TAKEN BY THE DEVELOPER AND ITS CONTRACTORS TO CONTROL DOWNSTREAM SEDIMENT TO THE LOWEST LEVEL PRACTICALLY ACHIEVABLE... 2. A ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE ROADS AND PARKS OPERATIONS BRANCH...

GRADING NOTES

- 1. ALL DISTURBED AREAS TO BE RESTORED TO EXISTING CONDITIONS OR BETTER, GRASSED LANDSCAPE AREAS TO RECEIVE A MIN. 200mm DEPTH OF TOPSOIL AND SOD IMMEDIATELY FOLLOWING COMPLETION OF GRADING.

WATER SERVICING NOTES

- 1. ALL REQUIRED PERMITS SHALL BE IN PLACE PRIOR TO INSTALLATION OF WATERMAIN AND SERVICES... 2. MINIMUM COVER OVER WATER MAIN TO BE 1.7m. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAIN AND SEWER TO BE 2.5m...

GENERAL NOTES - SANITARY SEWER

- A. SANITARY SEWER TO BE LOCATED AT THE CENTRELINE OF THE ROAD... B. SEWERS SHALL BE CONSTRUCTED WITH BEDDINGS AS PER OPSD-802.010 (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE...

Table with 2 columns: CITY OF BARRIE STANDARD, GENERAL NOTES SANITARY SEWERS. Includes revision table and approval stamp for BSD-N3.

GENERAL NOTES - SANITARY SEWER

- A. SANITARY LATERAL CONNECTION TO BE LOCATED AT THE CENTRELINE OF THE LOT AND CAPPED... B. LOCATION OF LATERAL TO BE MARKED 2.0m PAST PROPERTY LINE WITH A 50 x 100mm WOOD MARKER, PAINTED GREEN, EXTENDING FROM SERVICE INVERT TO 300mm ABOVE GROUND LEVEL...

Table with 2 columns: CITY OF BARRIE STANDARD, GENERAL NOTES SANITARY SEWERS. Includes revision table and approval stamp for BSD-N4.

GENERAL NOTES - STORM SEWER

- A. STORM SEWER TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER... B. PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED... C. STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD-802.010 (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE...

Table with 2 columns: CITY OF BARRIE STANDARD, GENERAL NOTES STORM SEWERS. Includes revision table and approval stamp for BSD-N5.

GENERAL NOTES - WATERMAIN

- 1. CONTRACTORS SHALL INFORM THE CITY OF BARRIE WATER OPERATIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THEIR INTENTIONS TO PERFORM WORK ON WATER INFRASTRUCTURE... 2. OPERATION OF HYDRANTS AND VALVES ON THE POTABLE WATER SYSTEM BY OTHER THAN QUALIFIED WATER OPERATIONS STAFF IS PROHIBITED BY CURRENT BYLAW CITY SERVICE FEES ARE PER THE CURRENT FEES BY-LAW THE CITY'S WATER OPERATIONS STAFF WILL SWAB, PRESSURE TEST, CHLORINATE AND FLUSH ALL NEW WATERMANS...

Table with 2 columns: City of Barrie STANDARD DETAIL, GENERAL NOTES - WATERMAIN. Includes revision table and approval stamp for BSD-N5.

ENGINEERING NOTES

- UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING REQUIREMENTS SHALL APPLY TO THE WORKS... 1. ALL MEASUREMENTS FOR THIS PROJECT ARE IN METERS, EXCEPT PIPE DIAMETERS WHICH IS IN MILLIMETRES, UNLESS OTHERWISE NOTED... 2. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION...

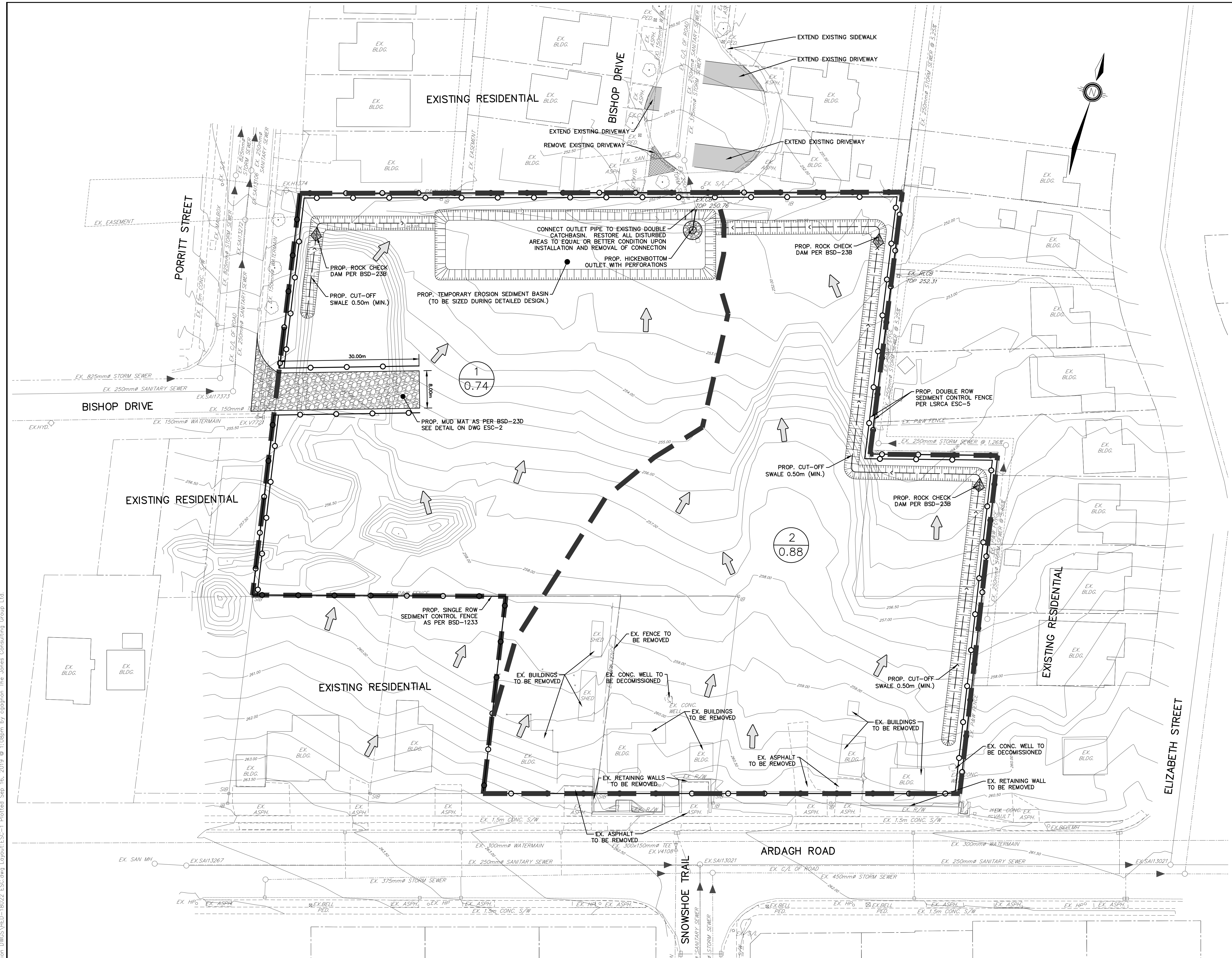
BENCHMARK table with columns: BENCHMARK, LOCATION, ELEVATION, DATE, INITIAL.



HEDBERN DEVELOPMENT CORPORATION GENERAL NOTES

Table with columns: DESIGN, DRAWN, CHECKED, SCALE, PROJECT, DATE, DWG. NO.

Vertical text on the left margin: G:\Eng_3D\HED-18022\Production\DWG\HED-18022-NOTES.dwg Layout: GN-1 Plotted: Sep 16, 2019 @ 11:50am by: csp@jones.com The Jones Consulting Group Ltd.



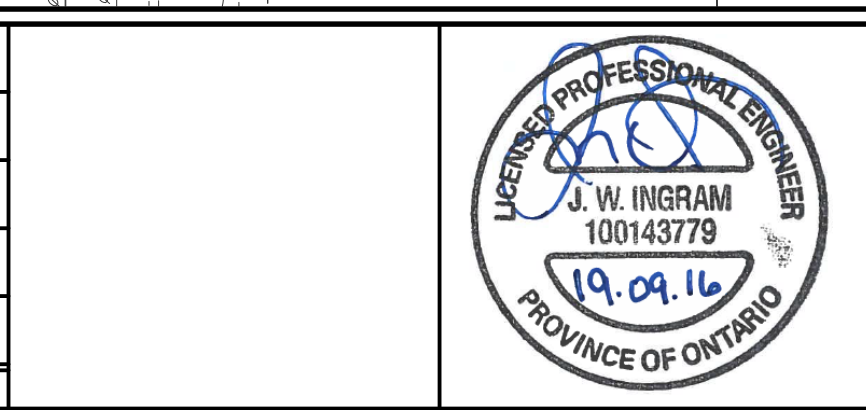
LEGEND

	EXISTING CONTOUR
	EX. SIGN
	EX. HYDRANT & VALVE
	EX. VALVE
	EX. SANITARY MANHOLE
	EX. STORM MANHOLE
	EX. CATCHBASIN
	EX. DOUBLE CATCHBASIN
	EX. BORE HOLE
	TEMPORARY SWALE
	EX. DIRECTION OF OVERLAND FLOW
	PROP. SILTATION CONTROL FENCE AS PER BSD-1233
	TEMP. ROCK CHECK DAM AS PER BSD-23B
	DRAINAGE BOUNDARY
	EROSION CATCHMENT AREA NUMBER
	PRE-GRADE CATCHMENT AREA (ha.)

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BENCHMARK:
 BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERRISDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV: 250.879
 BENCHMARK No: 0312003021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV: 248.846
 BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM DOT" SPEED LIMIT SIGN AND THE BUS STOP. ELEV: 248.846
 BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERRISDALE DRIVE SOUTH ADJACENT TO THE FERRISDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI



HEDBERN DEVELOPMENT CORPORATION
 EROSION AND SEDIMENT CONTROL PLAN

		229 Mapleview Dr. E. Unit 1 Barrie, ON L4N 0W5 P. 705.734.2538 F. 705.734.1058	
DESIGN	JWI/KS	SCALE: 1:400	DATE: MARCH 2019
DRAWN	KS	PROJECT	DWG. No
CHECKED	JWI	HED-18022	ESC-1

GENERAL NOTES

1. DRAWINGS

A. ALL DRAWINGS SHALL BE PRODUCED IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARDS & SPECIFICATIONS FOR PLAN & PROFILE DRAWINGS, GENERAL SERVICE PLANS AND LOT GRADING PLANS.

2. MEASUREMENTS

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3. GENERAL

A. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARD DRAWINGS (BSD) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).

B. ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY CITY OF BARRIE STANDARD DRAWINGS (BSD) AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).

C. LOCATION OF EXISTING SERVICES ARE NOT GUARANTEED. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.

D. A ROAD OCCUPANCY PERMIT IS REQUIRED FROM THE ROADS AND PARKS OPERATIONS BRANCH PRIOR TO THE COMMENCEMENT OF WORK WITHIN ANY CITY RIGHT-OF-WAY.

E. A SITE ALTERATION PERMIT IS REQUIRED FROM THE ENGINEERING DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY EARTH WORKS ON THE SITE.

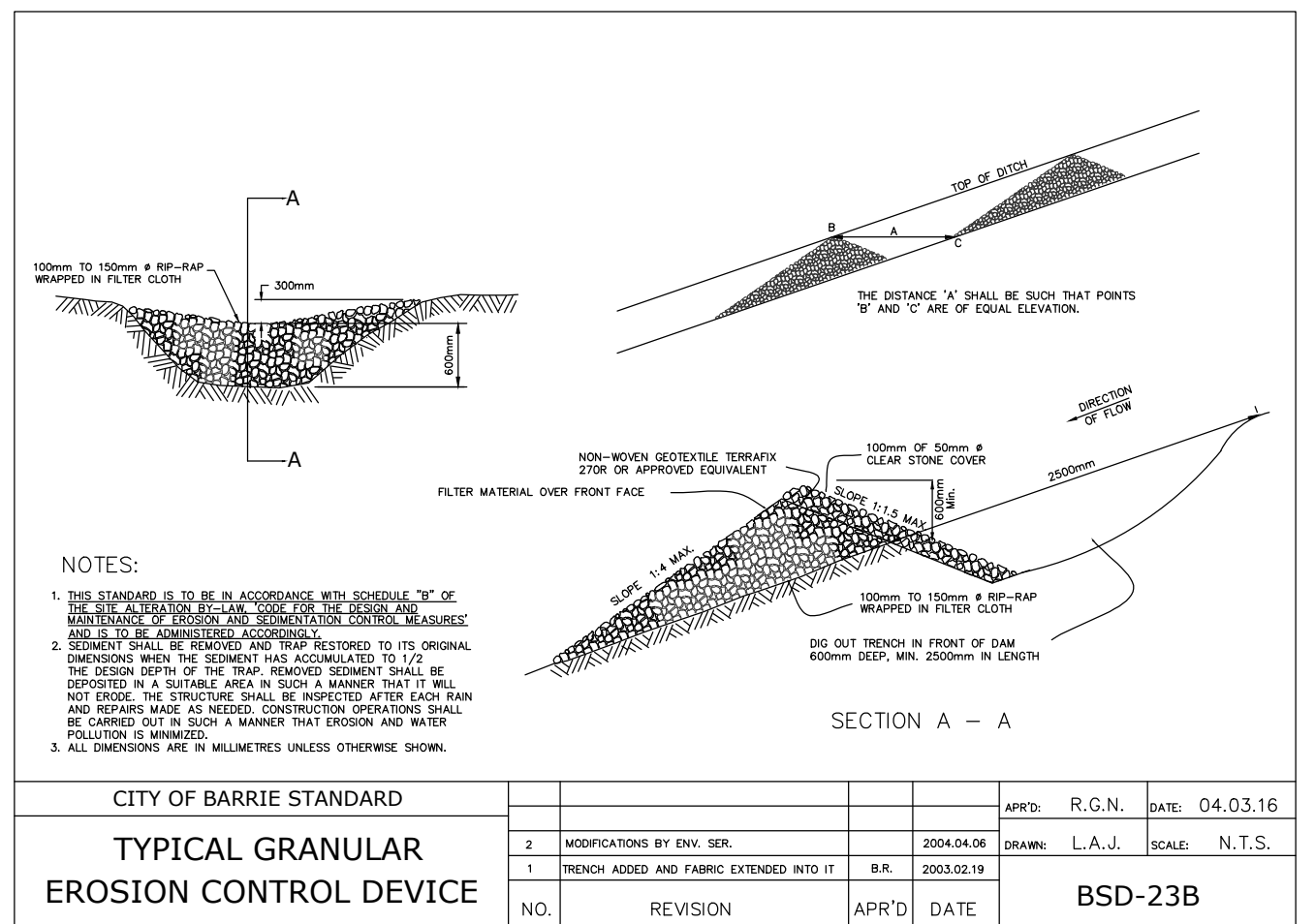
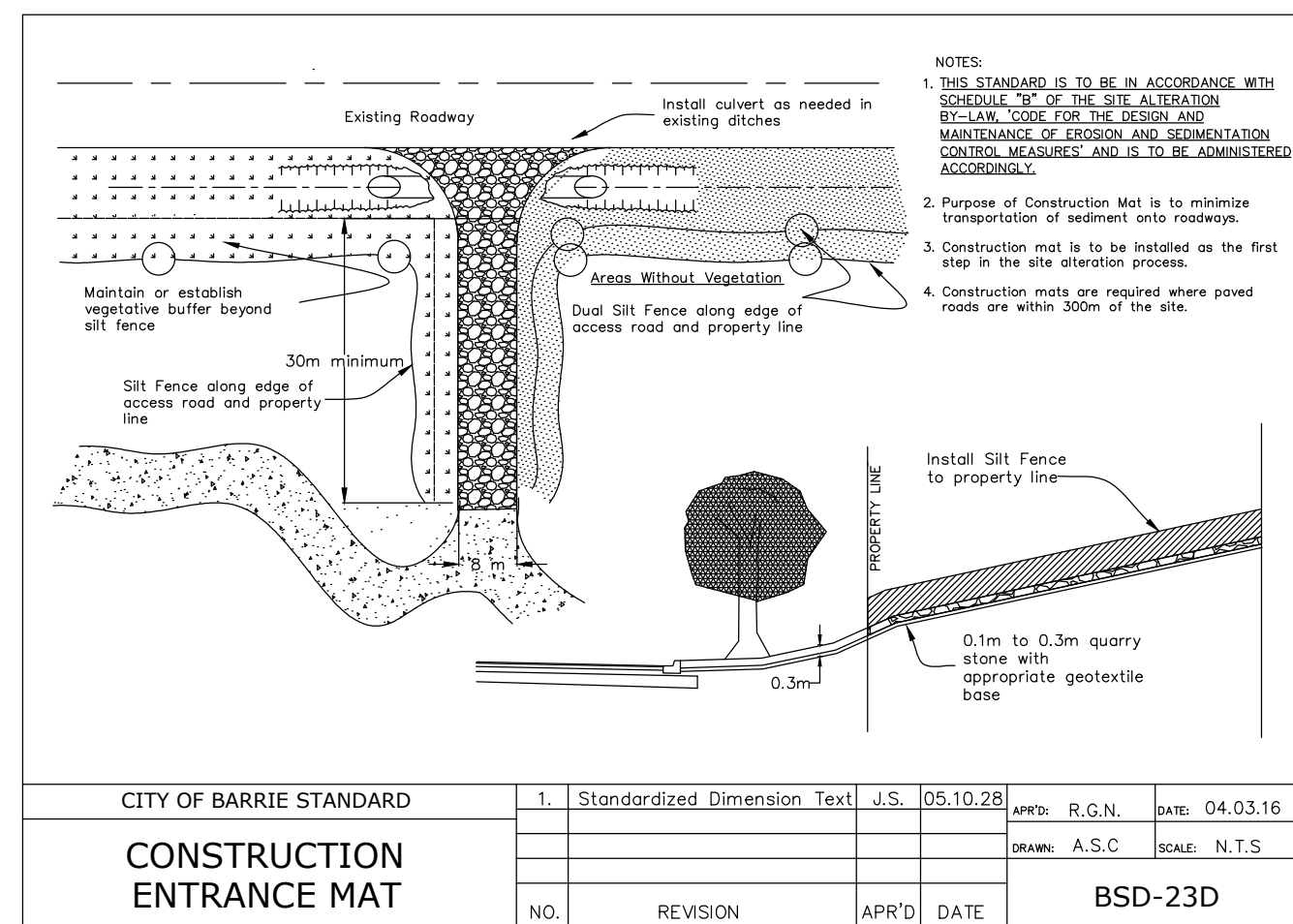
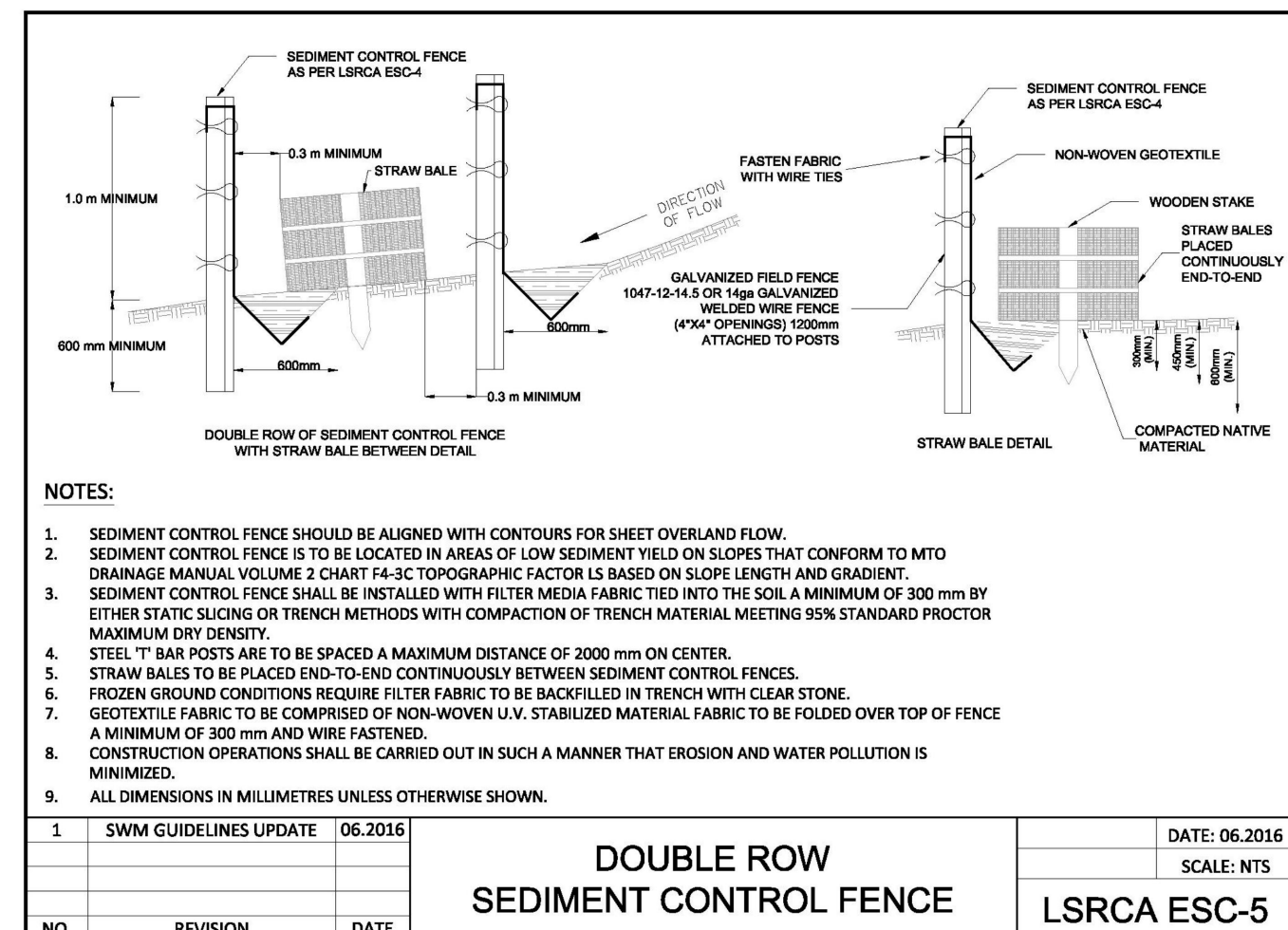
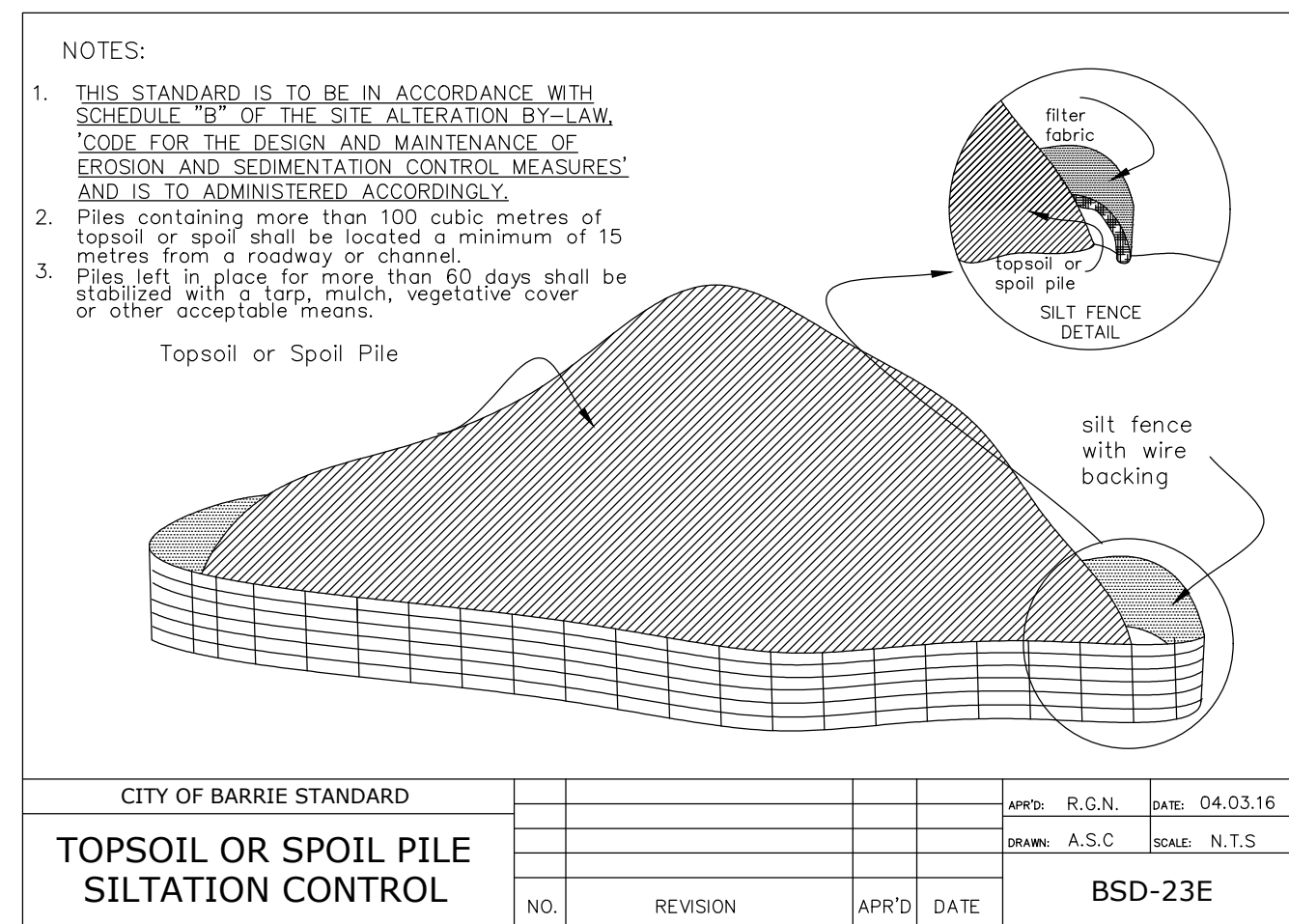
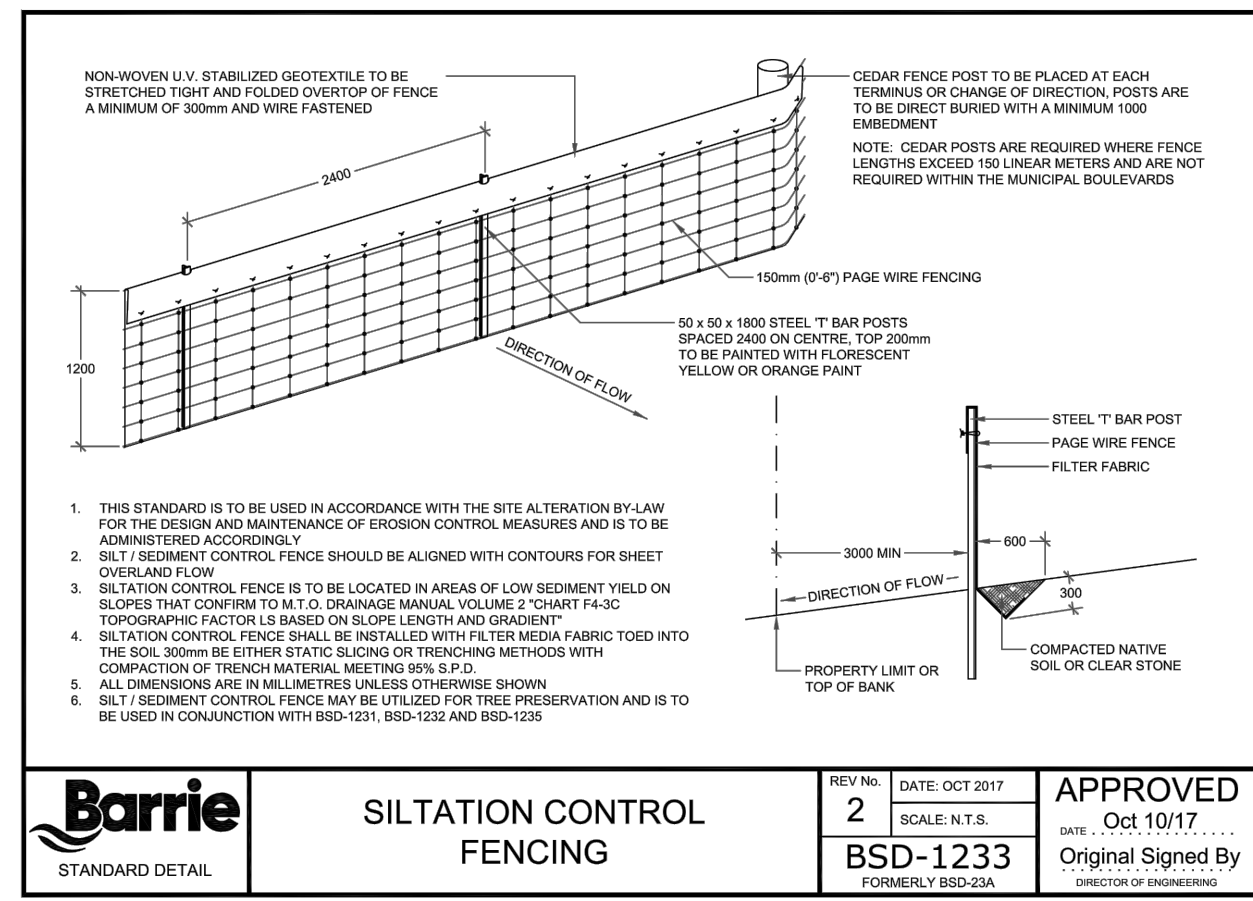
F. NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.

G. GRANULAR MATERIAL, USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.

H. ALL DISTURBED AREAS ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE CITY ENGINEERING DEPARTMENT.

I. ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.

CITY OF BARRIE STANDARD		3. NOTE: S.E. REVISED & A.I. ADDED	J.S.	05.01.10	APPR'D	R.G.N.	DATE	9.2.05.15
GENERAL NOTES		2. S.D. - "ENGINEERING DEPARTMENT"	B.R.	02.10.28	DRWNG	L.A.J.	SCALE	N.T.S.
		1. S.E. TOPSOIL PERMIT		01.12.06				
NO.	REVISION	APPR'D	DATE	BSD-N6				



EROSION CONTROL NOTES

1. THE ACCOMPANYING PLANS SET OUT THE MEASURES THAT WILL BE TAKEN BY THE DEVELOPER AND ITS CONTRACTORS TO CONTROL DOWNSTREAM SEDIMENT TO THE LOWEST LEVEL PRACTICALLY ACHIEVABLE. THE CONDITIONS AND TECHNIQUES SET OUT ARE TO BE FOLLOWED UNLESS APPROVED OTHERWISE BY THE CONTRACT ADMINISTRATOR, CONSERVATION AUTHORITY AND/OR MUNICIPALITY.
2. ALL TEMPORARY SILT CONTROL AND EROSION PROTECTION DEVICES (I.E. SILT FENCING, DRAINAGE SWALES, ROCK CHECK DAMS, SEDIMENT BASIN, GRAVEL ACCESS PAD, ETC.) SHALL BE CONSTRUCTED PRIOR TO COMMENCEMENT OF SITE WORKS AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.
3. ALL SEDIMENTATION CONTROL MEASURES ARE TO BE INSPECTED REGULARLY (MINIMUM WEEKLY), AS WELL AS AFTER EVERY RAINFALL EVENT AND ANY DAMAGED SILT CONTROL AND EROSION PROTECTION DEVICES SHALL BE PROMPTLY REPAIRED OR REPLACED BY THE CONTRACTOR.
4. THE CONTRACTOR MUST USE MATERIALS, CONSTRUCTION PRACTICES, AND MITIGATION TECHNIQUES IN ORDER TO PREVENT THE UNAUTHORIZED HARMFUL ALTERATION, DISRUPTION OR DESTRUCTION OF VEGETATION OR THE IMPAIRMENT OF WATER QUALITY.
5. THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES.
6. AREAS WITHOUT STABLE GROUND COVER SHALL BE PROTECTED WITH SILTATION CONTROL FENCING, STRAW MULCH, ETC. AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BECOME ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
7. ALL EXPOSED SOIL MUST BE GRADED TO A STABLE SLOPE AND TREATED AS QUICKLY AS POSSIBLE TO PREVENT EROSION AND SEDIMENT FROM LEAVING THE SITE. ALL AREA STRIPPED OF VEGETATIVE COVER FOR LONGER THAN 30 DAYS SHALL BE TOPSOILED AND SEEDED AT THE DIRECTION OF THE ENGINEER.
8. ALL SITE DRAINAGE TO BE DIRECTED TO THE TEMPORARY SEDIMENT BASINS AND OTHER CHECK DAMS VIA SHEET DRAINAGE, BERMS OR SWALES (AS NECESSARY) TO FACILITATE THE COMPLETION OF GRADING WORKS. THE CONTRACTOR SHALL CONSTRUCT ANY ADDITIONAL SWALES OR BERMS THAT MAY BE NECESSARY TO DIRECT RUN-OFF IN A CONTROLLED MANNER OF SUITABLE QUALITY.
9. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE FROM PROPOSED CONSTRUCTION ACCESS VIA THE GRAVEL ACCESS PAD.
10. ANY DEWATERING WASTE SHALL BE DISCHARGED TO A VEGETATED AREA AT LEAST 30m FROM ANY WATERCOURSE AND FILTERED. FILTERING METHOD SHALL INCLUDE APPROPRIATELY SIZED DEWATERING BAG (FILTER BAG) ON TOP OF A 300mm THICK CLEARSTONE PAD TO BE APPROVED BY SITE THE INSPECTOR AND LSRCA. DEWATERING BAG AND CLEARSTONE PAD SHALL BE MAINTAINED IN GOOD WORKING ORDER AND REPLACED AS DEEMED NECESSARY.
11. TECHNIQUES FOR EROSION AND SEDIMENT CONTROLS ARE TO ADHERE TO ACCEPTED ENGINEERING PRACTICE AND MUNICIPAL, CONSERVATION AUTHORITY AND ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR SHALL OBTAIN A CURRENT COPY AND BECOME FAMILIAR WITH OPSB 805; CONSTRUCTION SPECIFICATION FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, AS WELL AS APPLICABLE MUNICIPAL STANDARDS AND/OR APPROVAL AGENCY STANDARDS.
12. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES, SUCH MEASURES MUST BE PRESENTED IN WRITING FOR APPROVAL BY THE CONTRACT ADMINISTRATOR AND MUST BE APPROVED IN WRITING BY THE APPLICABLE APPROVAL AGENCIES.

CONSTRUCTION SEQUENCE

THE FOLLOWING CONSTRUCTION SEQUENCE IS PROVIDED FOR CONTRACTOR GUIDANCE:

1. CONSTRUCT ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING SILT FENCE, TREE PRESERVATION FENCE, MUD MATS, CHECK DAMS, SEDIMENT BASINS, SWALES/BERMS, ETC.
2. HYDRO SEED ALL EROSION CONTROL WORKS I.E. TEMPORARY DRAINAGE SWALES/BERMS AND TEMPORARY PONDS (ABOVE PERMANENT POOL ELEVATION).
3. COMMENCE GRUBBING AND STUMP REMOVAL.
4. SITE ALTERATION WORKS (TEMPORARY SEDIMENT CONTROL POND) WITHIN LSRCA REGULATED LIMIT ARE PROHIBITED UNTIL SUCH TIME THAT THE LSRCA APPROVALS HAVE BEEN OBTAINED. IN ADDITION, TOPSOIL STRIPPING AND EARTH EXCAVATION OUTSIDE THE LSRCA REGULATED AREA WILL BE SUBJECT TO PHASING AS DIRECTED BY THE ENGINEER. EACH PHASE MUST BE SUPPORTED BY APPROPRIATE SIZED EROSION AND SEDIMENT CONTROL MEASURES.
5. STRIPPING AND REMOVAL OF TOPSOIL. A VOLUME OF TOPSOIL TO BE STORED ON-SITE AS REQUIRED TO FACILITATE RESTORATION OF SITE.
6. PROCEED WITH EARTH EXCAVATION, CUT TO FILL AND PRE-GRADING OPERATIONS. ALL AREAS STRIPPED OF VEGETATIVE COVER FOR A PERIOD GREATER THAN 30 DAYS SHALL BE HYDRO SEEDING AS DIRECTED BY THE ENGINEER.
7. PROCEED WITH SITE WORKS I.E. SITE SERVICING AND SURFACE WORKS INSTALLATIONS.
8. COMPLETE TEMPORARY CONNECTIONS FROM SEDIMENT BASINS TO INTERNAL STORM SEWERS.
9. RESTORATION OF DISTURBED AREAS.
10. REMOVAL OF SEDIMENT AND EROSION CONTROLS.

NOTE SILTATION AND EROSION CONTROL MEASURES ARE TO BE MONITORED AND MAINTAINED THROUGHOUT CONSTRUCTION AND NECESSARY REPAIRS TO BE PROMPTLY COMPLETED AS REQUIRED.

CONTINGENCY PLAN

IF UNFORESEEN EVENTS CAUSE THE STRATEGIES SET OUT IN THIS PLAN TO BE INSUFFICIENT OR INAPPROPRIATE TO MEET THE OBJECTIVE, THE CONTRACTOR IS EXPECTED TO RESPOND IN A TIMELY MANNER WITH ALL REASONABLE MEASURES CONSISTENT WITH SAFETY, TO PREVENT, COUNTERACT OR REMEDY DOWNSTREAM SEDIMENTATION AND EROSION.

IF A SPILL OCCURS IT SHALL BE REPORTED TO THE MINISTRY OF ENVIRONMENT, CONSERVATION AND PARKS SPILLS ACTION CENTRE AT 1-800-268-6060 AND THE ON CALL CITY OF BARRIE ENVIRONMENTAL OFFICER SHOULD ALSO BE NOTIFIED VIA CELL PHONE AT (705) 725-3374.

IF APPROVAL AGENCIES DETERMINE THAT LONG TERM DAMAGE TO THE NATURAL ENVIRONMENT HAS OCCURRED DUE TO FAILURE OF THIS PLAN TO CONTROL SEDIMENTS, A RESTORATION PLAN WILL BE DEVELOPED BY THE CONTRACTOR IN CONSULTATION WITH AND APPROVAL FROM THE APPROPRIATE AGENCIES FOR IMPLEMENTATION BY THE CONTRACTOR.

HYDRO SEEDING

1. ALL TEMPORARY EROSION AND SEDIMENT CONTROL SWALES, BERMS AND SEDIMENT PONDS TO BE HYDRO SEEDING IMMEDIATELY FOLLOWING CONSTRUCTION.
2. ALL AREAS STRIPPED OF VEGETATIVE COVER FOR LONGER THAN 30 DAYS SHALL BE HYDRO SEEDING AS DIRECTED BY THE ENGINEER.
3. HYDRO SEED MIX TO BE 48% ANNUAL RYE GRASS, 48% FALL RYE AND 4% RED CLOVER (100 kg/ha) WITH FIBRATAC TACTIFIER OR APPROVED EQUIVALENT.

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BENCHMARK:

BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERNDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEVY 250.975

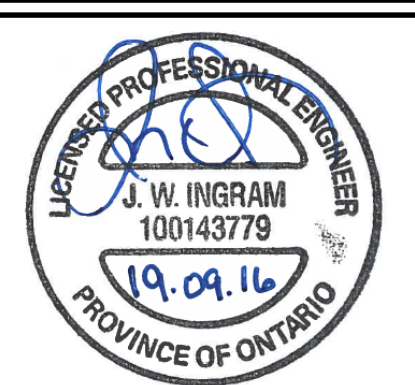
BENCHMARK No: 0312002021 SET BUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEVY 248.846

BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM" SPEED LIMIT SIGN AND THE "STOP" SIGN.

BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERNDALE DRIVE SOUTH ADJACENT TO THE FERNDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWJ

DESIGN	JWJ/KS	SCALE	N/A	DATE	MARCH 2019
DRAWN	KS	PROJECT	HED-18022	DWG. NO	DWG. NO
CHECKED	JWJ	PROJECT	HED-18022	ESC-2	ESC-2

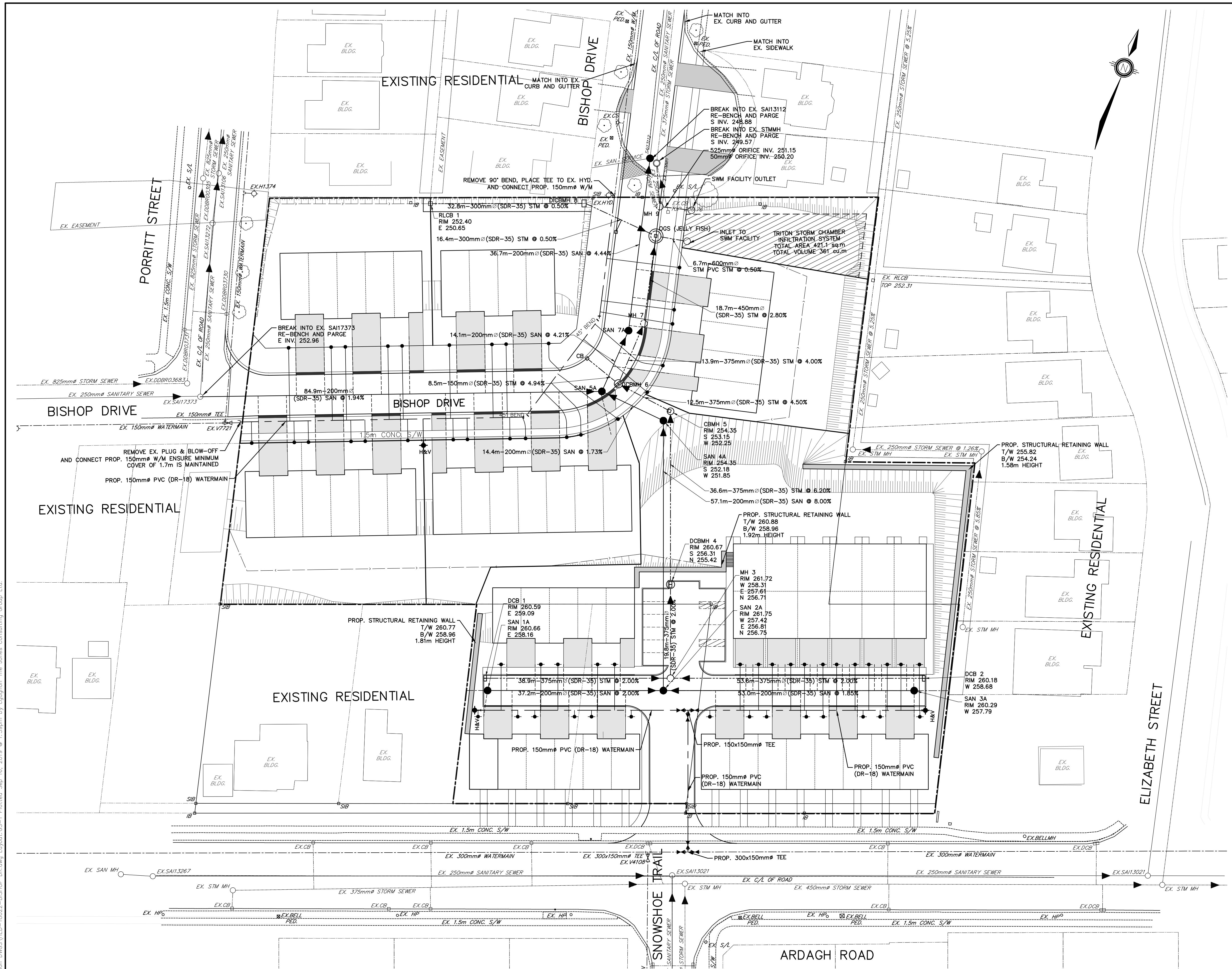


HEDBERN DEVELOPMENT CORPORATION

EROSION AND SEDIMENT CONTROL PLAN NOTES AND DETAILS



DESIGN	JWJ/KS	SCALE	N/A	DATE	MARCH 2019
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CHECKED	JWJ	PROJECT	HED-18022	ESC-2	ESC-2



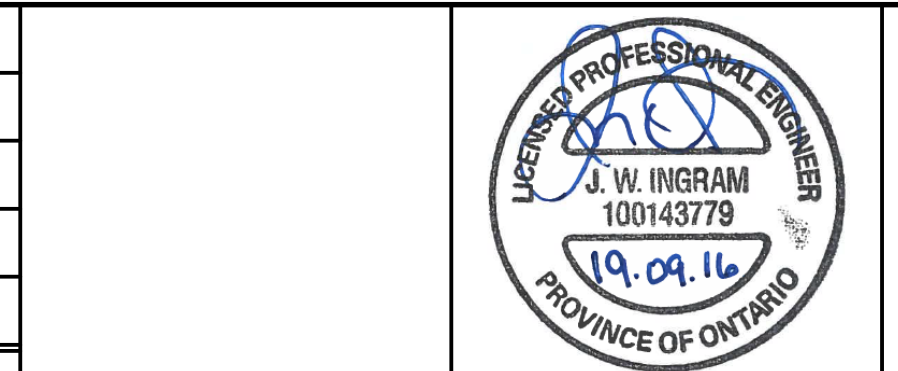
LEGEND

- PROPERTY BOUNDARY
- EXISTING CONTOUR
- DROPPED CURB
- PROPOSED SWALE
- PROPOSED SLOPE 3:1 MAX
- PROPOSED RETAINING WALL
- EX. STM MH
- PROPOSED CATCH BASIN
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED CATCH BASIN MAINTENANCE HOLE
- PROPOSED DOUBLE CATCH BASIN MAINTENANCE HOLE
- PROPOSED STORM SEWER AND FLOW DIRECTION
- EX. SAN 11312
- EXISTING SANITARY MAINTENANCE HOLE
- PROPOSED SANITARY MAINTENANCE HOLE
- PROPOSED SANITARY SEWER AND FLOW DIRECTION
- PROPOSED SANITARY SEWER (100mm)
- PROPOSED LOT NUMBER
- PROPOSED WATERMAIN
- PROPOSED CURB STOP AND WATER SERVICE (25mm)
- PROPOSED HYDRANT AND VALVE
- PROPOSED VALVE

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BENCHMARK:
 BENCHMARK No: 03120080042 LOCATED ON THE WESTERLY LIMIT OF FERNDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF JOSE DRIVE AND 350m NORTH OF ARDAGH ROAD. ELEV 250.875
 BENCHMARK No: 03120030021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846
 BENCHMARK No: 03120040053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP.
 BENCHMARK No: 03120040045 LOCATED ON THE WEST CURB LINE OF FERNDALE DRIVE SOUTH ADJACENT TO THE FERNDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI



HEDBERN DEVELOPMENT CORPORATION
 BISHOP DRIVE GENERAL SERVICING

DESIGN	JW/KS	SCALE: 1:400	DATE: MARCH 2019
DRAWN	KS	PROJECT: HED-18022	DWG. No: G-1
CHECKED	JW		

JONES CONSULTING GROUP LTD.
 PLANNERS & ENGINEERS
 229 Mapleview Dr. E. Unit 1
 Barrie, ON L4N 0W5
 P. 705.734.2538
 F. 705.734.1056



LEGEND

	EXISTING CONTOUR
	PROPOSED GRADE
	EXISTING GRADE
	PROPOSED GRADIENT AND FLOW DIRECTION
	DROPPED CURB
	TACTILE WARNING PLATE (OPSD 310.039)
	EMERGENCY OVERLAND FLOW DIRECTION
	PROPOSED SWALE
	PROPOSED SLOPE 3:1 MAX
	PROPOSED RETAINING WALL
	EXISTING STORM MAINTENANCE HOLE
	EXISTING SANITARY MAINTENANCE HOLE
	PROPOSED CATCH BASIN
	PROPOSED DOUBLE CATCH BASIN
	PROPOSED CATCH BASIN MAINTENANCE HOLE
	PROPOSED DOUBLE CATCH BASIN MAINTENANCE HOLE
	PROPOSED SANITARY MAINTENANCE HOLE
	PROPOSED NUMBER OF RISERS
	PROPOSED LOT NUMBER
	PROPOSED CURB STOP
	PROPOSED HYDRANT AND VALVE
	PROPOSED VALVE

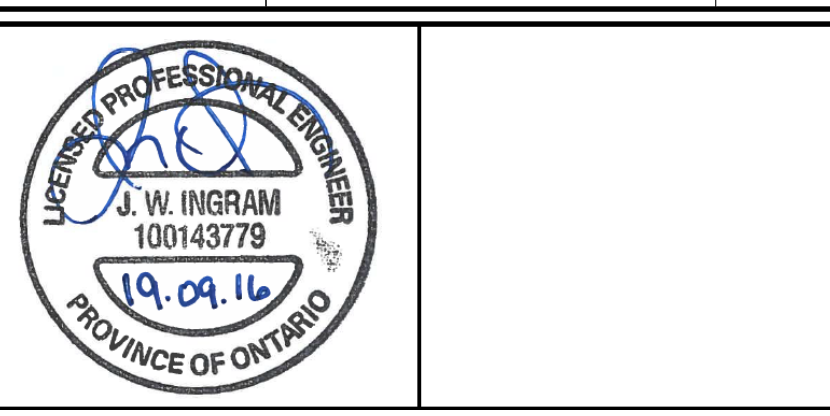
NOTE:
ALL DISTURBED AREAS TO BE RE-INSTATED TO EXISTING CONDITION OR BETTER. RE-INSTATE WITH 200mm TOPSOIL AND SOD.

G:\Eng_3D\HED-18022\Production\DWG\HED-18022_Grading.dwg Layout (GP) - I Plotted Sep. 16, 2019 @ 2:00pm by cagapron. The Jones Consulting Group Ltd.

BENCHMARK:

BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERRIDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV 256.979			
BENCHMARK No: 0312003021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846			
BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP.			
BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERRIDALE DRIVE SOUTH ADJACENT TO THE FERRIDALE WOODS ELEMENTARY SCHOOL SIGN.			

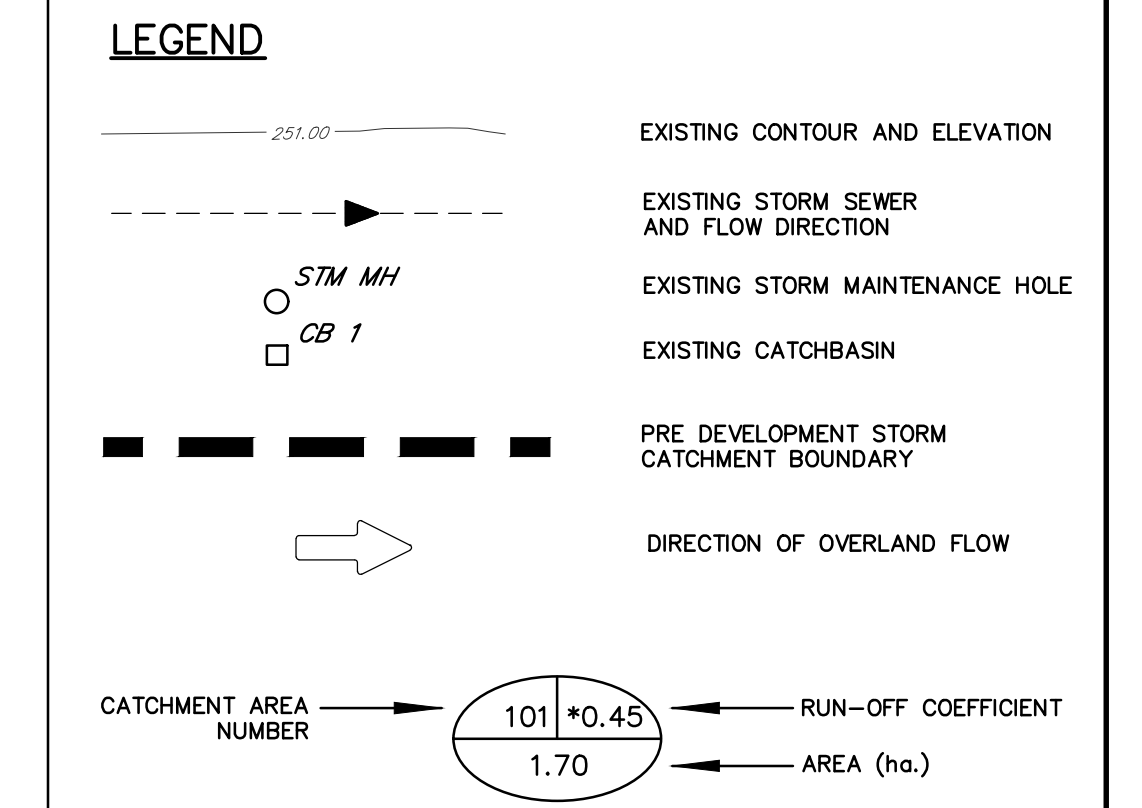
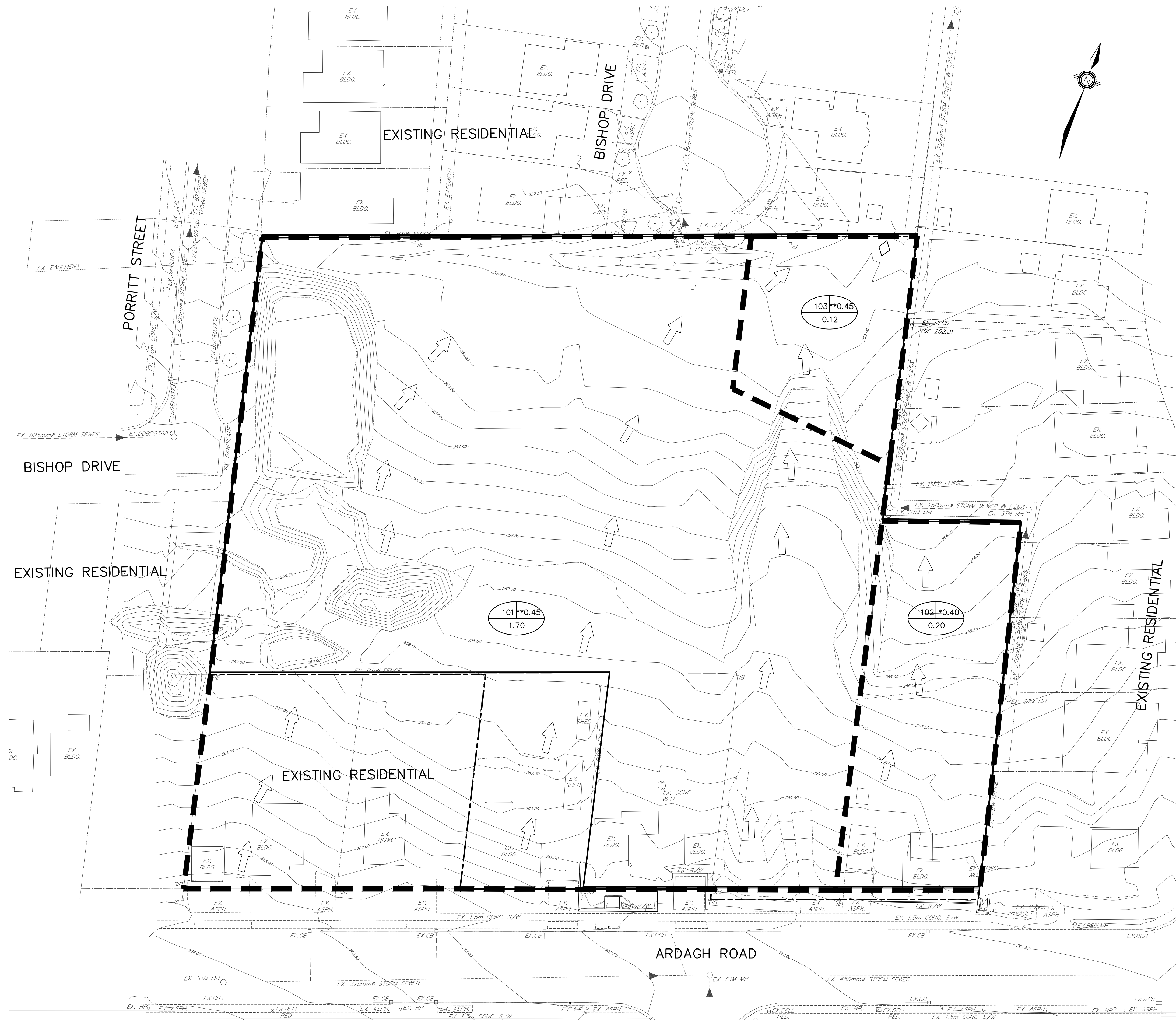
NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI



HEDBERN DEVELOPMENT CORPORATION
GRADING PLAN

DESIGN	JWI/KS	SCALE: 1:400	DATE	MARCH 2019
DRAWN	KS	PROJECT	HED-18022	DWG. No
CHECKED	JWI			GP-1

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E. Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1058



* ALLOWABLE DEVELOPMENT CATCHMENT REFER TO CITY OF BARRIE, TRIBUTARY AREAS OF STORM SEWER DESIGN (AS CONSTRUCTED) DATED APRIL 15TH, 1988.

** ALLOWABLE DEVELOPMENT CATCHMENT REFER TO GALLOREST HOMES INC. STORM CATCHMENT AND DRAINAGE PLAN DATED MAY 30TH, 1989.

G:\Eng_3D\VED-18022\Production\DWG\VED-18022 STORM.dwg Layout: STM-1 Printed: Sep 16, 2019 @ 11:55am by sgagnan The Jones Consulting Group Ltd.

BENCHMARK:
 BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERRIDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV 250.875
 BENCHMARK No: 0312003021 SET PLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846
 BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE MAXIMUM 60' SPEED LIMIT SIGN AND THE BUS STOP. ELEV 248.846
 BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERRIDALE DRIVE SOUTH ADJACENT TO THE FERRIDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI

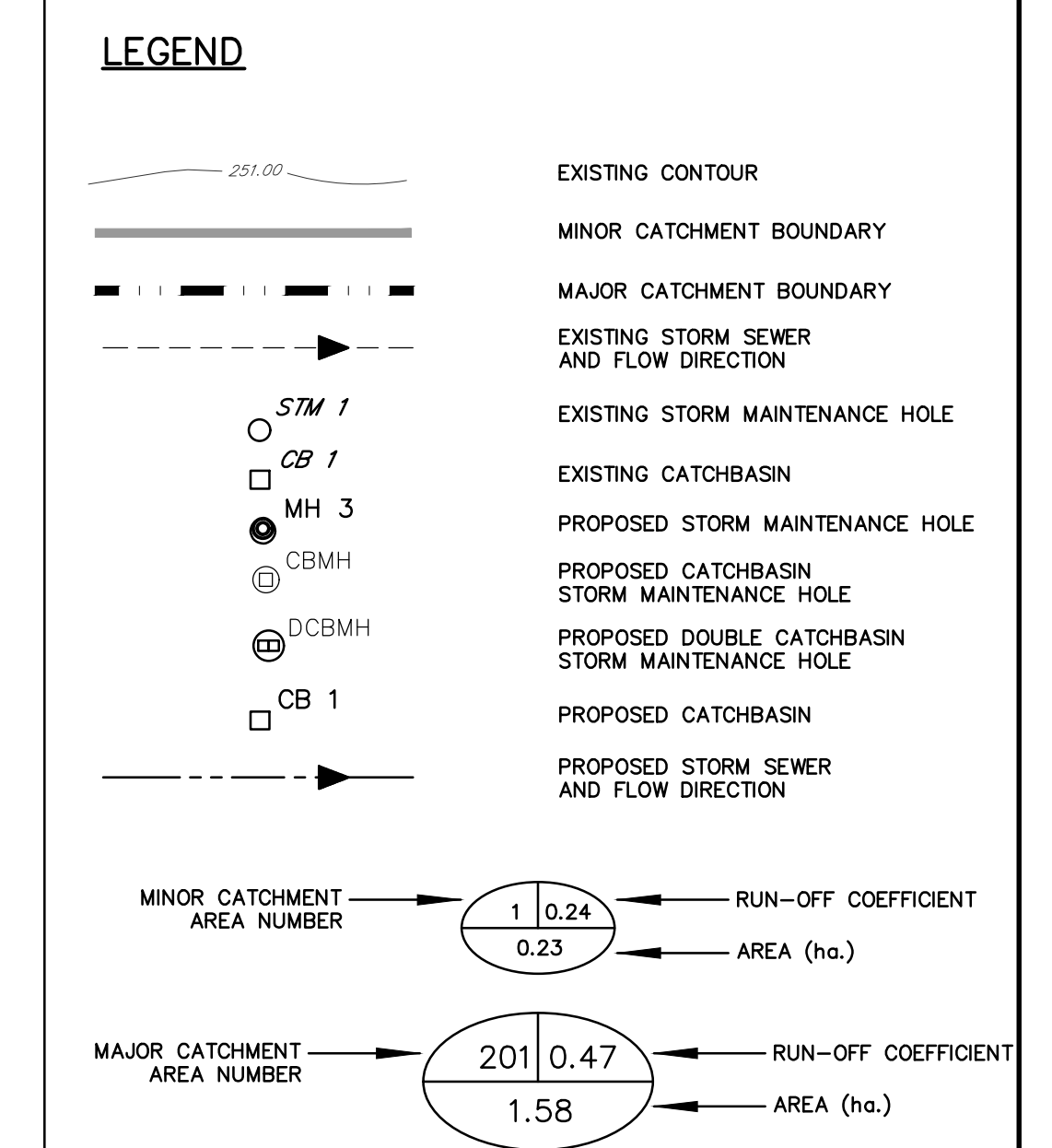
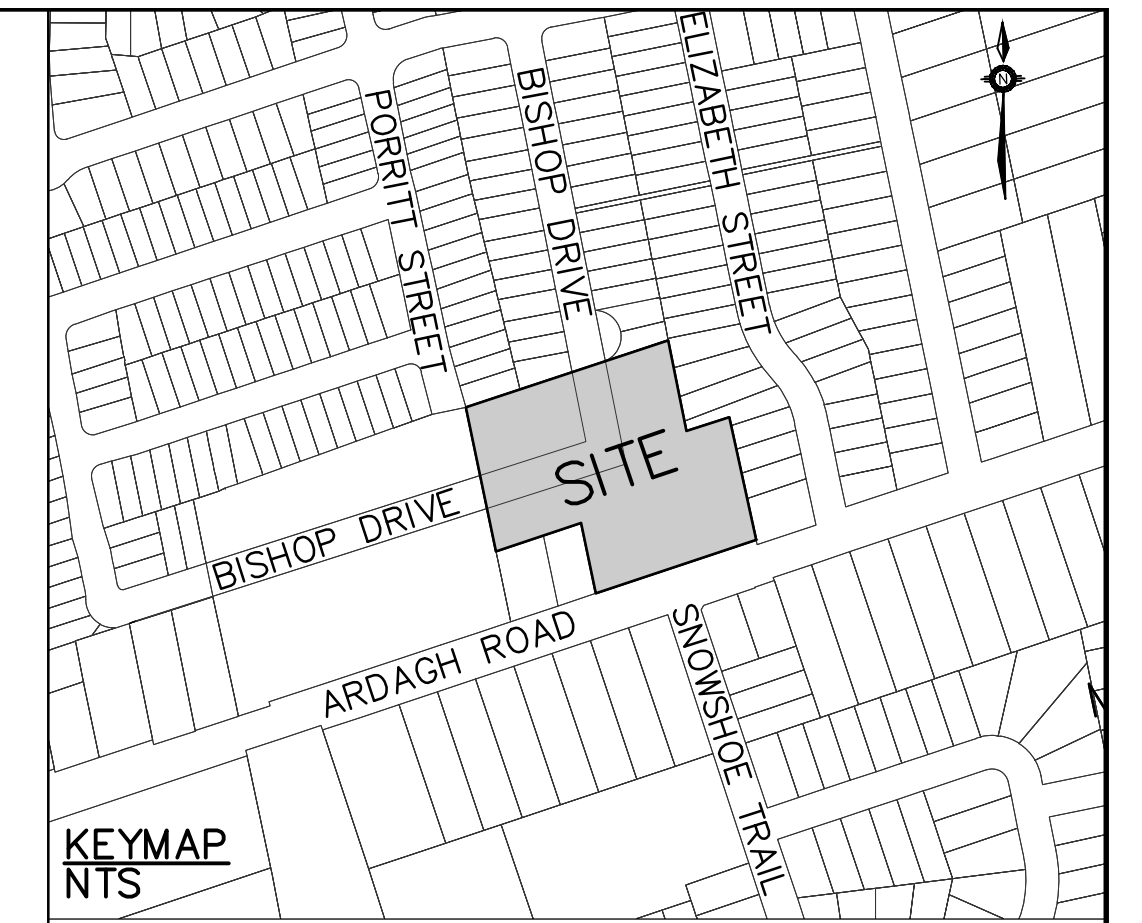
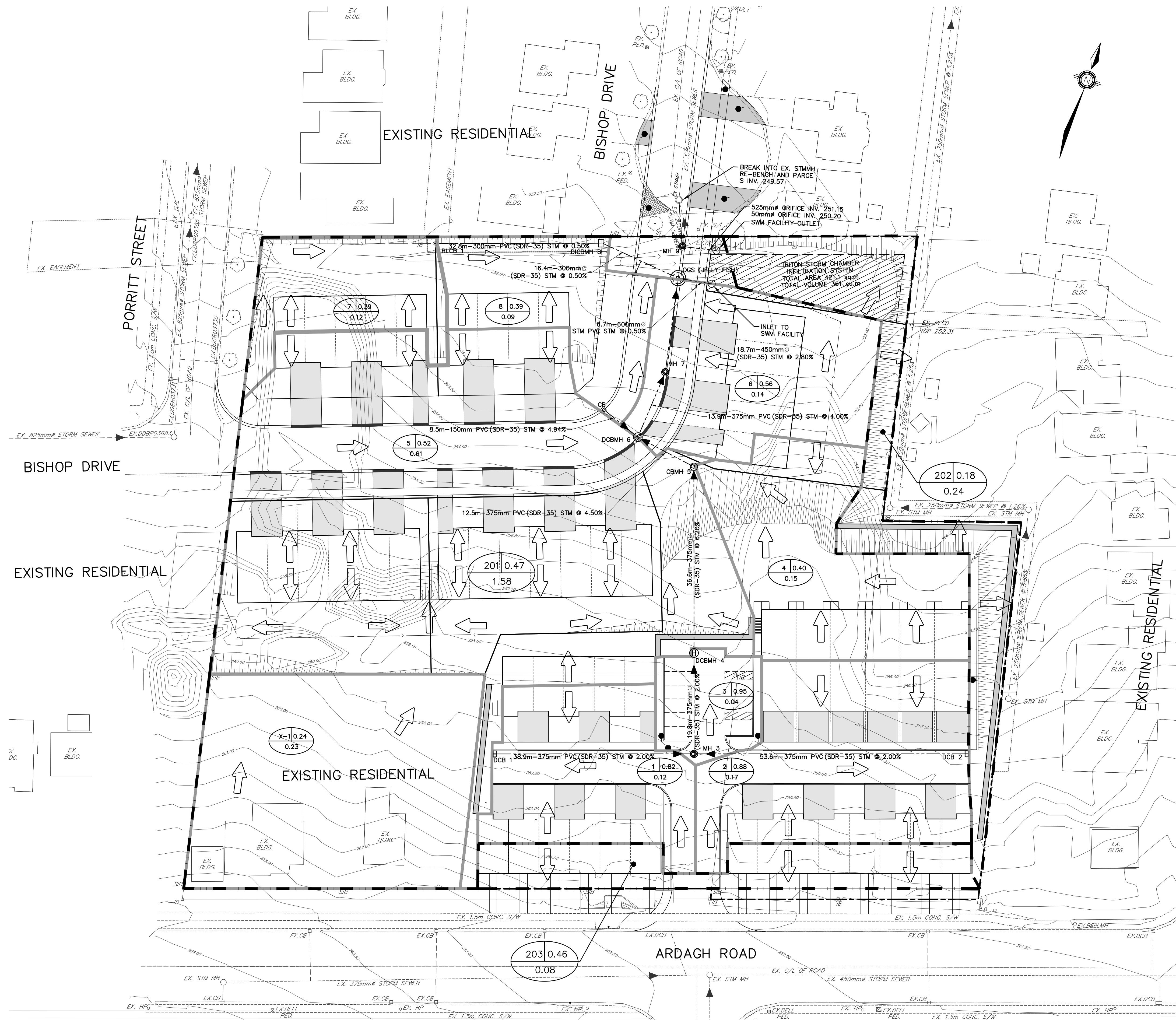


HEDBERN DEVELOPMENT CORPORATION

ALLOWABLE DEVELOPMENT STORM DRAINAGE PLAN

JONES CONSULTING GROUP LTD.
 PLANNERS & ENGINEERS
 229 Mapleview Dr. E. Unit 1
 Barrie, ON L4N 0W5
 P. 705.734.2538
 F. 705.734.1056

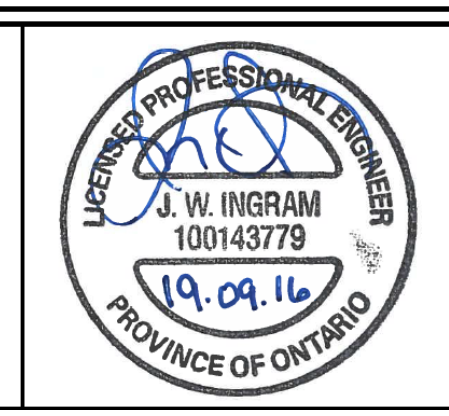
DESIGN	JWI/KS	SCALE: 1:400	DATE	MARCH 2019
DRAWN	KS	PROJECT	DWG. No	
CHECKED	JWI	HED-18022	STM-1	



NOTE:
 ALL STORM SEWERS HAVE BEEN DESIGNED TO CONVEY 100 YEAR STORM EVENT

BENCHMARK:
 BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERNDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV 250.975
 BENCHMARK No: 0312003021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846
 BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP. ELEV 248.846
 BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERNDALE DRIVE SOUTH ADJACENT TO THE FERNDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI

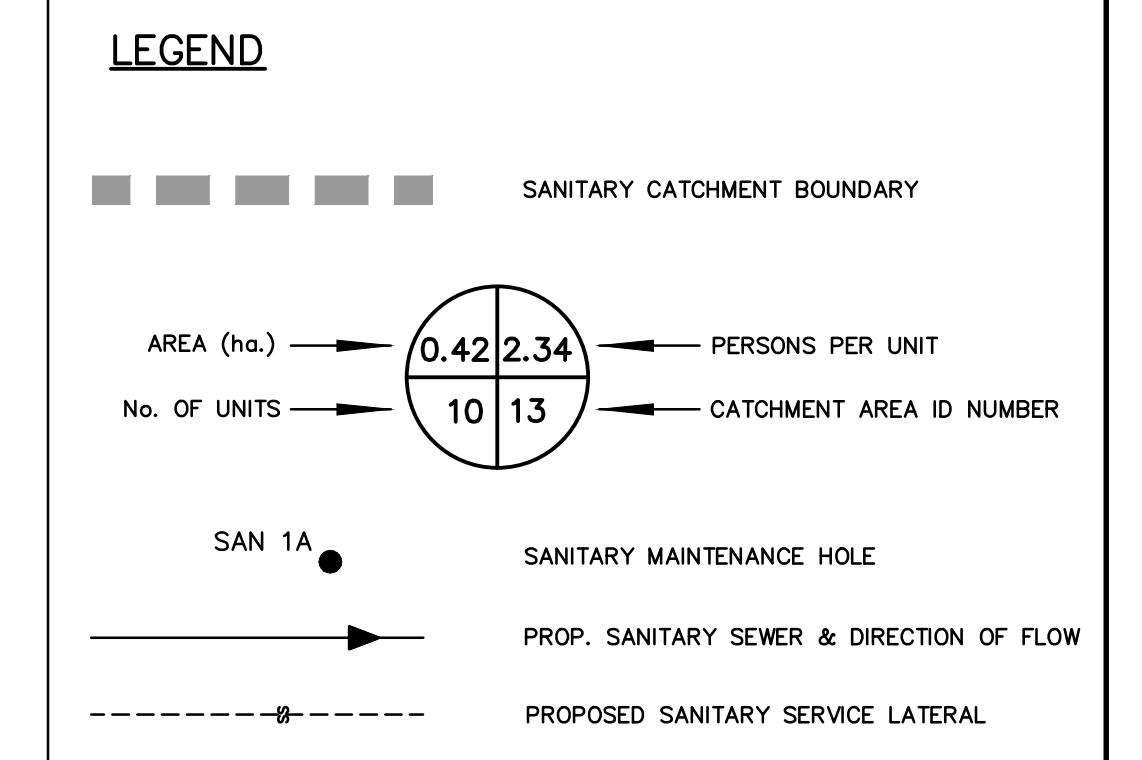
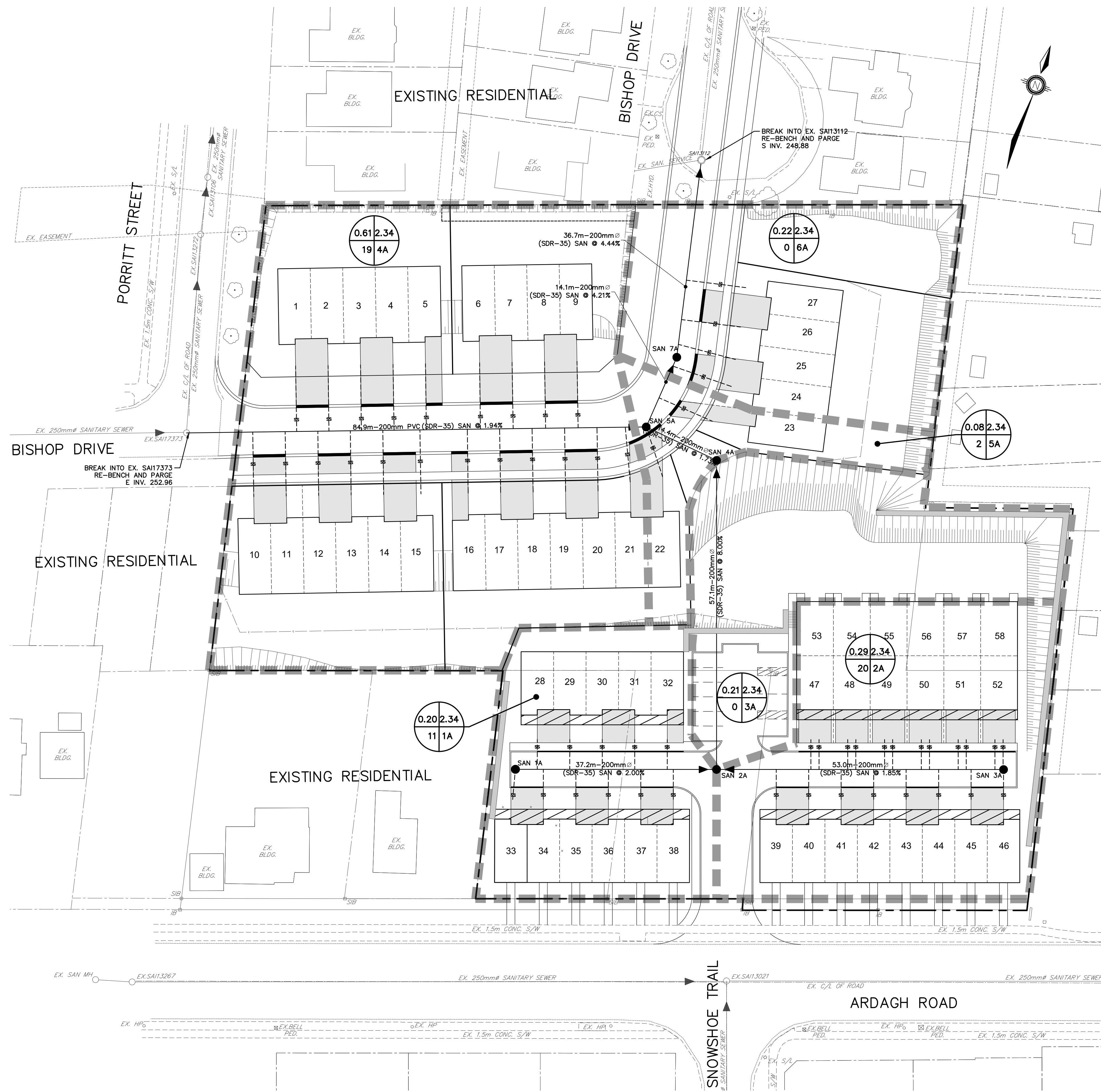


HEDBERN DEVELOPMENT CORPORATION
 POST DEVELOPMENT STORM DRAINAGE PLAN

JONES CONSULTING GROUP LTD.
 PLANNERS & ENGINEERS
 229 Mapleview Dr. E. Unit 1
 Barrie, ON L4N 0W5
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 F. 705.734.1056

DESIGN	JWI/KS	SCALE: 1:400	DATE	MARCH 2019
DRAWN	KS	PROJECT	DWG. No	
CHECKED	JWI	HED-18022	STM-2	

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G:\Eng_3D\VED-18022\Production\DWG\VED-18022_SANITARY.dwg Layout: SAN-1 Plotted: Sep 16, 2019 @ 11:57am by sgagnan The Jones Consulting Group Ltd.

BENCHMARK:
 BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF CORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV 250.973
 BENCHMARK No: 0312003021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846
 BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP. ELEV 248.846
 BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERDALE DRIVE SOUTH ADJACENT TO THE FERDALE WOODS ELEMENTARY SCHOOL SIGN.

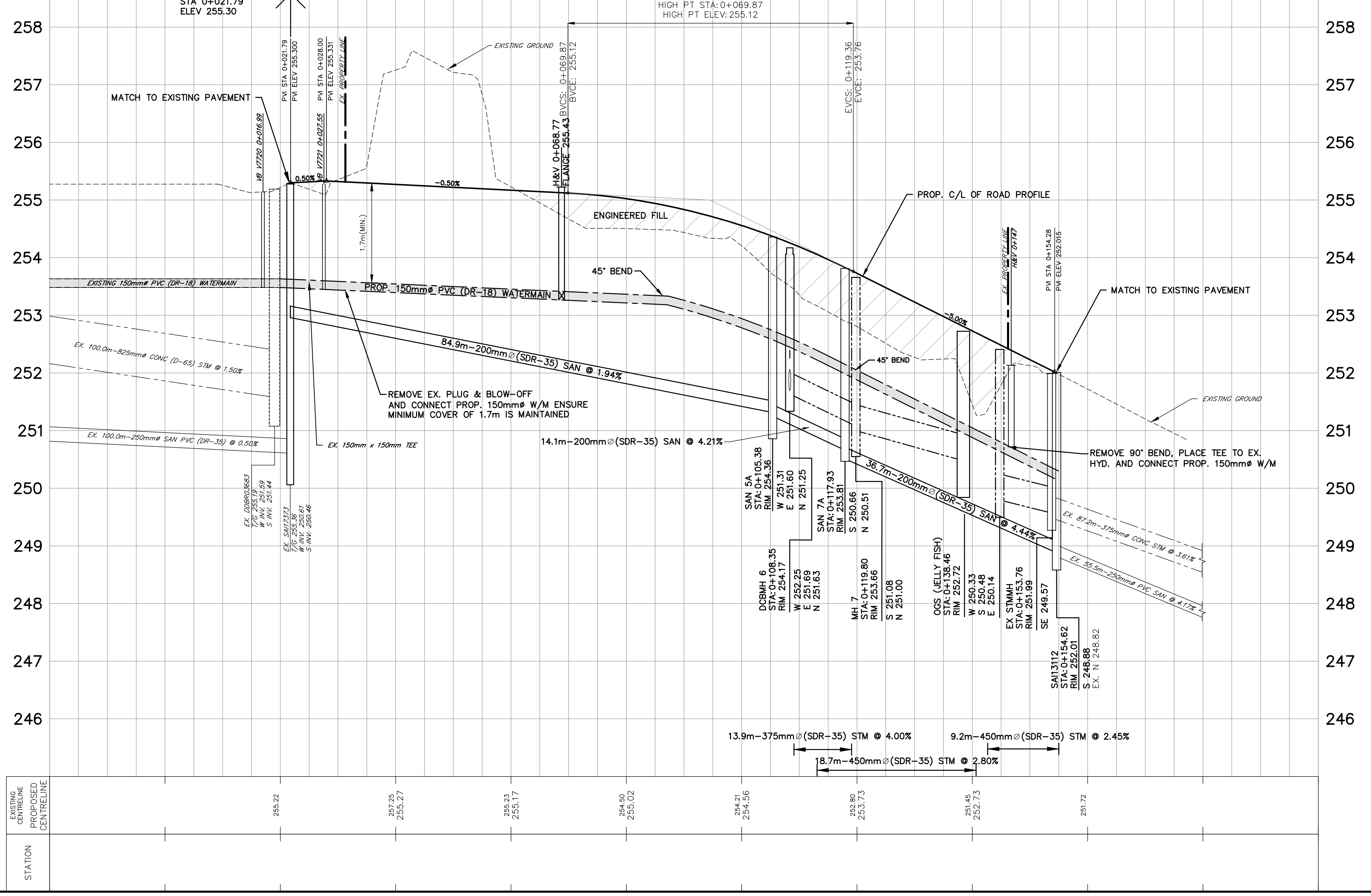
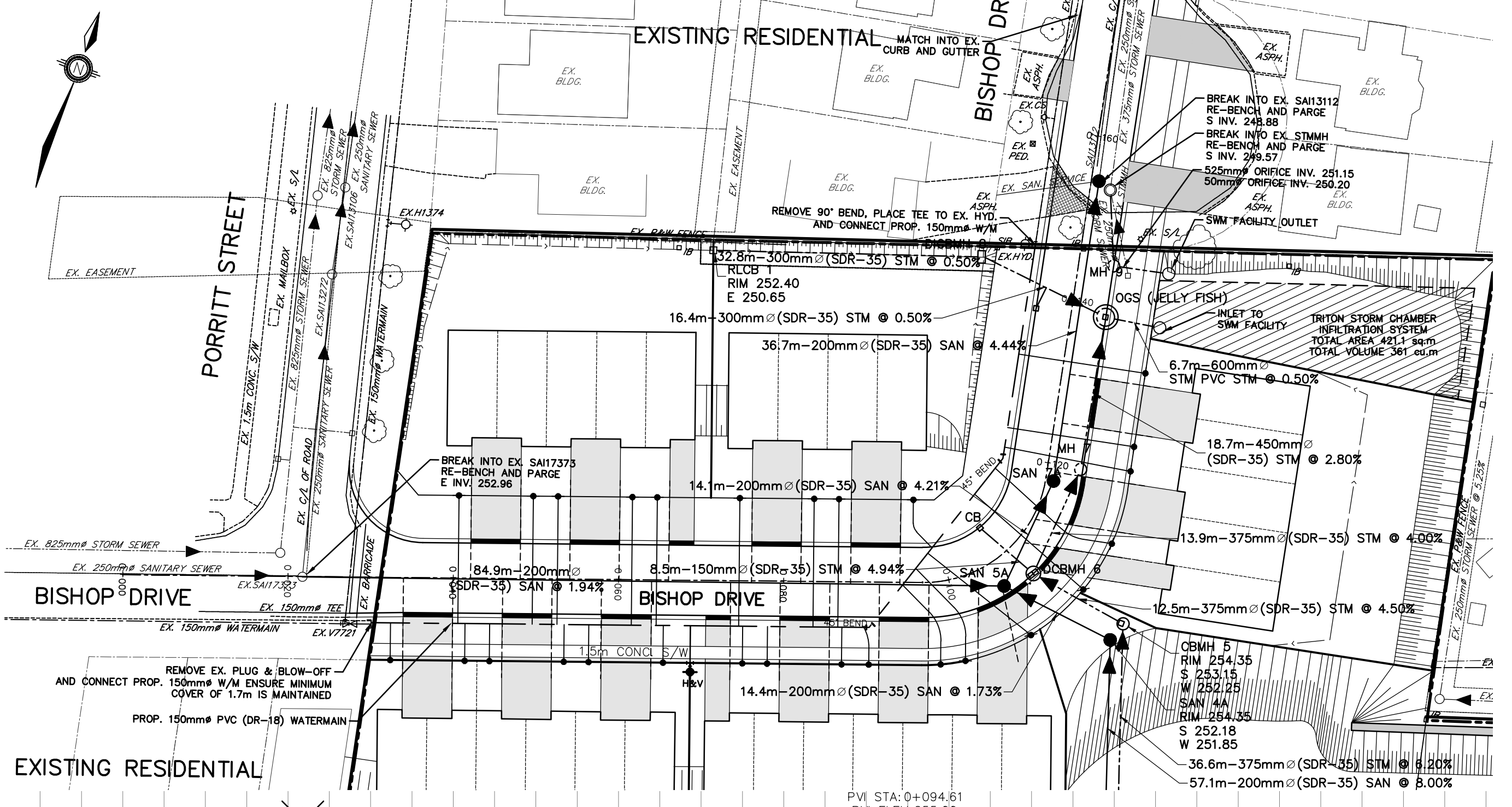
NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI



HEDBERN DEVELOPMENT CORPORATION
 SANITARY DRAINAGE PLAN

JONES CONSULTING GROUP LTD.
 PLANNERS & ENGINEERS
 229 Mapleview Dr. E. Unit 1
 Barrie, ON L4N 0W5
 P. 705.734.2638
 F. 705.734.1056

DESIGN	JWI/KS	SCALE: 1:500	DATE	MARCH 2019
DRAWN	KS	PROJECT	DWG. No	
CHECKED	JWI	HED-18022	SAN-1	



LEGEND

- PROPERTY BOUNDARY
- EXISTING CONTOUR
- DROPPED CURB
- EX. WATERMAIN
- PROP. WATERMAIN
- PROP. CURB STOP
- SANITARY MAINTENANCE HOLE
- PROP. SANITARY SEWER & DIRECTION OF FLOW
- SANITARY SERVICE
- STORM MAINTENANCE HOLE
- PROP. STORM SEWER & DIRECTION OF FLOW
- CATCH BASIN
- DOUBLE CATCH BASIN
- STORM MAINTENANCE HOLE
- CATCH BASIN MAINTENANCE HOLE
- DOUBLE CATCH BASIN MAINTENANCE HOLE
- FIRE HYDRANT
- VALVE BOX

G:\Eng_3D\VED-18022\Production_DWG\VED-18022-BISHOP DR.dwg, Layout: PP-1, Plotted: Sep 16, 2019, @ 2:28pm by cspagnon The Jones Consulting Group, Ltd.

BENCHMARK:
 BENCHMARK No: 03120080042 LOCATED ON THE WESTERLY LIMIT OF FERNDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF JONES DRIVE AND 350m NORTH OF ARDAGH ROAD.
 BENCHMARK No: 03120030021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846
 BENCHMARK No: 03120040003 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S BAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP.
 BENCHMARK No: 03120040045 LOCATED ON THE WEST CURB LINE OF FERNDALE DRIVE SOUTH ADJACENT TO THE FERNDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI



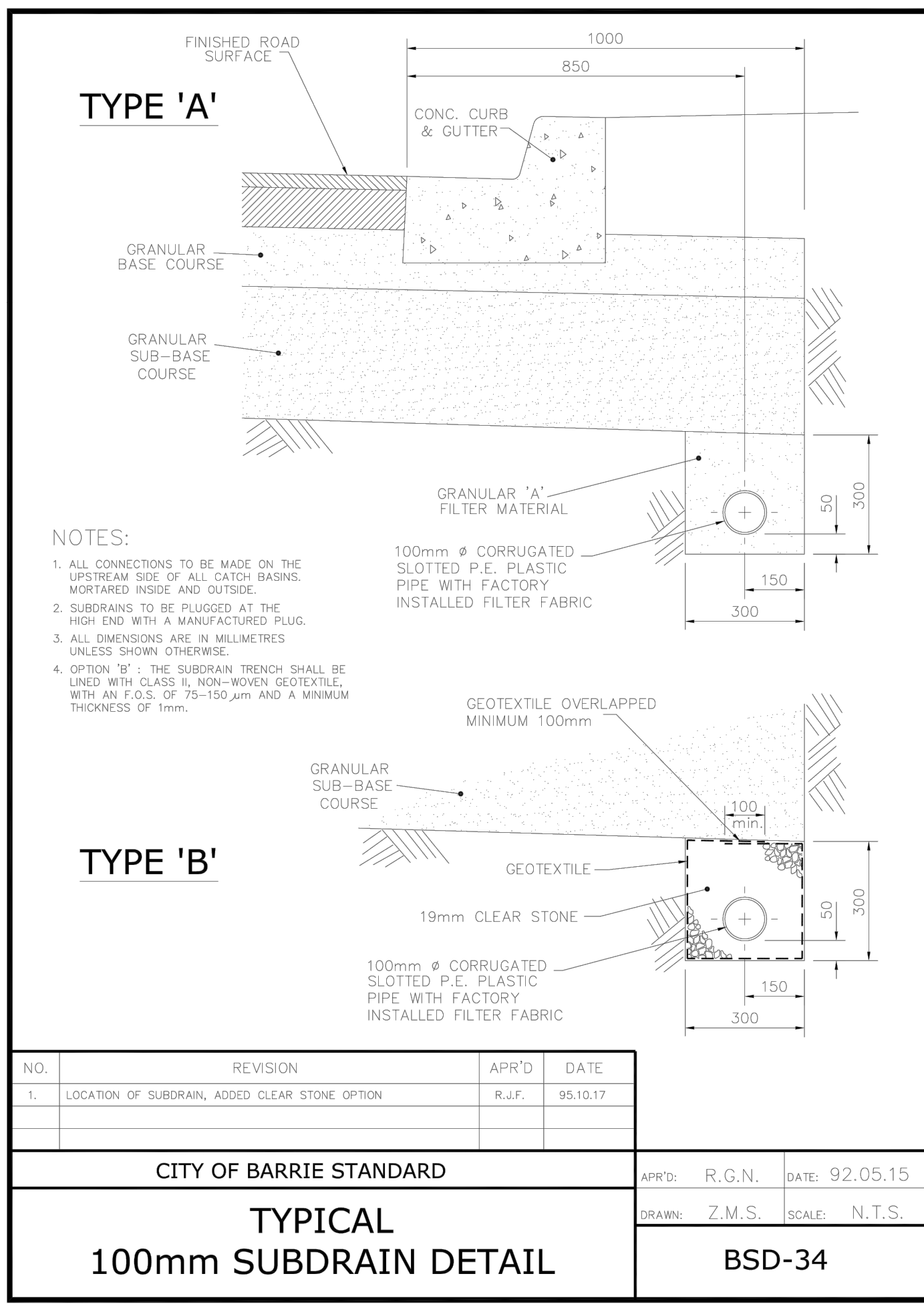
HEDBERN DEVELOPMENT CORPORATION

BISHOP DRIVE PLAN AND PROFILE
 STA: 0+000 TO 0+180

JONES CONSULTING GROUP LTD.
 PLANNERS & ENGINEERS

229 Mapleview Dr. E. Unit 1
 Barrie, ON L4N 0W5
 P. 705.734.2538
 F. 705.734.1056

DESIGN	JW/KS	SCALE: H 1:500 V 1:50	DATE	MARCH 2019
DRAWN	KS	PROJECT	HED-18022	DWG. No
CHECKED	JW			PP-1



NO.	REVISION	APR'D	DATE
1.	LOCATION OF SUBDRAIN, ADDED CLEAR STONE OPTION	R.J.F.	95.10.17

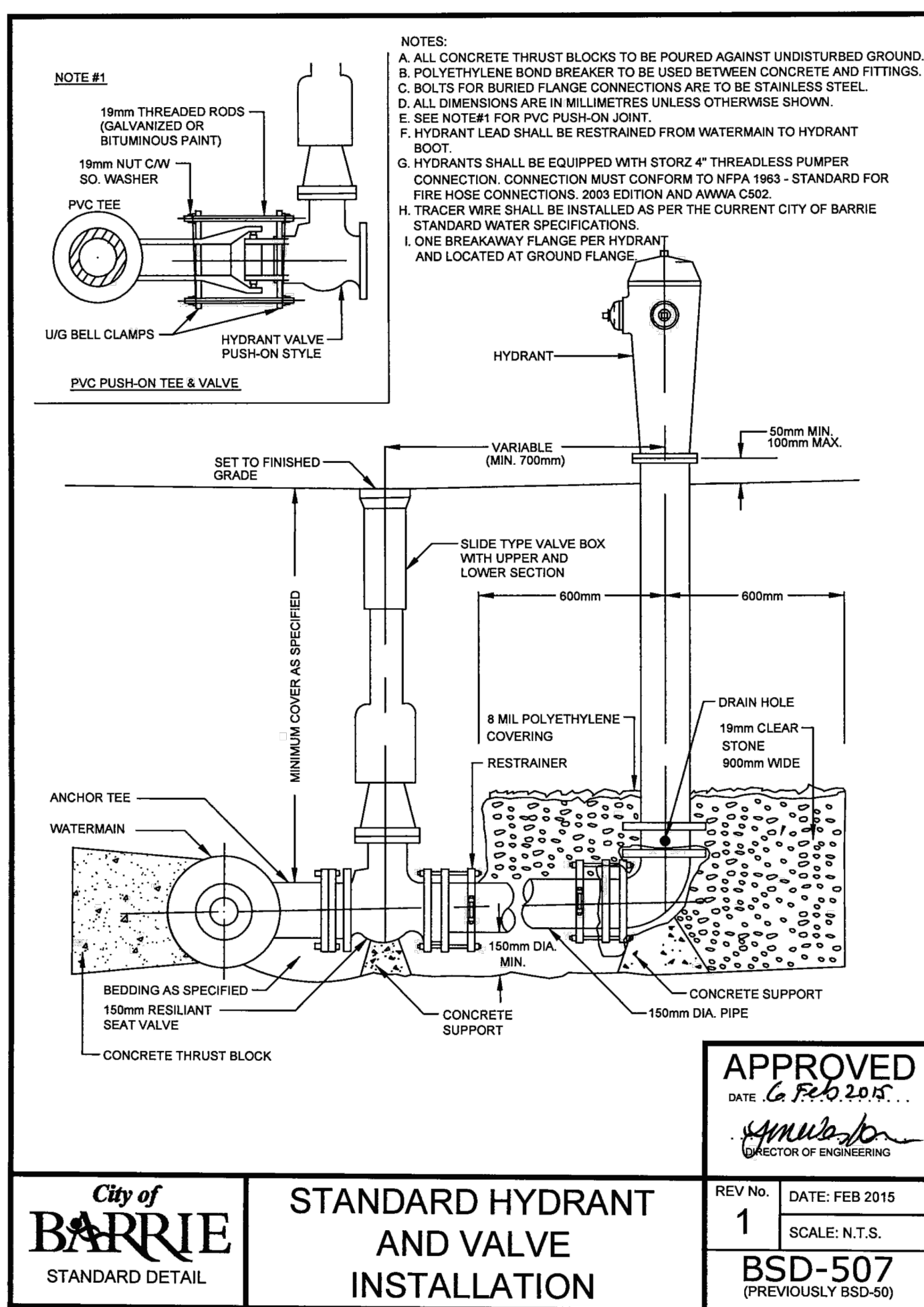
CITY OF BARRIE STANDARD

APPR'D: R.G.N. DATE: 92.05.15

DRAWN: Z.M.S. SCALE: N.T.S.

TYPICAL 100mm SUBDRAIN DETAIL

BSD-34



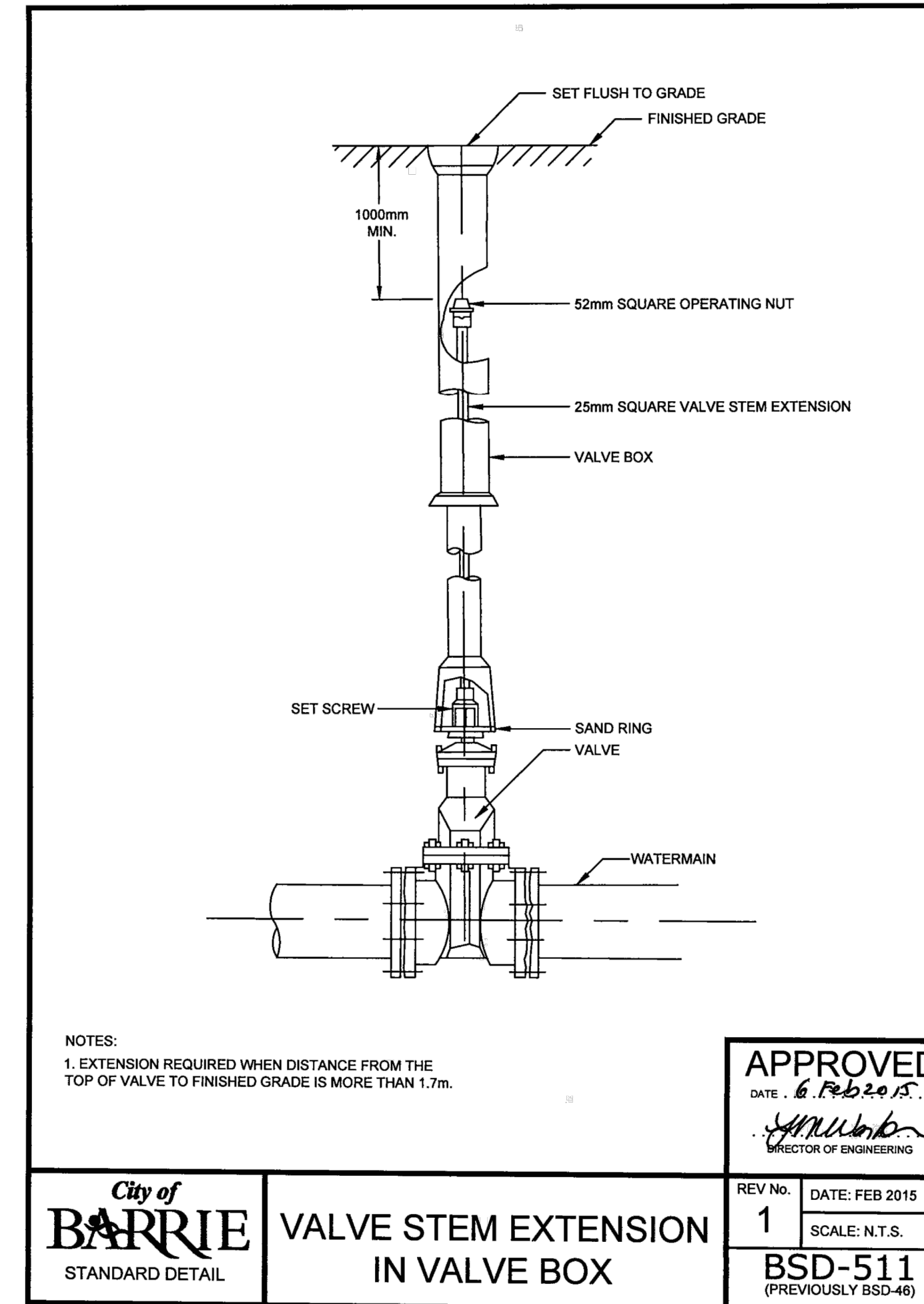
APPROVED DATE: 6 Feb 2015

City of BARRIE STANDARD DETAIL

STANDARD HYDRANT AND VALVE INSTALLATION

REV No. 1 DATE: FEB 2015 SCALE: N.T.S.

BSD-507 (PREVIOUSLY BSD-50)



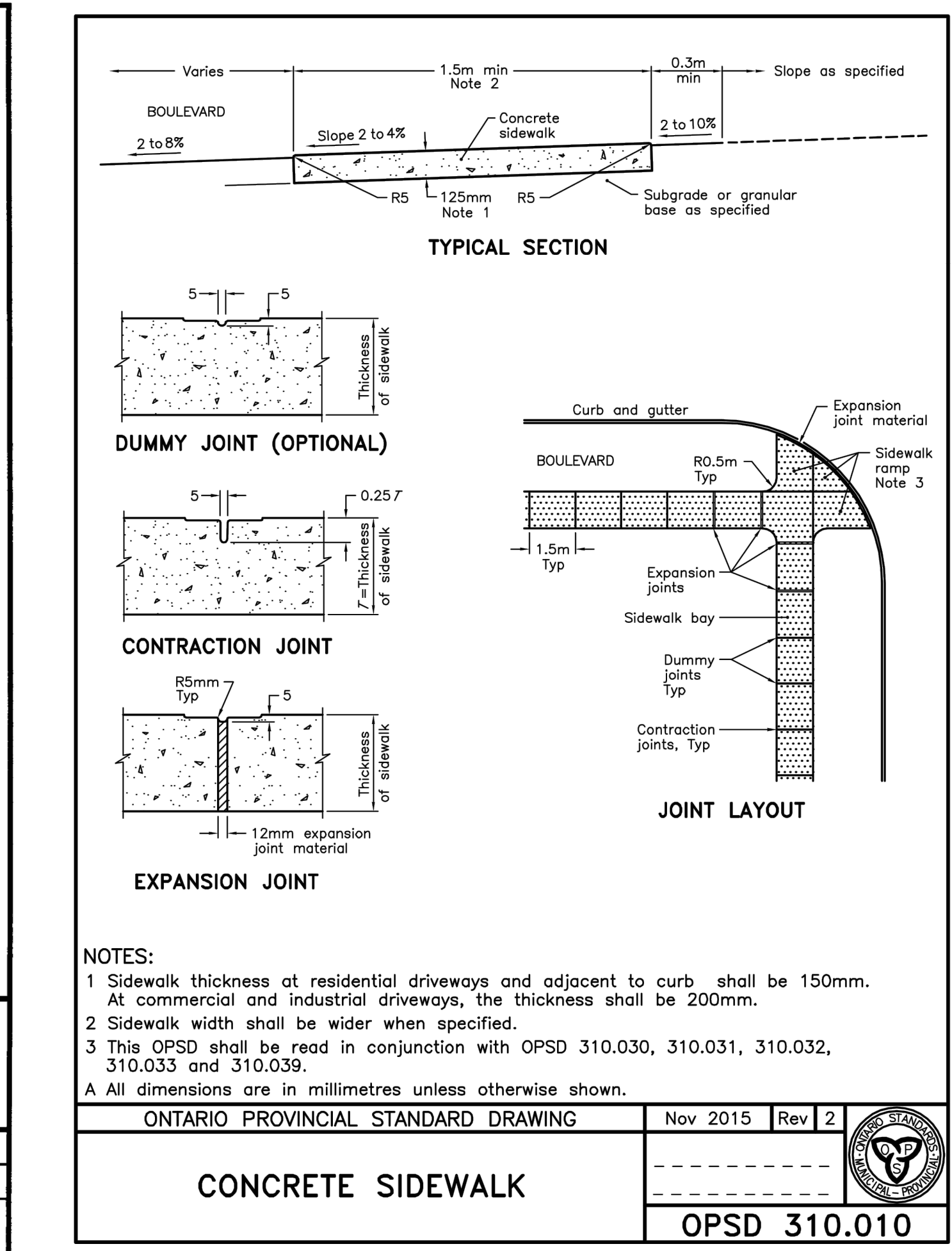
APPROVED DATE: 6 Feb 2015

City of BARRIE STANDARD DETAIL

VALVE STEM EXTENSION IN VALVE BOX

REV No. 1 DATE: FEB 2015 SCALE: N.T.S.

BSD-511 (PREVIOUSLY BSD-48)

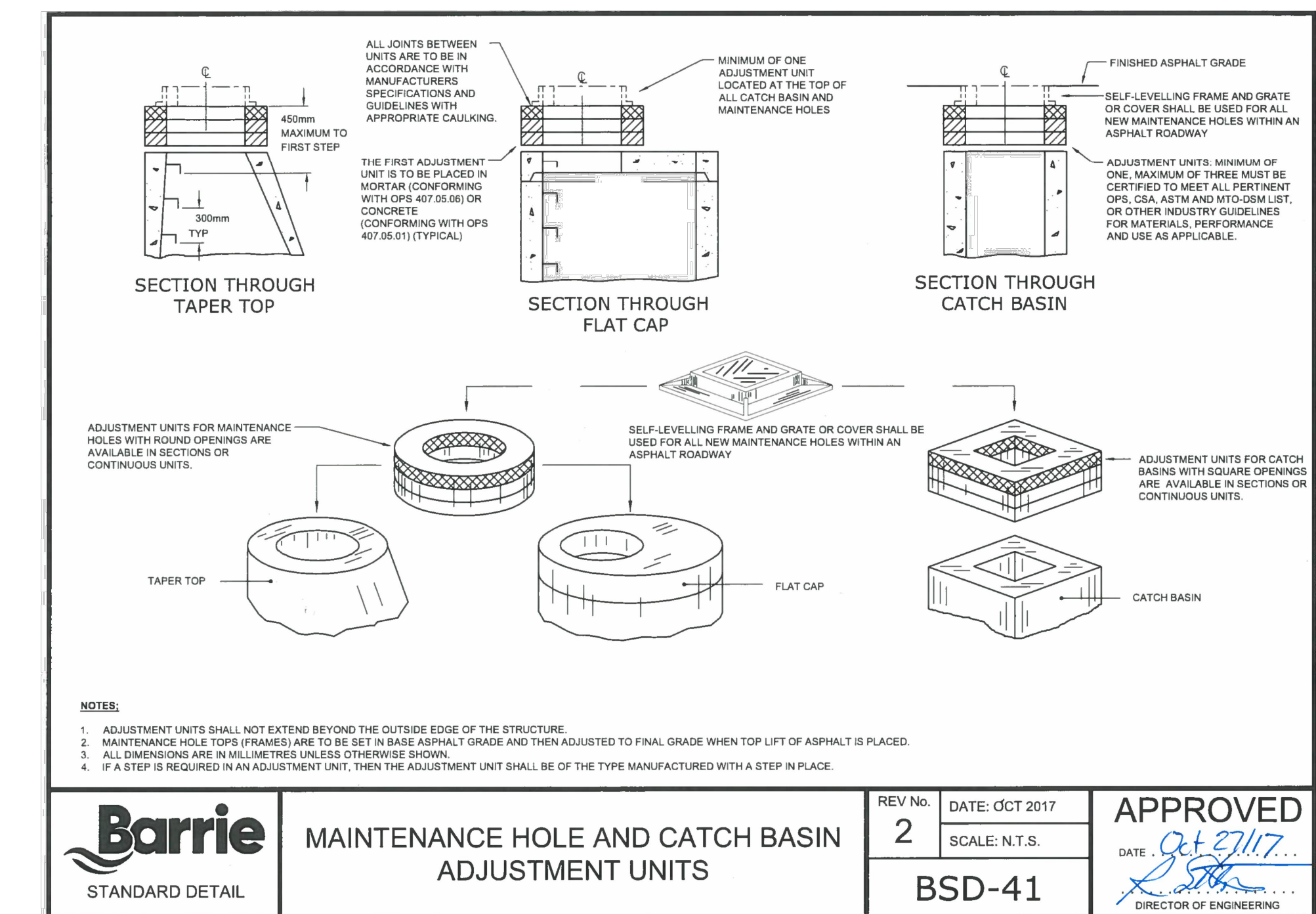


ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2015 Rev 2

CONCRETE SIDEWALK

OPSD 310.010



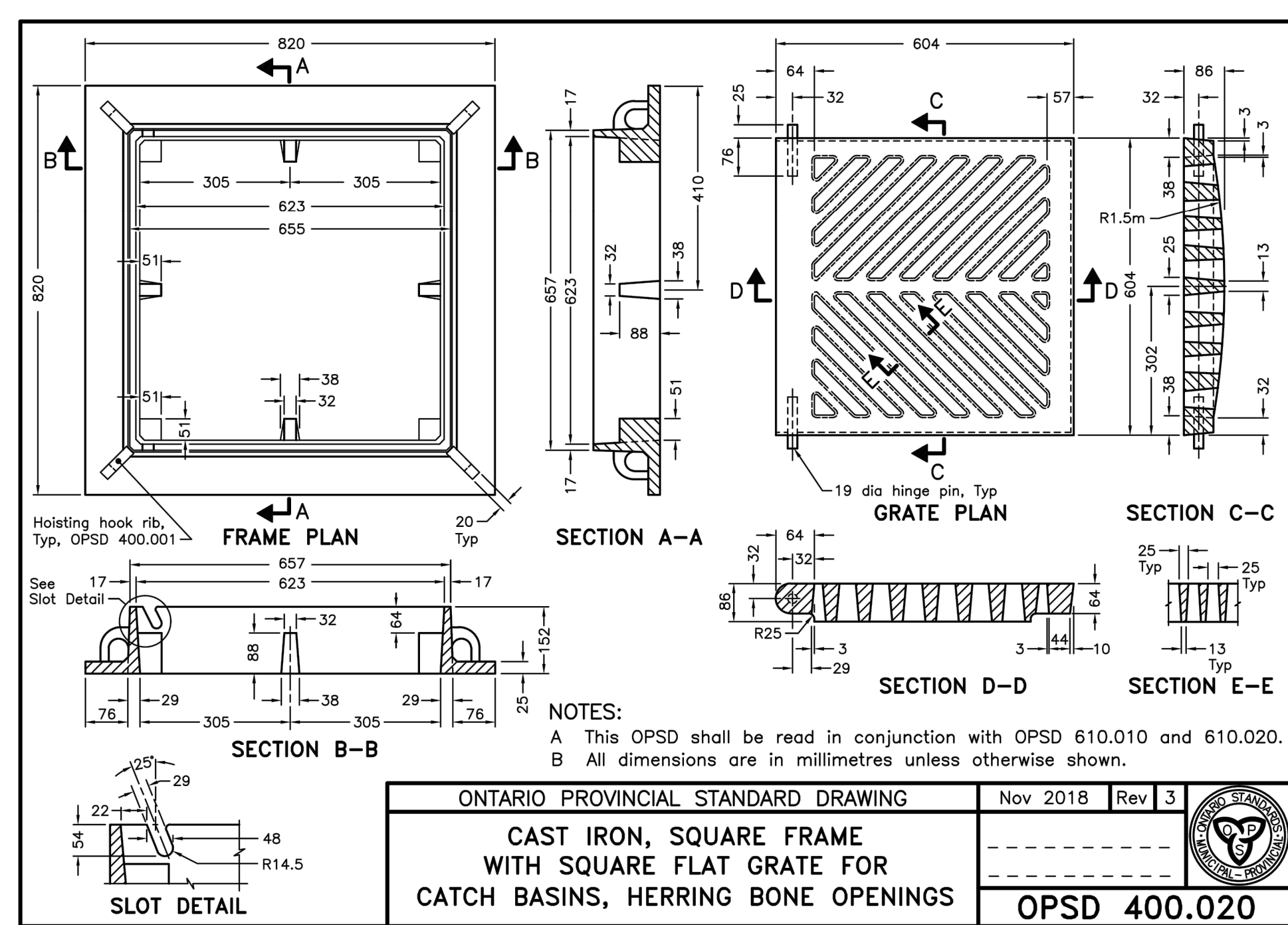
Barrie STANDARD DETAIL

MAINTENANCE HOLE AND CATCH BASIN ADJUSTMENT UNITS

REV No. 2 DATE: OCT 2017 SCALE: N.T.S.

APPROVED DATE: Oct 27/17

BSD-41

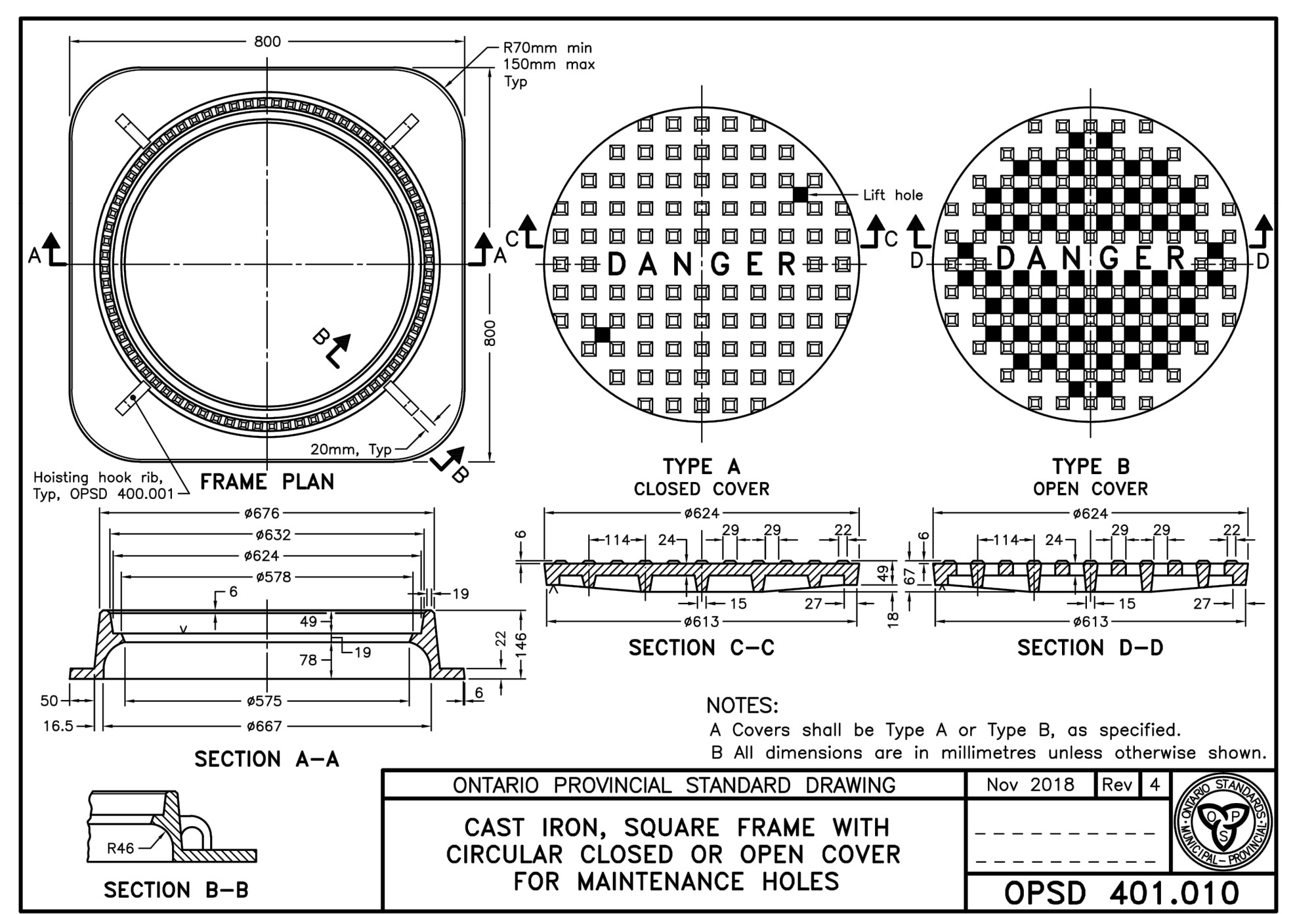


ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2018 Rev 3

CAST IRON, SQUARE FRAME WITH SQUARE FLAT GRATE FOR CATCH BASINS, HERRING BONE OPENINGS

OPSD 400.020



ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2018 Rev 4

CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES

OPSD 401.010

BENCHMARK: BENCHMARK No: 03120080042 LOCATED ON THE WESTERLY LIMIT OF FERNDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV: 250.970

BENCHMARK No: 03120030021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV: 248.846

BENCHMARK No: 03120040053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP.

BENCHMARK No: 03120040045 LOCATED ON THE WEST CURB LINE OF FERNDALE DRIVE SOUTH ADJACENT TO THE FERNDALE WOODS ELEMENTARY SCHOOL SIGN.

HEDBERN DEVELOPMENT CORPORATION

STANDARD DETAILS

JONES CONSULTING GROUP LTD. PLANNERS & ENGINEERS

229 Mapleview Dr. E. Unit 1 Barrie, ON L4N 0W5 P: 705.734.2638 F: 705.734.1058

DESIGN: JWI/KS SCALE: NTS DATE: MARCH 2019

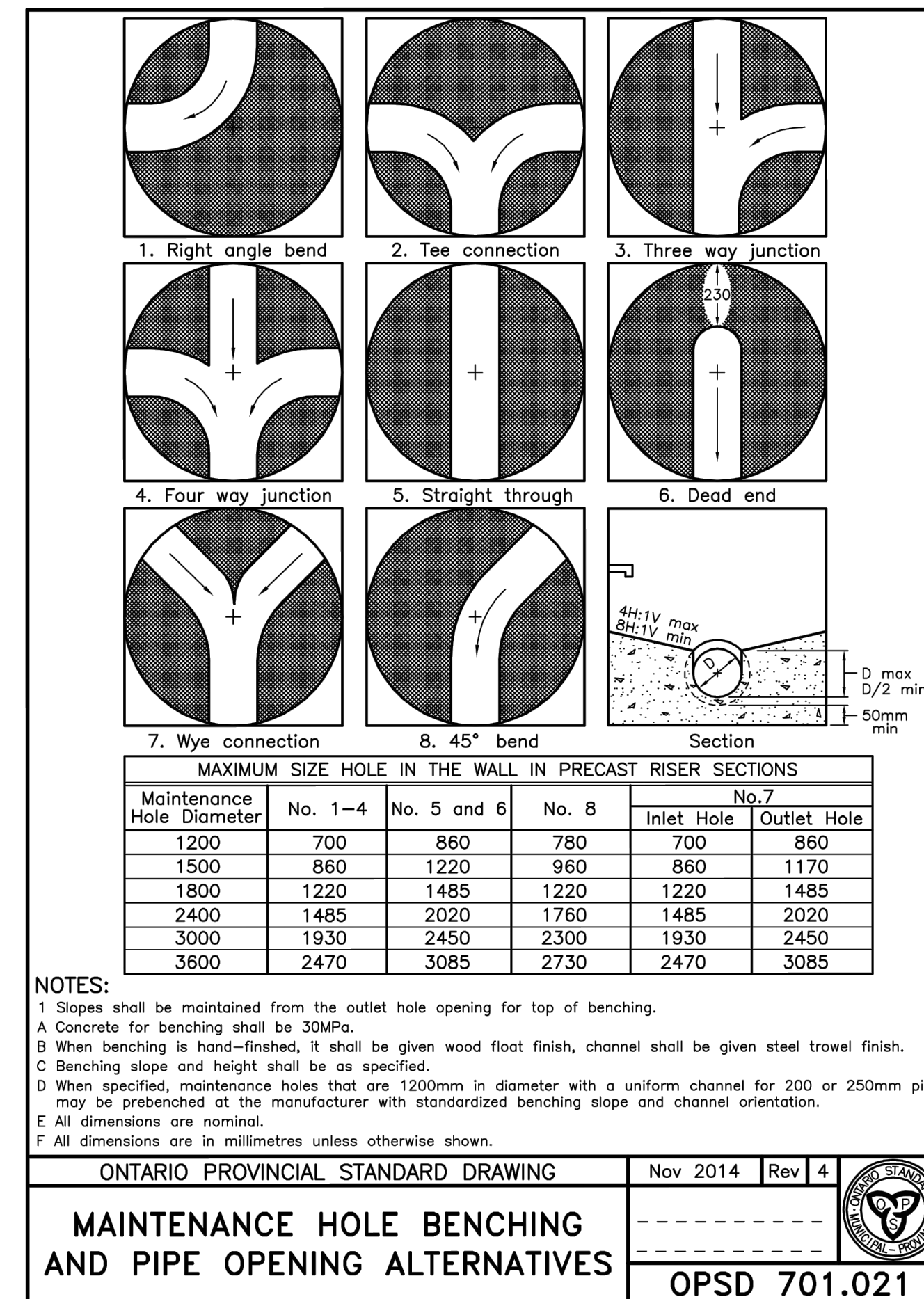
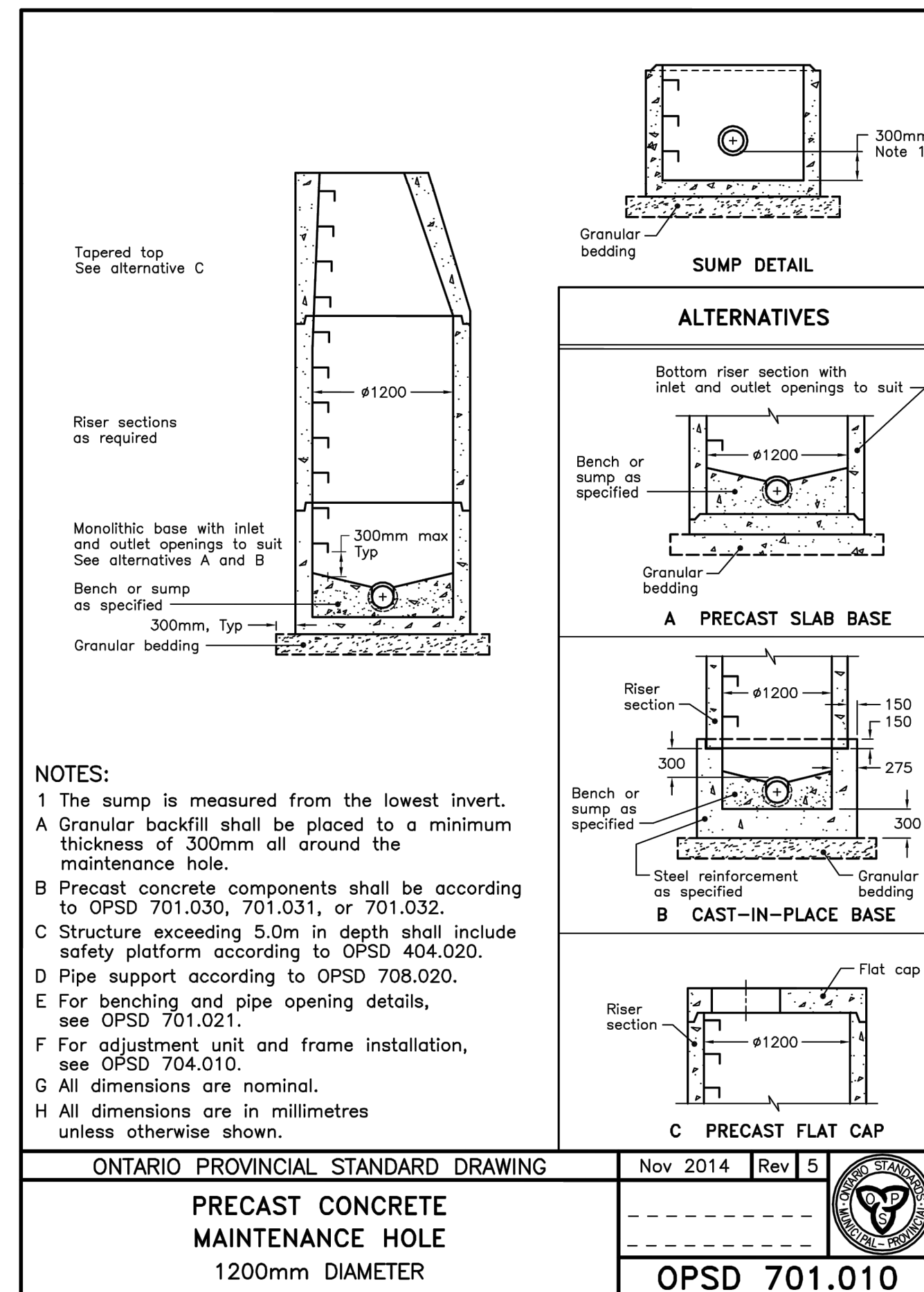
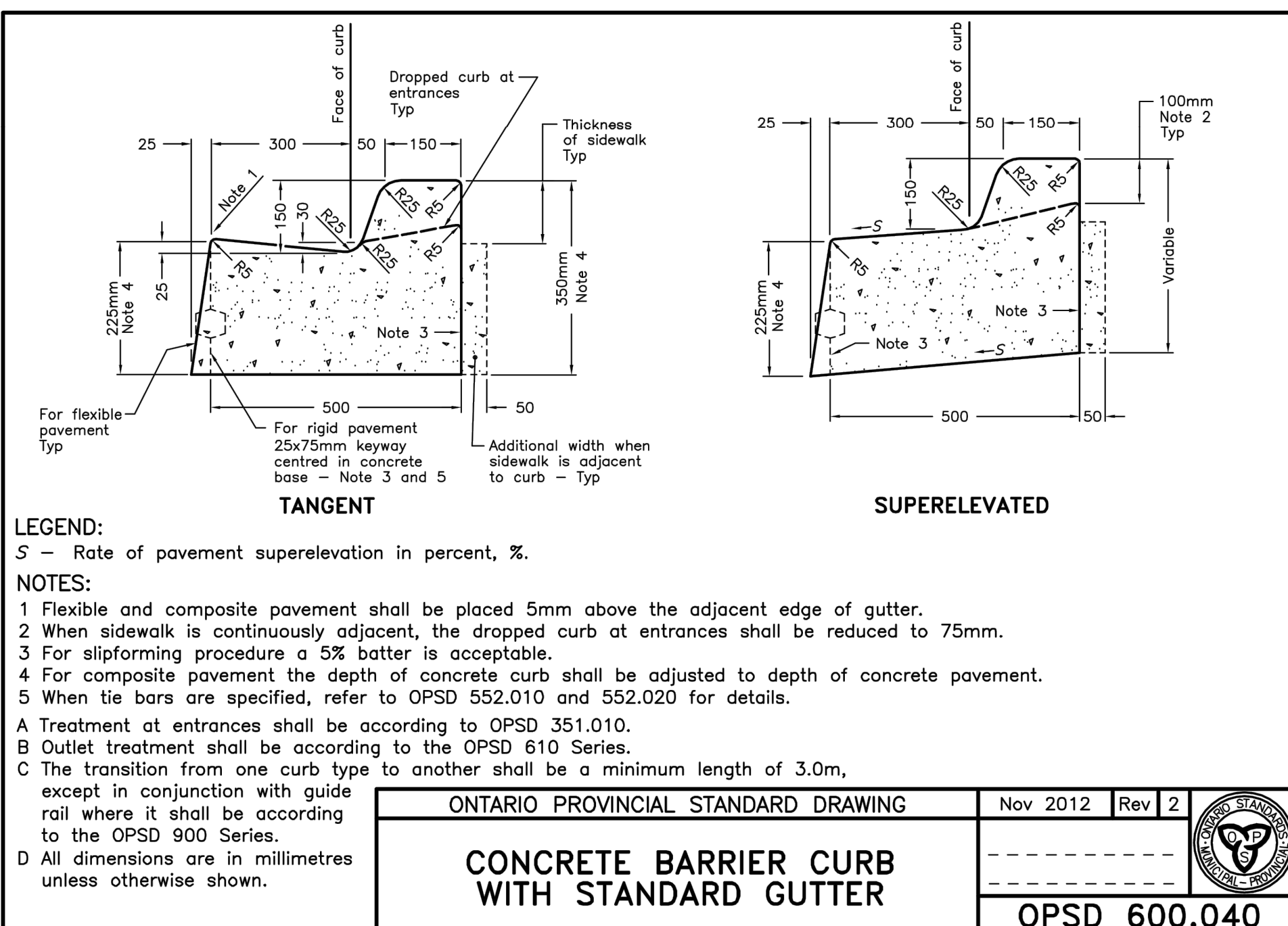
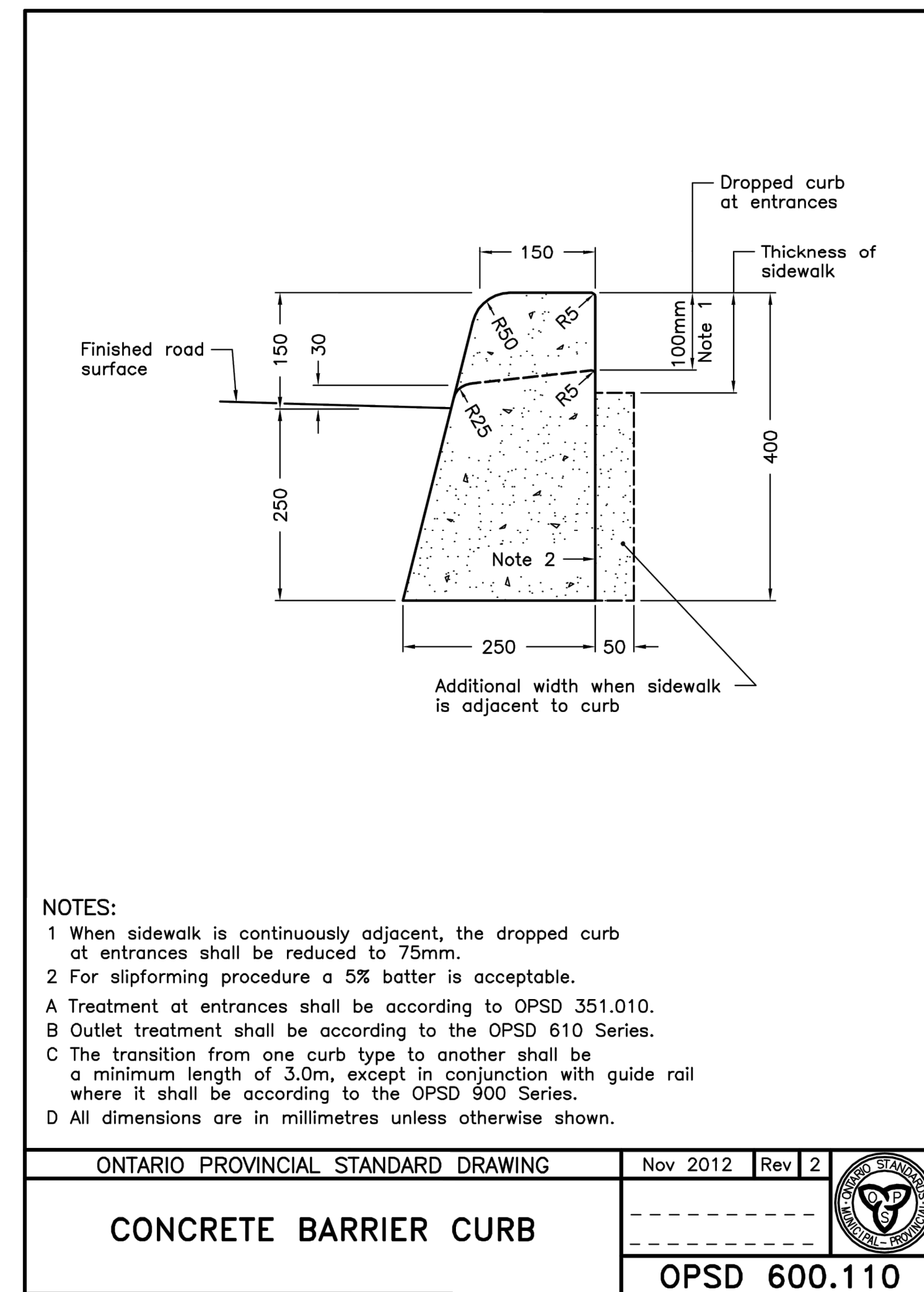
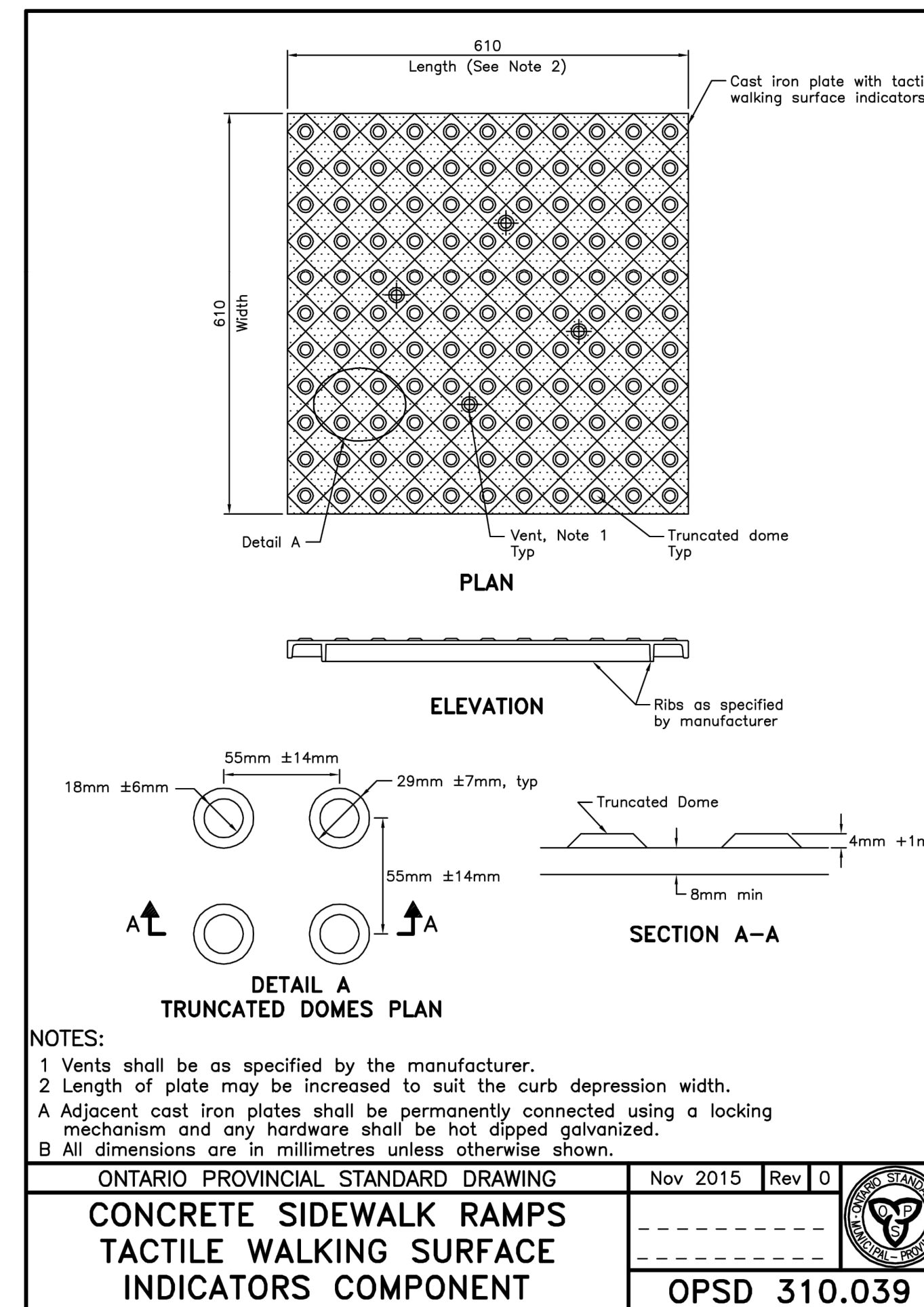
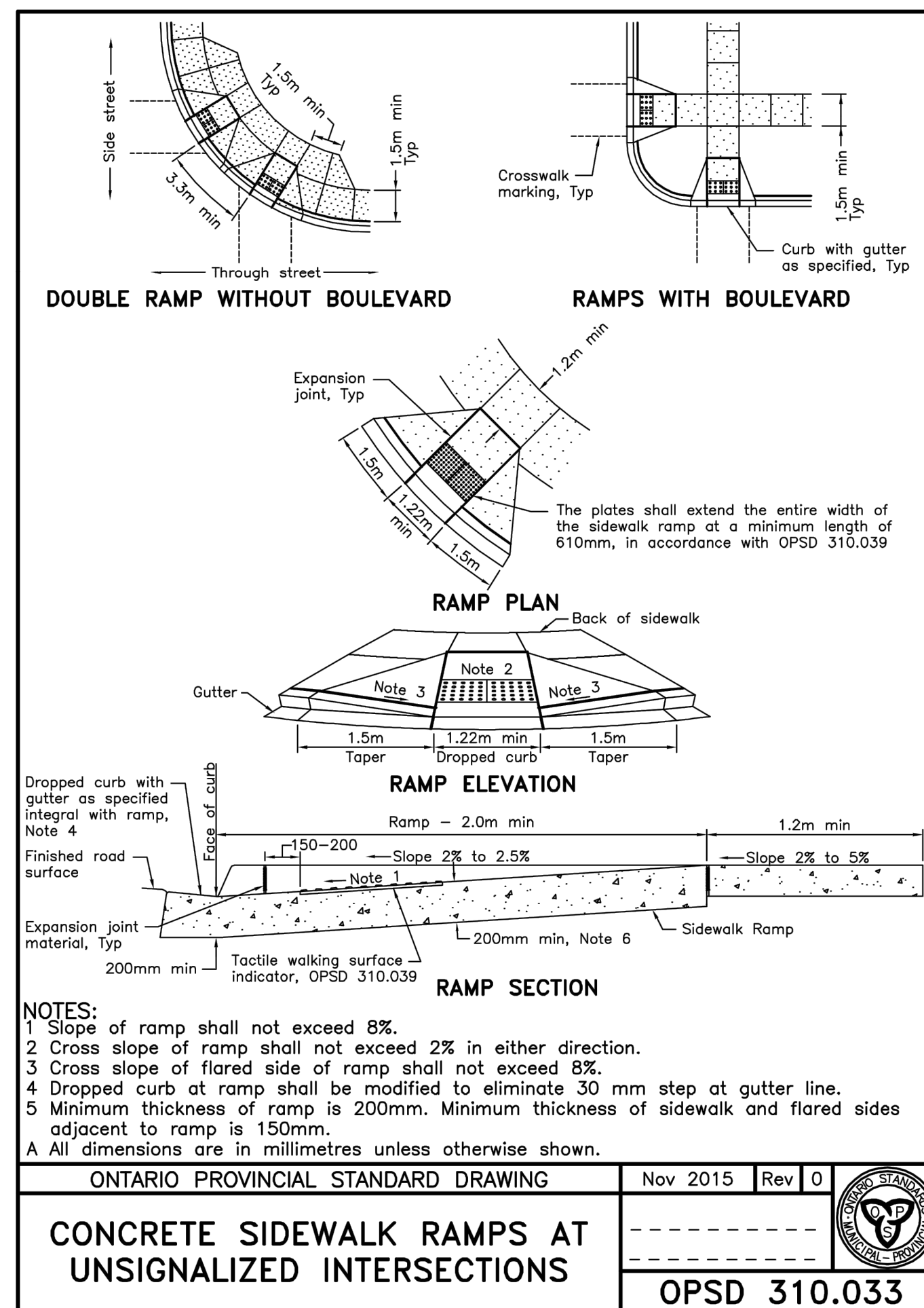
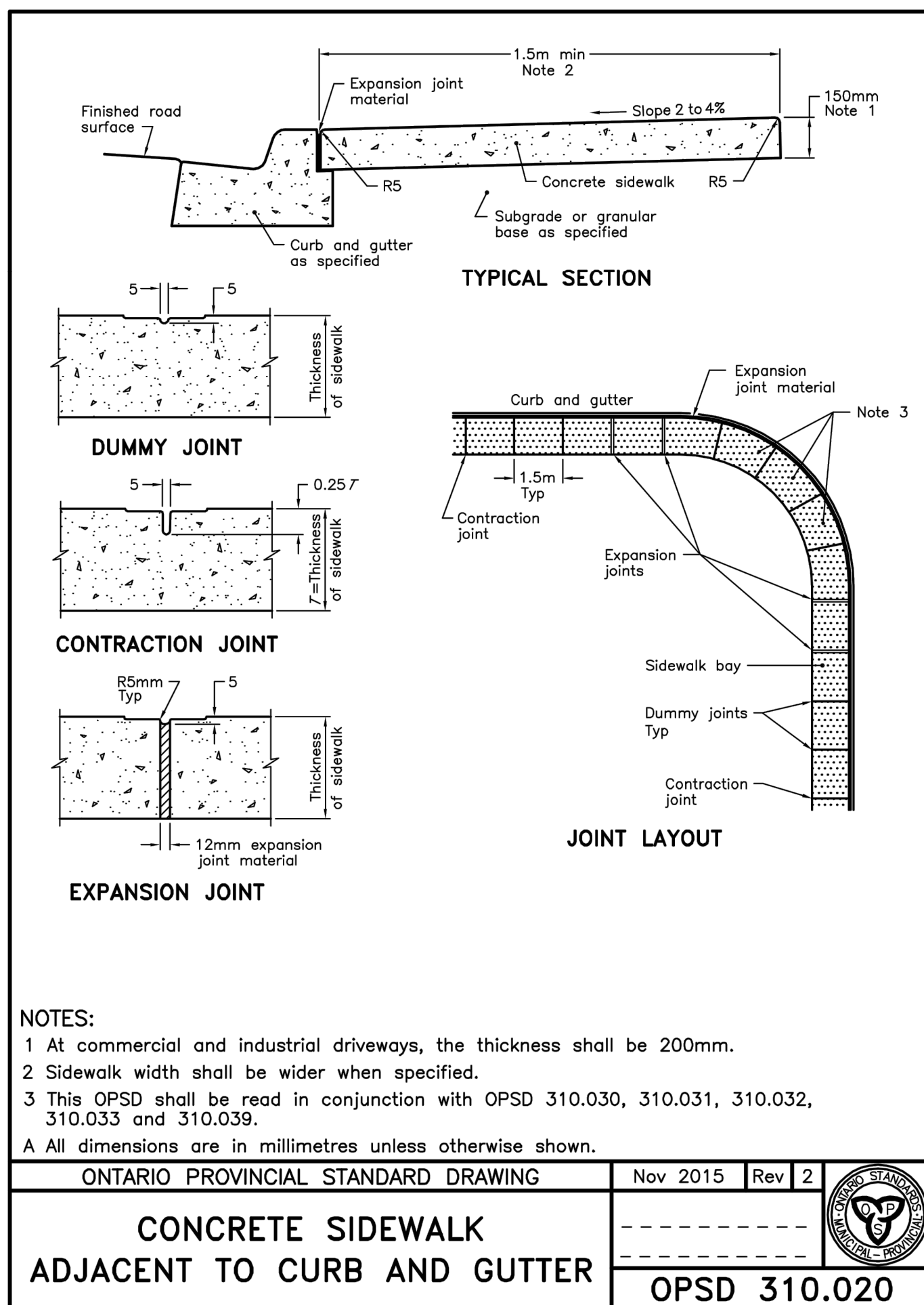
DRAWN: KS PROJECT: HED-18022 DWG. No: DET-1

CHECKED: JWI

1. DRAFT APPROVAL SEP 2019 JWI

NO. REVISIONS DATE INITIAL

PROVINCE OF ONTARIO



BENCHMARK:
BENCHMARK No: 0312008042 LOCATED ON THE WESTERLY LIMIT OF FERRIDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD. ELEV 256.979
BENCHMARK No: 0312003021 SET FLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN. ELEV 248.846
BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP. ELEV 248.846
BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERRIDALE DRIVE SOUTH ADJACENT TO THE FERRIDALE WOODS ELEMENTARY SCHOOL SIGN.

1.	DRAFT APPROVAL	SEP 2019	JW
NO.	REVISIONS	DATE	INITIAL



HEDBERN DEVELOPMENT CORPORATION
STANDARD DETAILS

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E. Unit 1
Barrie, ON L4N 0W5
P. 705.734.2638
F. 705.734.1058

DESIGN	JW/KS	SCALE: NTS	DATE	MARCH 2019
DRAWN	KS	PROJECT	DWG. No	
CHECKED	JW	HED-18022	DET-2	

ALTERNATIVES

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, 701.040, 701.041, 703.011, 703.021, and 705.010.
 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
PRECAST CONCRETE MAINTENANCE HOLE
 1500mm DIAMETER
 Nov 2014 | Rev 5
OPSD 701.011

ALTERNATE STANDARD HEIGHTS	ALTERNATE DIMENSION
A	1980
B	1830
C	1520
D	1380

NOTES:
 1 Outlet hole size 525mm diameter maximum, location as required.
 2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
 3 Minimum clearance between beam recess and hole for pipe shall be 300mm or minimum clearance can be 150mm with addition of two 15M size rebar on 45 degree diagonal.
 A Centre reinforcing in base slab and walls ≥ 200 mm.
 B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
 C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
 D Pipe support shall be according to OPSD 708.020.
 E All dimensions are nominal.
 F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
PRECAST CONCRETE CATCH BASIN
 600x600mm
 Nov 2014 | Rev 3
OPSD 705.010

ALTERNATE STANDARD HEIGHTS	ALTERNATE DIMENSION
A	1980
B	1830
C	1680

NOTES:
 1 Outlet hole size 525mm diameter maximum, location as required.
 2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
 3 Minimum clearance between beam recess and hole for pipe shall be 300mm or minimum clearance can be 150mm with addition of two 15M size rebar on 45 degree diagonal.
 A Centre reinforcing in base slab and walls ≥ 200 mm.
 B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
 C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
 D Pipe support shall be according to OPSD 708.020.
 E All dimensions are nominal.
 F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
PRECAST CONCRETE TWIN INLET CATCH BASIN
 600 x 1450mm
 Nov 2014 | Rev 3
OPSD 705.020

TRITON CROSS SECTION WITH SAND FILTRATION LAYER - LOW PROFILE OPTION

CHAMBER WIDTH	CHAMBER SPACING	CENTER TO CENTER	CHAMBER HEIGHT	MAX END CAP CONNECTION
S29 59" (1499mm)	6.0" (150mm)	65.0" (1653mm)	36" (914mm)	32" (813mm)
S22 55" (1397mm)	7.25" (184mm)	62.25" (1581mm)	35" (889mm)	30" (762mm)
C10 39.7" (1008mm)	6.0" (150mm)	45.7" (1160mm)	25" (635mm)	20" (508mm)
M6 33.6" (853mm)	6.0" (150mm)	39.6" (1006mm)	17.5" (445mm)	14" (356mm)

ONTARIO PROVINCIAL STANDARD DRAWING
TRITON CROSS SECTION WITH SAND FILTRATION LAYER - LOW PROFILE OPTION
 Nov 2014 | Rev 1
TRITON - STANDARD DETAILS

DRAWING NOT TO BE USED FOR CONSTRUCTION

JELLYFISH DESIGN NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS ARE NOMINAL UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 6. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 7. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 8. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 9. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 10. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

ONTARIO PROVINCIAL STANDARD DRAWING
JELLYFISH #12 PEAK DIVERSION
 Nov 2014 | Rev 1
Jellyfish #12 PEAK DIVERSION

HEBERN BISHOP DRIVE
 BRIVE, ON
 GENERAL PLAN VIEW
 Sheet Number 5 OF 7

HEBERN BISHOP DRIVE
 BRIVE, ON
 SECTION A-A
 Sheet Number 6 OF 7

BENCHMARK:
 BENCHMARK No: 0312008042 LOCATED ON THE WESTERN LIMIT OF FERNDALE DRIVE SOUTH APPROXIMATELY 47m NORTH OF CENTRELINE OF GORE DRIVE AND 330m NORTH OF ARDAGH ROAD.
 ELEV: 250.975
 BENCHMARK No: 0312003021 SET PLUSH IN THE CONCRETE FOUNDATION TO A SUPPORT COLUMN TO ROOFED ENTRANCE WALK AT THE SOUTHWEST CORNER OF THE SCHOOL. THE TABLET IS 100mm BELOW THE BRICKWORK AND CENTERED IN THE COLUMN.
 ELEV: 248.846
 BENCHMARK No: 0312004053 LOCATED ON THE SOUTH SIDE OF ARDAGH ROAD APPROXIMATELY 32m EAST OF THE INTERSECTION OF GRANT'S WAY AND APPROXIMATELY 10m EAST OF THE "MAXIMUM 50" SPEED LIMIT SIGN AND THE BUS STOP.
 BENCHMARK No: 0312004045 LOCATED ON THE WEST CURB LINE OF FERNDALE DRIVE SOUTH ADJACENT TO THE FERNDALE WOODS ELEMENTARY SCHOOL SIGN.

NO.	REVISIONS	DATE	INITIAL
1.	DRAFT APPROVAL	SEP 2019	JWI

HEDBERN DEVELOPMENT CORPORATION
STANDARD DETAILS

HEBERN BISHOP DRIVE
 BRIVE, ON
 SECTION A-A
 Sheet Number 6 OF 7

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DESIGN	JWI/KS	SCALE:	NTS	DATE	MARCH 2019
DRAWN	KS	PROJECT	HED-18022	DWG. No	DET-3
CHECKED	JWI				

G:\Eng_3D\VED-18022\Production\DWG\VED-18022-DETAILS.dwg Layout:DET-3 Plotted: Sep 16, 2019 @ 12:55pm by capgron The Jones Consulting Group Ltd.