

DRAWING INDEX	
BROCK STREET	
DRAWING NO.	DRAWING TITLE
GENERAL	
5483-COVER	COVER PAGE
5483-G101	DRAWING INDEX AND GENERAL NOTES
5483-G102	BLOCK LEGEND SHEET
5483-G201	BASELINE LAYOUT
CIVIL	
5483-C101	PLAN/PROFILE - FROM STA. 1+000 TO 1+140
5483-C102	PLAN/PROFILE - FROM STA. 1+140 TO 1+280
5483-C103	PLAN/PROFILE - FROM STA. 1+280 TO 1+415
5483-C301	CROSS SECTIONS I
5483-C302	CROSS SECTIONS II
5483-C303	CROSS SECTIONS III
DETAILS I	
5483-C501	DETAILS I
5483-C502	TYPICAL CROSS SECTION

GENERAL NOTES

- THESE NOTES APPLY TO ALL DRAWINGS WITHIN THIS SET.
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE RELEVANT SECTIONS OF THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS OR IN THE CONTRACT SPECIFICATIONS.
- THE POSITIONS OF POLE LINES, CONDUITS, WATERMANS, SEWERS, AND OTHER UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF POSITION IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM. ALL EXISTING LEGAL/PROPERTY MONUMENTATION TO BE PROTECTED AND MAINTAINED BY THE CONTRACTOR. ALL MONUMENTATION REMOVED BY THE CONTRACTOR SHALL BE REPLACED BY A LICENSED ONTARIO LAND SURVEYOR AT NO COST TO THE OWNER.
- REMOVE AND REINSTATE ALL DRIVEWAYS (SAME MATERIAL), STREET FURNITURE, SIGNS, MAILBOXES, GUIDE RAILS, CULVERTS, HEADWALLS, ETC., AS NECESSARY. REINSTATEMENT TO BE TO EXISTING CONDITION OR BETTER.
- CULVERTS, POLES, ETC. NOT REMOVED ARE TO BE PROTECTED, SHORED OR BRACED TO PREVENT DAMAGE (TYP. DENOTES TYPICAL).
- ALL EXISTING TREES, SHRUBS AND PLANTINGS NOT IDENTIFIED FOR REMOVAL ARE TO BE PROTECTED. IF THEY ARE DAMAGED BY CONTRACTOR'S OPERATIONS, THEY SHALL BE REPLACED BY AND AT THE CONTRACTOR'S EXPENSE.
- ALL GRANULAR MATERIAL SHALL BE COMPACTED IN 150mm LIFTS TO 100% S.P.M.D.D. AND ALL NATIVE BACKFILL SHALL BE COMPACTED TO 95% S.P.M.D.D. UNLESS OTHERWISE NOTED. ALL GRANULAR DRIVEWAYS TO BE RE-GRADED AS REQUIRED.
- ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE ELEVATIONS ON THE CONTRACT DRAWINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER ON SITE. SUMPS OR TRAPS IN THE PIPING SHALL NOT BE PERMITTED UNLESS SHOWN ON THESE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY CONSTRUCTION LAYOUT INCLUDING BUT NOT LIMITED TO: LOCATION AND OFFSET STAKES INDICATING PROPOSED WATERMAIN, STORM AND SANITARY SEWER
- ALIGNMENT AND ELEVATION AT EVERY 20m, AT EACH OFFSET SHOWN, AT EACH STRUCTURE AND AT EACH PROPOSED BEND.
- THE CONTRACTOR SHALL PROVIDE A LIST OF THE TEMPORARY BENCHMARKS, GRADE SHEETS AND ANY (ASSOCIATED) FIELD NOTES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- ALL SEWERS 525mm AND SMALLER SHALL BE PVC DR35 PIPE CONFORMING TO CSA B182.1 OR CSA B182.4, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL PIPES ARE TO BE INSULATED IF COVER IS LESS THAN 1.2m.
- ALL MAINTENANCE HOLES AND CATCHBASIN STRUCTURES SHALL BE PRECAST CONFORMING TO OPSD 701.030 AND 705.020 RESPECTIVELY. MAINTENANCE HOLE FRAME AND COVERS SHALL CONFIRM TO OPSD 401.010(B). CATCHBASIN FRAME AND GRATES SHALL CONFORM TO OPSD 400.100.
- ALL CATCHBASIN LEADS ARE TO BE DR35 PVC AS STATED IN THE CONTRACT SPECIFICATIONS.
- ALL ABANDONED PIPE TO BE FLUSHED CLEAN, CHARGED AND CAPPED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM 2.5m HORIZONTAL SEPARATION BETWEEN PROPOSED WATERMANS AND EXISTING OR PROPOSED SEWERS. WHERE 2.5m (HORIZONTAL) AND/OR 0.5m (VERTICAL) CANNOT BE ACHIEVED, THE WATERMAIN JOINTS SHALL BE WRAPPED AS NOTED IN SPECIFICATIONS.
- ALL PIPE SEWERS SHALL BE TESTED FOR INFILTRATION AND FOR DEFLECTION IN ACCORDANCE WITH OPSD 401. CCTV ALL SEWERS UPON COMPLETION.
- AS A MINIMUM, THE CONTRACTOR SHALL EXPOSE BY HAND EXCAVATION ALL BURIED UTILITIES (SEWER, WATER, GAS, PHONE, CABLE, POWER, ETC., SHOWN OR OTHERWISE) CROSSING THE PROPOSED WATERMAIN, SANITARY AND STORM SEWER AND PROVIDE THEIR SIZE, LOCATION AND GEODETIC ELEVATION TO THE ENGINEER FOR REVIEW A MINIMUM OF 48 HOURS PRIOR TO CROSSING. THE ENGINEER WILL REVIEW THIS INFORMATION AND ADVISE THE CONTRACTOR OF ANY REQUIRED REVISIONS.
- PROPERTY LINES WHERE SHOWN ON THESE DRAWINGS ARE SHOWN ONLY FOR REFERENCE AND ARE NOT TO BE USED FOR LEGAL PURPOSES.
- DIGITAL BASEPLAN DRAWINGS WILL BE PROVIDED TO THE CONTRACTOR FOR LAYOUT PURPOSES IF REQUESTED.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL:
 - SIGNING SHALL, AS A MINIMUM BE IN ACCORDANCE WITH CURRENT OTM (ONTARIO TRAFFIC MANUAL). FLAGGING SHALL BE IN ACCORDANCE WITH 'CORRECT METHODS OF TRAFFIC CONTROL' ISSUED BY THE CONSTRUCTION SAFETY ASSOCIATION OF ONTARIO.
 - AT LEAST ONE LANE OF FLAGGED TRAFFIC MUST BE MAINTAINED AT ALL TIMES AND BOTH LANES SHALL BE FULLY OPEN TO TRAFFIC DURING NON-WORKING HOURS.
 - LOCAL STREETS MAY BE CLOSED TO THROUGH TRAFFIC FOR SHORT PERIODS DURING THE INSTALLATION OF THE STORM SEWER, WATERMAIN, SANITARY SEWER AND DURING RESTORATION.
 - PRIOR TO CLOSING ANY RIGHT-OF-WAY, THE CONTRACTOR SHALL OBTAIN CLEARANCE FROM THE ENGINEER AND NOTIFY THE APPROPRIATE EMERGENCY SERVICES, PUBLIC TRANSIT AND SCHOOL BUS OPERATORS OF STREETS CLOSED, STREETS BEING USED FOR DETOURS AND THE DURATION OF ANY DETOUR.
- ASSOCIATED ENGINEERING (ONT.) LIMITED DOES NOT ASSUME ANY RESPONSIBILITY FOR LOSSES, DAMAGES AND COSTS ARISING FROM THE USE OR REUSE OF THESE DRAWINGS BY PERSONS, FIRMS, OR CORPORATIONS WITHOUT PRIOR WRITTEN CONSENT.
- THESE DRAWINGS ARE COPYRIGHTED. ALL RIGHTS RESERVED. NO PART MAY BE REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION.

NO.	REVISION	DATE	INT.
0	ISSUED FOR TENDER	2021-02-04	MM

Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLO
Number: 100203964
Category: Civil
2021-01-27
This licence is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario

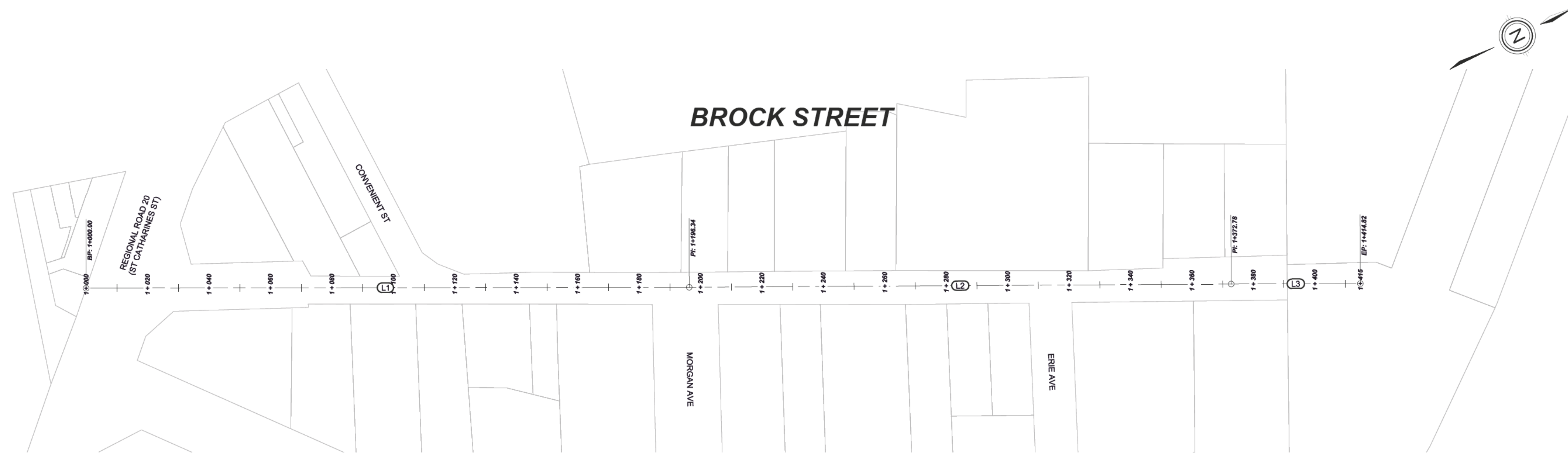


DRAFTING
MM/JT
DESIGN
MM/JT
CHECKED BY
MM/JT
APPROVED BY
MM/JT



CONTRACT # PW 2021-01
**BROCK STREET WATERMAIN REPLACEMENT
AND ROAD RECONSTRUCTION**
IN THE TOWNSHIP OF WEST LINCOLN
GENERAL NOTES AND INDEX

CONSULTANT FILE No. 20205483	
DATE FEB 2021	
SCALE	
REF. No. #	
DWG No.	REV.
5328-G101	0



BROCK ST ALIGNMENT TABLE					
LINE	STATION	Length	DEFLECTION	BEGIN COORDINATES	END COORDINATES
L1	1+000.00	196.338	16°13'52"	4772716.133 618346.838	4772904.645 618401.718
L2	1+196.34	176.447	15°58'37"	4772904.645 618401.718	4773074.276 618450.285
L3	1+372.78	42.039	16°07'01"	4773074.276 618450.285	4773114.662 618461.955

BENCHMARK INFORMATION

GEODETTIC DESCRIPTION
 CONCRETE BRIDGE CARRYING TORONTO, HAMILTON AND BUFFALO R/WY OVER HWY 20 AT SMITHVILLE, 0.7 KM EAST OF UNITED CHURCH IN THE HAMLET OF SMITHVILLE, AND 306.3 M EAST OF SOUTH ST. TABLET IS SET HORIZONTALLY IN NORTH FACE OF SOUTH CONCRETE ABUTMENT, 1.2.19 M WEST OF S.E. CORNER, 34 CM ABOVE CONCRETE SIDEWALK AND 7.9 M SOUTH OF CENTERLINE OF HWY 20.

N: 4772364.00
 E: 618548.00
 ELEV. 183.506

NO.	REVISION	DATE	INIT.
0	ISSUED FOR TENDER	2021-02-04	MM

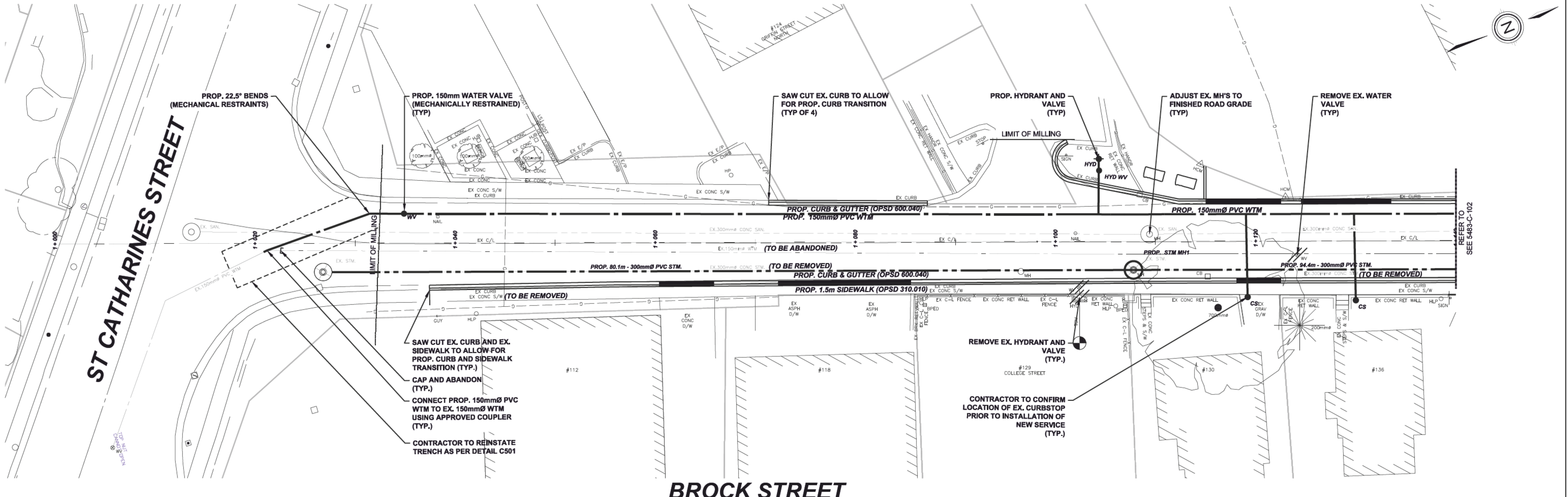
Professional Engineers
 Ontario
Limited Licensee
 Name: M. A. MASCIOLI
 Number: 100203964
 Category: Civil
 2021-01-27
 This license is subject to the limitation as detailed on the certificate.
 Association of Professional Engineers of Ontario



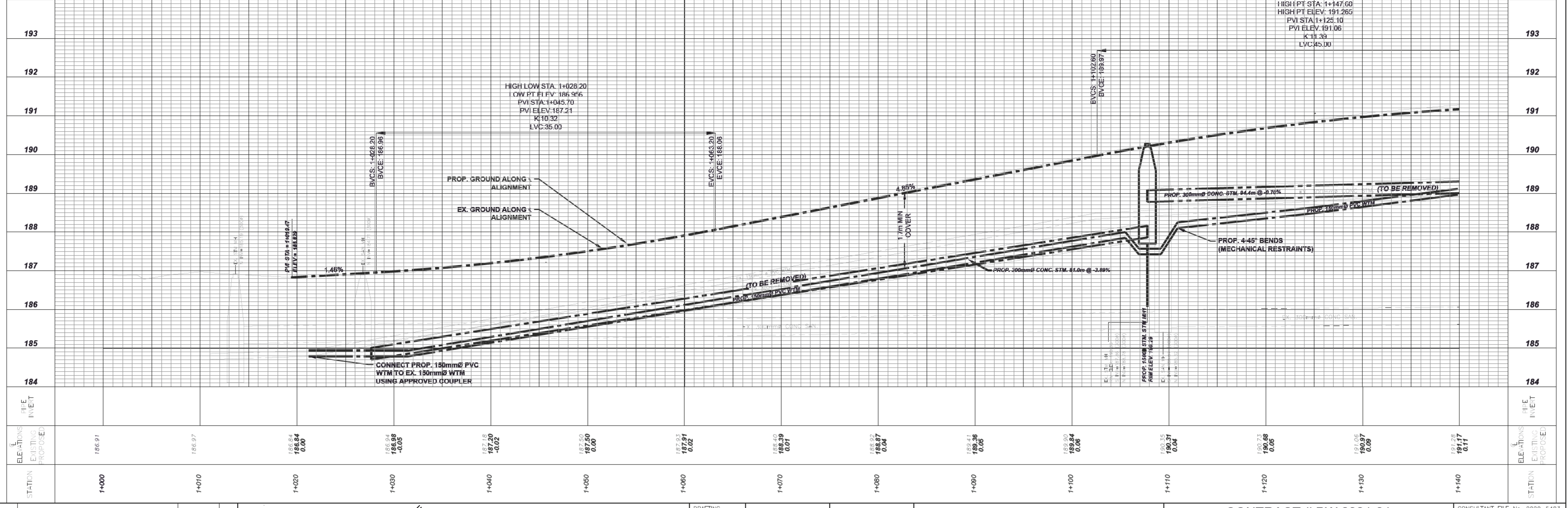
DRAFTING
MM/JT
 DESIGN
MM/JT
 CHECKED BY
MM/JT
 APPROVED BY
MM/JT

CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT
AND ROAD RECONSTRUCTION
IN THE TOWNSHIP OF WEST LINCOLN
BASELINE DRAWING

CONSULTANT FILE No. 20205483	REV.
DATE FEB 2021	0
SCALE Hor : 1:200 m Ver : 1:50 m	
REF. No. #	
DWG No. 5328-G200	



BROCK STREET



STATION	ELEVATIONS EXISTING PROPOSED	PIPE INVERT
1+000	186.91	
1+010	186.97	
1+020	186.94 186.94 0.00	
1+030	186.94 186.99 -0.05	
1+040	187.18 187.20 -0.02	
1+050	187.50 187.50 0.00	
1+060	187.93 187.91 0.02	
1+070	188.46 188.39 0.07	
1+080	188.92 188.87 0.04	
1+090	189.41 189.36 0.05	
1+100	189.90 189.84 0.06	
1+110	190.35 190.31 0.04	
1+120	190.73 190.68 0.05	
1+130	191.06 190.97 0.08	
1+140	191.28 191.17 0.11	

Professional Engineers Ontario
Limited Licensee
 Name: M. A. MASCIOLI
 Number: 100203964
 Category: Civil
 Expiry: 2021-01-27
 This license is subject to the limitation as detailed on the certificate.
 Association of Professional Engineers of Ontario

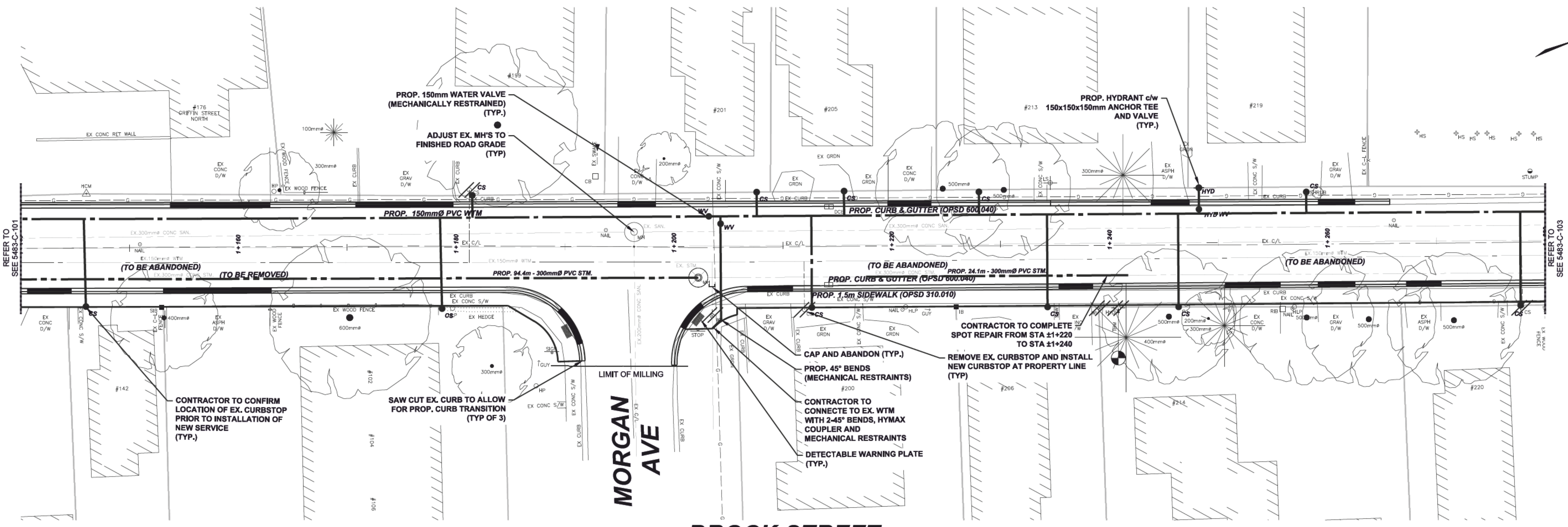


DRAFTING MM/JT
 DESIGN MM/JT
 CHECKED BY MM/JT
 APPROVED BY MM/JT

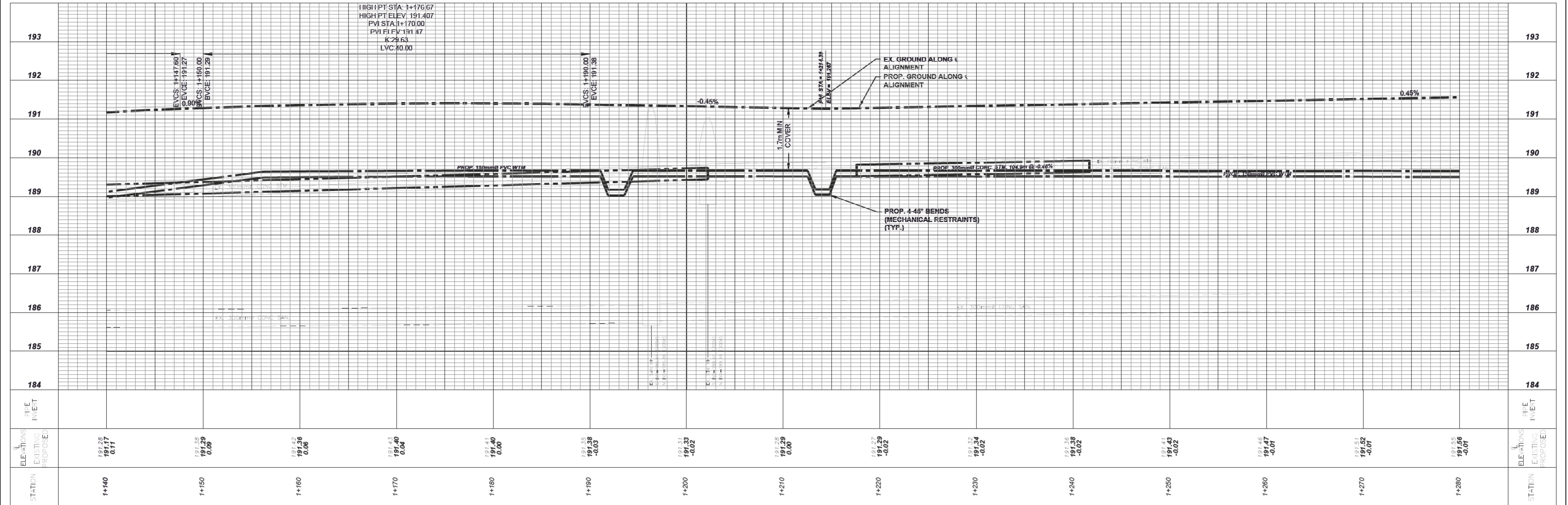


CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT AND ROAD RECONSTRUCTION
 IN THE TOWNSHIP OF WEST LINCOLN
ROAD GEOMETRICS - STA 1+000 TO STA 1+140

CONSULTANT FILE No. 2020-5483	REV.
DATE FEB 2021	0
SCALE Hor: 1:200 m Ver: 1:50 m	
REF. No. ##	
DWG No. 5483-C-101	



BROCK STREET



STATION	ELEVATIONS EXISTING PROPOSED	STATION	ELEVATIONS EXISTING PROPOSED
1+140	191.25 191.17 0.11	1+170	191.43 191.40 0.04
1+150	191.38 191.29 0.09	1+180	191.41 191.40 0.00
1+160	191.51 191.36 0.06	1+190	191.35 191.29 -0.03
1+200	191.31 191.33 -0.02	1+220	191.27 191.29 -0.02
1+210	191.26 191.29 -0.00	1+230	191.32 191.34 -0.02
1+240	191.36 191.39 -0.02	1+250	191.41 191.43 -0.02
1+260	191.46 191.47 -0.01	1+270	191.51 191.52 -0.01
1+280	191.55 191.56 -0.01		

Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
2021-01-27
This license is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario

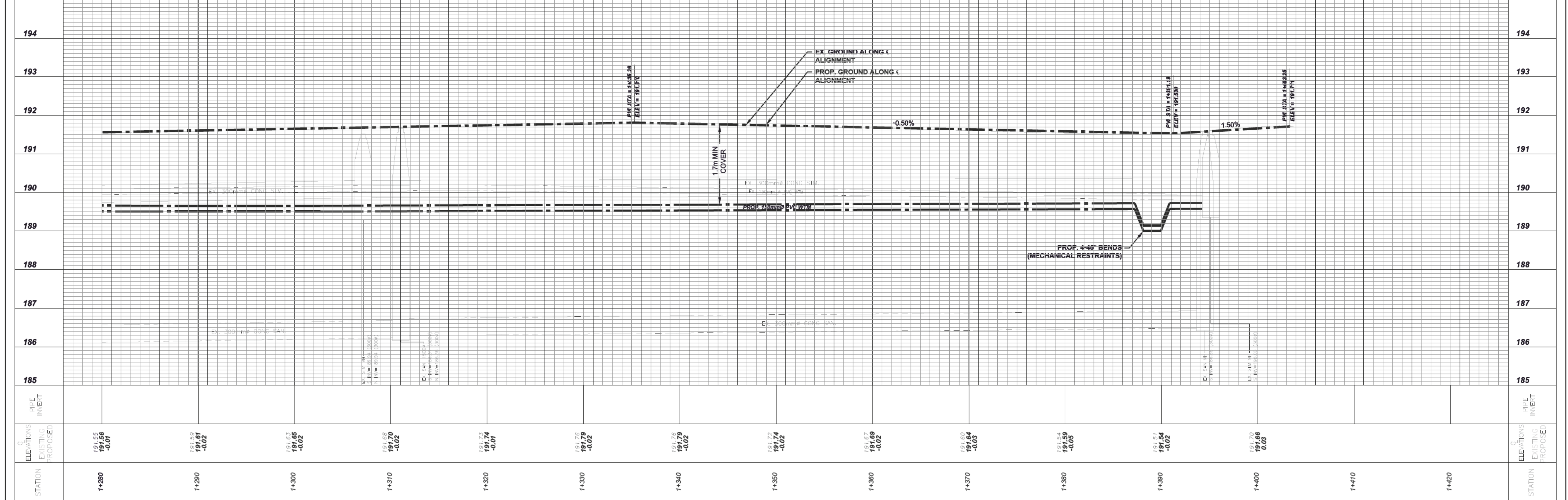
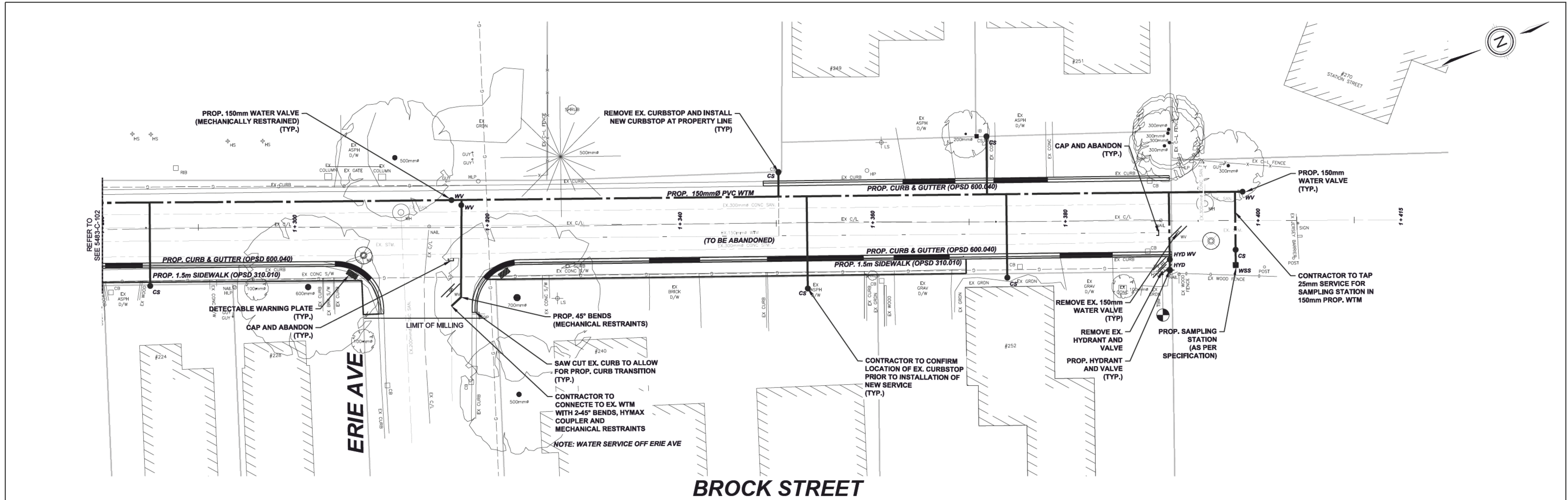


DRAFTING
MM/JT
DESIGN
MM/JT
CHECKED BY
MM/JT
APPROVED BY
MM/JT



CONTRACT # PW 2021-01
**BROCK STREET WATERMAIN REPLACEMENT
AND ROAD RECONSTRUCTION**
IN THE TOWNSHIP OF WEST LINCOLN
ROAD GEOMETRICS - STA 1+140 TO STA 1+280

CONSULTANT FILE No. 2020-5483	REV.
DATE FEB 2021	0
SCALE Hor: 1:200 m Ver: 1:50 m	
REF. No. ##	
DWG No. 5483-C-102	



NO.	REVISION	DATE	INIT.
0	ISSUED FOR TENDER	2021-02-04	MM

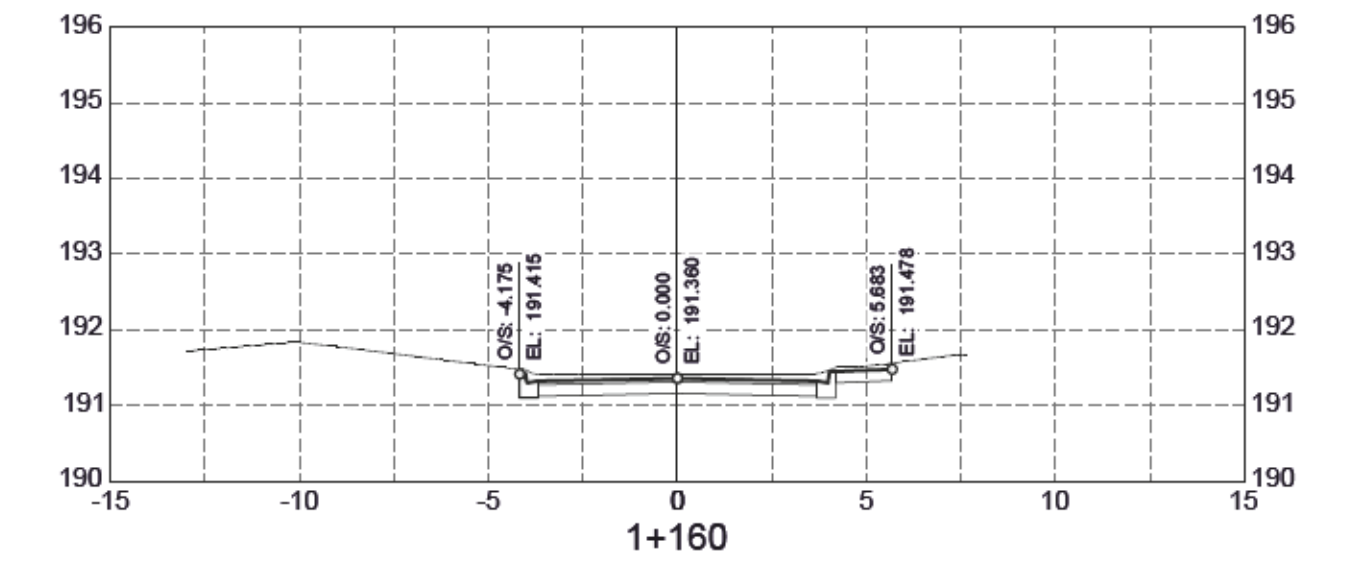
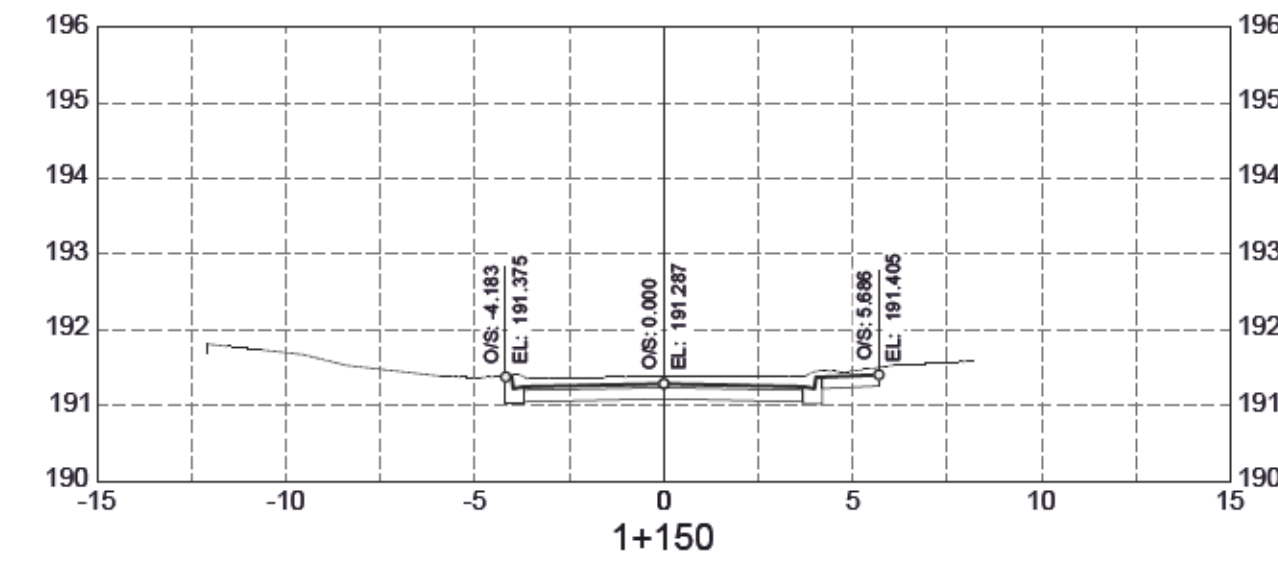
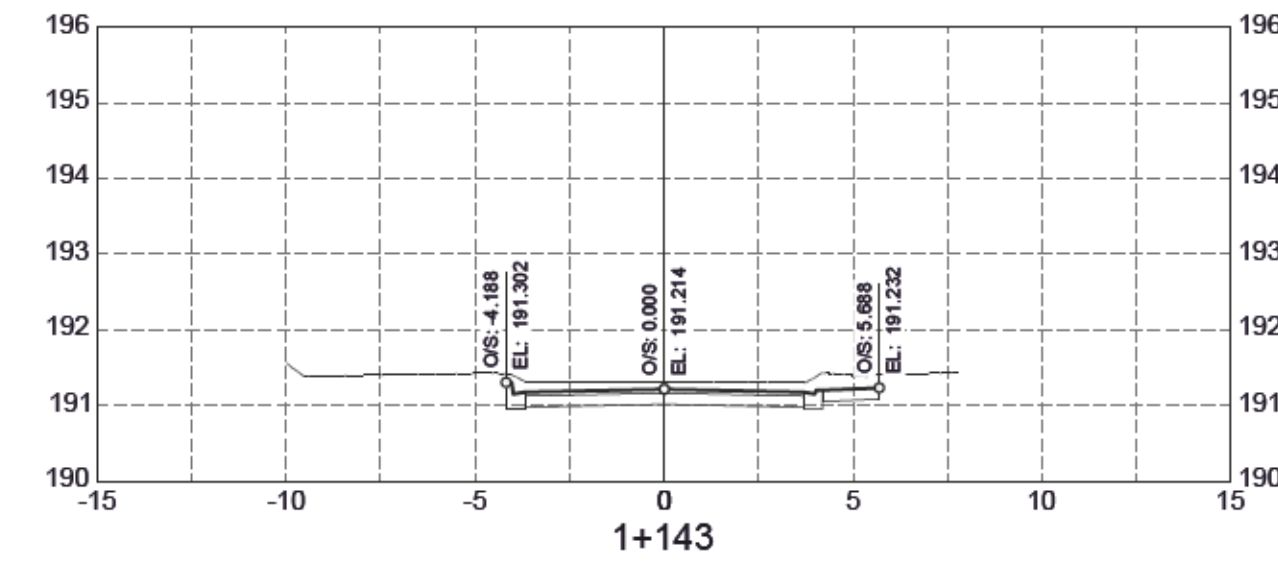
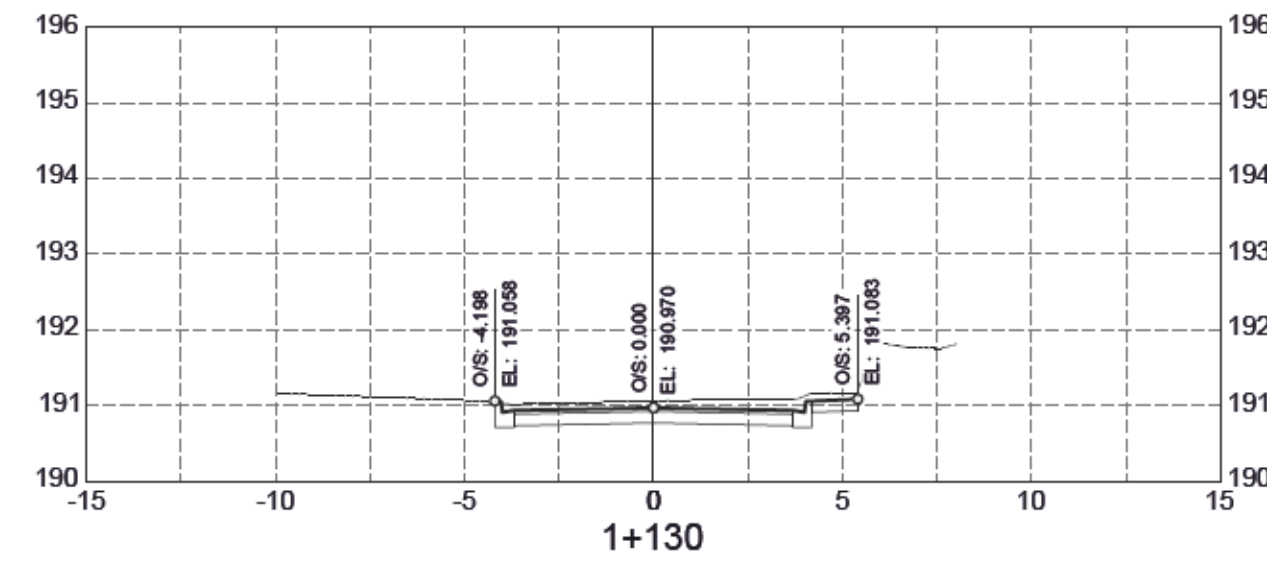
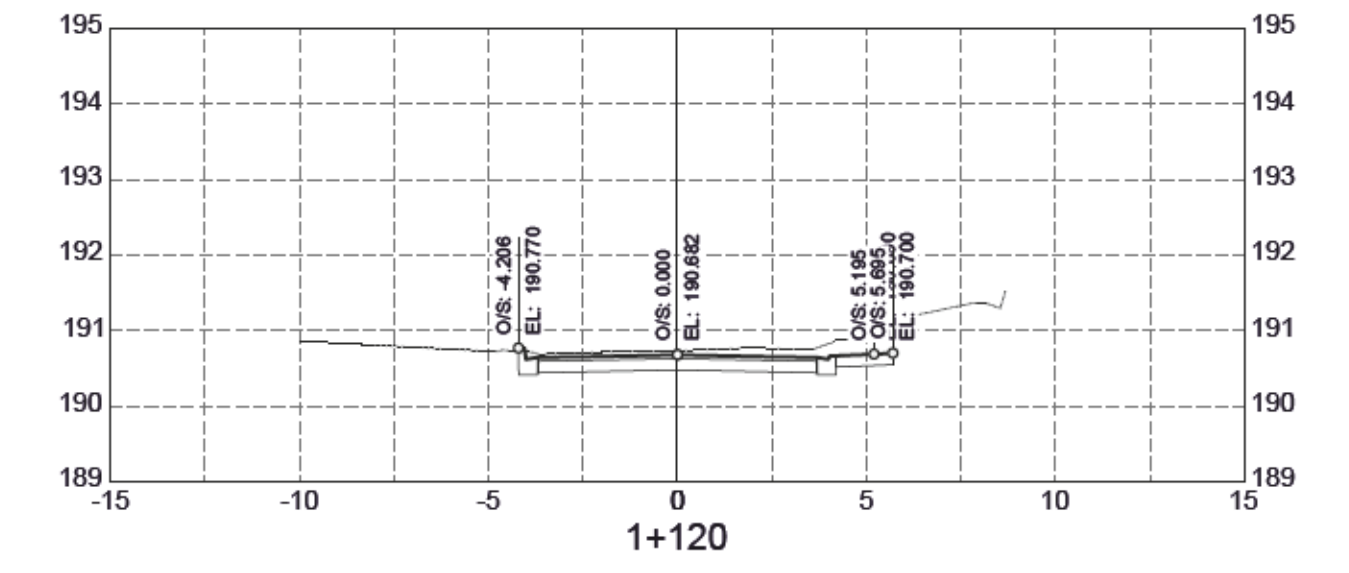
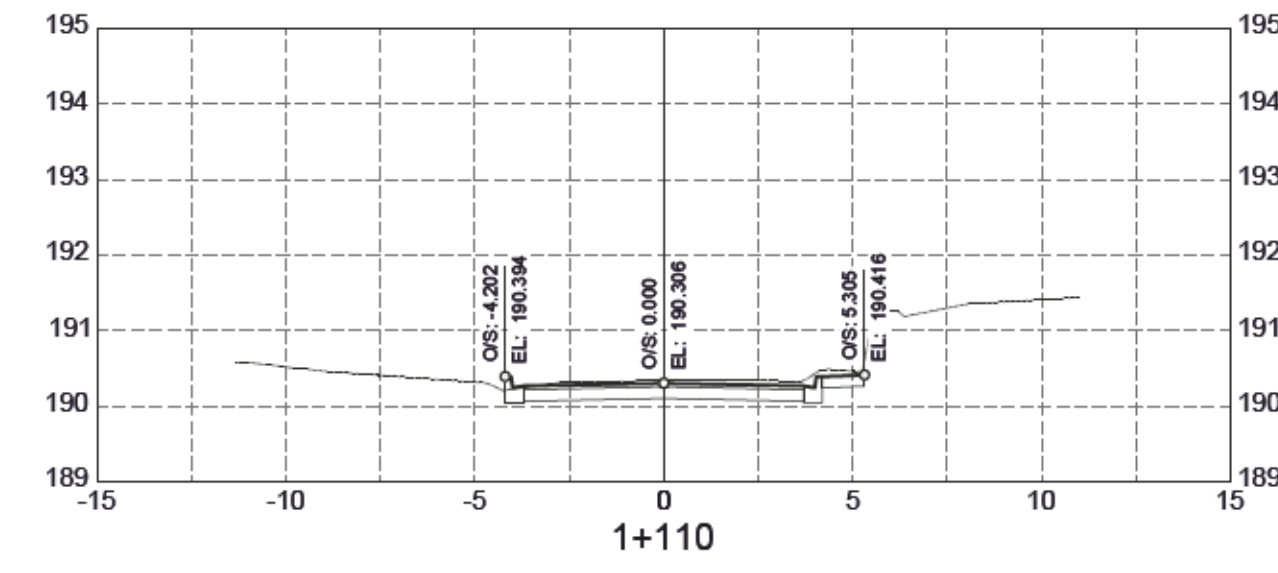
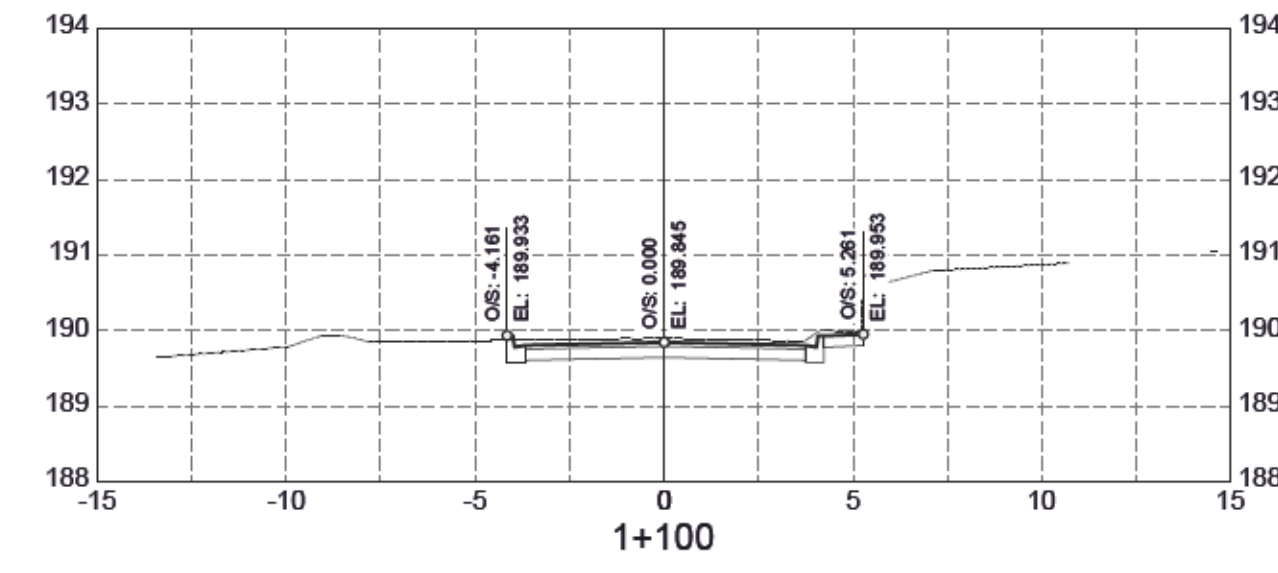
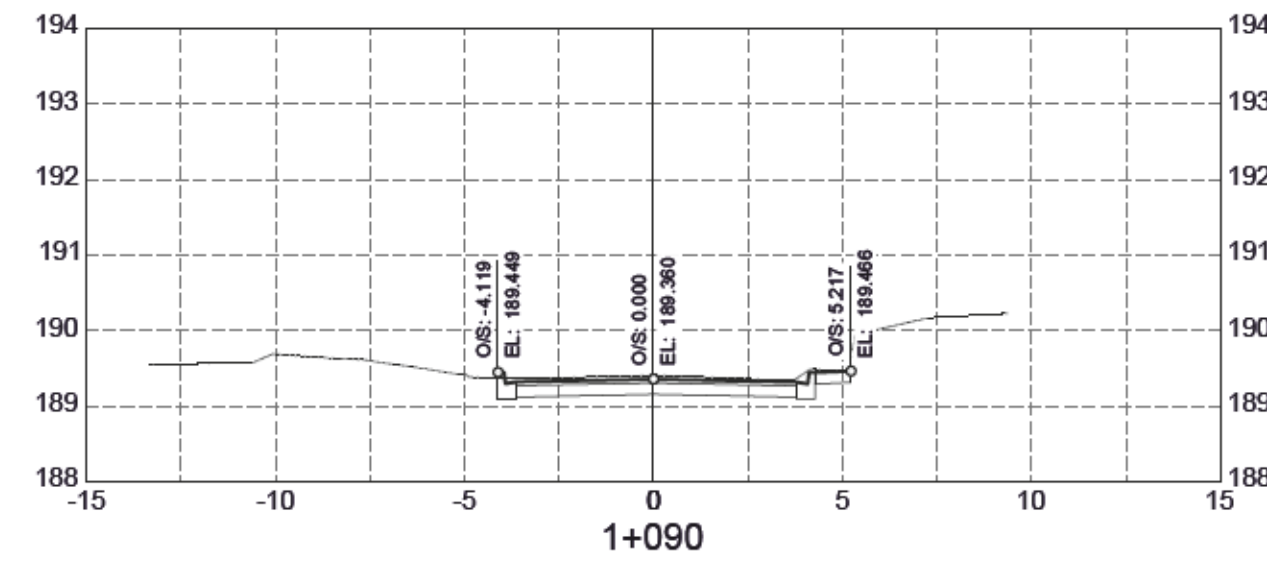
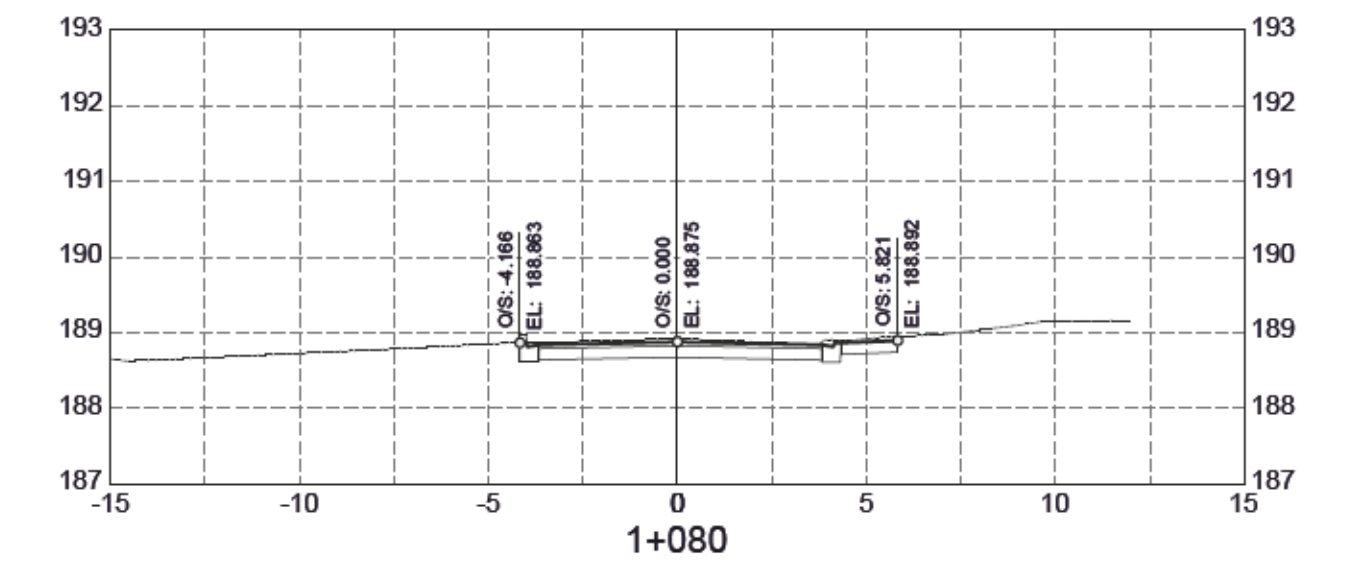
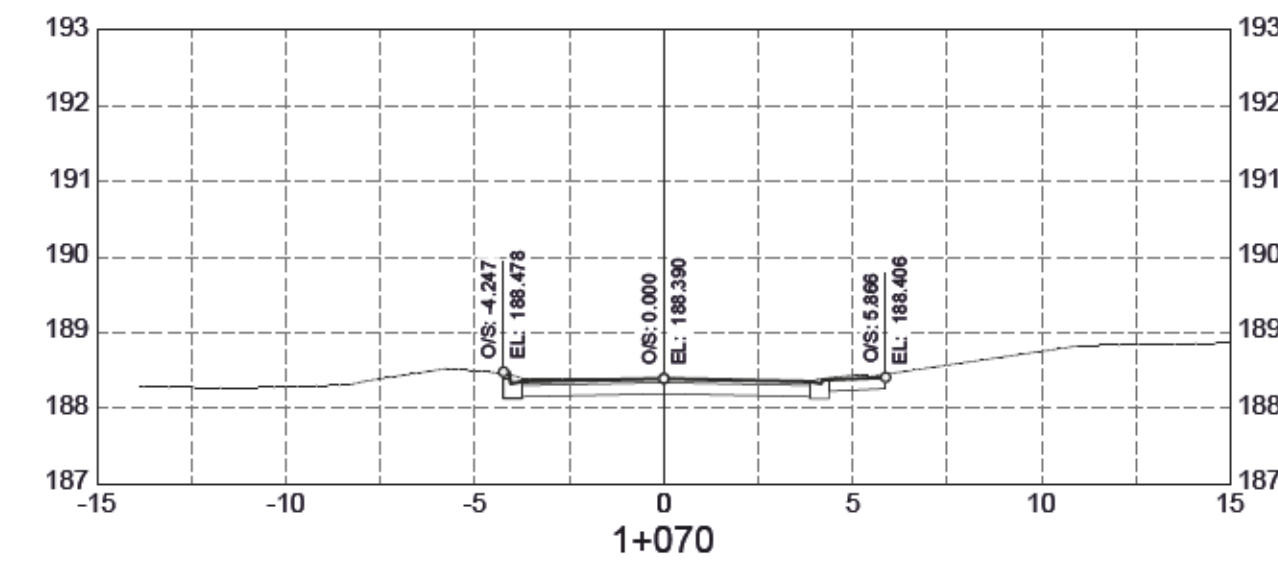
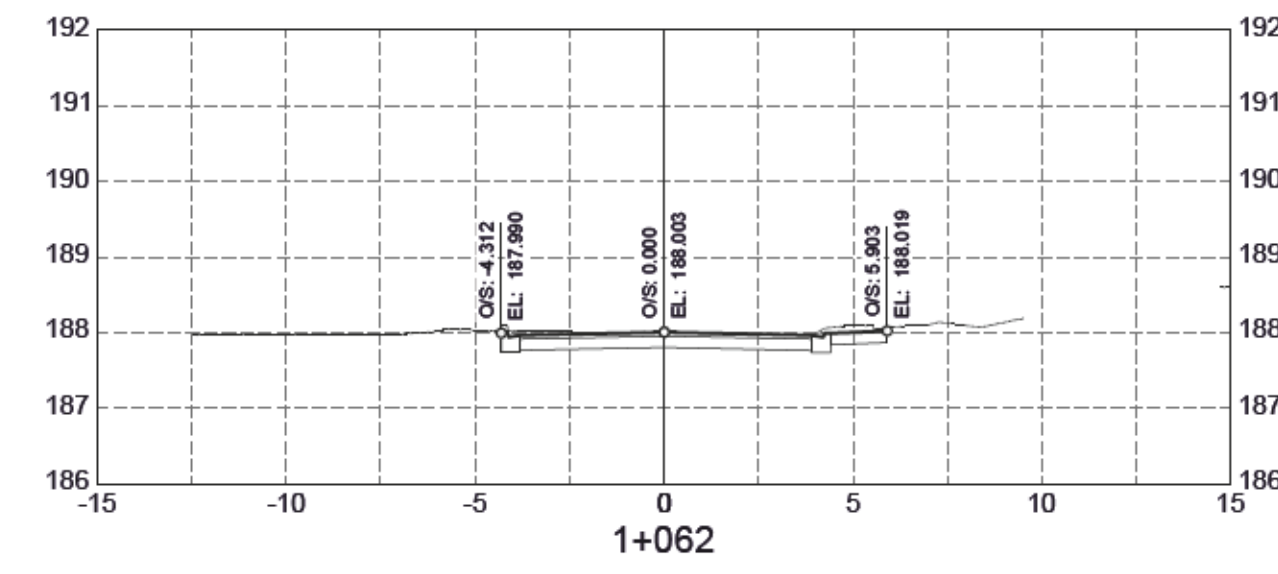
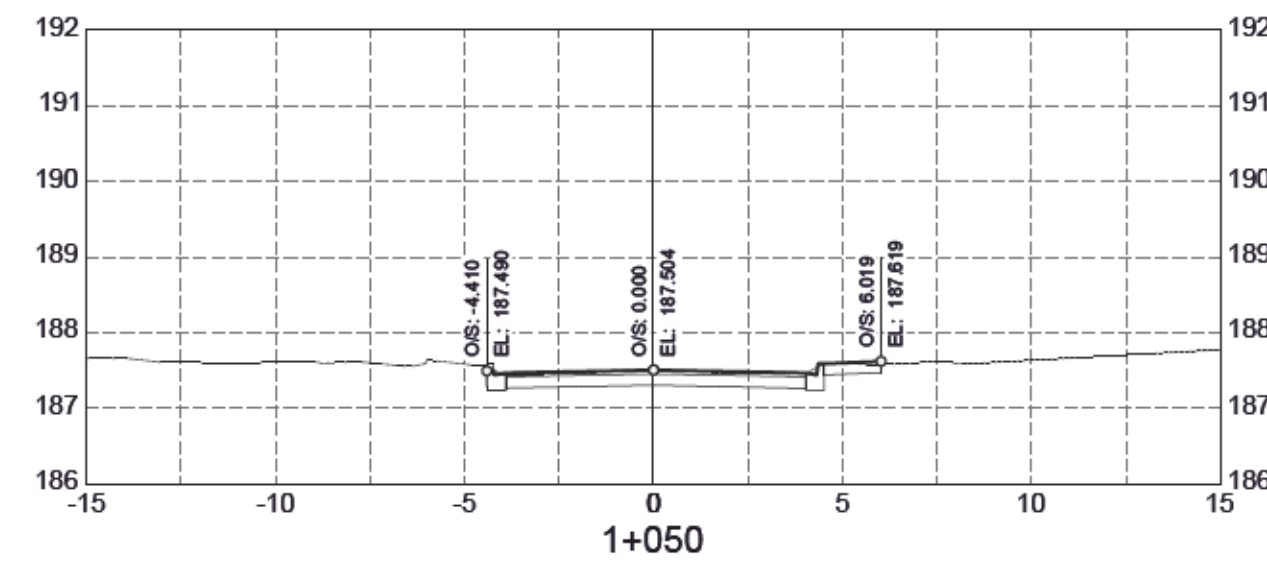
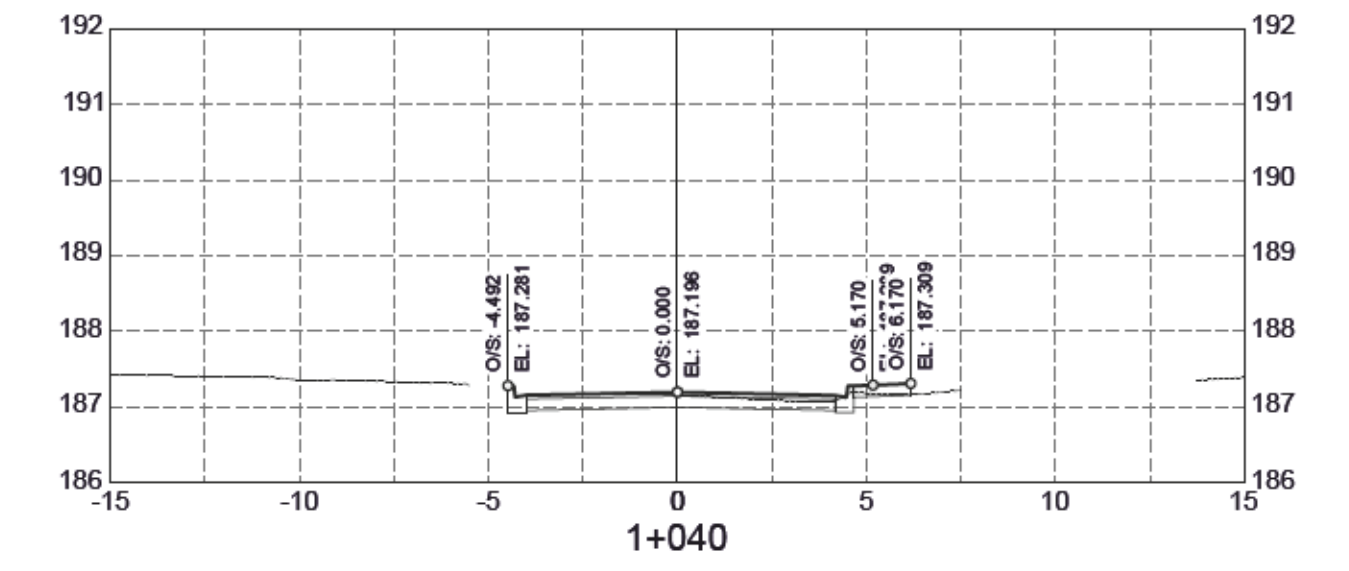
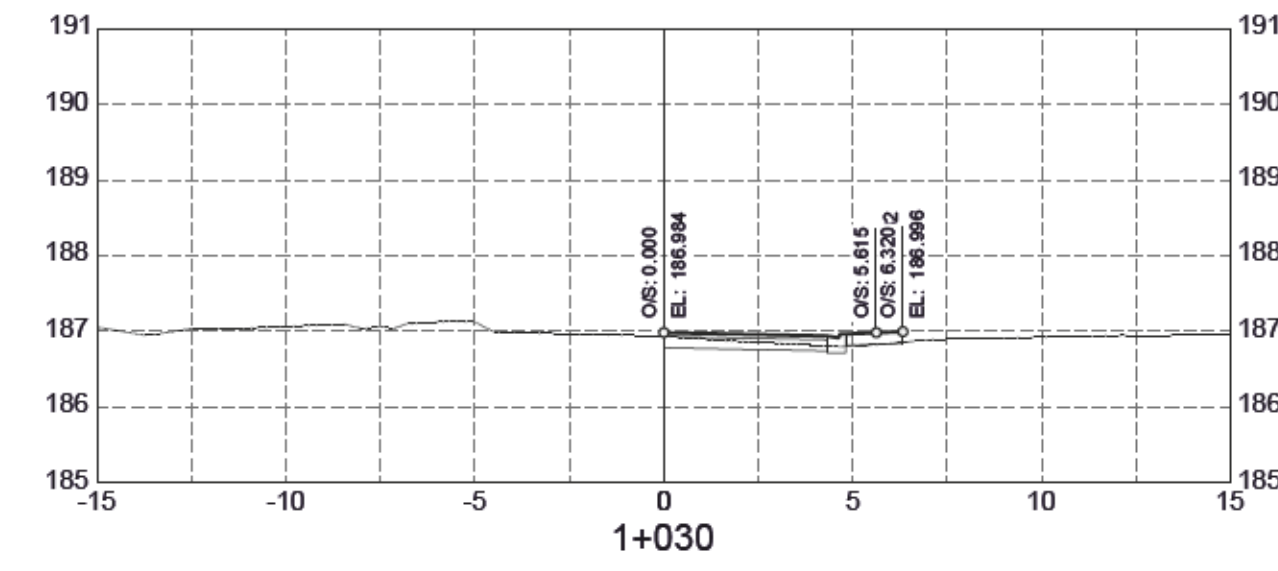
Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
Limitations:
This licence is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario

DRAFTING
MM/JT
DESIGN
MM/JT
CHECKED BY
MM/JT
APPROVED BY
MM/JT

Associated Engineering

CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT AND ROAD RECONSTRUCTION
IN THE TOWNSHIP OF WEST LINCOLN
ROAD GEOMETRICS - STA 1+280 TO STA 1+415

CONSULTANT FILE No. 2020-5483
DATE FEB 2021
SCALE Hor : 1:200 m
Ver : 1:50 m
REF. No. ##
DWG No. **5483-C-103**
REV. 0



NO.	REVISION	DATE	INIT.
0	ISSUED FOR TENDER	2021-02-04	MM

Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
2021-01-27
This licence is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario



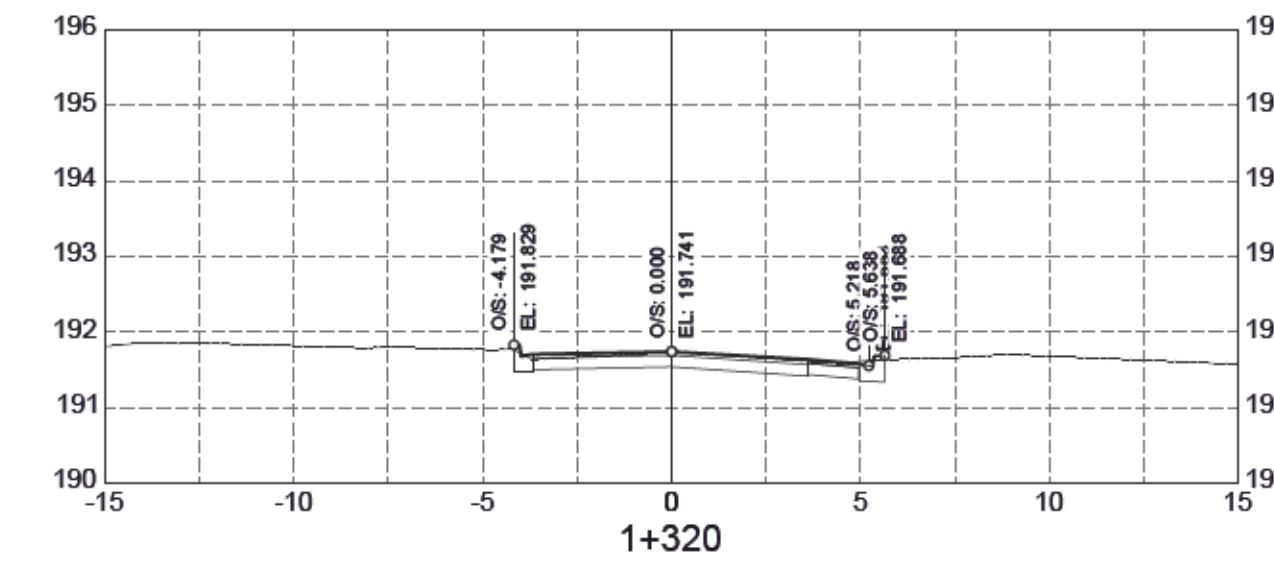
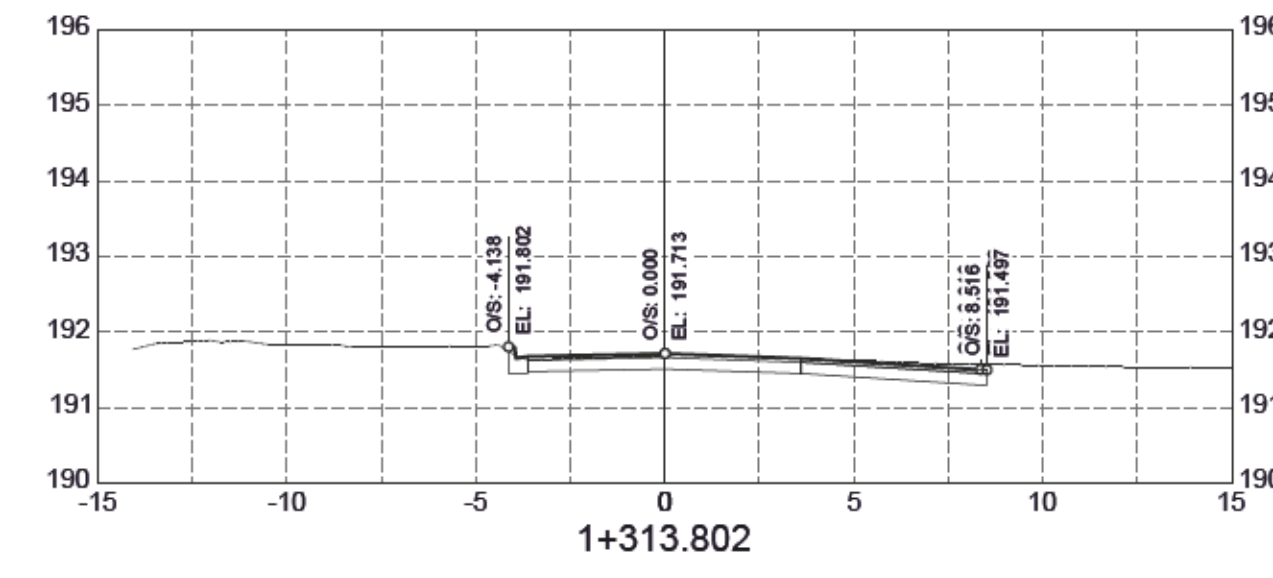
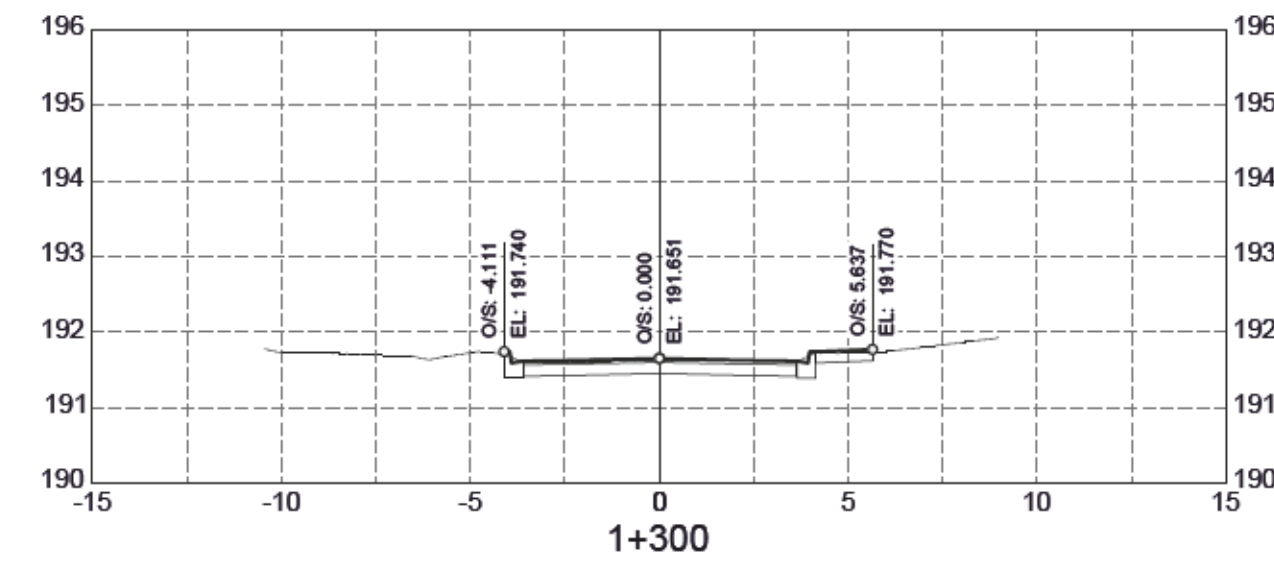
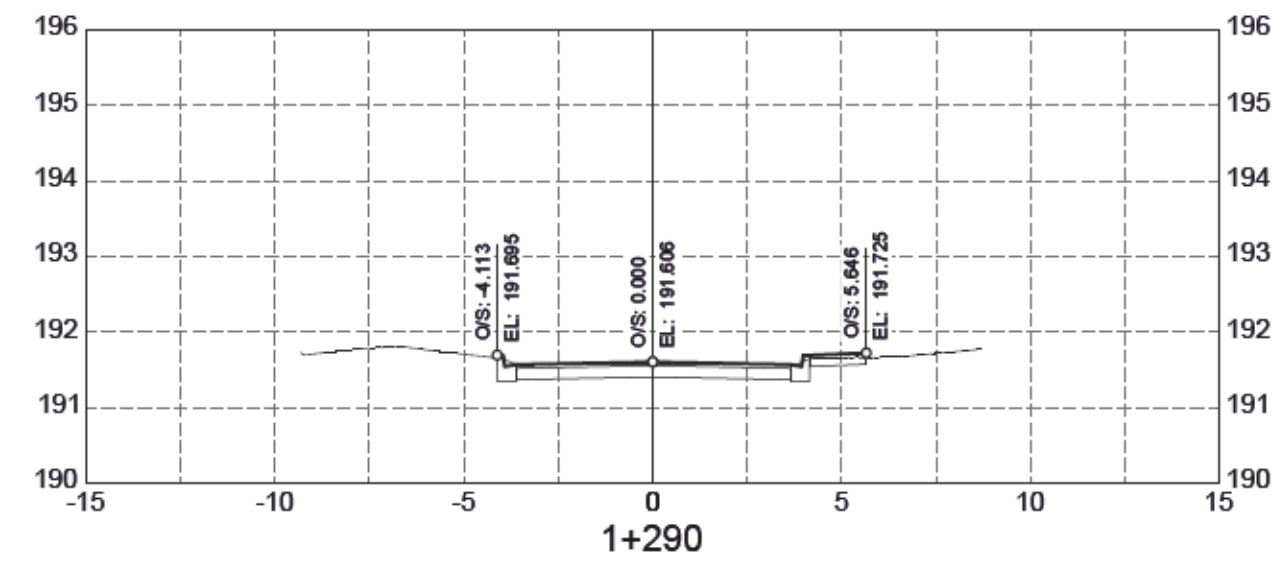
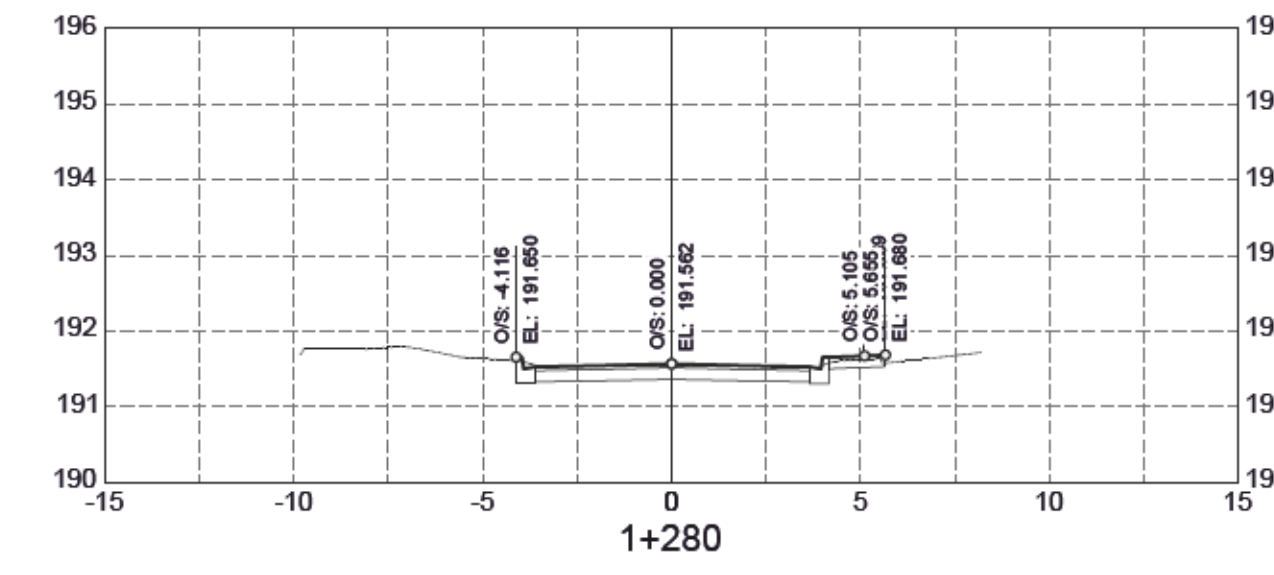
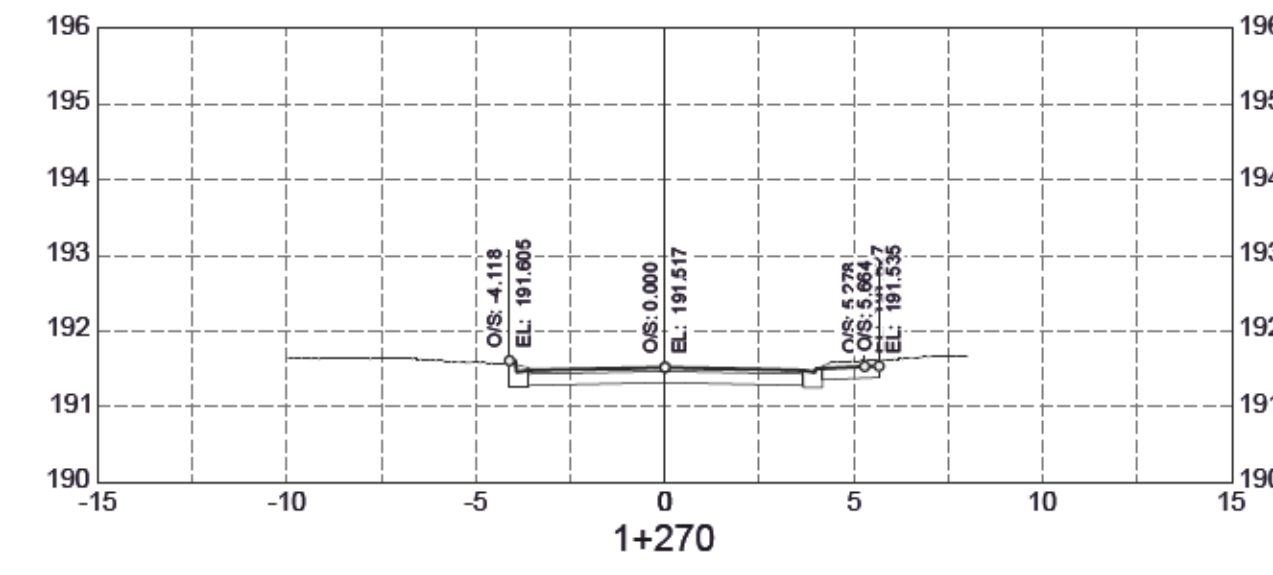
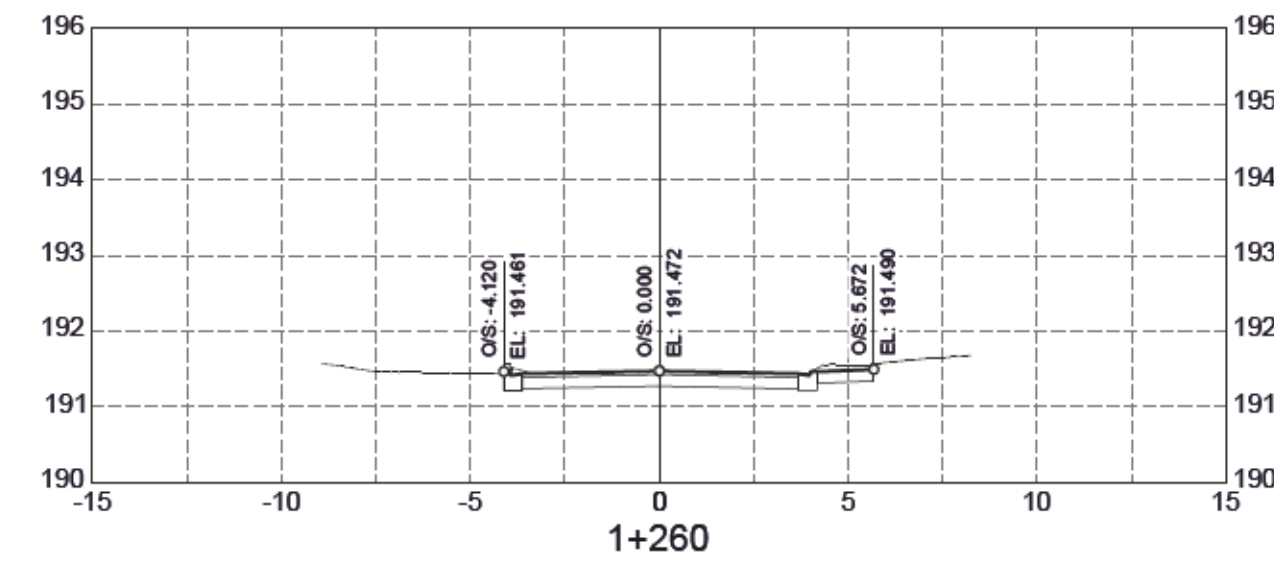
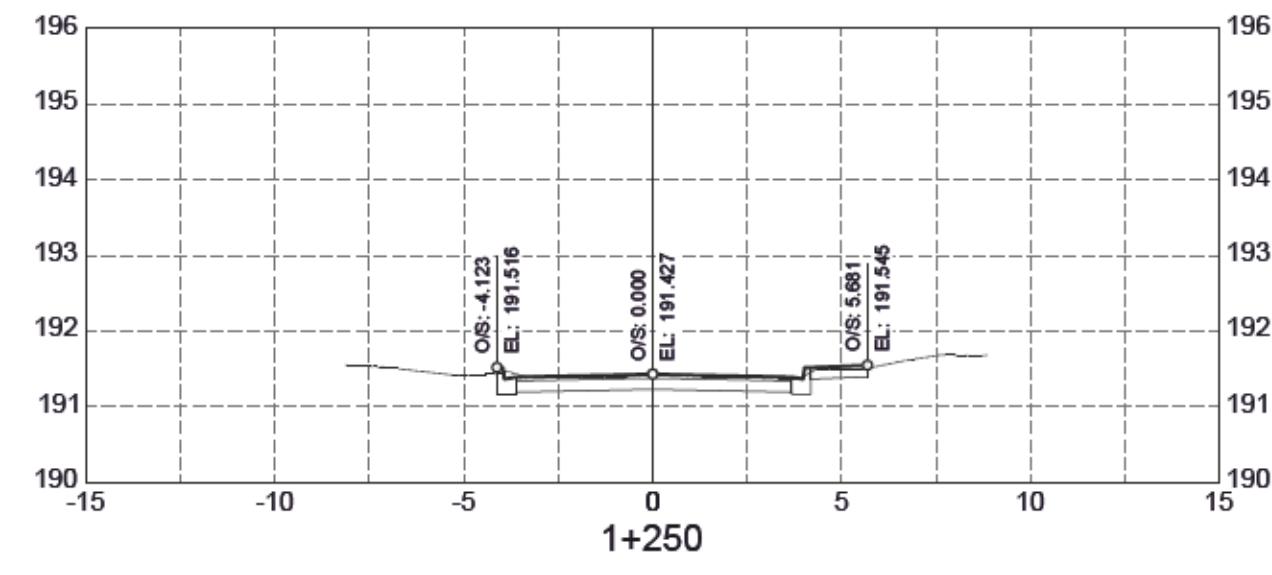
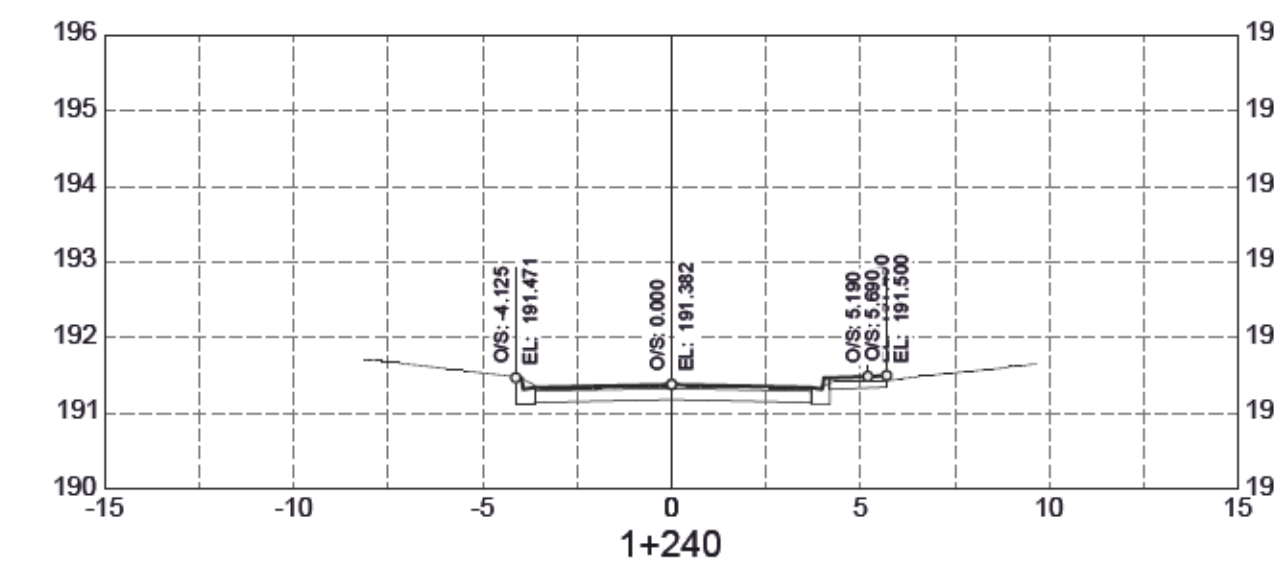
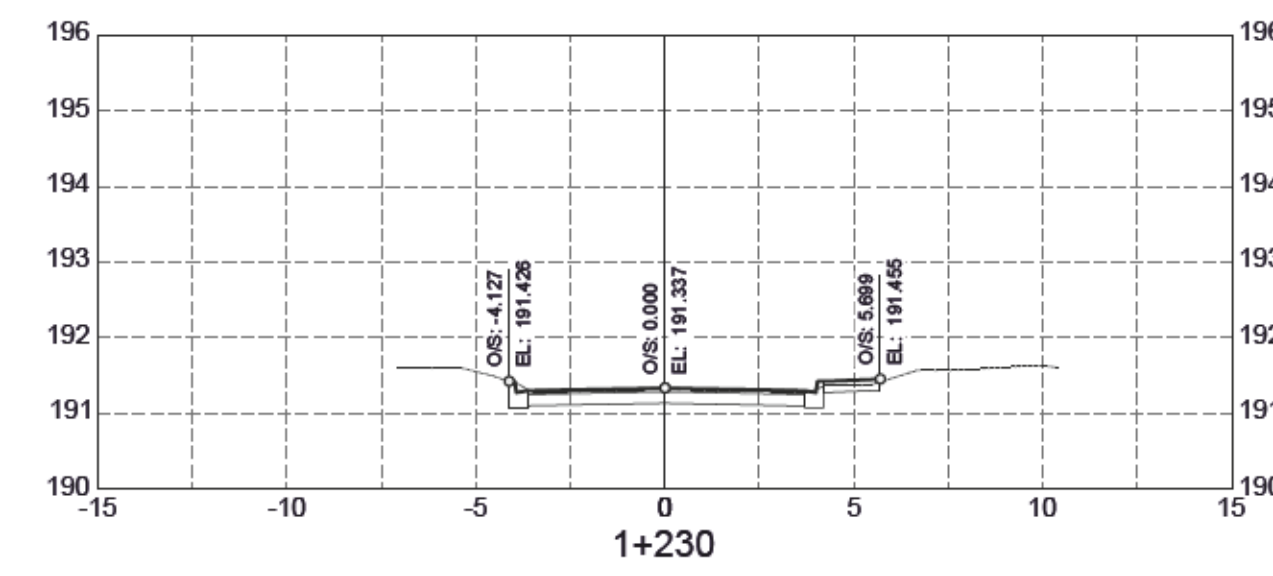
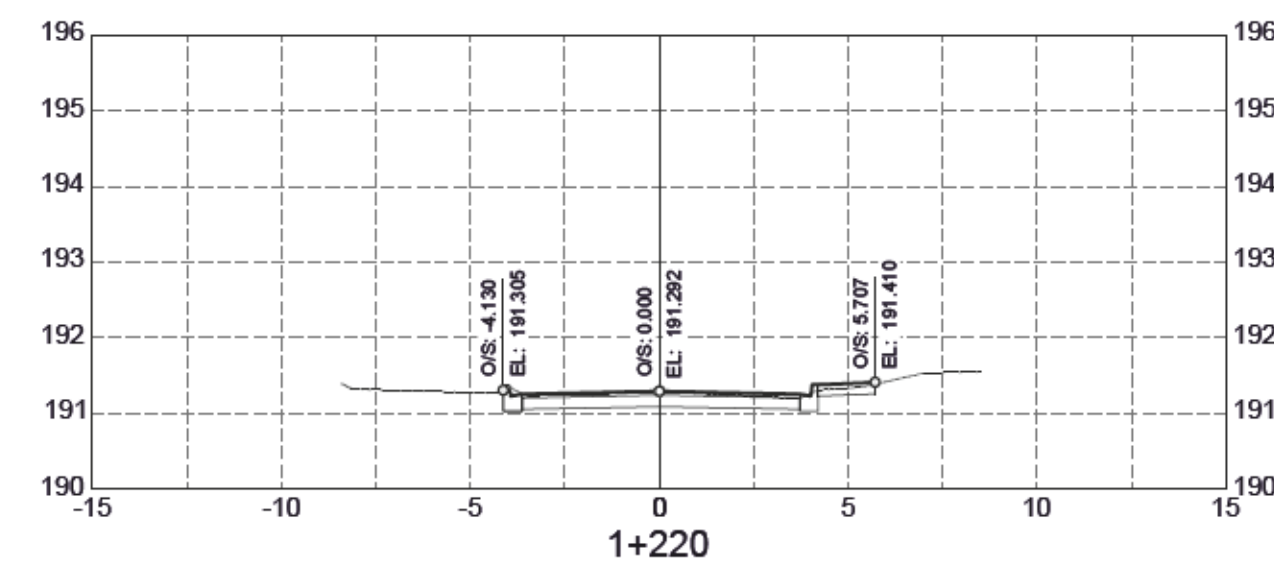
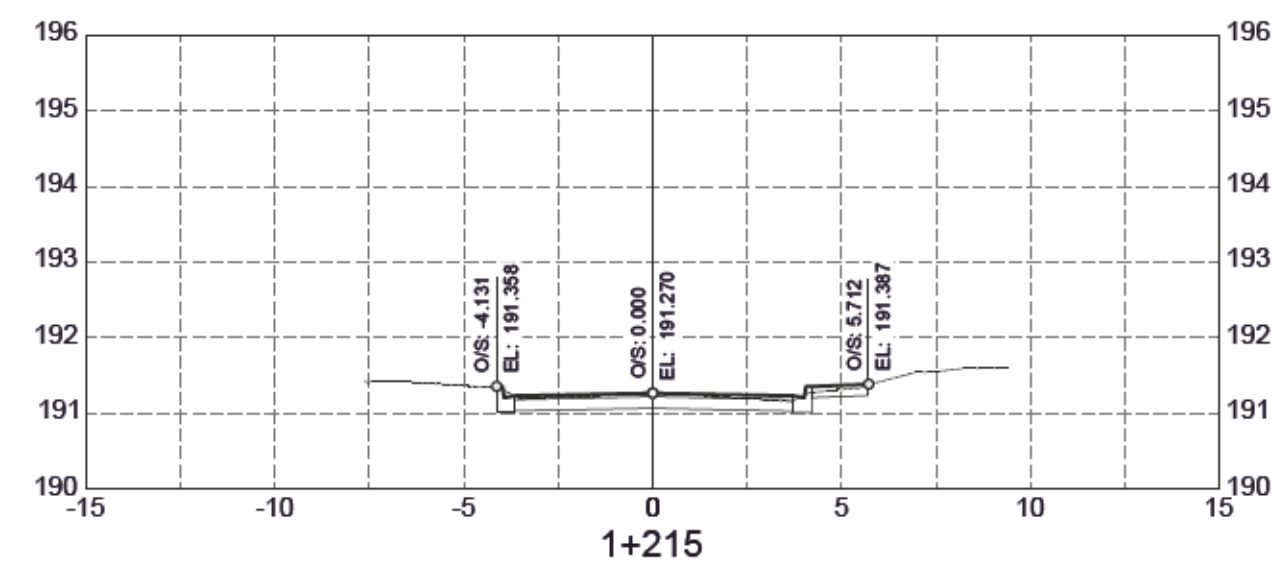
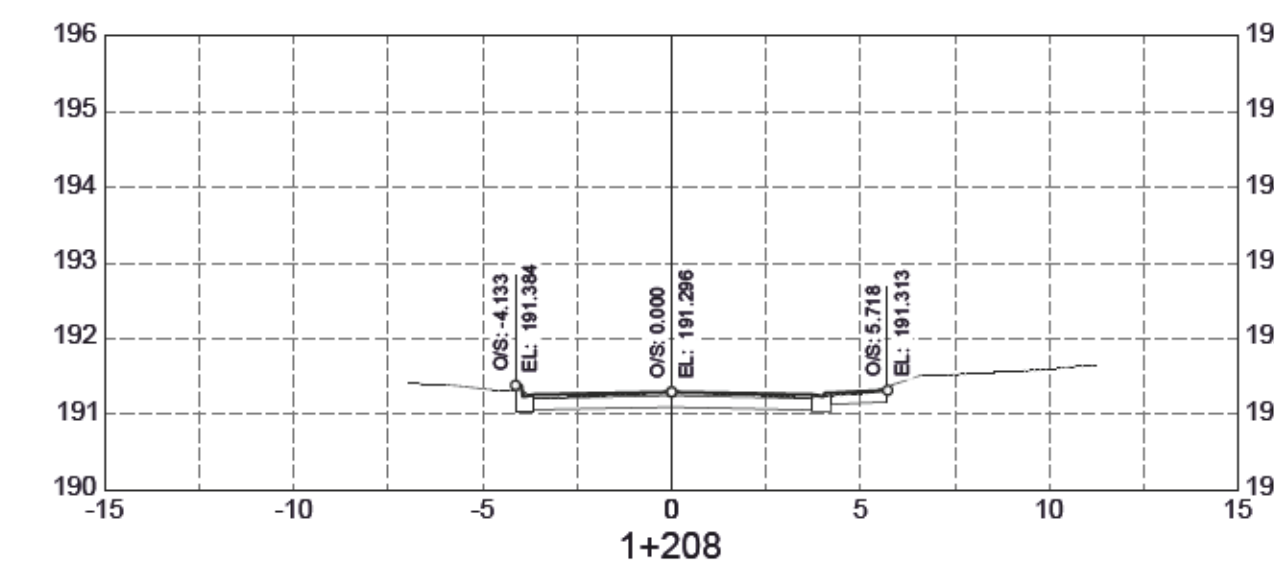
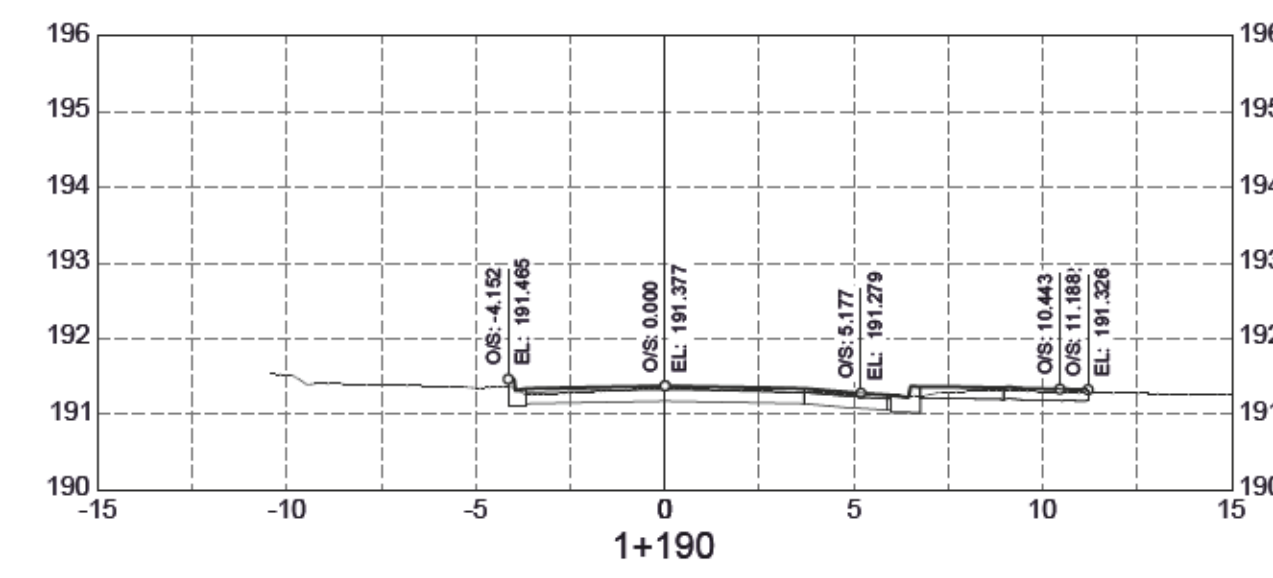
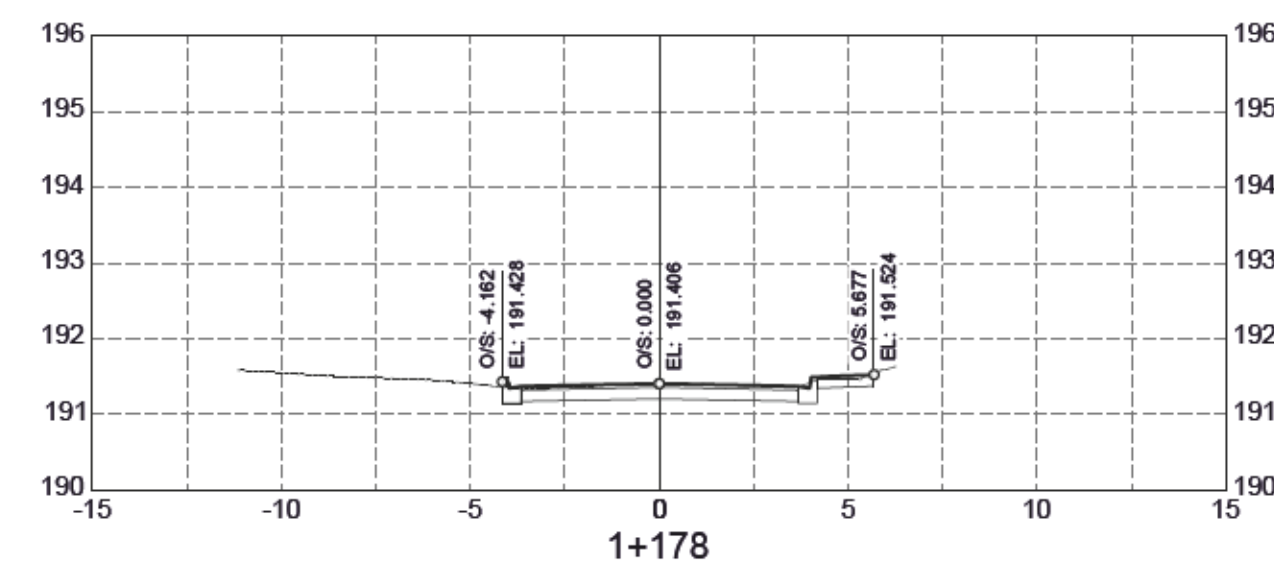
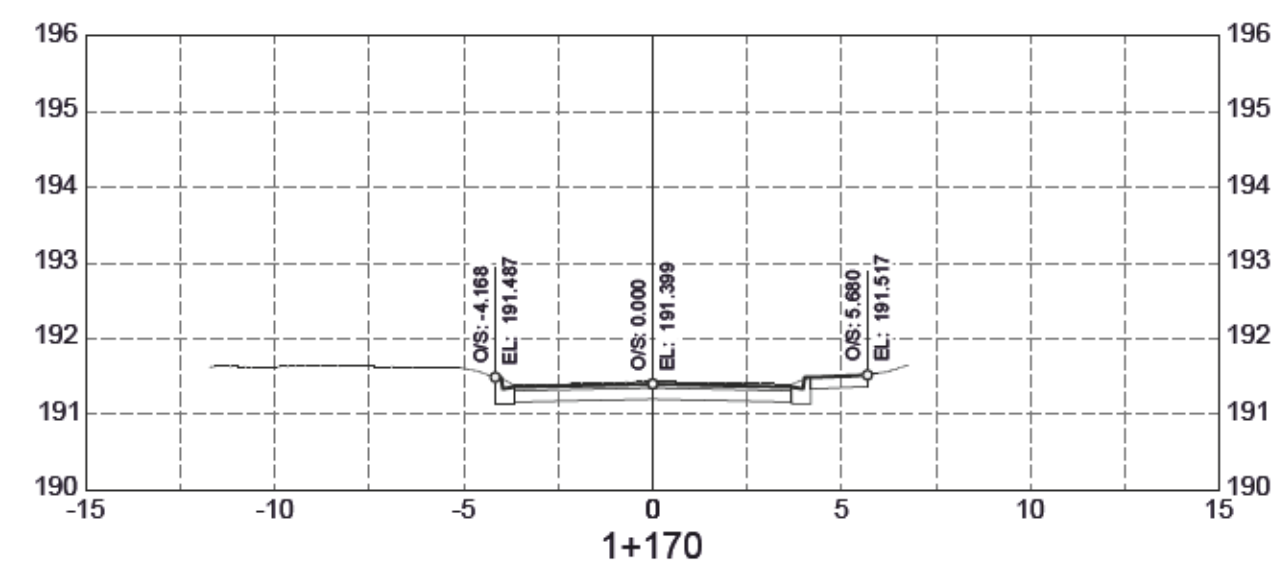
DRAFTING
MM/JT
DESIGN
MM/JT
CHECKED BY
MM/JT
APPROVED BY
MM/JT



CONTRACT # PW 2021-01
**BROCK STREET WATERMAIN REPLACEMENT
AND ROAD RECONSTRUCTION**
IN THE TOWNSHIP OF WEST LINCOLN

CROSS SECTIONS I

CONSULTANT FILE No. 20205483
DATE FEB 2021
SCALE
REF. No. #
DWG No. 5483-C301
REV. 0



No.	REVISION	DATE	INIT.
0	ISSUED FOR TENDER	2021-02-04	MM

Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
2021-01-27
This license is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario

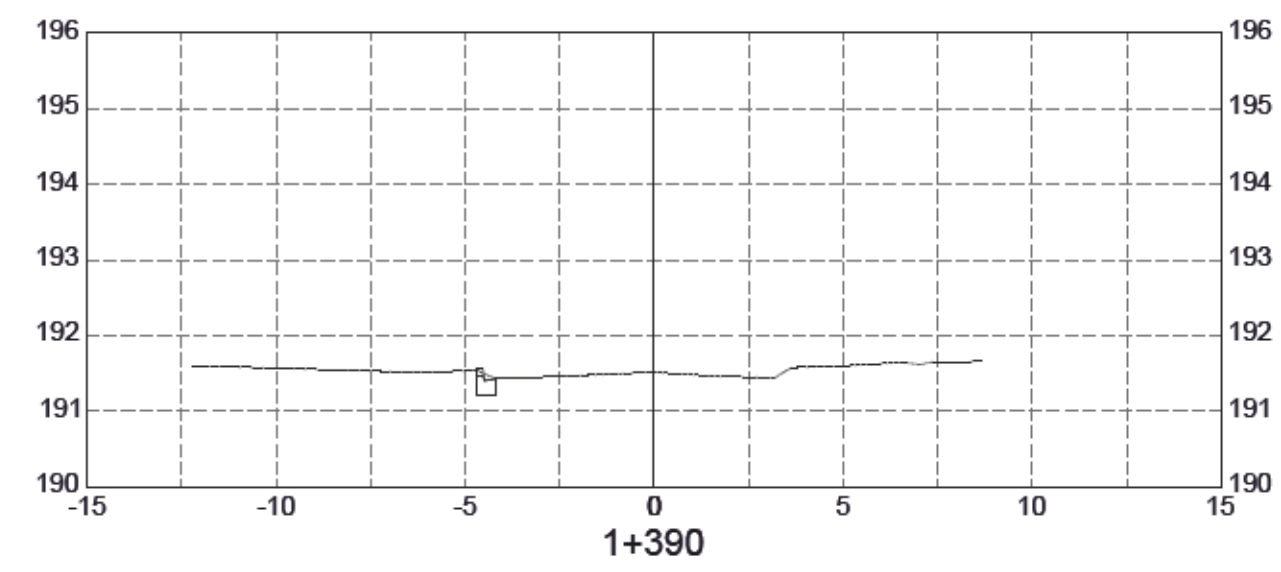
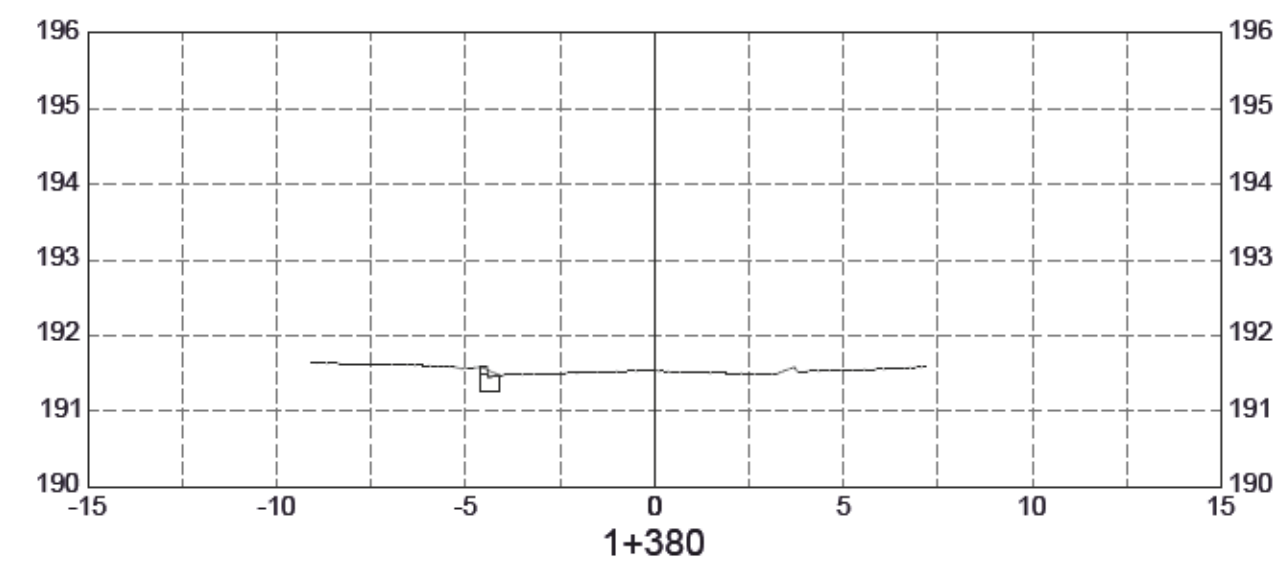
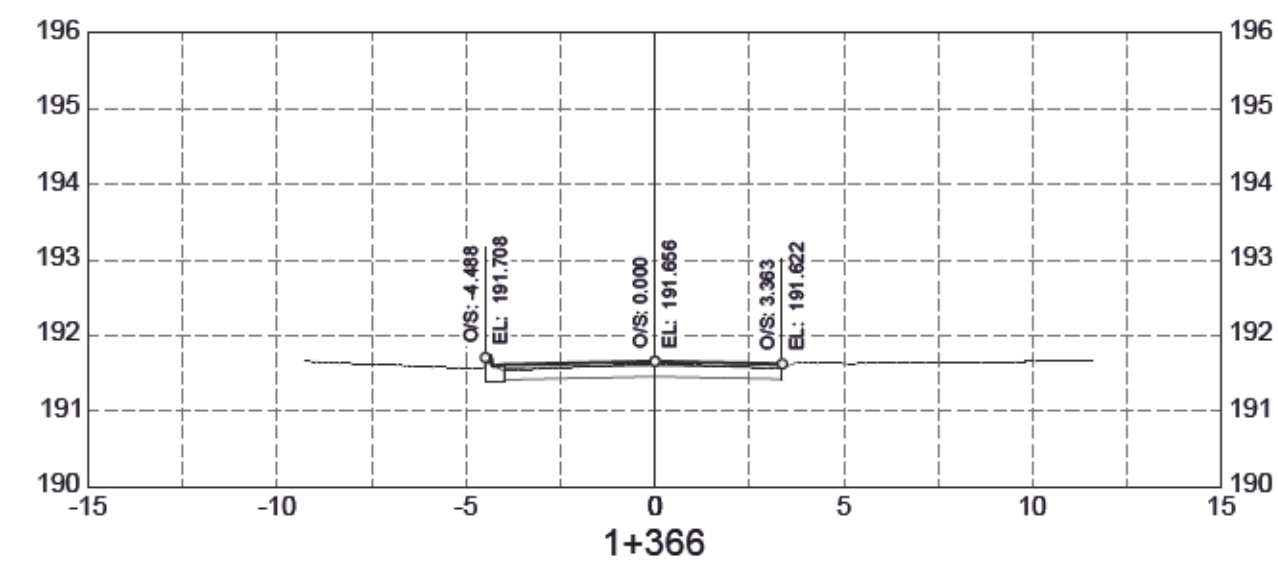
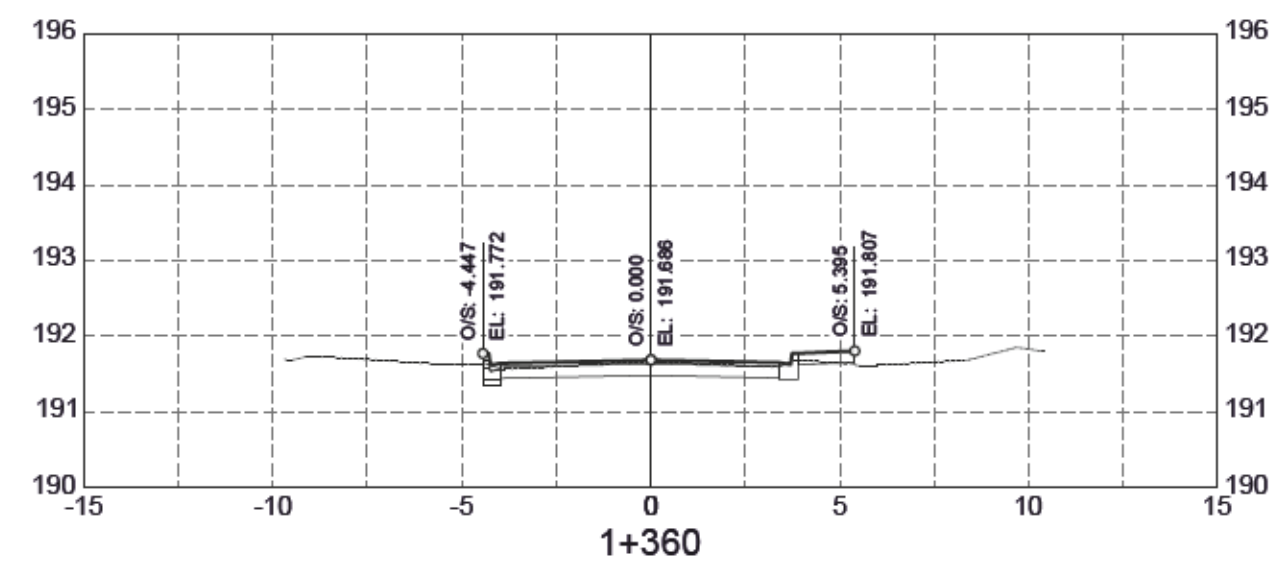
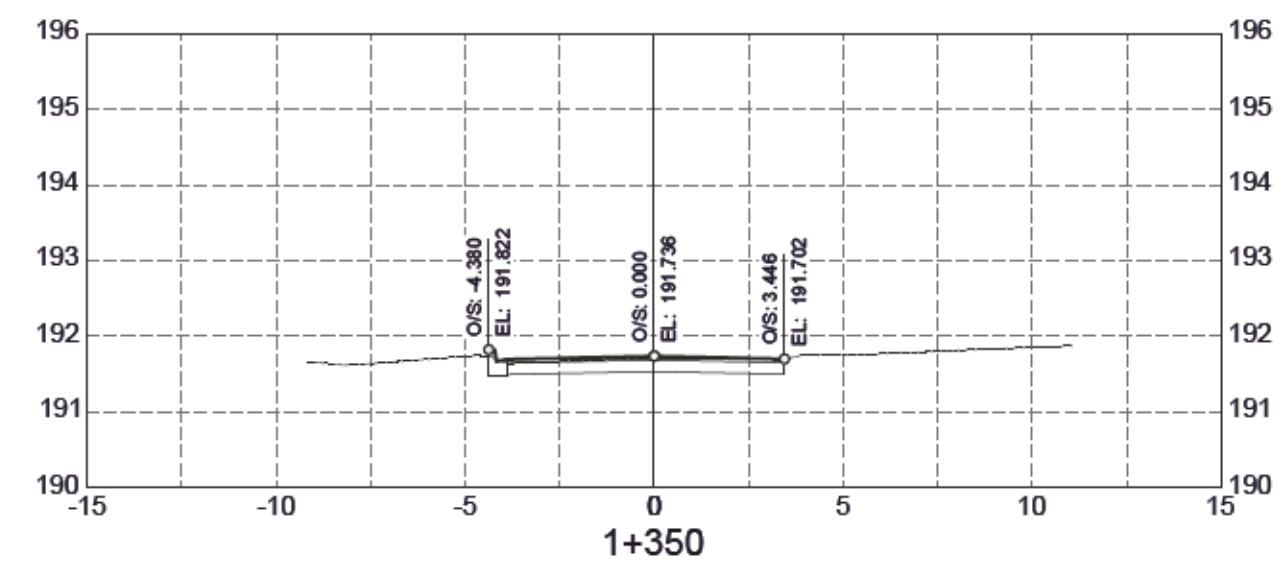
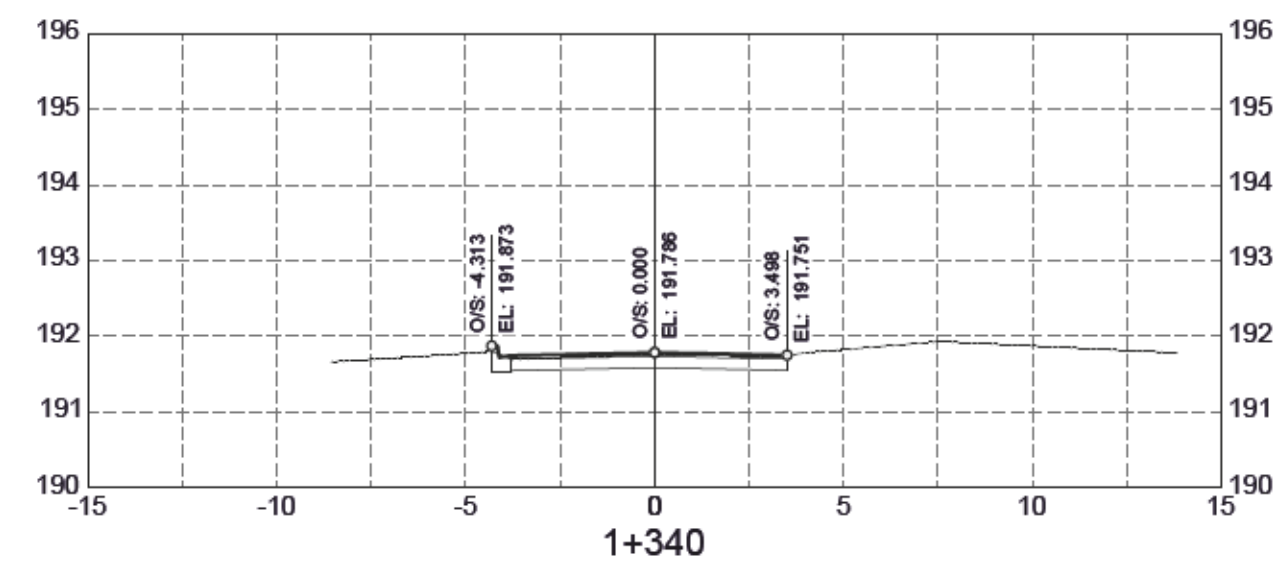
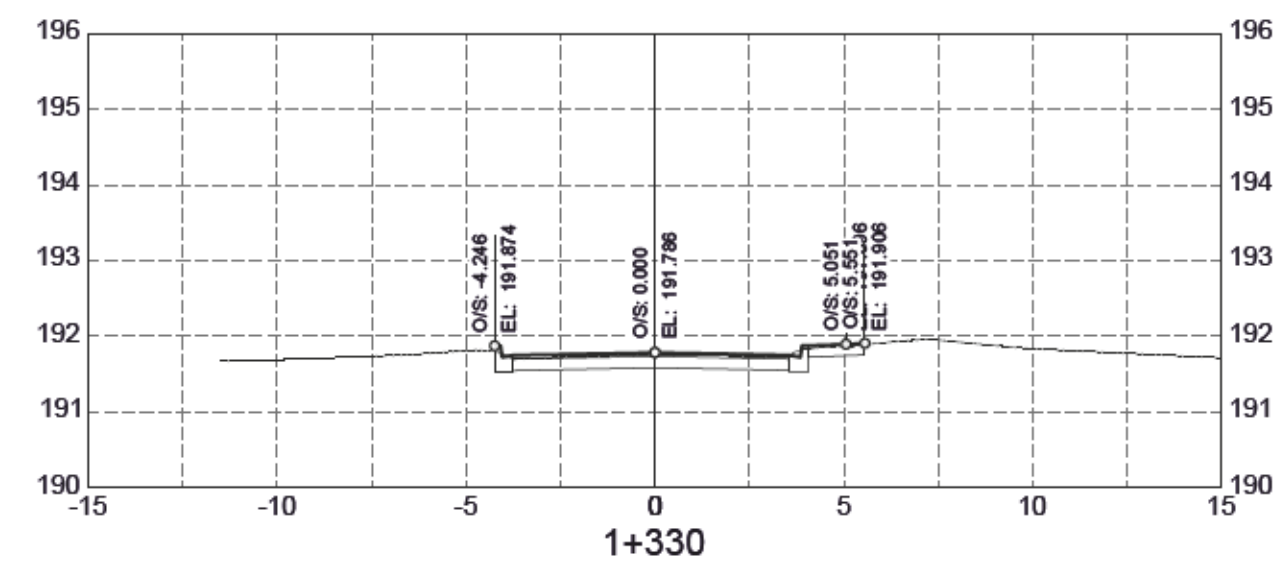


DRAFTING: MM/JT
DESIGN: MM/JT
CHECKED BY: MM/JT
APPROVED BY: MM/JT



CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT AND ROAD RECONSTRUCTION IN THE TOWNSHIP OF WEST LINCOLN
CROSS SECTIONS II

CONSULTANT FILE No. 20205483	
DATE	FEB 2021
SCALE	
REF. No. #	
DWG No.	5483-C302
REV.	0



NO.	REVISION	DATE	INT.
0	ISSUED FOR TENDER	2021-02-04	MM

Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
2021-01-27
Limitations:
This licensee is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario

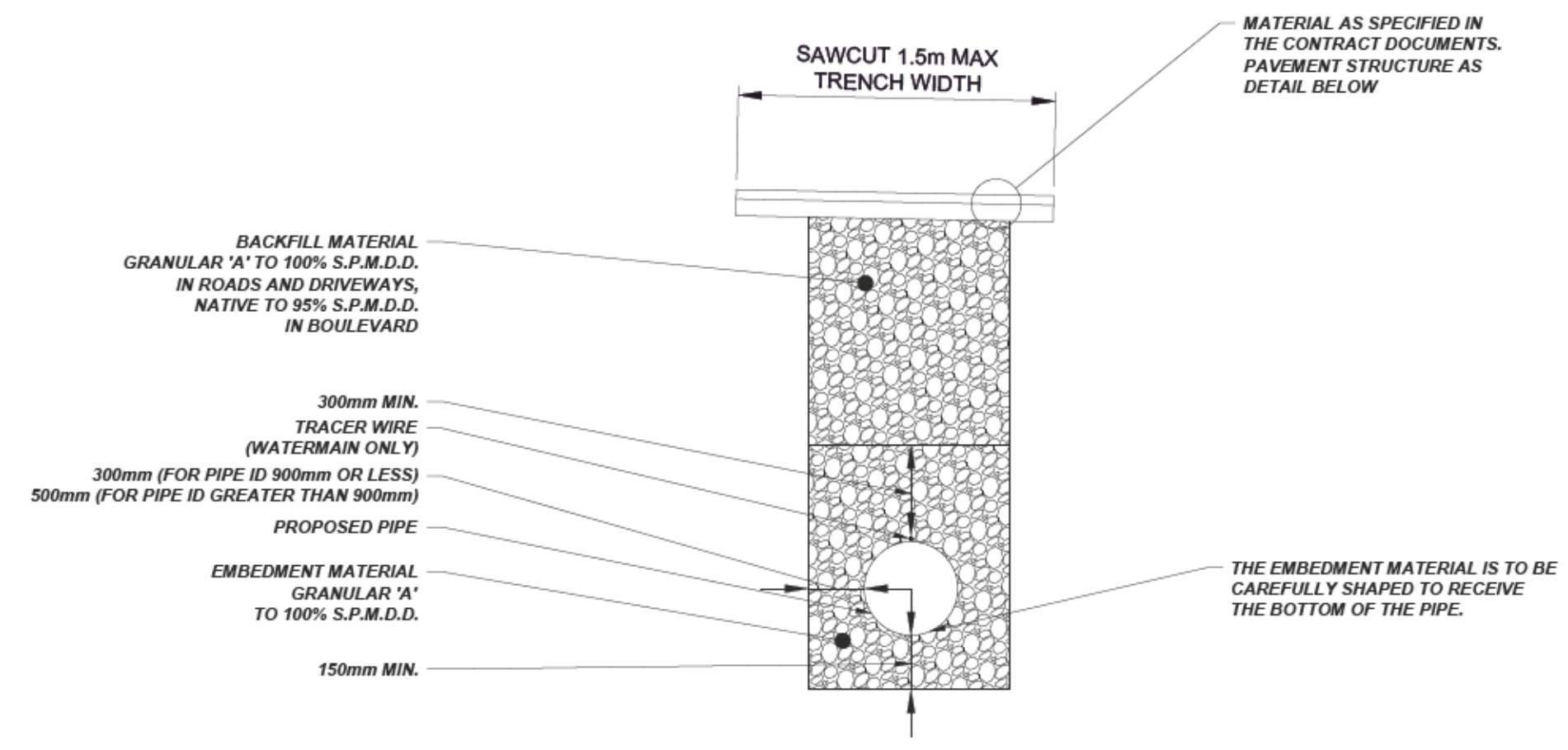


DRAFTING: MM/JT
DESIGN: MM/JT
CHECKED BY: MM/JT
APPROVED BY: MM/JT



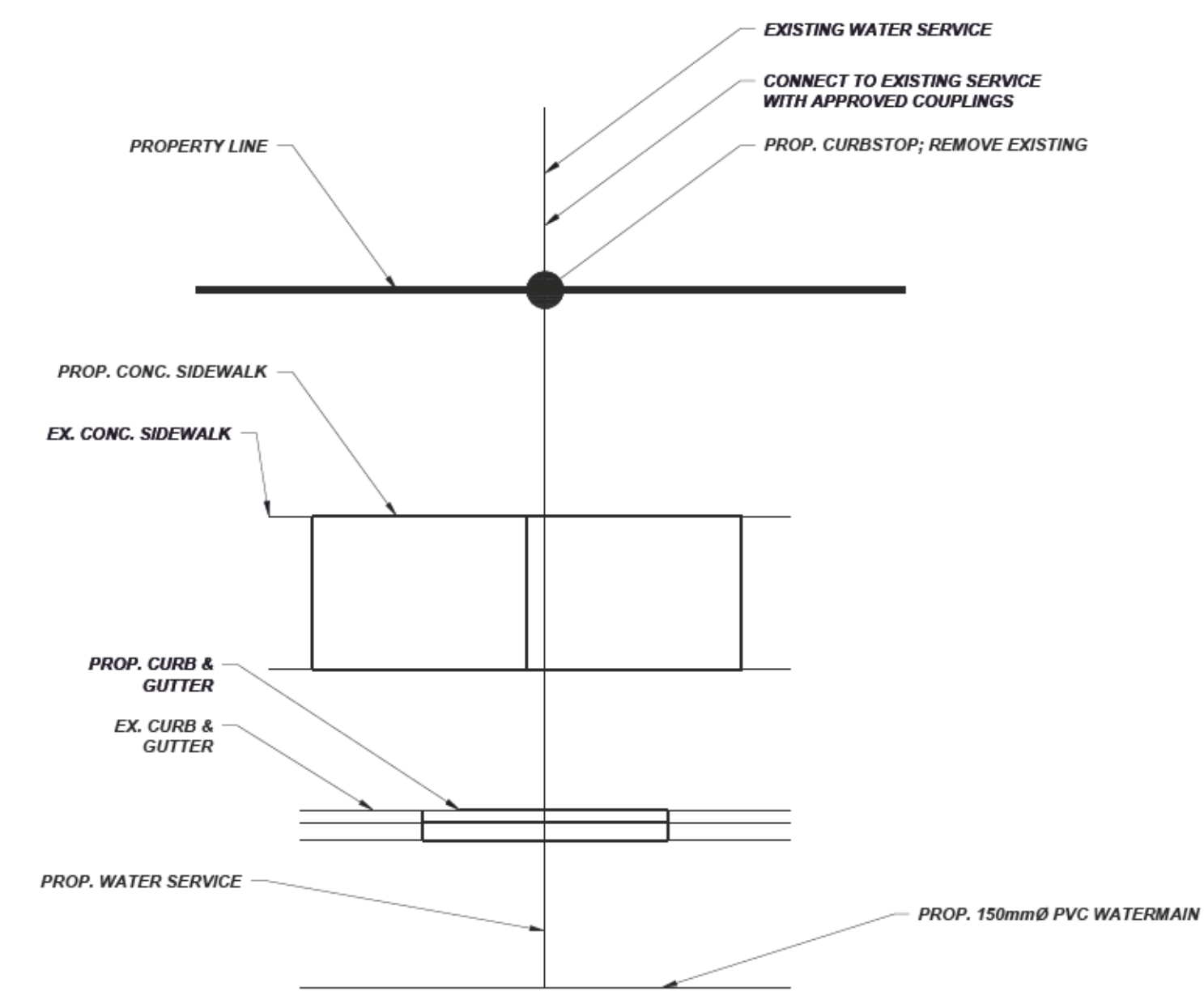
CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT
AND ROAD RECONSTRUCTION
IN THE TOWNSHIP OF WEST LINCOLN
CROSS SECTIONS III

CONSULTANT FILE No. 20205483	
DATE	FEB 2021
SCALE	
REF. No. #	
DWG No.	5483-C303
REV.	0

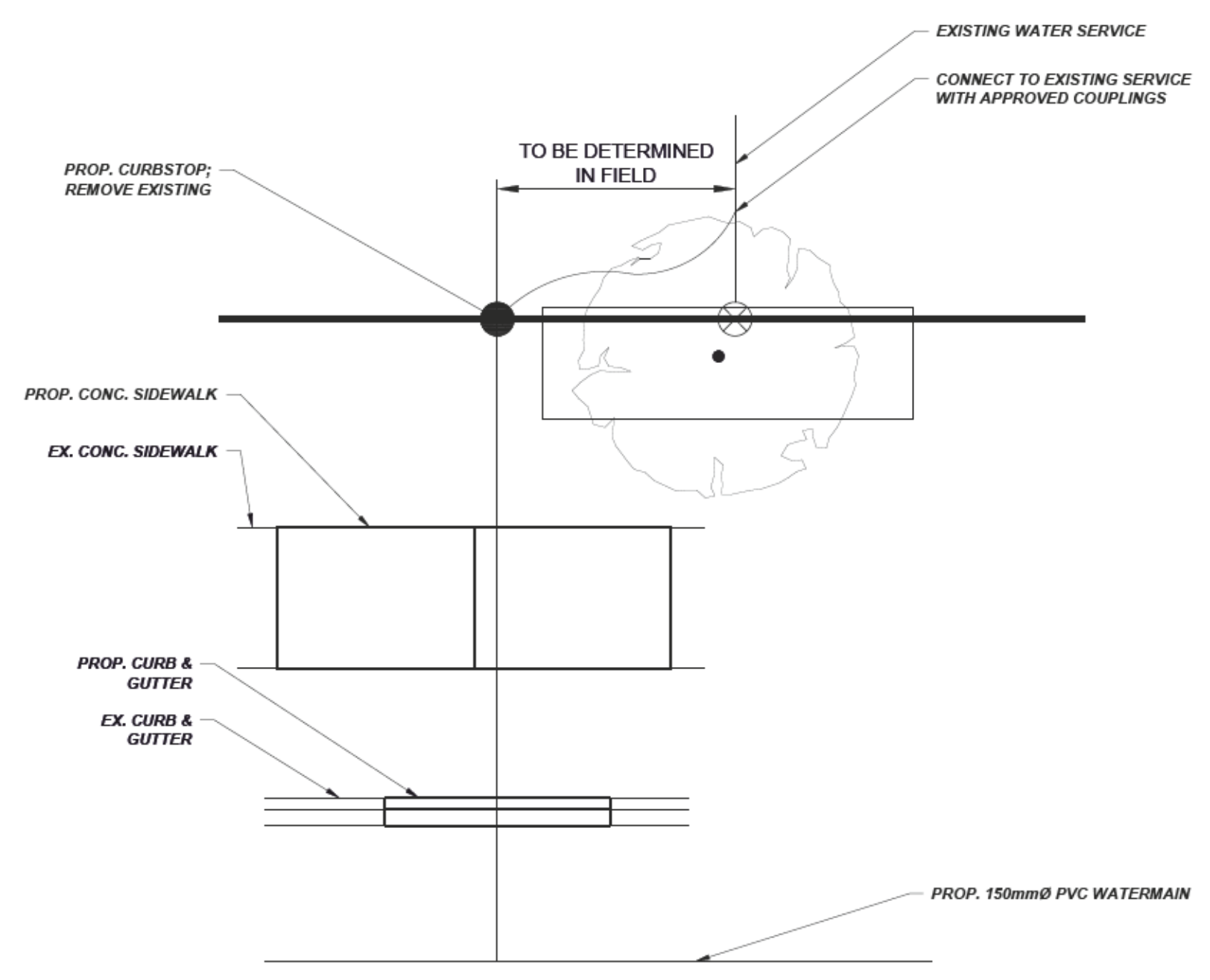


- NOTES:
- ALL PIPE TO BE INSTALLED USING ENGINEERED TRENCH BOX IN ORDER TO REDUCE CONSTRUCTION FOOTPRINT. TRENCH BOX SHOP DRAWINGS TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENCED IN ONTARIO AND SUBMITTED TO CONTRACT ADMINISTRATOR.
 - REFER TO OPSD 802.010 FOR ADDITIONAL DETAILS ON THE EMBEDMENT AND BACKFILL OF FLEXIBLE PIPE IN AN EARTH EXCAVATION.
 - REFER TO OPSD 802.030, 802.031, 802.032 FOR ADDITIONAL DETAILS ON THE EMBEDMENT AND BACKFILL OF RIGID PIPE IN AN EARTH EXCAVATION.
 - EMBEDMENT MATERIAL MEANS MATERIAL AS IT RELATES TO FLEXIBLE AND RIGID PIPE FROM THE BOTTOM OF THE BEDDING TO THE BOTTOM OF THE BACKFILL. EMBEDMENT MATERIAL REFERS TO BOTH BEDDING AND COVER MATERIAL AND IS TO BE PLACED AND COMPACTED IN A UNIFORM MANNER TO PROVIDE THE PROPER SUPPORT FOR THE PIPE AND TO FORM PART OF THE STRUCTURE OF THE PIPE.
 - AS A MINIMUM AND UNLESS DIRECTED OTHERWISE SURFACE RESTORATION TYPES SHALL MATCH EXISTING AND AS FOLLOWS: MAINTAINED GREEN SPACES AND GRASS AREAS: TOPSOIL AND SOD AS SPECIFIED
- ROADWAYS: HOT MIX ASPHALT AS SPECIFIED
- BOULEVARDS: TOP SOIL AND SOD
 - MINIMUM COVER FOR WATERMAIN = 1.8m
MINIMUM COVER FOR SANITARY SEWERS = 2.5m

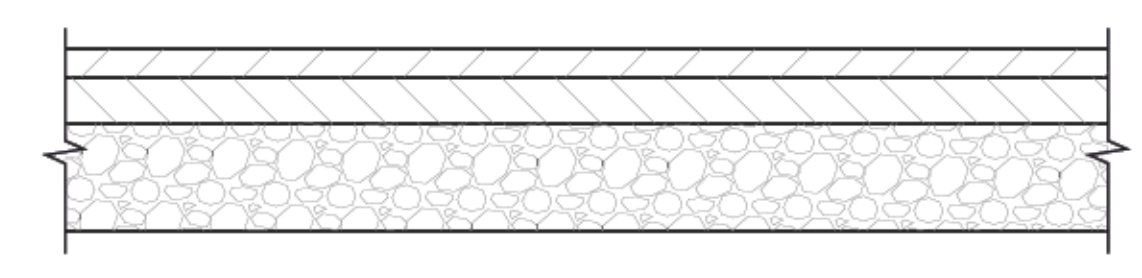
1 DETAIL NTS
TYP. SEWER AND WATERMAIN TRENCH



2 DETAIL NTS
TYPICAL INSTALLATION OF 25mm COPPER WATER SERVICE

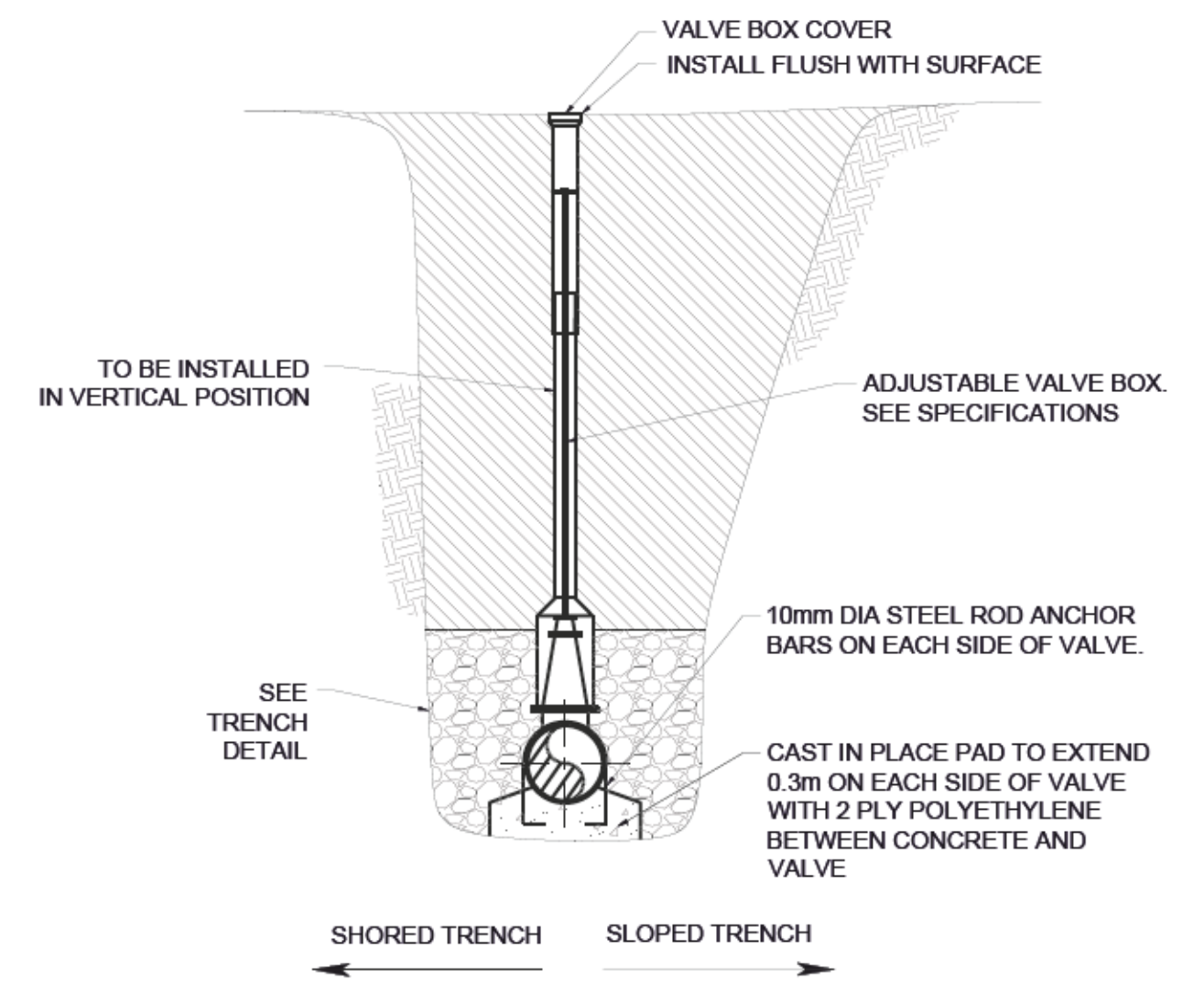


3 DETAIL NTS
TYPICAL DETOUR OF NEW WATER SERVICE TO AVOID PROTECTED TREES



HL3HS = 40 mm
HL8 HS = 50 mm
GRANULAR 'A' = 450 mm

4 DETAIL NTS
TYP. ROAD STRUCTURE IN TRENCH



NOTE:
PROVIDE CATHODIC PROTECTION IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.

5 DETAIL NTS
VALVE INSTALLATION

NO.	REVISION	DATE	INIT.
0	ISSUED FOR TENDER	2021-02-04	MM

Professional Engineers Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
2021-01-27
This licence is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario



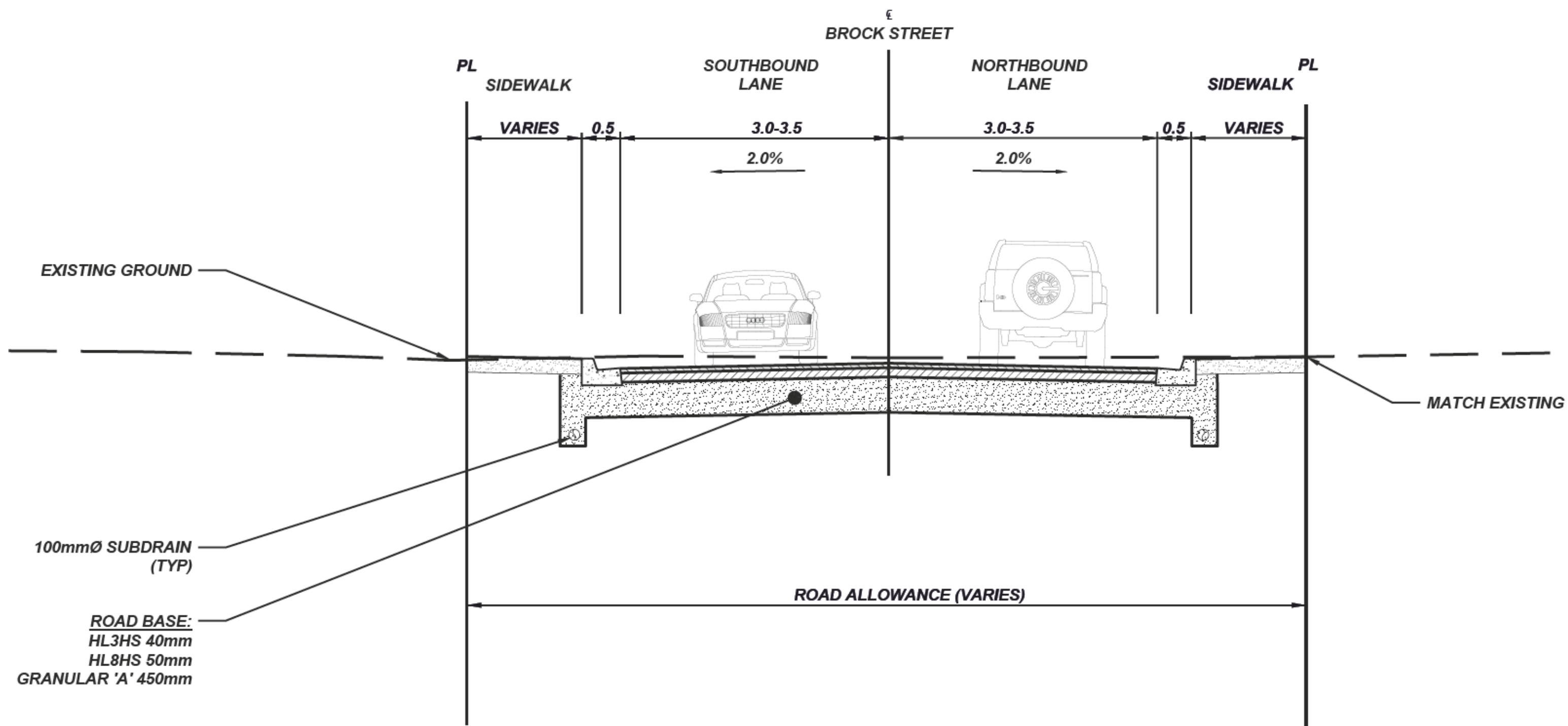
DRAFTING MM/JT
DESIGN MM/JT
CHECKED BY MM/JT
APPROVED BY MM/JT



CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT AND ROAD RECONSTRUCTION IN THE TOWNSHIP OF WEST LINCOLN

DETAILS

CONSULTANT FILE No. 20205483	REV.
DATE FEB 2021	0
SCALE	
REF. No. #	
DWG No. 5328-C501	



1 SECTION NTS
PROPOSED TYPICAL CROSS SECTION

NO.	REVISION	DATE	INIT.
0	ISSUED FOR TENDER	2021-02-04	MM

Professional Engineers
Ontario
Limited Licensee
Name: M. A. MASCIOLI
Number: 100203964
Category: Civil
2021-01-27
This license is subject to the limitation as detailed on the certificate.
Association of Professional Engineers of Ontario



DRAFTING MM/JT
DESIGN MM/JT
CHECKED BY MM/JT
APPROVED BY MM/JT



CONTRACT # PW 2021-01
BROCK STREET WATERMAIN REPLACEMENT
AND ROAD RECONSTRUCTION
IN THE TOWNSHIP OF WEST LINCOLN
TYPICAL CROSS SECTION

CONSULTANT FILE No. 20205483	REV.
DATE FEB 2021	0
SCALE	
REF. No. #	
DWG No. 5328-C502	