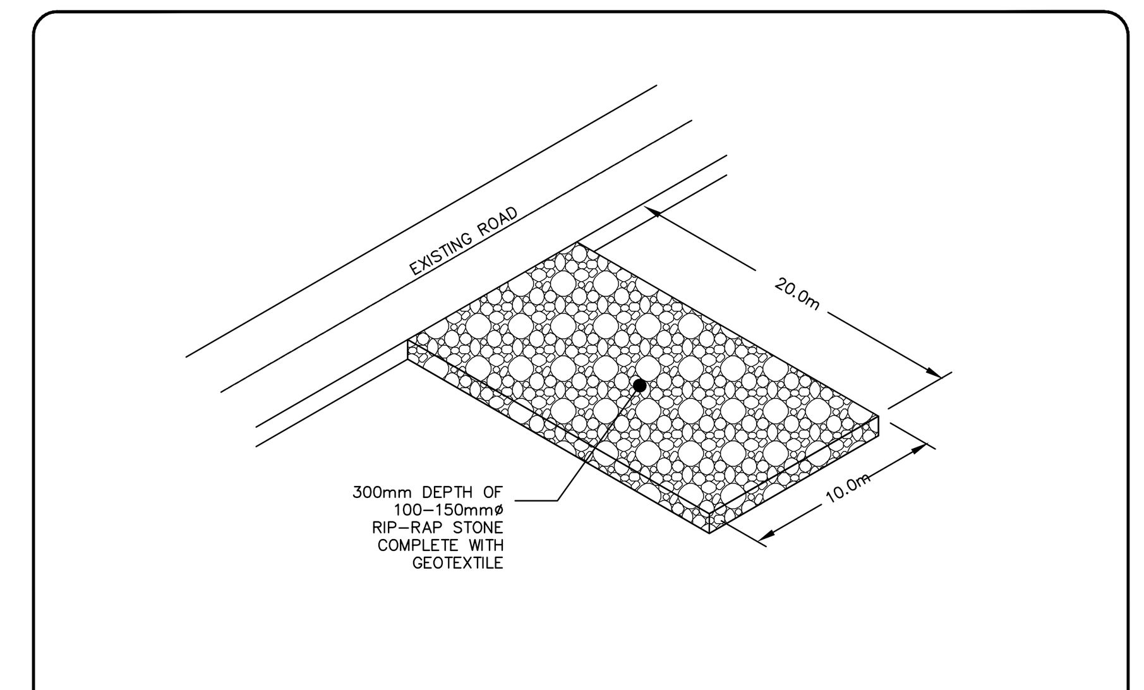
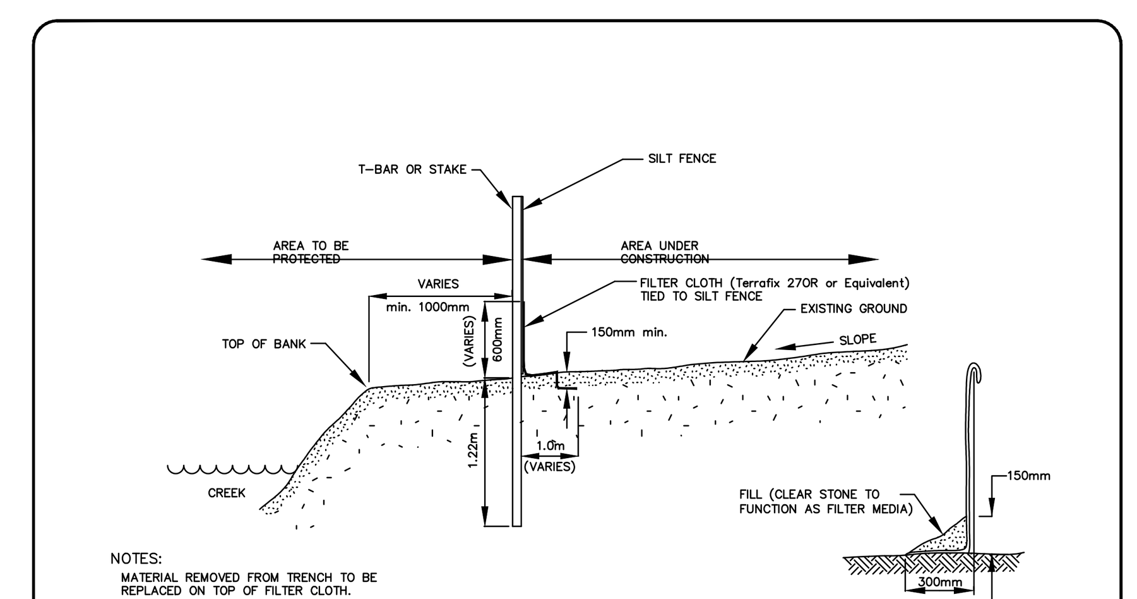
EROSION & SEDIMENT CONTROL:

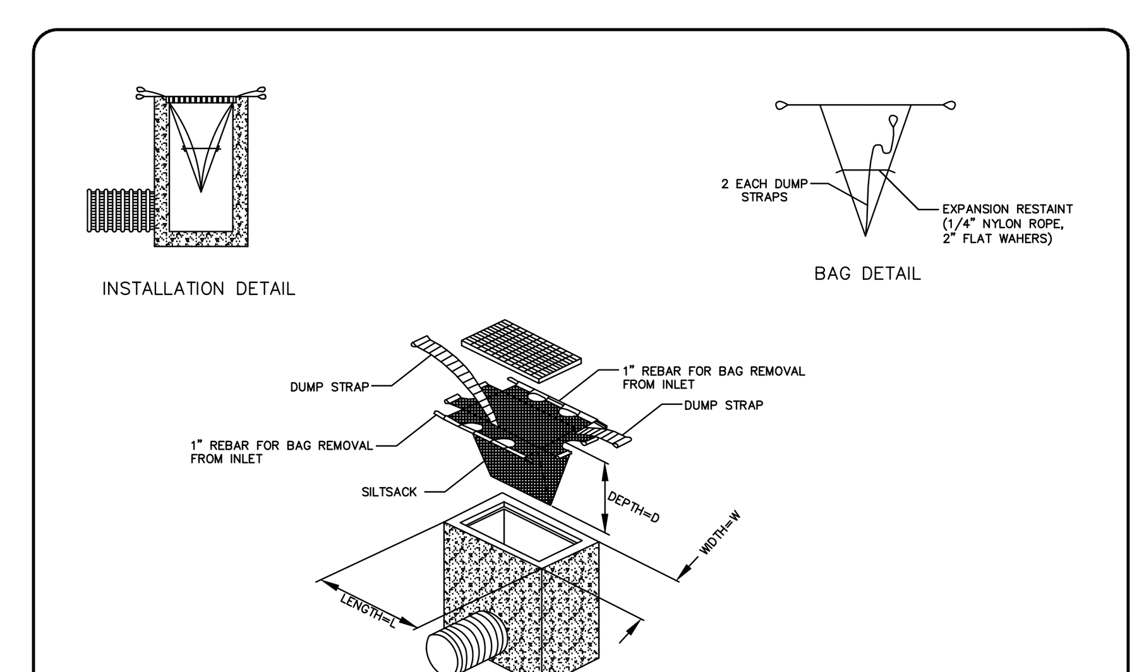
1. REFER TO DRAWING G1 FOR ALL GENERAL NOTES AND GRADING NOTES.
2. EROSION AND SEDIMENT CONTROL (ESC) MEASURES WILL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING CONSTRUCTION PHASES, TO PREVENT ENTRY OF SEDIMENT INTO THE WATER. ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE REPAIRED OR REPLACED WITHIN 48 HOURS OF INSPECTION OR BOTH.
3. ALL DISTURBED AREAS WILL BE MINIMIZED TO THE EXTENT POSSIBLE, AND TEMPORARILY OR PERMANENTLY STABILIZED OR RESTORED AS THE WORK PROGRESSES.
4. THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREA. IF THE PRESCRIBED MEASURES ON THE PLANS ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF A DELETERIOUS SUBSTANCE, THEN ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE POTENTIAL ECOLOGICAL IMPACTS AND A NIAGARA REGION CONSERVATION AUTHORITY ENFORCEMENT OFFICE SHOULD BE IMMEDIATELY CONTACTED. ADDITIONAL ESC MEASURES TO BE KEPT ON SITE AND USED AS NECESSARY.
5. ALL ACTIVITIES, INCLUDING MAINTENANCE PROCEDURES, WILL E CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR REFUELING AND MAINTENANCE AND REFUELING WILL BE CONDUCTED A MINIMUM OF 30 m FROM THE WATER.
6. ALL GRADES WITHIN THE REGULATORY FLOOD PLAN WILL BE MAINTAINED OR MATCHED.
7. IF NECESSARY, TRUCKS WILL BE WASHED DOWN BEFORE LEAVING THE SITE.
8. THE SITE WILL BE WET DOWN IF NECESSARY TO CONTROL DUST.
9. ALL CONSTRUCTION EQUIPMENT MUST BE PARKED ON-SITE.
10. SEDIMENT CONTROL FENCE TO BE AS PER DETAIL ON DRAWING D1.
11. ALL SILTSACK SEDIMENT CONTROL DEVICES TO BE ROUTINELY INSPECTED AND MAINTAINED IN PROPER WORKING ORDER UNTIL AREA IS STABILIZED.
12. SILTSACK TO BE PLACED UNDER GRATES ON ALL CATCHBASINS TO TRAP SEDIMENT. SILTSACK ARE TO BE CLEANED REGULARLY AND ARE NOT TO BE REMOVED UNTIL SUCH TIME AS THE CURBS ARE CONSTRUCTED AND THE BOULEVARDS ARE SODDED OR BACKYARDS GRADED AND SODDED. SILTSACK FOR SILT CONTROL TO BE TERRA FIX SILTSACK OR APPROVED EQUIVALENT AS PER DETAIL ON DRAWING D1.
13. IN THE CASE OF ANY CONFLICT WITH ANOTHER PLAN, THIS PLAN PREVAILS ONLY IN RESPECT TO CONSTRUCTION MEASURES AND ACTIVITIES SUCH AS THE CONSTRUCTION ACCESS, SILT FENCE, SECURITY FENCING, SEDIMENT CONTROL, AND MUD MATS.
14. STREET SWEEPING, CATCH BASIN CLEANING AND DUST CONTROL ARE THE RESPONSIBILITY OF THE DEVELOPER AND MUST BE KEPT UNDER CONTROL ON ALL ROADWAYS TO THE SATISFACTION OF THE CITY.
15. APPROPRIATE SIGNAGE IS TO BE INSTALLED ON THE BOULEVARD TO INDICATE THAT THE SIDEWALK IS NOT ACCESSIBLE.



MUD MAT - CONSTRUCTION ACCESS
SCALE: N.T.S.



SILT FENCE - T BAR
SCALE: N.T.S.



SILTSACK SEDIMENT CONTROL DEVICE
SCALE: N.T.S.

KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- SEDIMENT CONTROL FENCE
- OVERLAND FLOW ROUTE
- SEDIMENT CONTROL DEVICE
- MUD MAT / CONSTRUCTION ENTRANCE

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

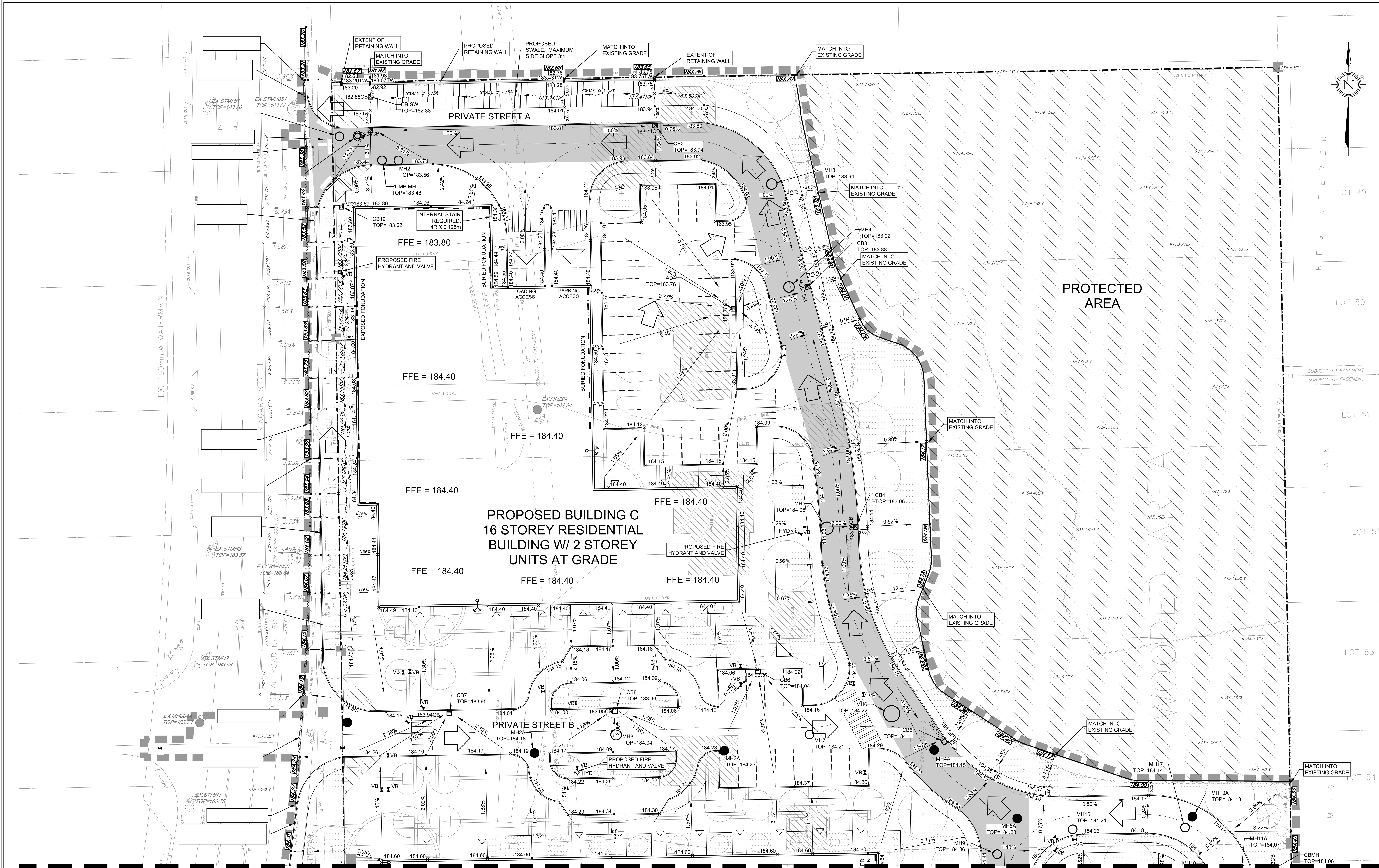
Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
EROSION AND SEDIMENT CONTROL PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	ESC1
Project No. 300052233		Contract No.		Revision No.	
Scale 1:500	0 5.0 10.0 20.0 30.0m				

File: \\monty\Shared Work Areas\052233 - Niagara St & Aqueduct St Welland\03_ProductionDwg\052233 - ESC1.dwg Date Plotted: September 4, 2024 - 12:17 PM



REFER TO DRAWING G2

KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- STEP JOINT
- RETAINING WALL
- PROPOSED BUILDING ENTRANCE
- × 184.79EX — EXISTING ELEVATIONS
- × 184.79 — EXISTING ELEVATIONS TO MATCH
- × 184.21 — FINISHED GROUND ELEVATION
- × 184.29TC — TOP OF CURB ELEVATION
- × 184.29TW — TOP OF WALL ELEVATION
- × 184.96SW — SWALE ELEVATION
- OVERLAND FLOW ROUTE
- 2.00% — PROPOSED SLOPES
- 2.00% — EXISTING SLOPES
- INTERCEPTOR SWALE
- QUALITY CONTROL DEVICE
- AREA DRAIN
- CATCHBASIN / DOUBLE CATCHBASIN
- HYD — HYDRANT AND VALVE
- VB — VALVE & BOX
- SIAMESE CONNECTION
- STORM MANHOLE
- SANITARY MANHOLE
- HEAVY DUTY ASPHALT

SITE GRADING NOTES:

1. ALL DISTURBED GRASSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER WITH SOD ON MIN 100mm TOPSOIL. THE RELOCATION OF TREES AND SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.
2. PROVIDE SUBDRAINS, MINIMUM LENGTH OF 3.0m, EXTENDING FROM ALL CATCHBASINS AND CATCHBASIN MANHOLES TO DRAIN THE GRANULAR SUB-BASE LAYER AS PER DETAIL ON DRAWING D1.
3. ALL CONCRETE CURB WITHIN THE SITE TO BE CONSTRUCTED AS PER DETAIL OPSD 600.110, UNLESS OTHERWISE SPECIFIED.
4. TRENCH BACKFILL WITHIN THE RIGHT OF WAY SHALL BE UNSHRINKABLE FILL AND SHALL EXTEND TO THE BASE OF ASPHALT.
5. ALL WORK SHALL BE SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF CITY ROAD OCCUPANCY PERMIT.
6. INSPECTIONS: ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING. ALL WORK RELATING TO WATERMAINS AND SEWERS TO BE INSPECTED BY THE MUNICIPALITY WHEN REQUIRED BY THE MUNICIPALITY.
7. REFER TO SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
8. STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT AS PER DETAIL ON DRAWING D1. ALL JOINTS MUST BE SEALED AS PER DETAIL.
9. EMBANKMENTS TO BE SLOPED AT MAX. 3:1, UNLESS OTHERWISE SPECIFIED.
10. ALL PAVEMENT MARKING, LINE PAINTING, DIRECTIONAL LINES/ARROWS ETC. SHALL BE PLACED IN ACCORDANCE WITH THE ARCHITECTURAL SITE PLAN OR THE OWNER'S TRAFFIC ENGINEERING CONSULTANT'S DRAWINGS. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT BASED PAINT IN ACCORDANCE WITH OPSS 1712.
11. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR THE RETAINING WALL (INCLUDE RAILINGS IF APPLICABLE) TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY STRUCTURAL AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
12. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER 1 (ONE) SET OF AS CONSTRUCTED SITE SERVICING, GRADING, AND SITE ELECTRICAL DRAWINGS (IN HARD PRINTS AND DIGITAL CAD FORMAT).

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

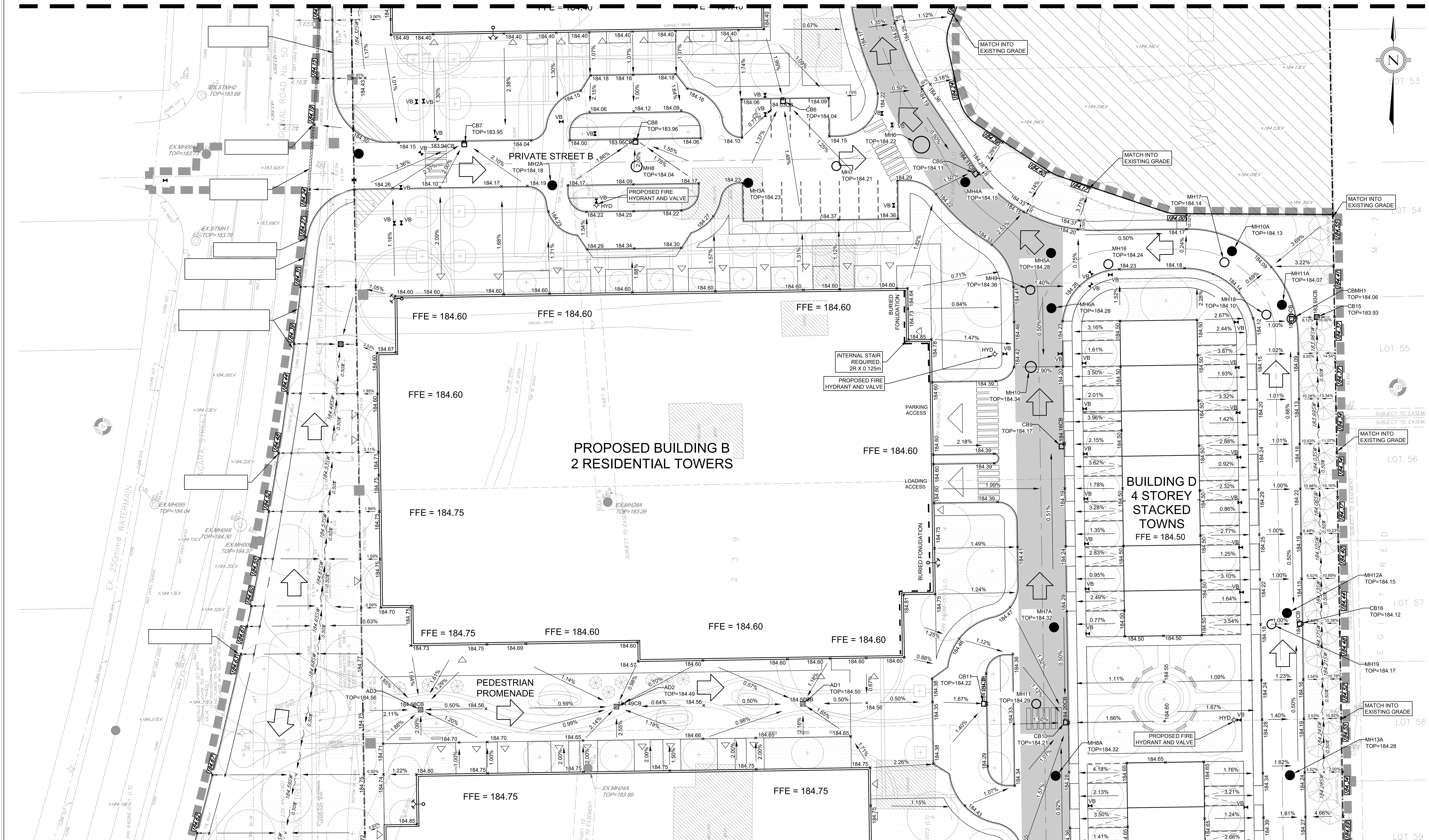
Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
GRADING PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	G1
Project No. 300052233		Contract No.		Revision No.	
Scale 1:300	0 / 6.0 / 12.0 / 18.0m				

REFER TO DRAWING G2



REFER TO DRAWING G3

SITE GRADING NOTES:

ALL DISTURBED GRASSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER WITH SOD ON MIN 100mm TOPSOIL. THE RELOCATION OF TREES AND SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.

PROVIDE SUBDRAINS, MINIMUM LENGTH OF 3.0m, EXTENDING FROM ALL CATCHBASINS AND CATCHBASIN MANHOLES TO DRAIN THE GRANULAR SUB-BASE LAYER AS PER DETAIL ON DRAWING D1.

ALL CONCRETE CURB WITHIN THE SITE TO BE CONSTRUCTED AS PER DETAIL OPSD 600.110, UNLESS OTHERWISE SPECIFIED.

TRENCH BACKFILL WITHIN THE RIGHT OF WAY SHALL BE UNSHRINKABLE FILL AND SHALL EXTEND TO THE BASE OF ASPHALT.

ALL WORK SHALL BE SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF CITY ROAD OCCUPANCY PERMIT.

INSPECTIONS: ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING. ALL WORK RELATING TO WATERMAINS AND SEWERS TO BE INSPECTED BY THE MUNICIPALITY WHEN REQUIRED BY THE MUNICIPALITY.

REFER TO SITE PLAN FOR DIMENSIONS AND SITE DETAILS.

STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT AS PER DETAIL ON DRAWING D1. ALL JOINTS MUST BE SEALED AS PER DETAIL.

9. EMBANKMENTS TO BE SLOPED AT MAX. 3:1, UNLESS OTHERWISE SPECIFIED.
10. ALL PAVEMENT MARKING, LINE PAINTING, DIRECTIONAL LINES/ARROWS ETC. SHALL BE PLACED IN ACCORDANCE WITH THE ARCHITECTURAL SITE PLAN OR THE OWNER'S TRAFFIC ENGINEERING CONSULTANT'S DRAWINGS. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT BASED PAINT IN ACCORDANCE WITH OPSS 1712.
11. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR THE RETAINING WALL (INCLUDE RAILINGS IF APPLICABLE) TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY STRUCTURAL AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
12. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER 1 (ONE) SET OF AS CONSTRUCTED SITE SERVICING, GRADING, AND SITE ELECTRICAL DRAWINGS (IN HARD PRINTS AND DIGITAL CAD FORMAT).

KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- STEP JOINT
- RETAINING WALL
- PROPOSED BUILDING ENTRANCE
- × 184.79EX — EXISTING ELEVATIONS
- × 184.79 — EXISTING ELEVATIONS TO MATCH
- × 184.21 — FINISHED GROUND ELEVATION
- × 184.29TC — TOP OF CURB ELEVATION
- × 184.29TW — TOP OF WALL ELEVATION
- × 184.96SW — SWALE ELEVATION
- OVERLAND FLOW ROUTE
- 2.00% — PROPOSED SLOPES
- 2.00% — EXISTING SLOPES
- INTERCEPTOR SWALE
- QUALITY CONTROL DEVICE
- AREA DRAIN
- CATCHBASIN / DOUBLE CATCHBASIN
- HYD — HYDRANT AND VALVE
- VB — VALVE & BOX
- SIAMESE CONNECTION
- STORM MANHOLE
- SANITARY MANHOLE
- HEAVY DUTY ASPHALT

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

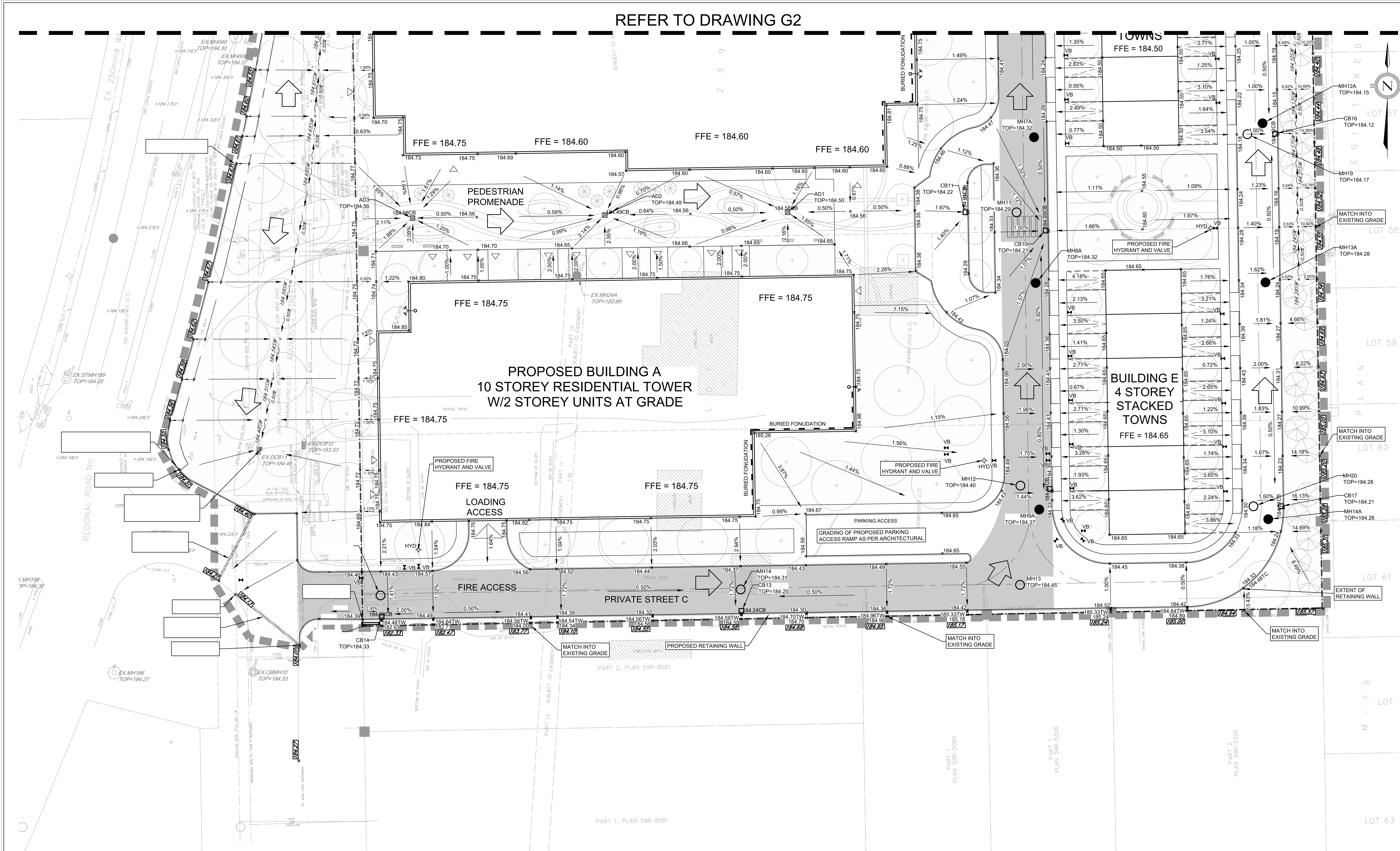
BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
GRADING PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	G2
Project No. 300052233		Contract No.		Revision No.	
Scale 1:300		0 / 6.0 / 12.0 / 18.0m			



KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- STEP JOINT
- RETAINING WALL
- PROPOSED BUILDING ENTRANCE
- × 184.79EX EXISTING ELEVATIONS
- × 184.79 EXISTING ELEVATIONS TO MATCH
- × 184.21 FINISHED GROUND ELEVATION
- × 184.29TC TOP OF CURB ELEVATION
- × 184.29TW TOP OF WALL ELEVATION
- × 184.96SW SWALE ELEVATION
- OVERLAND FLOW ROUTE
- 2.00% PROPOSED SLOPES
- 2.00% EXISTING SLOPES
- INTERCEPTOR SWALE
- QUALITY CONTROL DEVICE
- AREA DRAIN
- CATCHBASIN / DOUBLE CATCHBASIN
- HYD HYDRANT AND VALVE
- VB VALVE & BOX
- SIAMESE CONNECTION
- STORM MANHOLE
- SANITARY MANHOLE
- HEAVY DUTY ASPHALT

SITE GRADING NOTES:

ALL DISTURBED GRASSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER WITH SOD ON MIN 100mm TOPSOIL. THE RELOCATION OF TREES AND SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.

PROVIDE SUBDRAINS, MINIMUM LENGTH OF 3.0m, EXTENDING FROM ALL CATCHBASINS AND CATCHBASIN MANHOLES TO DRAIN THE GRANULAR SUB-BASE LAYER AS PER DETAIL ON DRAWING D1.

ALL CONCRETE CURB WITHIN THE SITE TO BE CONSTRUCTED AS PER DETAIL OPSD 600.110, UNLESS OTHERWISE SPECIFIED.

TRENCH BACKFILL WITHIN THE RIGHT OF WAY SHALL BE UNSHRINKABLE FILL AND SHALL EXTEND TO THE BASE OF ASPHALT.

ALL WORK SHALL BE SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF CITY ROAD OCCUPANCY PERMIT.

INSPECTIONS: ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING. ALL WORK RELATING TO WATERMAINS AND SEWERS TO BE INSPECTED BY THE MUNICIPALITY WHEN REQUIRED BY THE MUNICIPALITY.

REFER TO SITE PLAN FOR DIMENSIONS AND SITE DETAILS.

STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT AS PER DETAIL ON DRAWING D1. ALL JOINTS MUST BE SEALED AS PER DETAIL.

9. EMBANKMENTS TO BE SLOPED AT MAX. 3:1, UNLESS OTHERWISE SPECIFIED.
10. ALL PAVEMENT MARKING, LINE PAINTING, DIRECTIONAL LINES/ARROWS ETC. SHALL BE PLACED IN ACCORDANCE WITH THE ARCHITECTURAL SITE PLAN OR THE OWNER'S TRAFFIC ENGINEERING CONSULTANT'S DRAWINGS. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT BASED PAINT IN ACCORDANCE WITH OPSS 1712.
11. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR THE RETAINING WALL (INCLUDE RAILINGS IF APPLICABLE) TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY STRUCTURAL AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
12. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER 1 (ONE) SET OF AS CONSTRUCTED SITE SERVICING, GRADING, AND SITE ELECTRICAL DRAWINGS (IN HARD PRINTS AND DIGITAL CAD FORMAT).

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

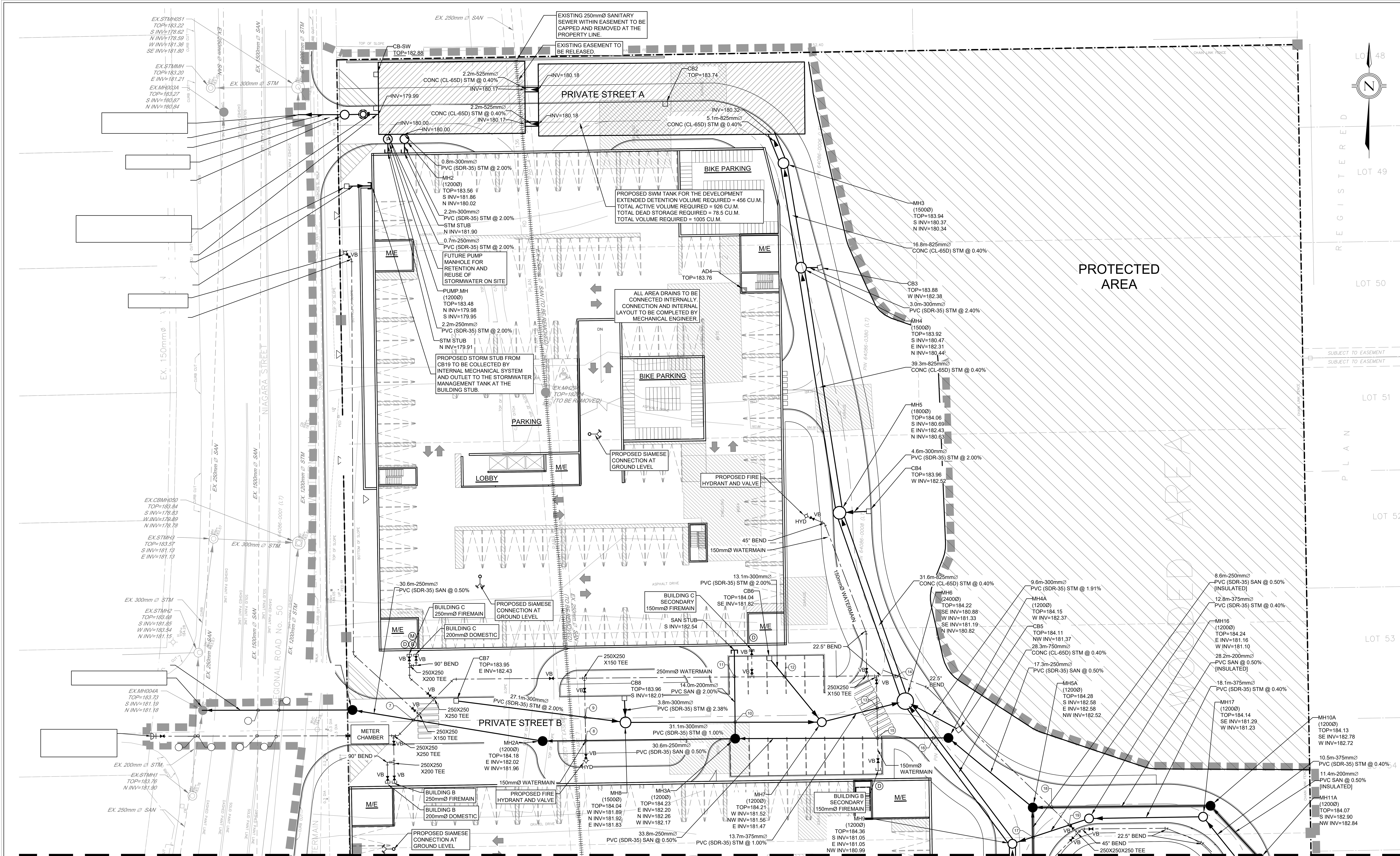
BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
GRADING PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	G3
Project No. 300052233		Contract No.		Revision No.	
Scale 1:300		0 – 6.0 – 12.0 – 18.0m			



WATERMAINS NOTES:

WATERMAIN SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 235 DR-18 PIPE MANUFACTURED TO AWWA C900-89 AND CSA CAN3 B137.3-M1986 WITH GASKETED BELL END C/W #14 AWG SOLID COPPER TRACER WIRE.

WATERMAINS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 300mm OVER AND 500mm UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING. ALL WATERMAINS AND SERVICES SHALL HAVE 1.80m MINIMUM COVER.

BEDDING FOR WATERMAINS SHALL BE AS PER OPSD 802.030.

ALL WATERMAIN HORIZONTAL AND VERTICAL BENDS, JOINTS AND PLUGS TO BE MECHANICALLY RESTRAINED. THRUST BLOCKS/MECHANICAL RESTRAINERS MUST BE INSTALLED ON ALL WATERMAIN BENDS, TEES, AND PLUGS AS PER MUNICIPAL STANDARDS.

ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.

HYDRANT AND VALVE TO BE AS PER OPSD 1105.010.

ALL HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.15m ABOVE PROPOSED FINISHED GRADE AT HYDRANT.

BUILDING SERVICE VALVES TO BE 3.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.

9. PROVISIONS FOR FLUSHING WATERMAINS MUST BE PROVIDED WITH A MINIMUM 50mm OUTLET FOR MAINS 100mm AND LARGER. FLUSHING POINTS MATCHING THE SIZE OF THE PIPE MUST BE PROVIDED AT THE END OF EACH COPPER MAIN. FIRE MAIN FLUSHING OUTLETS TO BE 100mm DIAMETER MINIMUM OR A HYDRANT. FLUSHING POINTS MUST BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN.
10. ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH LOCAL MUNICIPAL AND PROVINCIAL GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
11. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING MAINS IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATION.

STORM AND SANITARY SEWERS NOTES:

1. MANHOLES SHALL BE AS PER OPSD 701.010 AND OPSD 701.011; FRAMES AND COVERS SHALL BE AS PER OPSD 401.010. SAFETY PLATFORMS TO BE INSTALLED WHERE DEPTH EXCEEDS 5.0m.
2. SINGLE CATCHBASINS SHALL BE AS PER OPSD 705.010, WITH FRAMES AND COVERS AS PER OPSD 400.020. DOUBLE CATCHBASINS SHALL BE AS PER OPSD 705.020.
3. CONCRETE PIPE SEWER BEDDING SHALL BE CLASS 'B' AS PER OPSD 802.030, PVC PIPE SEWER BEDDING SHALL BE CLASS 'B' AS PER OPSD 802.030 TO TOP OF SEWER. NATIVE BACKFILL TO BE COMPACTED TO A MIN. 98% STANDARD PROCTOR DENSITY, WITH A MINIMUM 300mm SAND COVER OVER PIPE.
4. ALL STORM SEWER PIPES UP TO 450mm DIA. SHALL BE PVC SDR-35 OR APPROVED EQUIVALENT. ALL STORM SEWER PIPES 525mm DIA. AND LARGER SHALL BE CONCRETE AND EQUAL TO C.S.A. SPECIFICATIONS A257.2 REINFORCED CLASSES AS SPECIFIED (65-D, 100-D, 140-D,) OR LATEST AMENDMENT UNLESS OTHERWISE SPECIFIED.
5. ALL SANITARY PVC SEWER PIPES SHALL BE SDR-35 EQUAL CSA SPECIFICATIONS B182.2-M1990 OR LATEST AMENDMENT UNLESS OTHERWISE NOTED.
6. ALL MANHOLE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY.
7. ALL CATCH BASINS AND CATCH BASIN MANHOLES ARE TO INCLUDE SUBDRAIN TREATMENT, IF REQUIRED.
8. ALL BLIND CONNECTIONS TO MATCH THE INVERT OF THE CATCH BASIN LEAD TO THE SPRINGLINE OF THE STORM PIPE. OTHERWISE INSTALL THE CATCH BASIN LEAD AT A MAXIMUM 2.00% AND DROP INTO PIPE.
9. UNLESS NOTED OTHERWISE, CATCHBASIN LEADS SHALL BE 250mmØ AT MINIMUM 1.00% SLOPE.
10. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SANITARY AND STORM SEWERS, INCLUDING PICTORIAL REPORT, TWO (2) CD COPIES IN A FORMAT SATISFACTORY TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION.

KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- STORM SEWER AND MANHOLE
- SANITARY SEWER AND MANHOLE
- WATERMAIN
- EXISTING STORM SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING WATERMAIN
- PIPE REMOVALS
- PIPE INSULATION
- QUALITY CONTROL DEVICE
- CATCHBASIN / DOUBLE CATCHBASIN
- AREA DRAIN
- TRENCH DRAIN
- PIPE ORIFICE
- HYD — HYDRANT AND VALVE
- VB — VALVE & BOX
- SIAMESE CONNECTION
- M — WATER METER
- D — DETECTOR ASSEMBLY
- B — BACKFLOW PREVENTOR
- 1 — PIPE CROSSING DENOTE

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

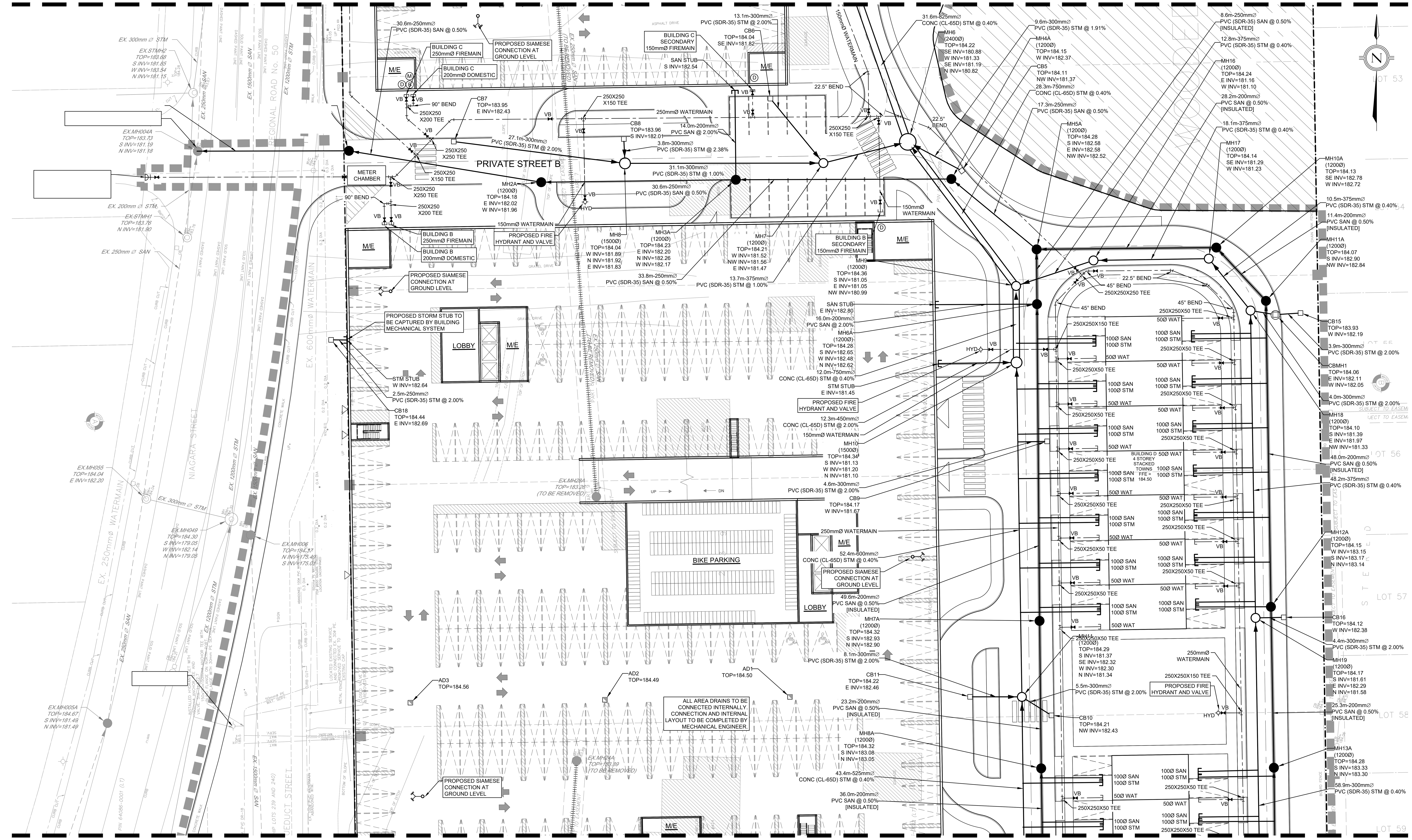
Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
SERVICING PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	S1
Project No. 300052233		Contract No.		Revision No.	
Scale 1:300		0 — 6.0 — 12.0 — 18.0m			

REFER TO DRAWING S2



REFER TO DRAWING S3

WATERMAINS NOTES:

WATERMAIN SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 235 DR-18 PIPE MANUFACTURED TO AWWA C900-89 AND CSA CAN3 B137.3-M1986 WITH GASKETED BELL END C/W #14 AWG SOLID COPPER TRACER WIRE.

WATERMAINS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 300mm OVER AND 500mm UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING. ALL WATERMAINS AND SERVICES SHALL HAVE 1.80m MINIMUM COVER.

BEDDING FOR WATERMAINS SHALL BE AS PER OPSD 802.030.

ALL WATERMAIN HORIZONTAL AND VERTICAL BENDS, JOINTS AND PLUGS TO BE MECHANICALLY RESTRAINED. THRUST BLOCKS/MECHANICAL RESTRAINERS MUST BE INSTALLED ON ALL WATERMAIN BENDS, TEES, AND PLUGS AS PER MUNICIPAL STANDARDS.

ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.

HYDRANT AND VALVE TO BE AS PER OPSD 1105.010.

ALL HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.15m ABOVE PROPOSED FINISHED GRADE AT HYDRANT.

BUILDING SERVICE VALVES TO BE 3.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.

9. PROVISIONS FOR FLUSHING WATERMAINS MUST BE PROVIDED WITH A MINIMUM 50mm OUTLET FOR MAINS 100mm AND LARGER. FLUSHING POINTS MATCHING THE SIZE OF THE PIPE MUST BE PROVIDED AT THE END OF EACH COPPER MAIN. FIRE MAIN FLUSHING OUTLETS TO BE 100mm DIAMETER MINIMUM OR A HYDRANT. FLUSHING POINTS MUST BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN.
10. ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH LOCAL MUNICIPAL AND PROVINCIAL GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
11. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING MAINS IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATION.

STORM AND SANITARY SEWERS NOTES:

1. MANHOLES SHALL BE AS PER OPSD 701.010 AND OPSD 701.011; FRAMES AND COVERS SHALL BE AS PER OPSD 401.010. SAFETY PLATFORMS TO BE INSTALLED WHERE DEPTH EXCEEDS 5.0m.
2. SINGLE CATCHBASINS SHALL BE AS PER OPSD 705.010, WITH FRAMES AND COVERS AS PER OPSD 400.020. DOUBLE CATCHBASINS SHALL BE AS PER OPSD 705.020.
3. CONCRETE PIPE SEWER BEDDING SHALL BE CLASS 'B' AS PER OPSD 802.030, PVC PIPE SEWER BEDDING SHALL BE CLASS 'B' AS PER OPSD 802.030 TO TOP OF SEWER. NATIVE BACKFILL TO BE COMPACTED TO A MIN. 98% STANDARD PROCTOR DENSITY, WITH A MINIMUM 300mm SAND COVER OVER PIPE.
4. ALL STORM SEWER PIPES UP TO 450mm DIA. SHALL BE PVC SDR-35 OR APPROVED EQUIVALENT. ALL STORM SEWER PIPES 525mm DIA. AND LARGER SHALL BE CONCRETE AND EQUAL TO C.S.A. SPECIFICATIONS A257.2 REINFORCED CLASSES AS SPECIFIED (65-D, 100-D, 140-D,) OR LATEST AMENDMENT UNLESS OTHERWISE SPECIFIED.
5. ALL SANITARY PVC SEWER PIPES SHALL BE SDR-35 EQUAL CSA SPECIFICATIONS B182.2-M1990 OR LATEST AMENDMENT UNLESS OTHERWISE NOTED.
6. ALL MANHOLE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY.
7. ALL CATCH BASINS AND CATCH BASIN MANHOLES ARE TO INCLUDE SUBDRAIN TREATMENT, IF REQUIRED.
8. ALL BLIND CONNECTIONS TO MATCH THE INVERT OF THE CATCH BASIN LEAD TO THE SPRINGLINE OF THE STORM PIPE. OTHERWISE INSTALL THE CATCH BASIN LEAD AT A MAXIMUM 2.00% AND DROP INTO PIPE.
9. UNLESS NOTED OTHERWISE, CATCHBASIN LEADS SHALL BE 250mmØ AT MINIMUM 1.00% SLOPE.
10. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SANITARY AND STORM SEWERS, INCLUDING PICTORIAL REPORT, TWO (2) CD COPIES IN A FORMAT SATISFACTORY TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION.

KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- STORM SEWER AND MANHOLE
- SANITARY SEWER AND MANHOLE
- WATERMAIN
- EXISTING STORM SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING WATERMAIN
- PIPE REMOVALS
- PIPE INSULATION
- QUALITY CONTROL DEVICE
- CATCHBASIN / DOUBLE CATCHBASIN
- AREA DRAIN
- TRENCH DRAIN
- PIPE ORIFICE
- HYD — HYDRANT AND VALVE
- VB — VALVE & BOX
- SIAMESE CONNECTION
- M — WATER METER
- D — DETECTOR ASSEMBLY
- B — BACKFLOW PREVENTOR
- 1 — PIPE CROSSING DENOTE

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

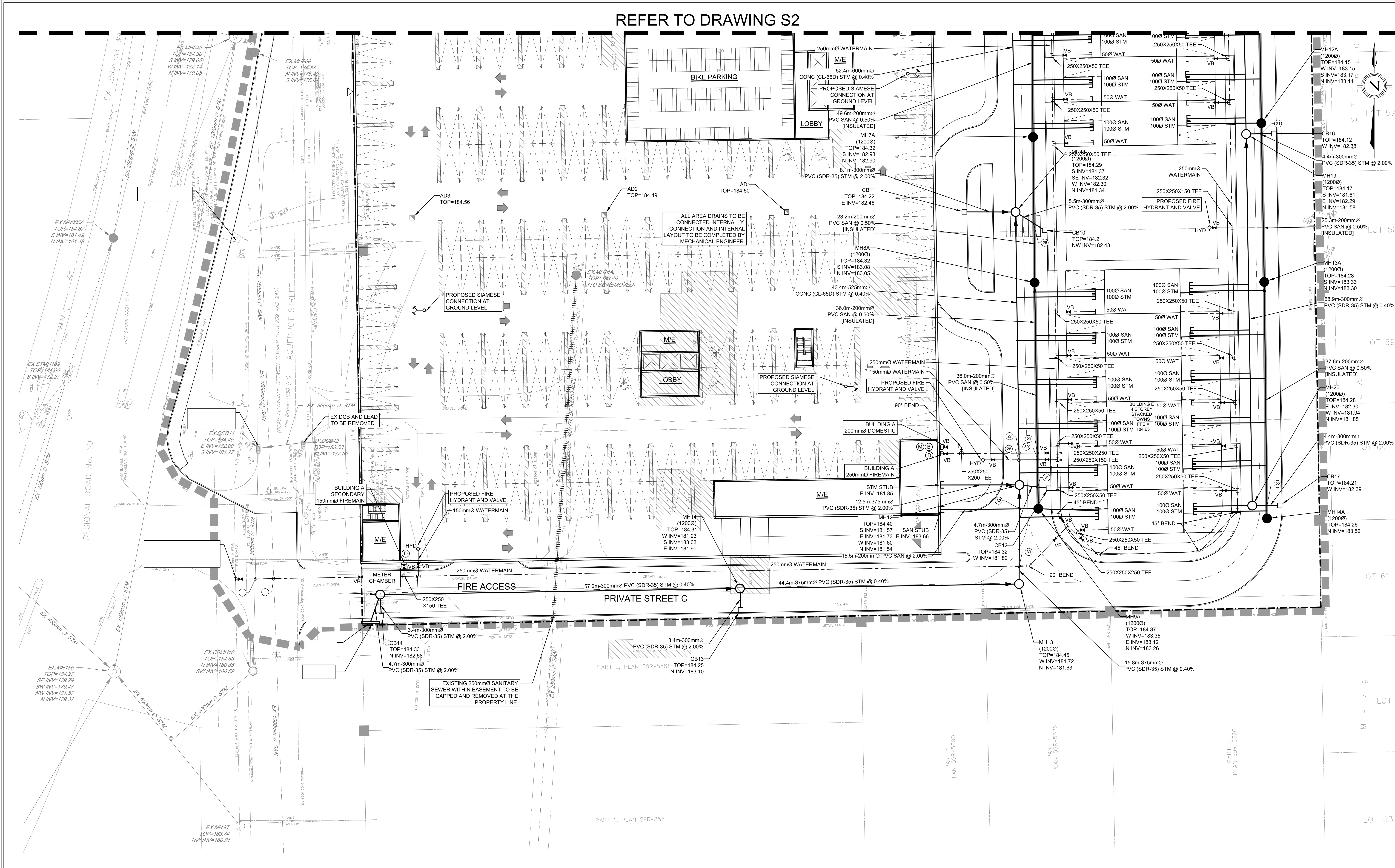
BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
SERVICING PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	S2
Project No. 300052233		Contract No.		Revision No.	
Scale 1:300		0 — 6.0 — 12.0 — 18.0m			



KEY PLAN
SCALE: N.T.S.

LEGEND:

- SITE PROPERTY LINE
- LIMIT OF CONSTRUCTION
- STORM SEWER AND MANHOLE
- SANITARY SEWER AND MANHOLE
- WATERMAIN
- EXISTING STORM SEWER AND MANHOLE
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING WATERMAIN
- PIPE REMOVALS
- PIPE INSULATION
- QUALITY CONTROL DEVICE
- CATCHBASIN / DOUBLE CATCHBASIN
- AREA DRAIN
- TRENCH DRAIN
- PIPE ORIFICE
- HYDRANT AND VALVE
- VALVE & BOX
- SIAMESE CONNECTION
- WATER METER
- DETECTOR ASSEMBLY
- BACKFLOW PREVENTOR
- PIPE CROSSING DENOTE

WATERMAINS NOTES:

WATERMAIN SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 235 DR-18 PIPE MANUFACTURED TO AWWA C900-89 AND CSA CAN3 B137.3-M1986 WITH GASKETED BELL END C/W #14 AWG SOLID COPPER TRACER WIRE.

WATERMAINS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 300mm OVER AND 500mm UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING. ALL WATERMAINS AND SERVICES SHALL HAVE 1.80m MINIMUM COVER.

BEDDING FOR WATERMAINS SHALL BE AS PER OPSD 802.030.

ALL WATERMAIN HORIZONTAL AND VERTICAL BENDS, JOINTS AND PLUGS TO BE MECHANICALLY RESTRAINED. THRUST BLOCKS/MECHANICAL RESTRAINERS MUST BE INSTALLED ON ALL WATERMAIN BENDS, TEES, AND PLUGS AS PER MUNICIPAL STANDARDS.

ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.

HYDRANT AND VALVE TO BE AS PER OPSD 1105.010.

ALL HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.15m ABOVE PROPOSED FINISHED GRADE AT HYDRANT.

BUILDING SERVICE VALVES TO BE 3.0m OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.

9. PROVISIONS FOR FLUSHING WATERMAINS MUST BE PROVIDED WITH A MINIMUM 50mm OUTLET FOR MAINS 100mm AND LARGER. FLUSHING POINTS MATCHING THE SIZE OF THE PIPE MUST BE PROVIDED AT THE END OF EACH COPPER MAIN. FIRE MAIN FLUSHING OUTLETS TO BE 100mm DIAMETER MINIMUM OR A HYDRANT. FLUSHING POINTS MUST BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN.
10. ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH LOCAL MUNICIPAL AND PROVINCIAL GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
11. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING MAINS IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATION.

STORM AND SANITARY SEWERS NOTES:

1. MANHOLES SHALL BE AS PER OPSD 701.010 AND OPSD 701.011; FRAMES AND COVERS SHALL BE AS PER OPSD 401.010. SAFETY PLATFORMS TO BE INSTALLED WHERE DEPTH EXCEEDS 5.0m.
2. SINGLE CATCHBASINS SHALL BE AS PER OPSD 705.010, WITH FRAMES AND COVERS AS PER OPSD 400.020. DOUBLE CATCHBASINS SHALL BE AS PER OPSD 705.020.
3. CONCRETE PIPE SEWER BEDDING SHALL BE CLASS 'B' AS PER OPSD 802.030, PVC PIPE SEWER BEDDING SHALL BE CLASS 'B' AS PER OPSD 802.030 TO TOP OF SEWER. NATIVE BACKFILL TO BE COMPACTED TO A MIN. 98% STANDARD PROCTOR DENSITY, WITH A MINIMUM 300mm SAND COVER OVER PIPE.
4. ALL STORM SEWER PIPES UP TO 450mm DIA. SHALL BE PVC SDR-35 OR APPROVED EQUIVALENT. ALL STORM SEWER PIPES 525mm DIA. AND LARGER SHALL BE CONCRETE AND EQUAL TO C.S.A. SPECIFICATIONS A257.2 REINFORCED CLASSES AS SPECIFIED (65-D, 100-D, 140-D,) OR LATEST AMENDMENT UNLESS OTHERWISE SPECIFIED.
5. ALL SANITARY PVC SEWER PIPES SHALL BE SDR-35 EQUAL CSA SPECIFICATIONS B182.2-M1990 OR LATEST AMENDMENT UNLESS OTHERWISE NOTED.
6. ALL MANHOLE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY.
7. ALL CATCH BASINS AND CATCH BASIN MANHOLES ARE TO INCLUDE SUBDRAIN TREATMENT, IF REQUIRED.
8. ALL BLIND CONNECTIONS TO MATCH THE INVERT OF THE CATCH BASIN LEAD TO THE SPRINGLINE OF THE STORM PIPE. OTHERWISE INSTALL THE CATCH BASIN LEAD AT A MAXIMUM 2.00% AND DROP INTO PIPE.
9. UNLESS NOTED OTHERWISE, CATCHBASIN LEADS SHALL BE 250mmØ AT MINIMUM 1.00% SLOPE.
10. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SANITARY AND STORM SEWERS, INCLUDING PICTORIAL REPORT, TWO (2) CD COPIES IN A FORMAT SATISFACTORY TO THE ENGINEER. ALL SEWERS ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION.

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

LICENSED PROFESSIONAL ENGINEER
J.A. SCHERER
100508022
SEPT. 4, 2024
PROVINCE OF ONTARIO

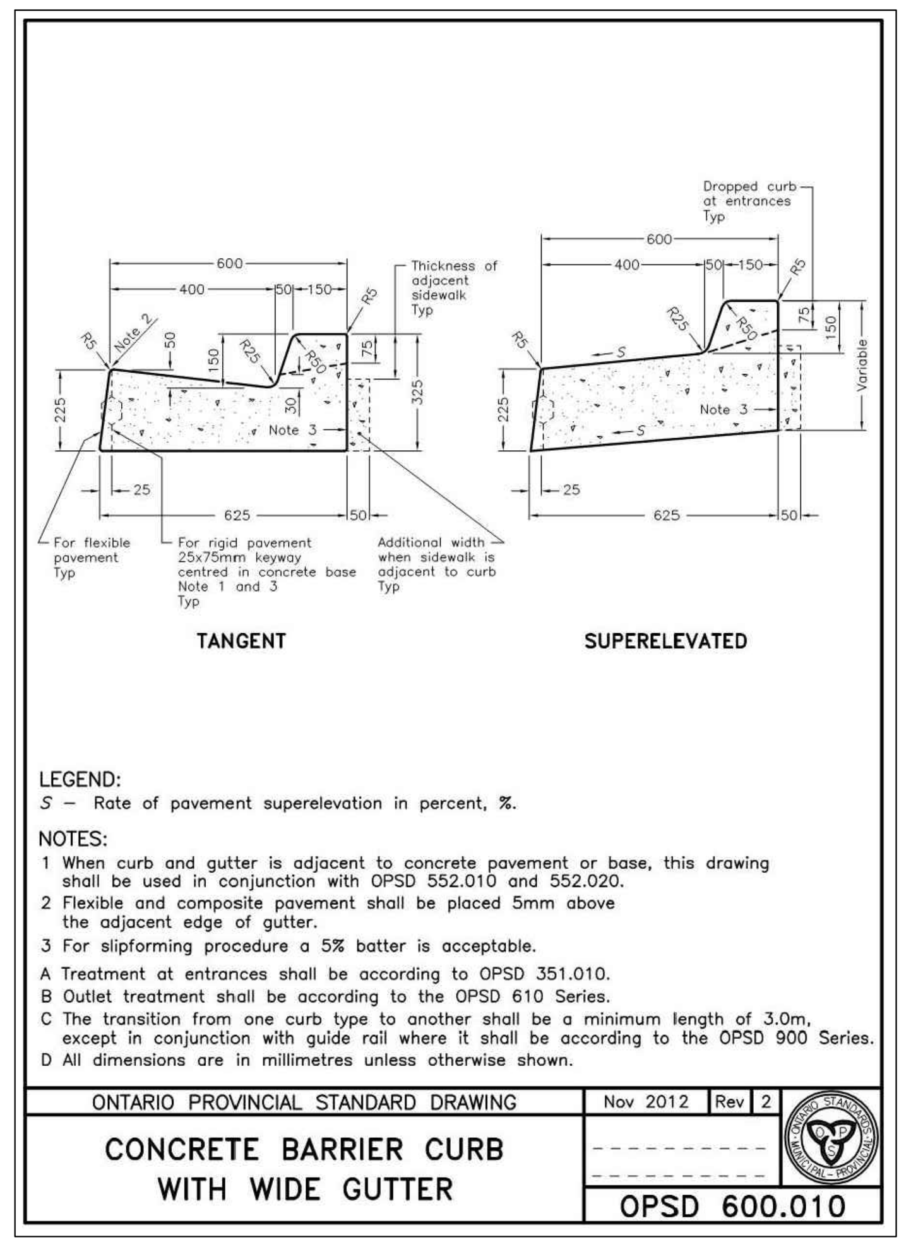
BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

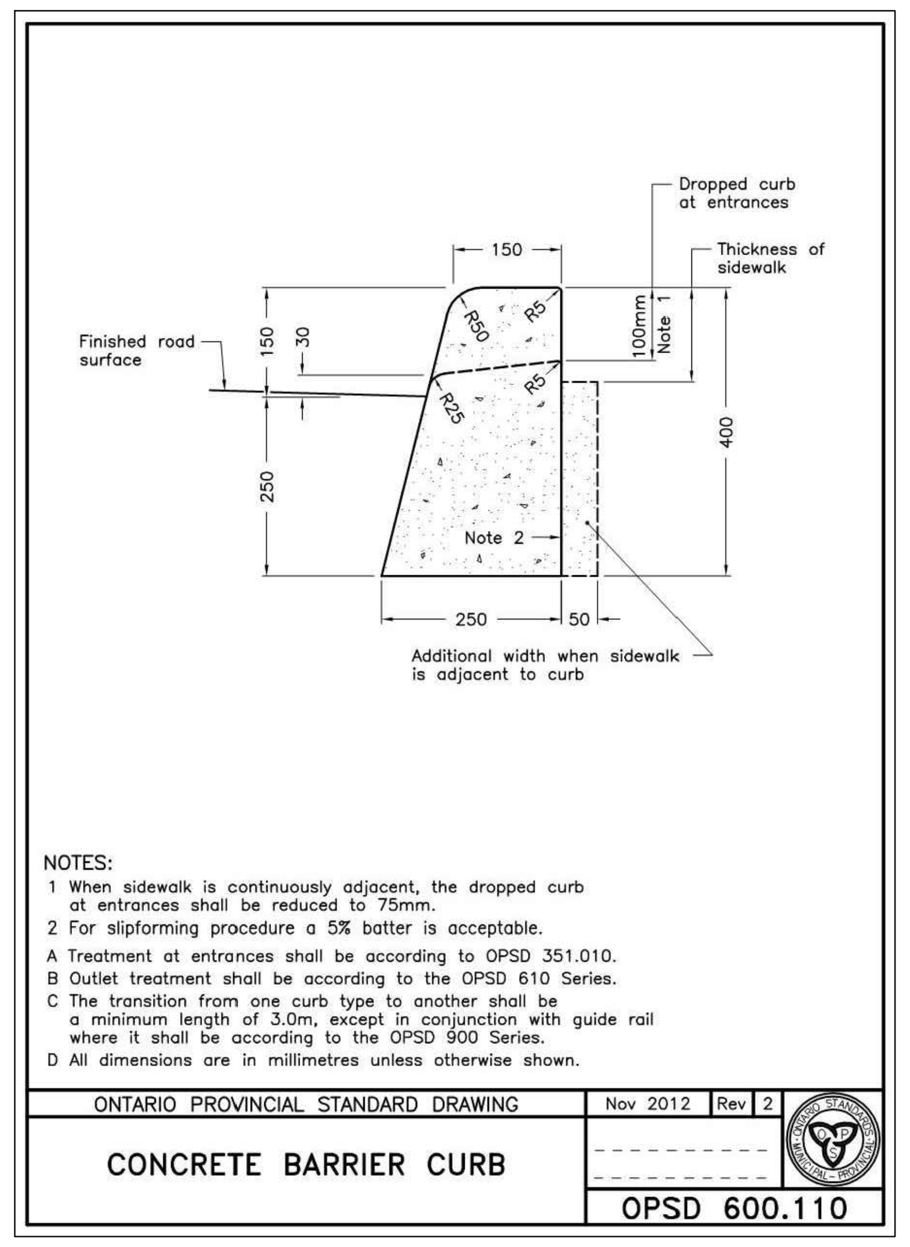
Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

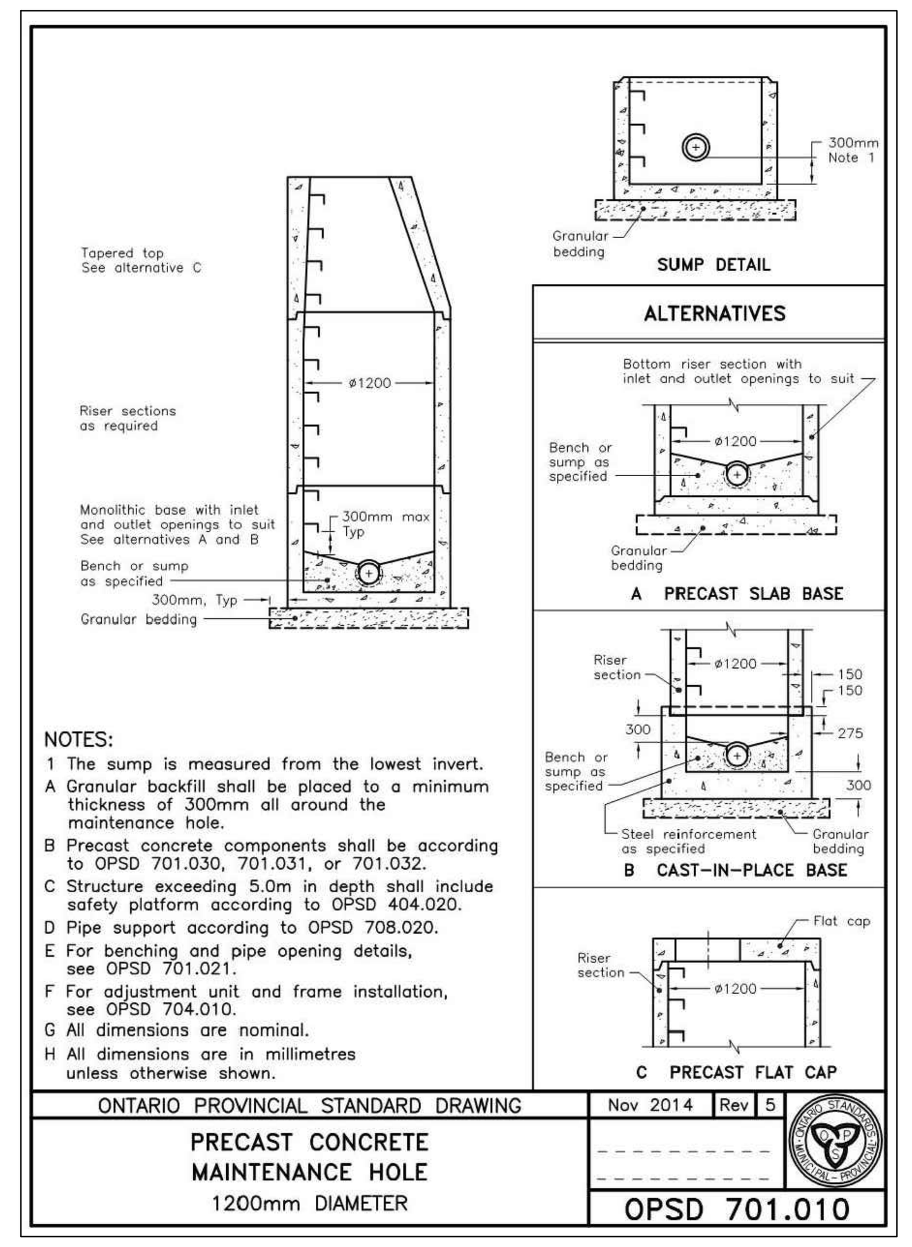
Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

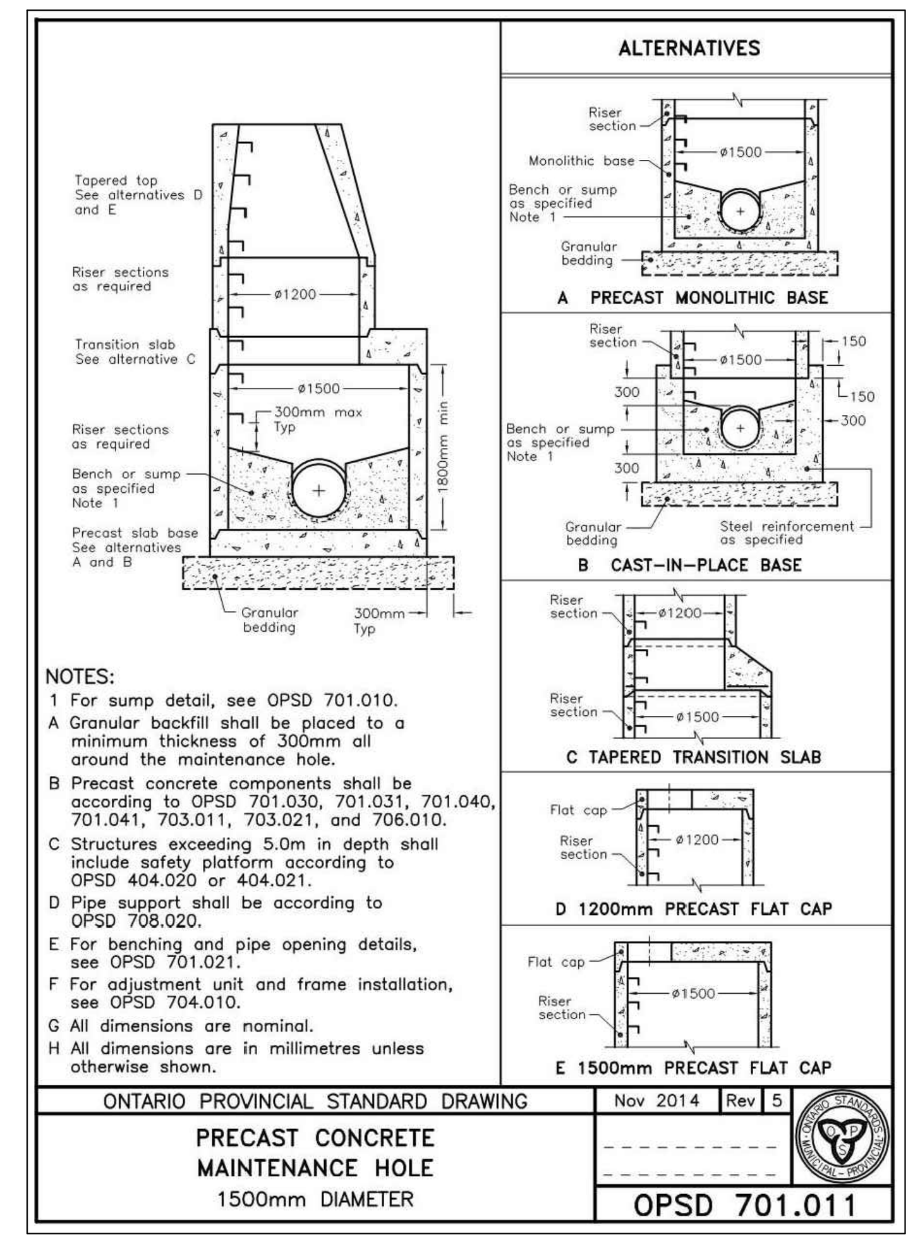
Drawing Title
SERVICING PLAN

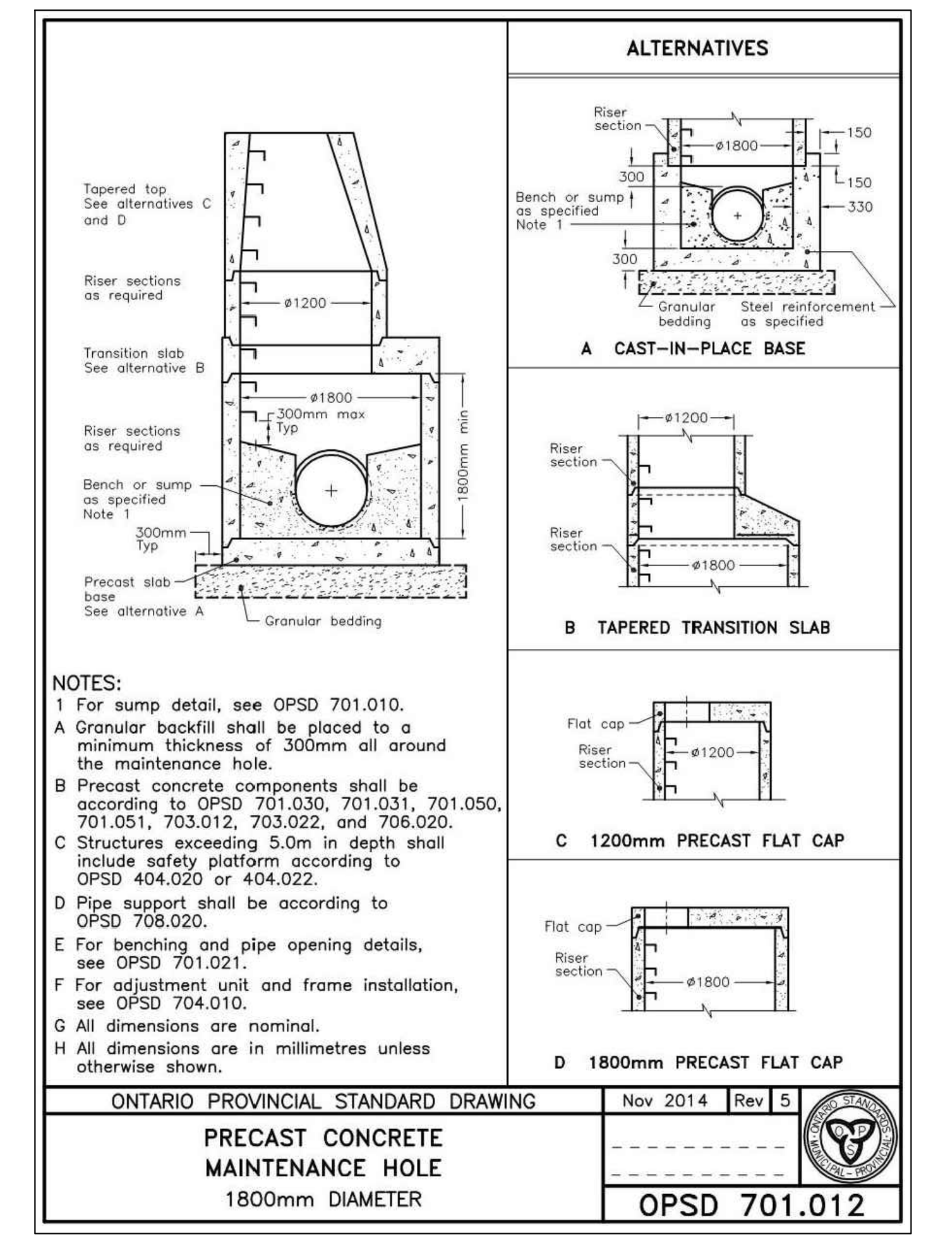
Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	S3
Project No. 300052233		Contract No.		Revision No.	
Scale 1:300	0 · 6.0 · 12.0 · 18.0m				

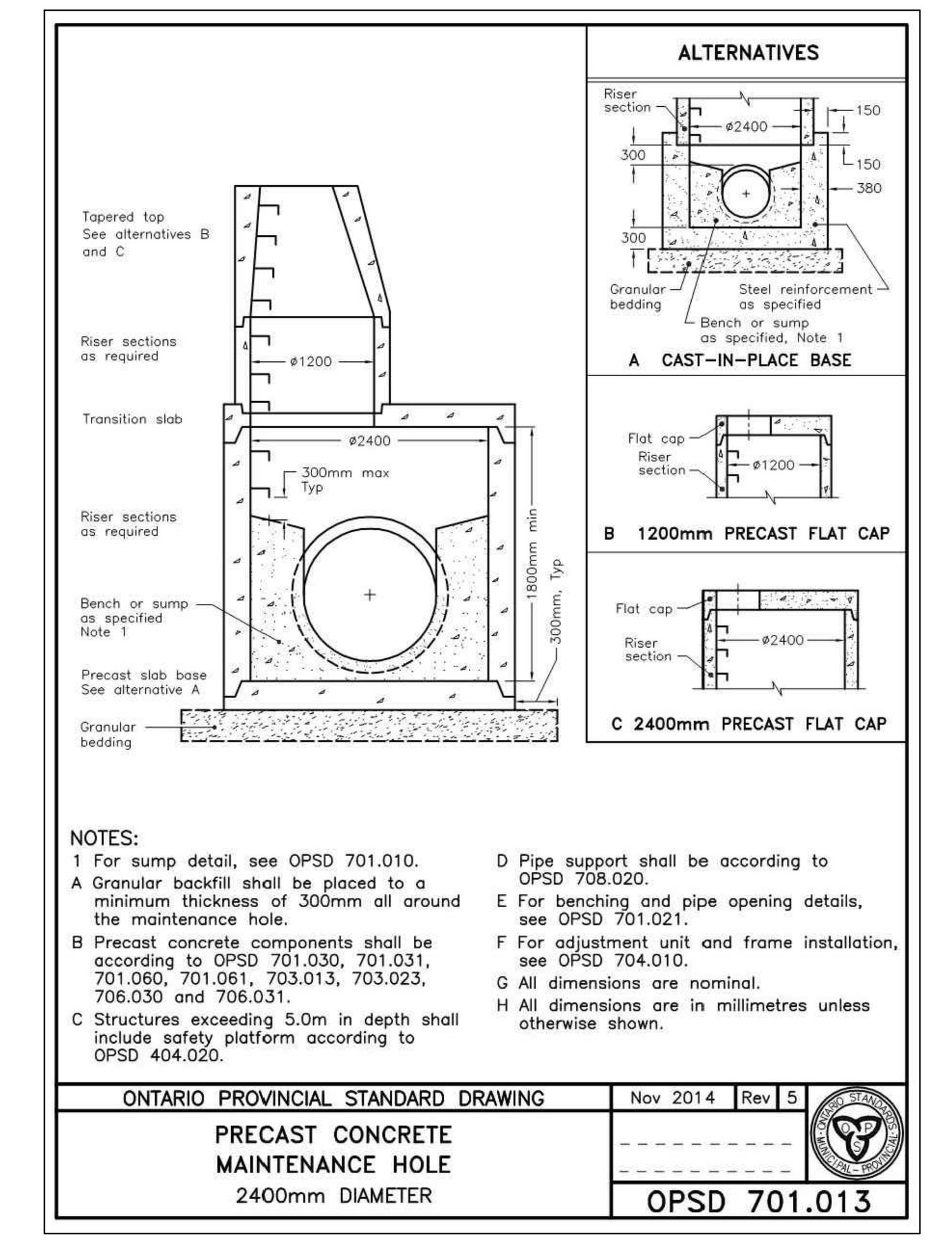




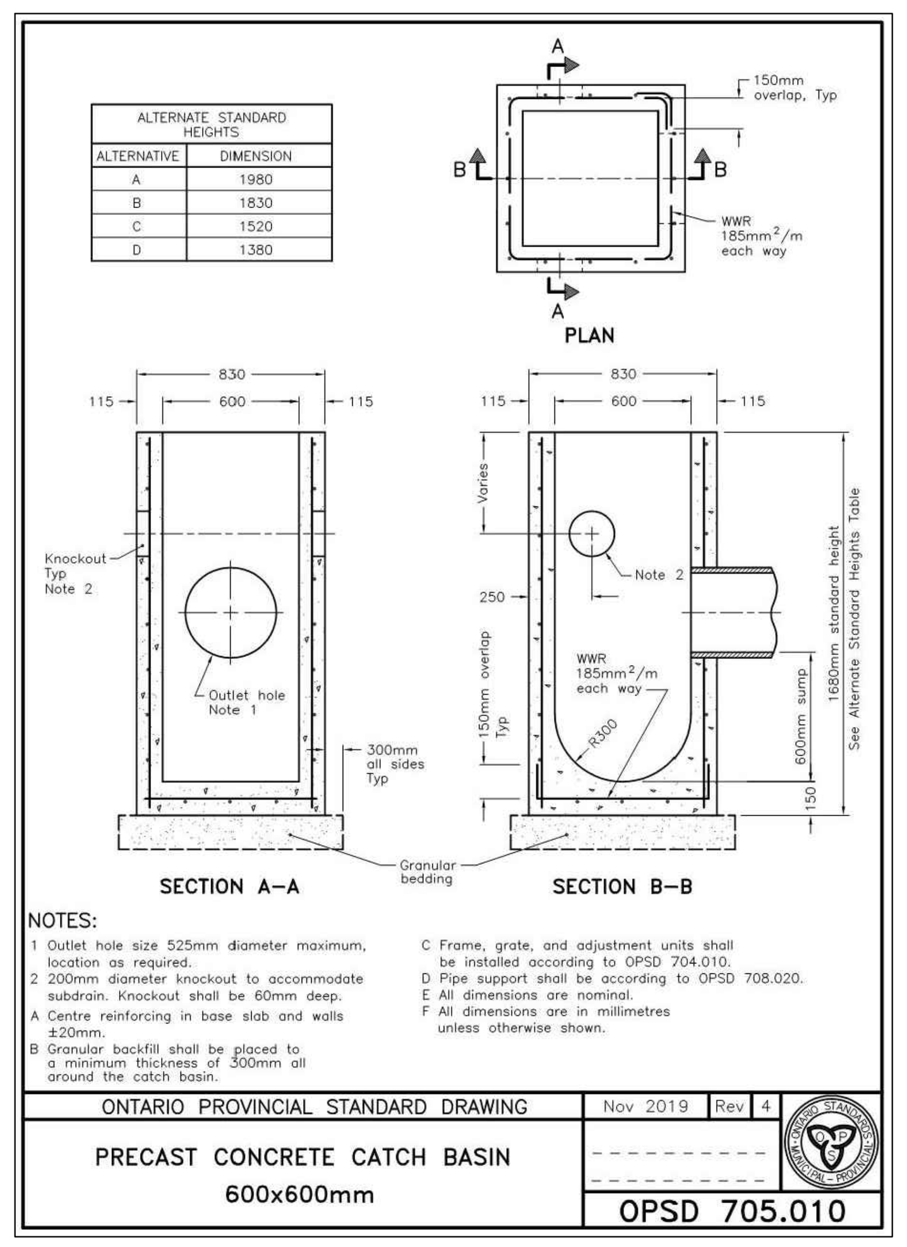


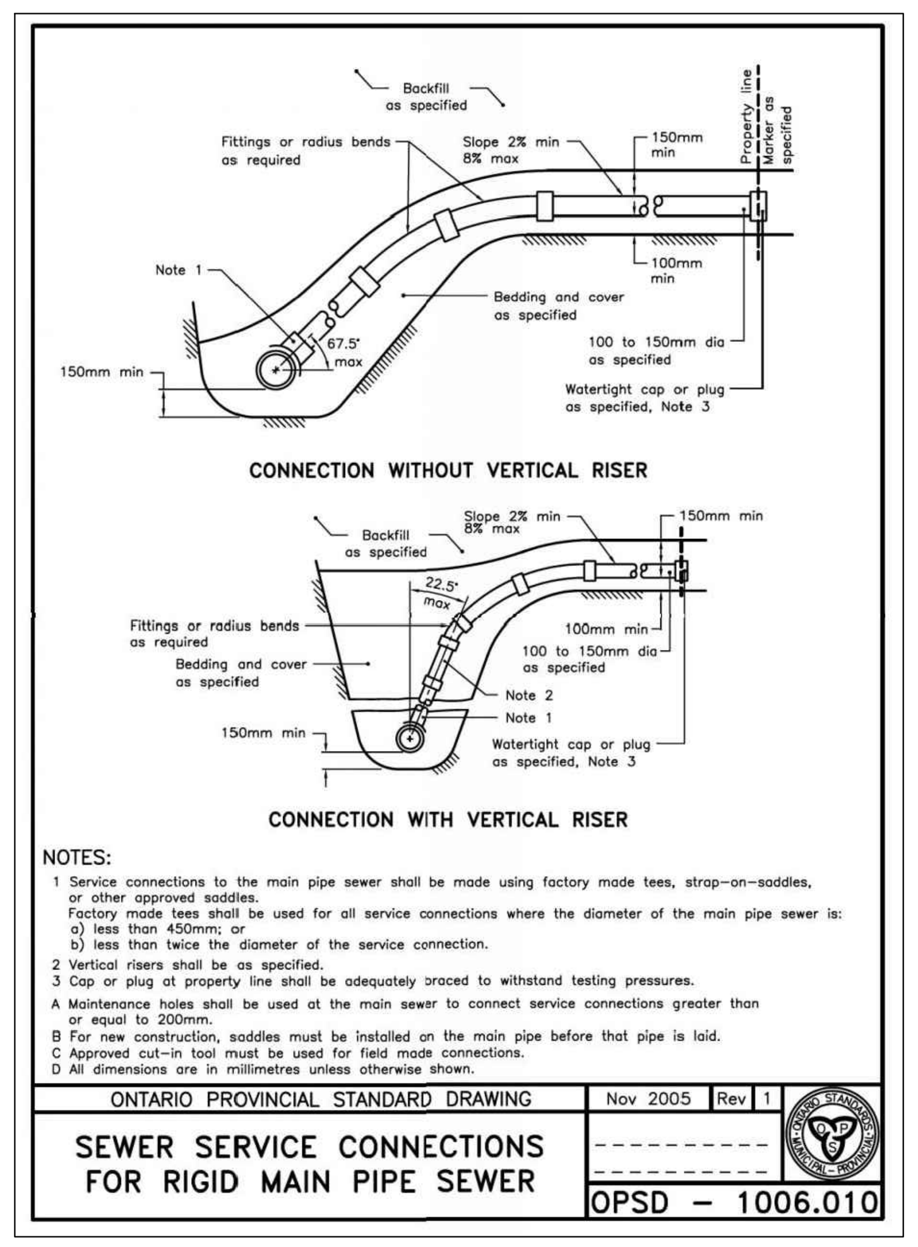


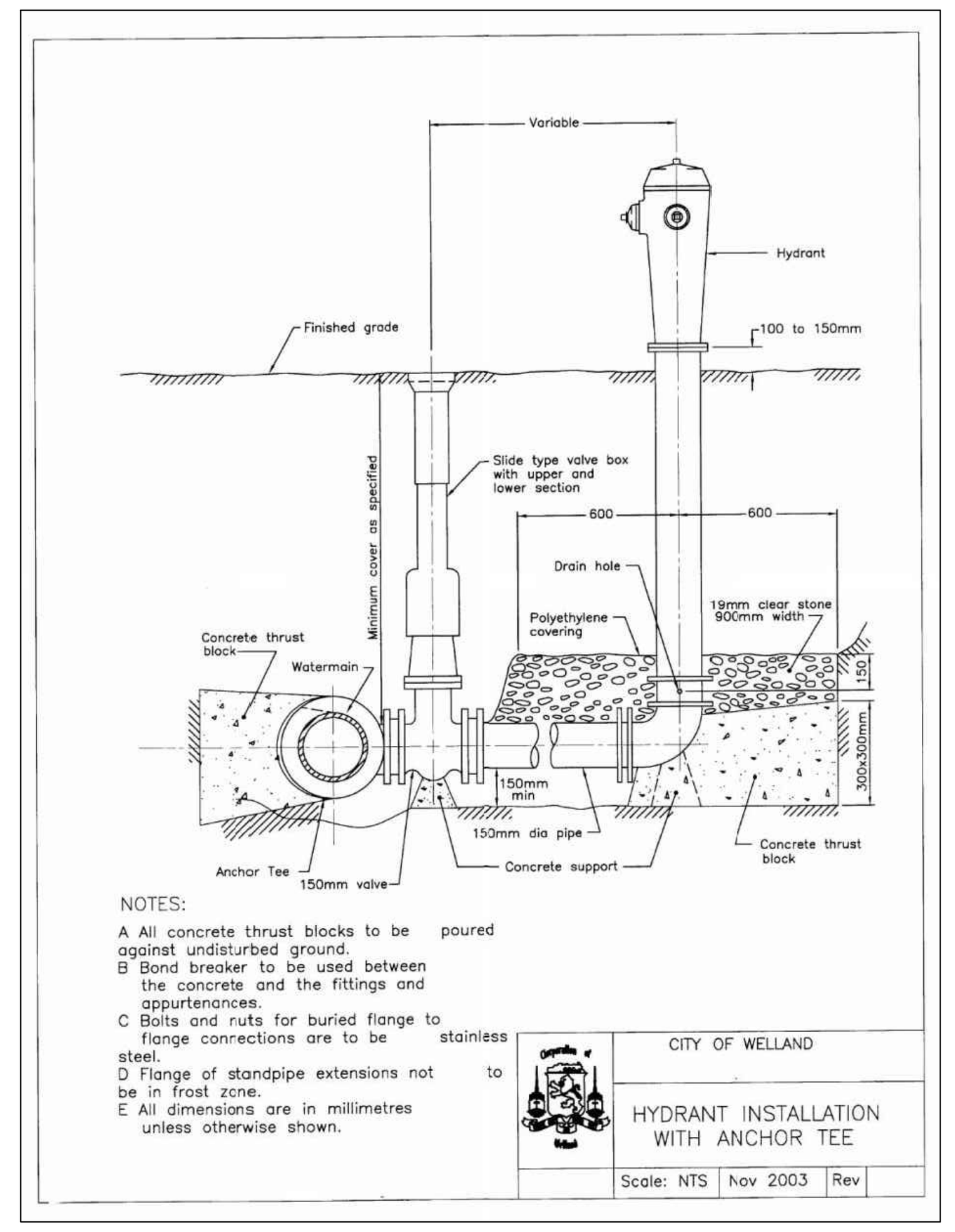




KEY PLAN
SCALE: N.T.S.

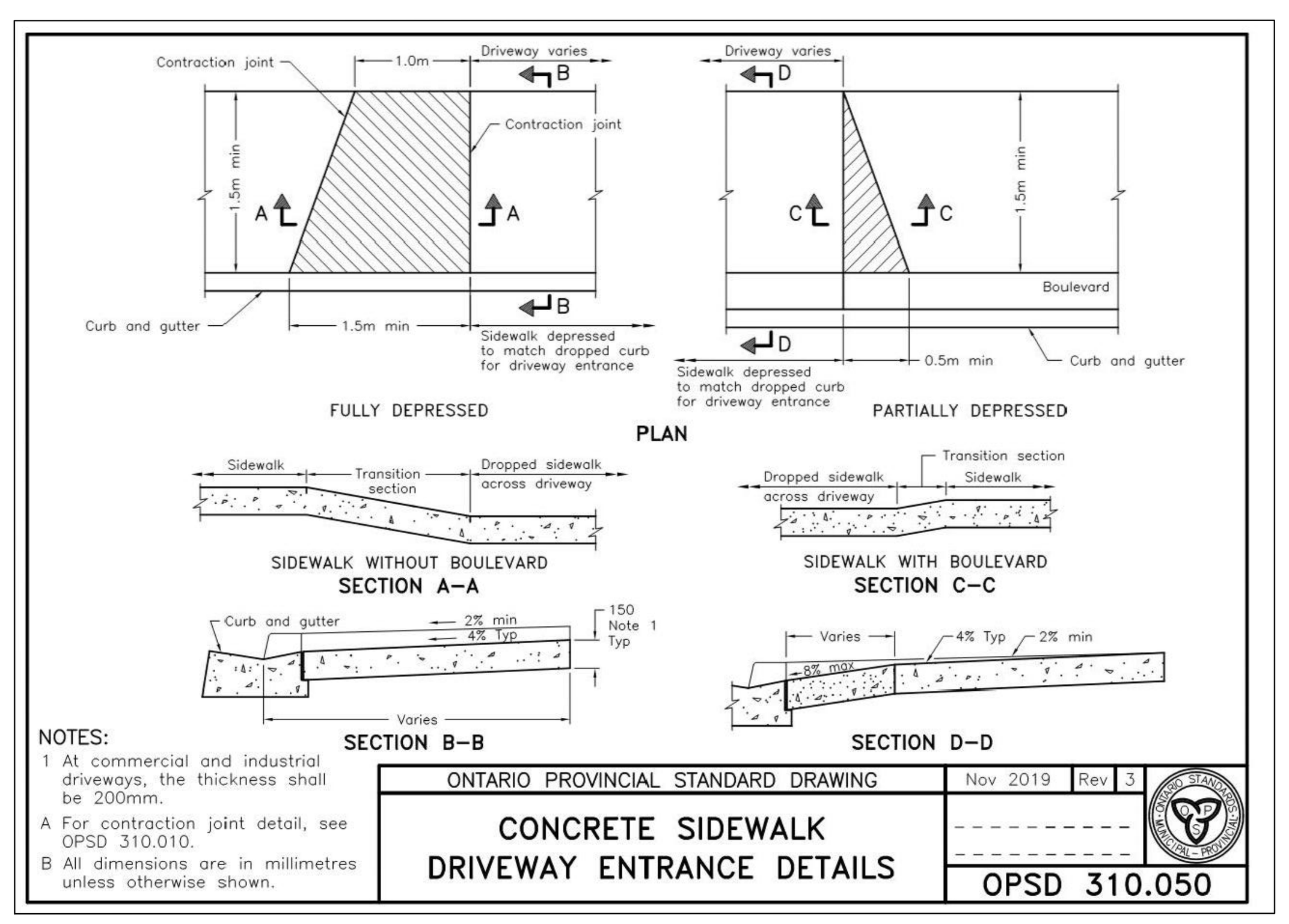


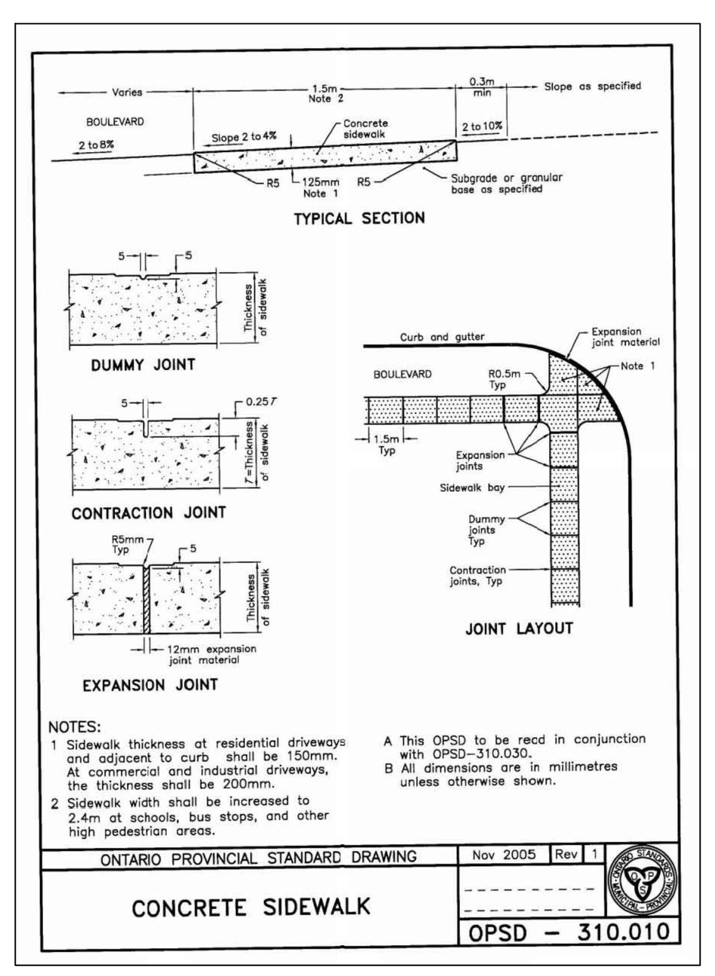


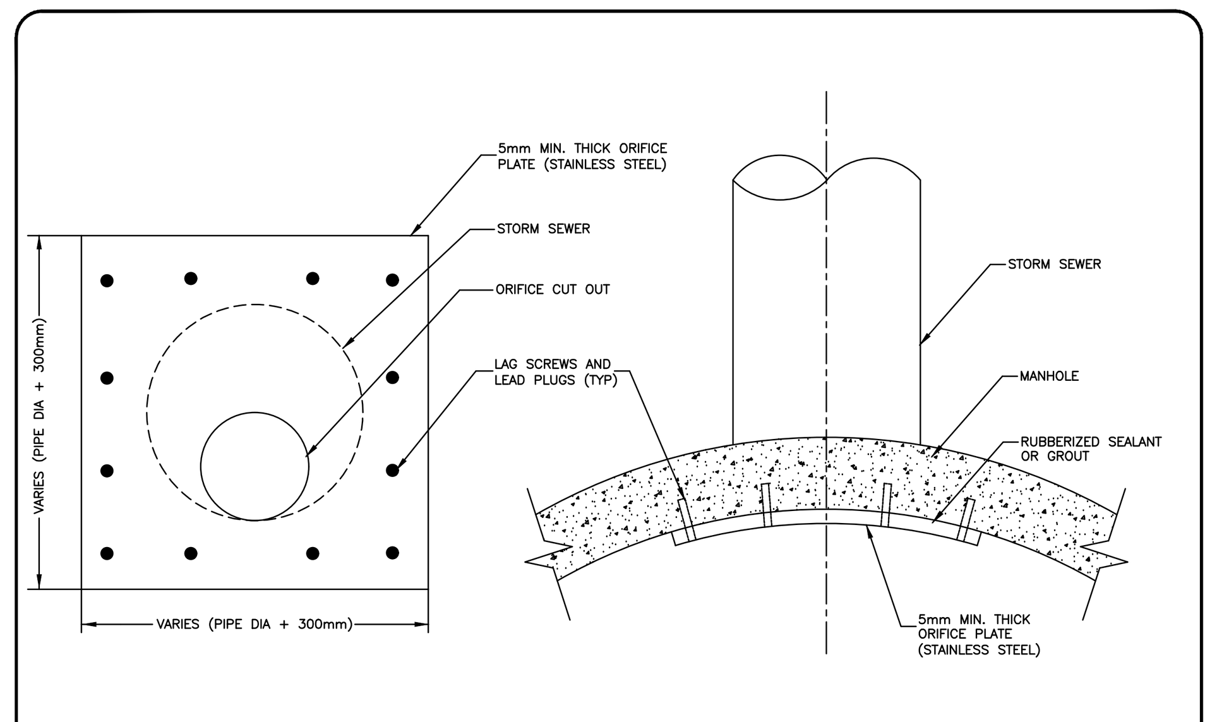


PIPE CROSSING TABLE				PIPE CROSSING TABLE				PIPE CROSSING TABLE			
LOCATION	TOP	BOTTOM	CLEARANCE	LOCATION	TOP	BOTTOM	CLEARANCE	LOCATION	TOP	BOTTOM	CLEARANCE
1	STM=182.36	SAN=182.71	0.36	12	SAN=181.99	STM=182.35	0.36	23	WAT=181.87	SAN=182.37	0.50*
2	SAN=182.56	STM=183.07	0.51	13	STM=181.27	SAN=181.55	0.28	24	WAT=180.19	STM=180.69	0.50*
3	STM=182.13	SAN=182.60	0.47	14	STM=180.79	SAN=181.24	0.45	25	WAT=181.51	STM=182.01	0.50*
4	STM=181.99	SAN=182.65	0.66	15	STM=180.78	SAN=181.13	0.35	26	WAT=181.26	STM=181.76	0.50*
5	STM=182.09	SAN=182.75	0.66	16	WAT=182.27	SAN=182.77	0.50*	27	STM=181.76	WAT=182.28	0.52
6	STM=181.95	SAN=182.53	0.58	17	WAT=181.12	SAN=182.62	0.50*	28	STM=180.23	WAT=181.89	1.66
7	STM=181.45	SAN=182.37	0.93	18	STM=182.01	WAT=182.52	0.51	29	SAN=176.97	WAT=181.81	4.84
8	STM=182.65	SAN=182.95	0.30	19	WAT=180.94	STM=181.44	0.50*	30	SAN=181.14	WAT=181.64	0.50
9	STM=182.33	SAN=182.69	0.36	20	WAT=180.93	STM=181.43	0.50*	31	WAT=181.35	STM=181.85	0.50*
10	STM=181.61	SAN=182.13	0.52	21	WAT=180.48	STM=180.98	0.50*	32	SAN=176.66	WAT=182.23	5.57
11	SAN=182.19	STM=182.49	0.30	22	STM=181.47	WAT=182.19	0.72	33	STM=181.21	WAT=182.23	1.02

*WATERMAIN TO BE DEFLECTED 0.50m BELOW SEWER







ORIFICE PLATE DETAIL
SCALE: N.T.S.

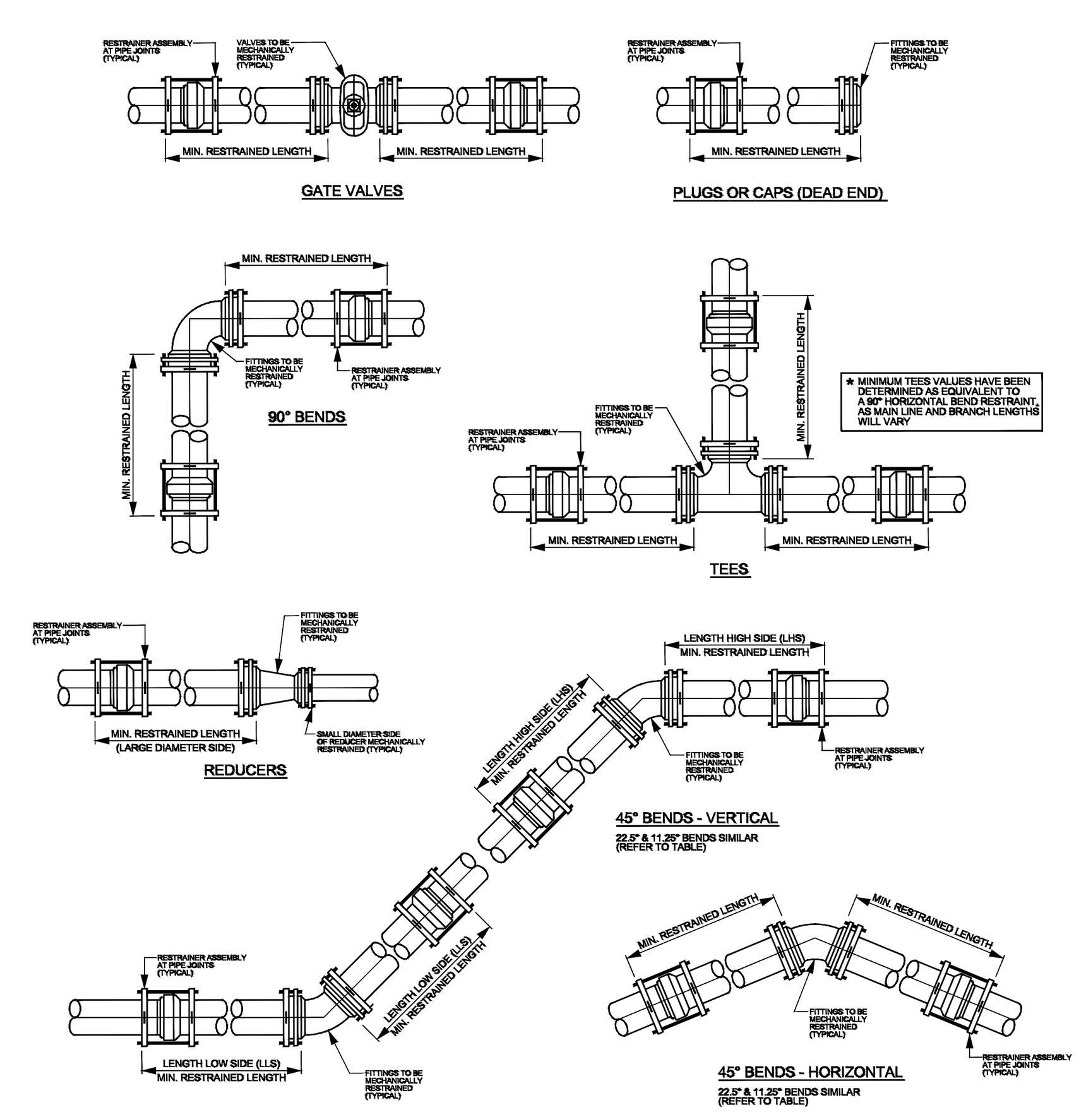
MINIMUM RESTRAINING LENGTH (m) TABLE

DESCRIPTION	PIPE DIAMETER (mm)					
	100 ø	150 ø	200 ø	250 ø	300 ø	400 ø
VALVES, DEAD ENDS, CAPS, PLUGS Either side of valves and before caps or plugs	7.5	10.5	13.5	16.0	19.0	24.5
TEES * Size on size or reducing tees	3.0	3.5	4.5	5.5	12.5 (a)	12.5 (a)
HORIZONTAL BENDS						
11.25° Bends	0.5	0.5	1.0	1.0	1.0	1.0
22.5° Bends	1.0	1.0	1.5	1.5	1.5	1.5
45° Bends	1.5	1.5	2.0	2.5	3.0	3.5
90° Bends	3.0	3.5	4.5	5.5	12.5 (a)	12.5 (a)
45° VERTICAL BENDS						
Length High Side - LHS (Based on 1.8m cover)	3.5	4.5	6.0	7.0	8.0	10.5
Length Low Side - LLS (Depth greater than or equal to 1.8m)	1.5	1.5	2.0	2.5	3.0	3.5
REDUCERS	LARGE DIAMETER SIDE (mm)					
SMALL DIAMETER SIDE (mm)	100 ø	150 ø	200 ø	250 ø	300 ø	400 ø
100 ø	N/A	5.5	10.0	13.0	16.5	23.0
150 ø	N/A	N/A	6.0	10.0	14.0	21.0
200 ø	N/A	N/A	N/A	5.5	10.5	18.0
250 ø	N/A	N/A	N/A	N/A	6.0	15.0
300 ø	N/A	N/A	N/A	N/A	N/A	10.5
400 ø	N/A	N/A	N/A	N/A	N/A	N/A

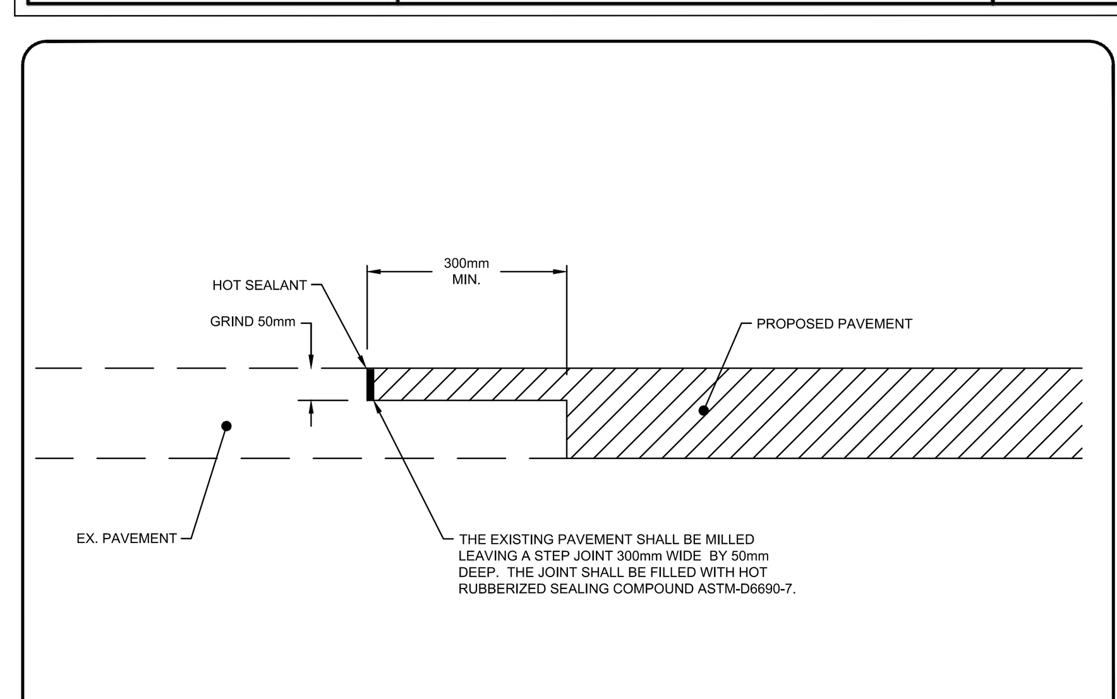
TABLE VALUES BASED UPON EBAA 'CL' (Granular)' SOIL TYPES
(Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays - backfilled with granular material)
(a) 300 Ø AND 400 Ø PIPE DIAMETER TABLE VALUES FOR 90° BENDS AND TEES HAVE BEEN INCREASED TO 12.5m MINIMUM LENGTHS.

NOTE

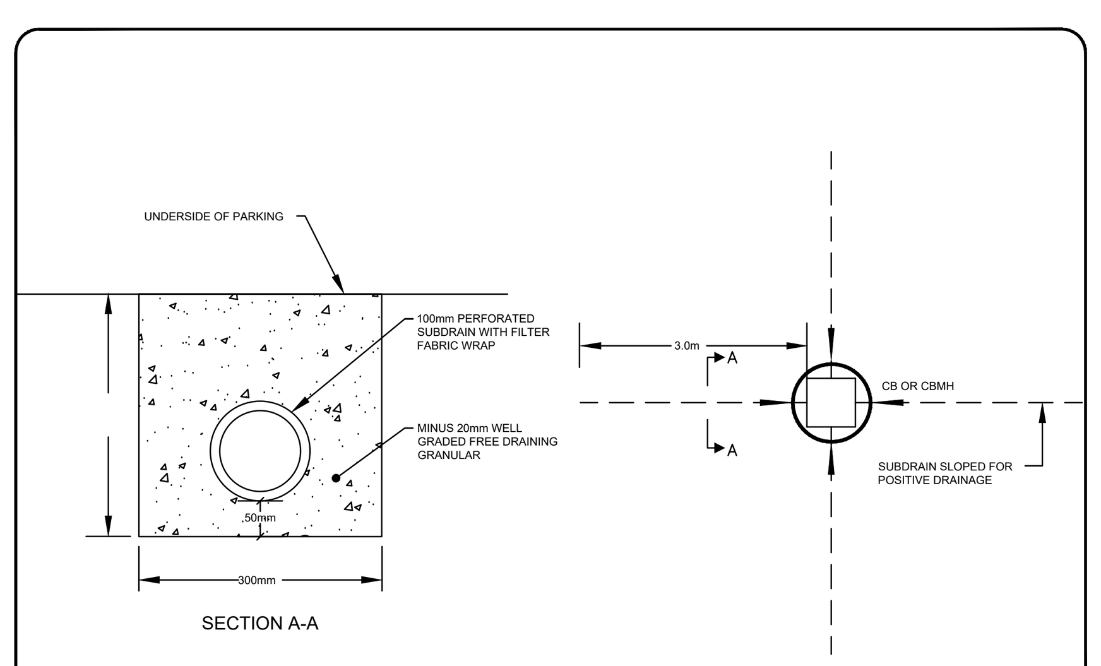
1. TABLE VALUES ARE BASED UPON PVC PIPE MANUFACTURERS RECOMMEND MINIMUM RESTRAINING LENGTHS FOR FITTINGS AND VALVES
2. TABLE CALCULATION PARAMETERS ARE BASED UPON A SAFETY FACTOR OF 1.5 TO 1, WITH AS TYPE '5' TRENCH AND A TEST PRESSURE OF 1035kPa (150p.s.i.)
3. MINIMUM RESTRAINED PIPE LENGTHS LISTED ARE INTENDED TO ADDRESS PVC PIPE INSTALLATIONS UNDER NORMAL CONDITIONS WITH GRANULAR 'D' (LIMESTONE SCREENING, COLOUR TO BE BETWEEN LIGHT GREY TO WHITE) BEDDING MATERIAL WITH A MINIMUM 1.8m DEPTH OF COVER.
4. SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING SOILS CONDITIONS:
   - DEPTH OF BURY LESS THAN 1.8m
   _CRITICAL INSTALLATIONS REQUIRING A HIGHER SAFETY FACTOR THAN 1.5 TO 1
   _SOILS WITH SPT 'N' < 12 OR Su < 70kPA (PER GEOTECHNICAL REPORT)
   _EMBANKMENT CONDITION
   _FILLS SOILS AT BASE OF TRENCH
   _ORGANIC SOILS BELOW INVERT
   _TRENCH CONDITIONS REQUIRING ACTIVE DEWATERING
   _ANY OTHER SEVERE SOIL OR PROJECT SPECIFIC CONDITIONS NOT COVERED IN TABLE
5. SHOP DRAWINGS ARE REQUIRED FOR ALL INSTALLATIONS WITH PIPE DIAMETER EQUAL TO AND GREATER THAN 400mm (AWWA C905).
6. ALL PIPING, FITTINGS, VALVES, APPURTENANCES AND MECHANICAL RESTRAINTS TO BE c/w DENSO PASTE, DENSO MASTIC AND DENSO TAPE OR APPROVED EQUAL, APPLIED TO MANUFACTURER'S RECOMMENDATIONS.



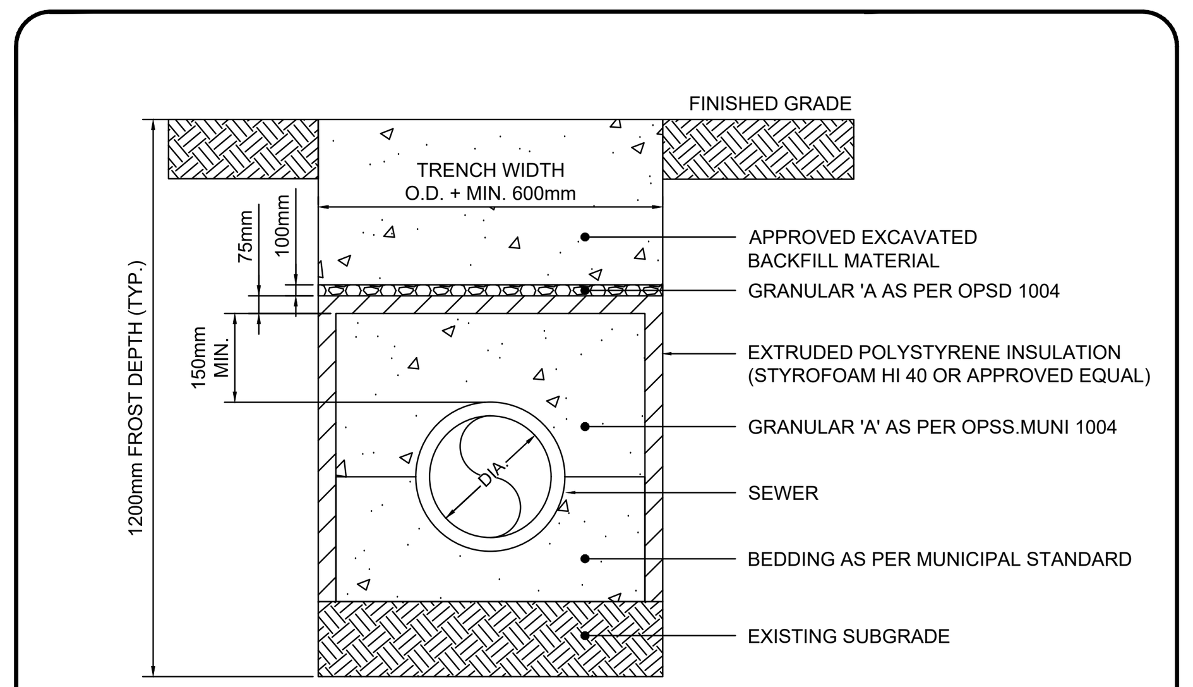
WATERMAIN PVC PIPE DEFLECTION
WITH TYPICAL MECHANICAL THRUST RESTRAINT
SCALE: N.T.S.



SCALE: N.T.S.



SUBDRAIN DETAIL
SCALE: N.T.S.



TYPICAL SEWER BOX INSULATION DETAIL
SCALE: N.T.S.

SITE PLAN
PREPARED BY: MCCALLUM SATHER ARCHITECT
DATE: AUGUST 30, 2024

TOPOGRAPHIC & LEGAL
PREPARED BY: J.D. BARNES LIMITED
DATE: APRIL 9, 2021

BENCHMARK NOTES
ELEVATIONS ARE OF GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM GNSS OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOID MODEL HT2.0.

Notes

2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

No.	Issue / Revision	Date	Auth.
1	ISSUED FOR ZBA	NOV. 17, 2023	PM
2	ISSUED FOR ZBA 2	JUNE 7, 2024	JS
3	ISSUED FOR ZBA 3	SEPT. 4, 2024	PM

BURNSIDE
R.J. Burnside & Associates Limited
1465 Pickering Parkway
Pickering, Ontario, L1V 7G7
Telephone: (905) 420-5777
Fax: (905) 420-5247
web www.rjburnside.com

Client
THE DEVELOPMENT SQUAD GP INC.
27 MELLOWOOD AVENUE
BRAMPTON, ON
L6P 2P2

Project Name:
SITE PLAN DEVELOPMENT
670 NIAGARA STREET
WELLAND, ON L3C 1M2

Drawing Title
DETAILS

Drawn	Checked	Designed	Checked	Date	Drawing No.
GP	JS	JS	PM	23/10/24	D1
Project No. 300052233		Contract No.		Revision No.	
Scale NOT TO SCALE					

File: \\monty\Shared Work Areas\052233 - Niagara St & Aqueduct St Welland\03_ProductionDwg\052233 - D1.dwg Date Plotted: September 4, 2024 - 12:17 PM