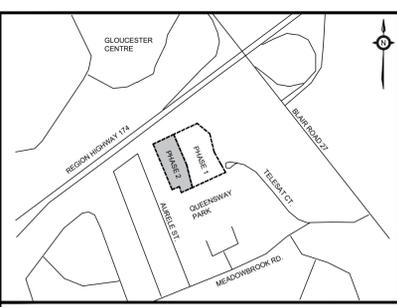


GENERAL NOTES:

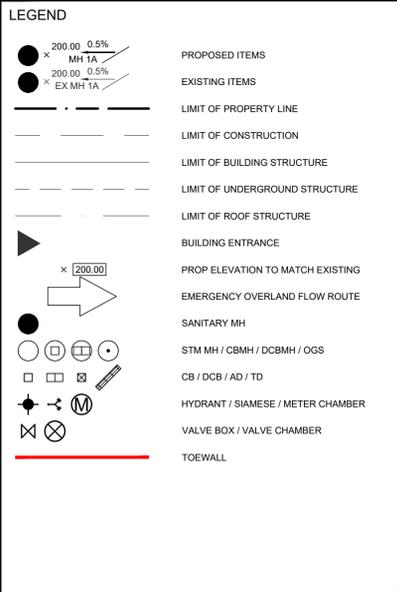
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- ALL TEMPORARY TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO TRAFFIC MANUAL BOOK 7: TEMPORARY CONDITIONS FIELD EDITION.
- ALL THE CONSTRUCTION WORK FOR THIS PROJECT SHALL COMPLY WITH THE STANDARD DRAWINGS AND SPECIFICATIONS OF THE CITY, THE REGION AND THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
- THE INFORMATION SHOWN FOR EXISTING UTILITIES WAS PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE LOCATED AND VERIFIED BY EACH UTILITY PRIOR TO COMMENCEMENT OF WORK. ANY VARIANCE IS TO BE IMMEDIATELY REPORTED TO THE ENGINEER. LOST TIME DUE TO FAILURE OF THE CONTRACTOR TO CONFIRM UTILITY LOCATIONS AND NOTIFY THE ENGINEER OF CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT THE CONTRACTORS EXPENSE.
- PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR OR DEVELOPER OR CONSULTANT WILL OBTAIN ALL NECESSARY ROAD OCCUPANCY PERMITS FROM THE CITY'S RIGHT-OF-WAY MANAGEMENT UNIT. ROAD OCCUPANCY ACCESS PERMIT MUST BE OBTAINED 48 HOURS PRIOR TO COMMENCING ANY WORKS WITHIN THE MUNICIPAL ROAD ALLOW.
- ALL WORK TO BE DESIGNED AND COMPLETED AS PER OPSS, OPSD, AND MTD.
- NO ALTERATIONS TO EXISTING BOUNDARY ELEVATIONS OR ADJACENT LANDS SHALL BE UNDERTAKEN UNLESS WRITTEN AGREEMENT WITH THE ADJACENT PROPERTY OWNER IS OBTAINED AND SUBMITTED IN A FORMAT ACCEPTABLE TO THE CITY.

SITE GRADING:

- 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.
- ALL GRANULAR BASE AND SUB-BASE MATERIALS SHALL BE GRADED AND COMPACTED TO 98% STANDARD PROCTOR DENSITY, FREE OF DEPRESSIONS AS PER THE GEOTECHNICAL REPORT.
- THE PAVEMENT STRUCTURE SHALL BE CONSTRUCTED BASED ON SPECIFICATIONS AS PER THE GEOTECHNICAL REPORT.
- 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 BARRIER CURBS WITHIN THE SITE TO BE CONSTRUCTED AS PER DETAIL ON DRAWING D1, UNLESS OTHERWISE SPECIFIED.
- TRENCH BACKFILL WITHIN THE RIGHT OF WAY SHALL BE UNSHRINKABLE FILL AND SHALL EXTEND TO THE BASE OF ASPHALT. LANDSCAPED AREA MAY BE EXEMPTED.
- 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 WATERMANS AND SEWERS TO BE INSPECTED BY THE MUNICIPALITY WHEN REQUIRED BY THE MUNICIPALITY.
- 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.
- TRANSITIONS WITHIN THE SUBGRADE WITHIN 1.2m FROM THE TOP OF PAVEMENT SHOULD INCLUDE 9H:1V TRANSITIONS AS PER DETAIL ON DRAWING D1.
- EMBANKMENTS TO BE SLOPED AT MAX 3:1, UNLESS OTHERWISE SPECIFIED.
- 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.
- 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.
- THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER 1 (ONE) SET OF AS CONSTRUCTED SITE SERVING, GRADING, AND SITE ELECTRICAL DRAWINGS.



KEY PLAN N.T.S. ADDRESS: 1600 JAMES NAISMITH DRIVE, OTTAWA PHASE 2



BENCHMARK:	ELEVATIONS ARE GEODETIC, IN METRES, AND RELATED TO BENCHMARK LOCATED IN TELESTAT COURT RELATED TO THE TOP OF THE SPRINKLER, WITH AN ELEVATION OF 73.92m		
BEARING:			
SITE PLAN:	KWA SITE DEVELOPMENT CONSULTING		
SURVEY:	STANTEC, 220909		
1	SITE PLAN APPROVAL - SUBMISSION 1	FEB 2026	TF
NO.	ISSUE	DATE	BY

NOT FOR CONSTRUCTION

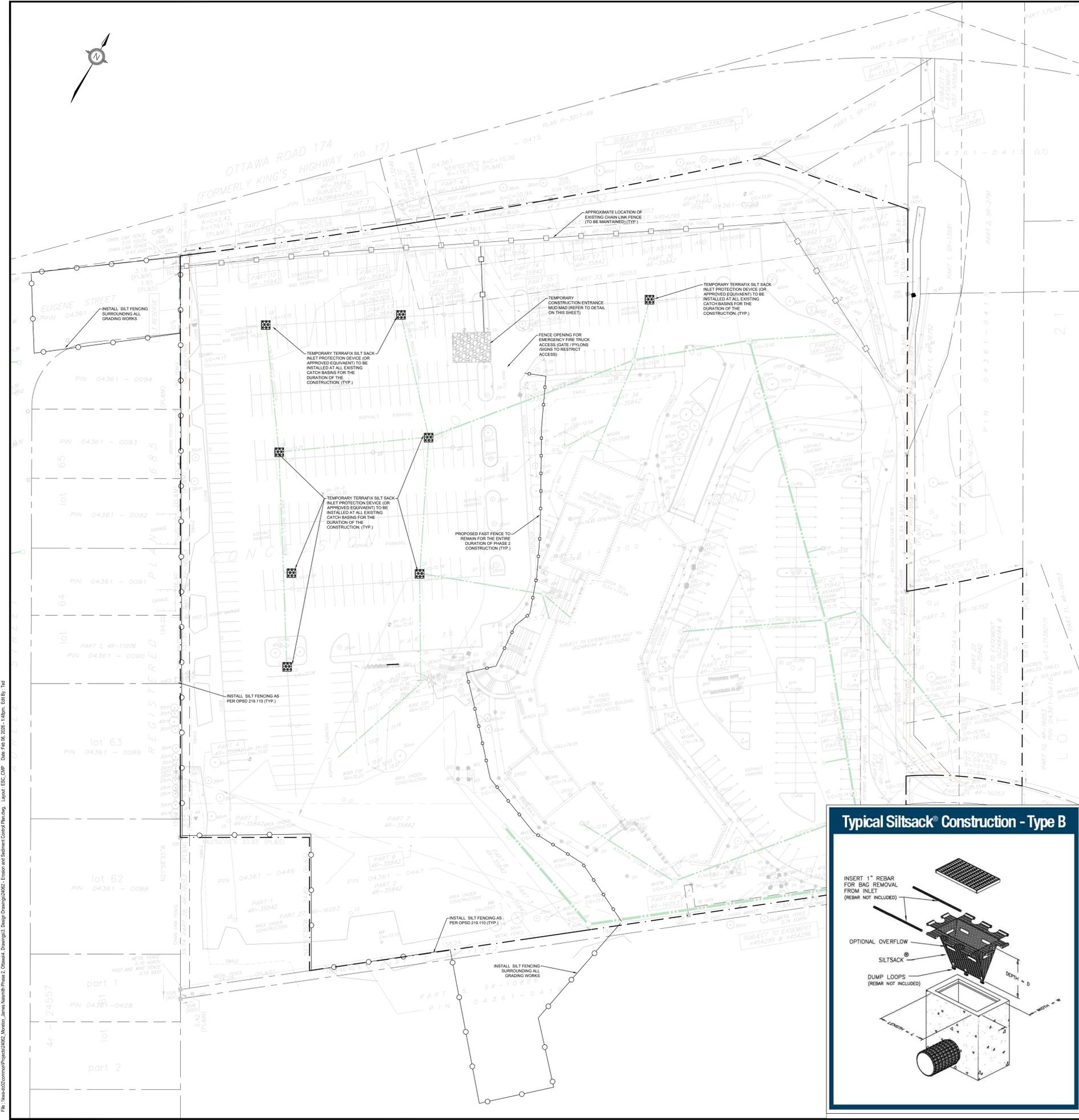
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- THIS DRAWING IS NOT TO BE ISSUED FOR CONSTRUCTION UNTIL ALL REQUIRED PERMITS HAVE BEEN ISSUED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, INVERTS AND DATA ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO KWA 48 HOURS PRIOR TO ANY CONSTRUCTION.

CLIENT:
 1600 JAMES NAISMITH DRIVE LP
 1460 THE QUEENSWAY, SUITE M264
 TORONTO, ONTARIO
 M8Z 1S4
 1600 JAMES NAISMITH DRIVE, OTTAWA
 PHASE 2

GRADING PLAN

SCALE:	1:250	PROJECT #	24062
DATE:	JANUARY 2026	DRAWING #	G1
DRAWN BY:	TF		
DESIGNED BY:	TF		
CHECKED BY:	TF		

File: \\w402\comm\proj\24062 - 1600 James Naismith Phase 2 - 020424 - Grading.dwg, Date: Feb 06, 2026, 1:31pm, E68 By: Tfd



GENERAL NOTES:

- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
- ALL TEMPORARY TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO TRAFFIC MANUAL BOOK 7, TEMPORARY CONDITIONS FIELD EDITION.
- ALL THE CONSTRUCTION WORK FOR THIS PROJECT SHALL COMPLY WITH THE STANDARD DRAWINGS AND SPECIFICATIONS OF THE CITY, THE REGION AND THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ALL OTHER CONTRACTORS AND PREVENT CONSTRUCTION CONFLICTS.
- THE INFORMATION SHOWN FOR EXISTING UTILITIES WAS PROVIDED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE LOCATED AND VERIFIED BY EACH UTILITY PRIOR TO COMMENCEMENT OF WORK. ANY VARIANCE IS TO BE IMMEDIATELY REPORTED TO THE ENGINEER. LOST TIME DUE TO FAILURE OF THE CONTRACTOR TO CONFIRM UTILITY LOCATIONS AND NOTIFY THE ENGINEER OF CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT THE CONTRACTOR'S EXPENSE.
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- ALL WORK TO BE DESIGNED AND COMPLETED AS PER OPSD, OPSD, AND MTO.
- NO ALTERATIONS TO EXISTING BUILDING ELEVATIONS OR ADJACENT LANES SHALL BE UNDERTAKEN UNLESS WRITTEN AGREEMENT WITH THE ADJACENT PROPERTY OWNER IS OBTAINED AND SUBMITTED IN A FORMAT ACCEPTABLE TO THE CITY.

EROSION AND SEDIMENT CONTROL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORK, MAINTAINED THROUGHOUT CONSTRUCTION, AND ONLY REMOVED UPON STABILIZATION OF THE DISTURBED AREAS.
- SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS WITH A MINIMUM FREQUENCY OF:
 - ON A WEEKLY BASIS
 - BEFORE AND AFTER EVERY RAINFALL EVENT (>12mm)
 - AFTER SIGNIFICANT SNOWMELT EVENTS
 - MONTHLY DURING INACTIVE PERIODS (> 30 DAYS) AND
 - DAILY DURING EXTENDED RAIN OR SNOWMELT PERIODS.
- REPAIRS TO ESC MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
- ADDITIONAL MATERIALS SUCH AS CLEAR STONE (12mm OR GREATER), FILTER FABRIC, PUMPS, HOSES AND SILT SOCKS TO BE KEPT ON-SITE AT ALL TIMES FOR CORRECTING DEFECTS TO MEET THE REQUIREMENTS OF THIS PLAN.
- ALL DISTURBED AREAS THAT WILL BE LEFT INACTIVE FOR MORE THAN THIRTY (30) DAYS ARE TO BE STABILIZED WITH THE EXCEPTION OF THE PREGRADED AREAS WHERE DRAINAGE IS COLLECTED IN AN APPROPRIATE EROSION CONTROL SYSTEM (IE FOOD SEDIMENT BASIN).
- ENGINEERED CHANGES TO THE ESC MEASURES MAY BE NECESSARY AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT CONTROL AND EROSION ON-SITE AND SHOULD BE COMPLETED BASED ON DIRECTION FROM THE SITE ENGINEER. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
- THE SITE TRAILER IS TO BE LOCATED IN A LOCATION DESCRIBED BY THE ENGINEER, OWNER AND CONTRACTOR PRIOR TO CONSTRUCTION.
- REFUELING IS TO TAKE PLACE ONLY WITHIN DESIGNATED AREAS AND SHALL BE A MINIMUM OF THIRTY METRES FROM ANY WATERCOURSE OR ENVIRONMENTALLY SENSITIVE AREA.
- SILT CLEANUP EQUIPMENT SUCH AS ABSORPTIVE MEDIA IS TO BE MAINTAINED ON-SITE FOR IMMEDIATE USE IN THE EVENT OF A SPILL.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEANUP AND RESTORATION, INCLUDING ALL COSTS, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS (EG. ROAD OCCUPANCY PERMIT, ACCESS PERMIT, ETC).
- SPILLED OR TRACKED MATERIALS FROM THE CONTRACTOR'S HAULING VEHICLES ON ROADS WILL BE CLEANED UP AND THE SITE WILL BE LEFT IN A NEAT CONDITION AT THE END OF EACH WORKING DAY. THE CONTRACTOR WILL ARRANGE FOR OFF-SITE DISPOSAL OF ALL WASTE MATERIAL AND RUBBISH IN A MANNER THAT COMPLES WITH ALL LAWS AND REGULATIONS.
- SECONDARY CONTAINMENT IS REQUIRED FOR ALL STATIONARY NON-Self-PROPELLED PETROLEUM FILLED EQUIPMENT (IE PUMPS, GENERATORS, ETC).
- THE CONTRACTOR WILL KEEP THE SITE FREE FROM ACCUMULATIONS OF WASTE MATERIALS, SURPLUS FILL, TOPSOIL AND ALL DEBRIS SUCH AS BOULDERS, BROKEN ASPHALT, BROKEN CONCRETE OR UNSUITABLE EARTH MATERIALS.
- PROVIDE TERRAFIX SILT SACK (OR APPROVED EQUIVALENT) ON ANY EXISTING CATCH BASINS WITHIN THE INFLUENCE OF THE CONSTRUCTION AREA. PROVIDE GRAVEL DRAIN INLET PROTECTION DURING EARLYWORKS ACTIVITIES ON ALL NEW INLETS CONSTRUCTED AS PART OF THIS DEVELOPMENT UNTIL THE DRAINAGE AREA IS STABILIZED/PAVED.
- SEDIMENT TO BE REMOVED FROM THE SEDIMENT BASINS BEFORE IT IS 25% FULL AND FROM SILT FENCE BEFORE IT IS 33% FULL.
- ALL TOPOGRAPHY AREAS LEFT EXPOSED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH APPROPRIATE NON-INVASIVE SPECIES. WINTER CONTINGENCY MEASURES SHALL BE IMPLEMENTED AS EROSION CONTROL FOR APPROPRIATE STABILIZATION OUTSIDE THE GROWING SEASON.
- GOOD HOUSEKEEPING PRACTICES ARE TO BE FOLLOWED ON SITE DURING CONSTRUCTION AND MONITORED ON A DAILY BASIS. THIS INCLUDES, BUT IS NOT LIMITED TO:
 - APPROPRIATE STORAGE AND DISPOSAL OF CONSTRUCTION MATERIALS.
 - APPROPRIATE STORAGE AND DISPOSAL OF GARBAGE AND DEBRIS.
 - APPROPRIATE DISPOSAL OF CONCRETE WASTE TO AN APPROVED DISPOSAL FACILITY, AND
 - SECONDARY CONTAINMENT OF PETROLEUM-BASED PRODUCTS (JERRY CANS, OIL, ETC.).

LEGEND

- EXISTING CHAIN LINK FENCE
- PROPOSED HOARDING FENCE
- PROPOSED HEAVY DUTY SILT FENCE
- TEMPORARY CONSTRUCTION ENTRANCE MUD MAT
- TERRAFIX SILT SACK INLET PROTECTION
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING CATCH BASIN

KEY PLAN
N.T.S. ADDRESS: 1600 JAMES NAISMITH DRIVE, OTTAWA PHASE 2

BENCHMARK: ELEVATIONS ARE GEODETIC, IN METRES, AND RELATED TO BENCHMARK LOCATED IN TELESTAT COURT RELATED TO THE TOP OF THE SPRINKLER, WITH AN ELEVATION OF 73.92m

BEARING:

SITE PLAN: KWA SITE DEVELOPMENT CONSULTING

SURVEY: STANTEC, 220909

1	SITE PLAN APPROVAL - SUBMISSION 1	FEB 2026	TF
NO.	ISSUE	DATE	BY

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CONSTRUCTION SPECIFICATIONS

- STONE - USE COARSE AGGREGATE (75mm - 125mm STONE)
- LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 10m.
- THICKNESS - NOT LESS THAN 200mm.
- WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO ADJACENT PAVED ROAD SURFACES MUST BE REMOVED IMMEDIATELY.

Typical Silt sack® Construction - Type B

INSERT 1" REBAR FOR BAG REMOVAL FROM INLET (REBAR NOT INCLUDED)

OPTIONAL OVERFLOW

SILT SACK®

DUMP LOOPS (REBAR NOT INCLUDED)

DEPTH = D

LENGTH = L

USE SILT FENCE OR BARRIER TO PREVENT TRAFFIC SHORT CIRCUIT

CONSTRUCTION ENTRANCE OR EXIT ("MUD MAT")

75-125mm CLEAN STONE

EXISTING PAVEMENT

EXISTING GROUND

PROFILE

10m (32') MIN.

EXISTING PAVEMENT

PLAN VIEW

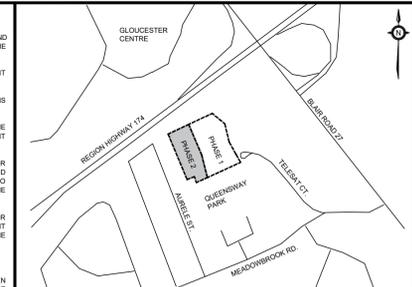
PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY

EXISTING GROUND

EXISTING PAVEMENT

USE SILT FENCE OR BARRIER TO PREVENT TRAFFIC SHORT CIRCUIT

PLAN VIEW



KEY PLAN N.T.S. ADDRESS: 1600 JAMES NAISMITH DRIVE, OTTAWA PHASE 2

LEGEND

- EXISTING CHAIN LINK FENCE
- PROPOSED HOARDING FENCE
- PROPOSED HEAVY DUTY SILT FENCE
- TEMPORARY CONSTRUCTION ENTRANCE MUD MAT
- TERRAFIX SILT SACK INLET PROTECTION
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING CATCH BASIN

BENCHMARK: ELEVATIONS ARE GEODETIC, IN METRES, AND RELATED TO BENCHMARK LOCATED IN TELESTAT COURT RELATED TO THE TOP OF THE SPRINKLER, WITH AN ELEVATION OF 73.92m

BEARING:

SITE PLAN: KWA SITE DEVELOPMENT CONSULTING

SURVEY: STANTEC, 220909

1	SITE PLAN APPROVAL - SUBMISSION 1	FEB 2026	TF
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KWA SITE DEVELOPMENT CONSULTING
2453 AUCKLAND DRIVE BURLINGTON, ON L7L 7A9

LICENCED PROFESSIONAL ENGINEER
T. FAIR
100176144
FEB 6, 2026
PROVINCE OF ONTARIO

CLIENT:
1600 JAMES NAISMITH DRIVE LP
1460 THE QUEENSWAY, SUITE M264
TORONTO, ONTARIO
M8Z 1S4
1600 JAMES NAISMITH DRIVE, OTTAWA
PHASE 2

EROSION AND SEDIMENT CONTROL / CONSTRUCTION MANAGEMENT PLAN

SCALE: 1:500 10m PROJECT # 24062

DATE: JANUARY 2026 DRAWING #

DRAWN BY: TF DESIGNED BY: TF CHECKED BY: TF

ESC/CMP

ALTERNATIVES

A PRECAST MONOLITHIC BASE

B CAST-IN-PLACE BASE

C TAPERED TRANSITION SLAB

D 1200mm PRECAST FLAT CAP

E 1500mm PRECAST FLAT CAP

NOTES:

- 1 The sump is measured from the lowest invert.
- 2 Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
- 3 Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
- 4 Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
- 5 Pipe support according to OPSD 708.020.
- 6 For benching and pipe opening details, see OPSD 704.021.
- 7 For adjustment unit and frame installation, see OPSD 704.010.
- 8 All dimensions are nominal.
- 9 All dimensions are in millimetres unless otherwise shown.

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

ALTERNATIVES

A PRECAST MONOLITHIC BASE

B CAST-IN-PLACE BASE

C TAPERED TRANSITION SLAB

D 1200mm PRECAST FLAT CAP

E 1500mm PRECAST FLAT CAP

NOTES:

- 1 For sump detail, see OPSD 701.010.
- 2 Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
- 3 Precast concrete components shall be according to OPSD 701.030, 701.031, 701.040, 701.041, 703.011, 703.021, and 706.010.
- 4 Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.021.
- 5 Pipe support shall be according to OPSD 708.020.
- 6 For benching and pipe opening details, see OPSD 704.021.
- 7 For adjustment unit and frame installation, see OPSD 704.010.
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ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 5
PRECAST CONCRETE MAINTENANCE HOLE
 1500mm DIAMETER
 OPSD 701.011

ALTERNATIVES

A CAST-IN-PLACE BASE

B TAPERED TRANSITION SLAB

C 1200mm PRECAST FLAT CAP

D 1800mm PRECAST FLAT CAP

NOTES:

- 1 For sump detail, see OPSD 701.010.
- 2 Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
- 3 Precast concrete components shall be according to OPSD 701.030, 701.031, 701.050, 701.051, 703.012, 703.022, and 706.020.
- 4 Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.022.
- 5 Pipe support shall be according to OPSD 708.020.
- 6 For benching and pipe opening details, see OPSD 704.021.
- 7 For adjustment unit and frame installation, see OPSD 704.010.
- 8 All dimensions are nominal.
- 9 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 5
PRECAST CONCRETE MAINTENANCE HOLE
 1800mm DIAMETER
 OPSD 701.012

ALTERNATE STANDARD HEIGHTS

ALTERNATE	DIMENSION
A	1900
B	1800
C	1500
D	1300

NOTES:

- 1 Catcher hole size 525mm diameter maximum.
- 2 200mm diameter knockout to accommodate subdrain. Knockout shall be 80mm deep.
- 3 Centre reinforcing in base slab and walls 400mm diameter and be placed to a minimum thickness of 500mm all around the catch basin.
- 4 Frame, grate and adjustment units shall be installed according to OPSD 704.010.
- 5 Pipe support shall be according to OPSD 708.020.
- 6 All dimensions are nominal.
- 7 All dimensions are in millimetres unless otherwise shown.

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

NOTES:

- 1 Circular chambers may be used if clearances are maintained.
- 2 Water meters shall be installed with a minimum 900mm unobstructed clearance in front of water meter to the nearest wall.
- 3 By-pass piping shall be installed with a minimum 300mm unobstructed clearance from the outside wall of the bypass pipe to the nearest wall.
- 4 Refer to manufacturer's installation recommendation for up and downstream piping requirement.
- 5 A 75mm meter shall have 75mm to 100mm increases on each side.
- 6 By-pass line size shall be same size as the meter line.
- 7 All joints shall be restrained.
- 8 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2019 Rev 3
PIPING LAYOUT FOR WATER METERS 75 TO 250mm IN CHAMBERS WITH BY-PASS
 OPSD 1107.020

TYPICAL SECTION

DUMMY JOINT (OPTIONAL)

CONTRACTION JOINT

EXPANSION JOINT

JOINT LAYOUT

NOTES:

- 1 Sidewalk thickness at residential driveways and adjacent to curb shall be 150mm.
- 2 All commercial and industrial driveways, the thickness shall be 200mm.
- 3 Sidewalk width shall be wider than specified.
- 4 This OPSD shall be read in conjunction with OPSD 310.030, 310.031, 310.032, 310.033 and 310.039.
- 5 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 2
CONCRETE SIDEWALK
 OPSD 310.010

TYPICAL SECTION A-A

NOTES:

- 1 The insulation material shall be advanced polyethylene according to OPSD 1600.100.
- 2 Minimum compressive strength of 275 kPa.
- 3 Pipe embedment for bedding, cover, and backfill shall be according to:
 - a) Revision OPSD 802.010, 802.013, 802.020, and 802.023.
 - b) OPSD 802.030, 802.031, 802.032, 802.033, 802.050, 802.051, 802.052, and 802.053.
- 4 A minimum insulation thickness shall be 50mm.
- 5 B joints shall be staggered for multiple insulation sheets.
- 6 This OPSD is to be read in conjunction with OPSD 3006.100 and 3090.101.
- 7 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2020 Rev 11
INSULATION FOR SEWERS AND WATERMAINS IN SHALLOW TRENCHES
 OPSD 1109.030

MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS

Maintenance Hole Diameter	No. 1-4	No. 5 and 6	No. 8	No. 7
700	700	850	780	700
1500	860	1220	860	860
1800	1220	1485	1220	1220
2400	1485	2020	1760	1485
3000	1930	2450	2300	1930
3600	2470	3085	2730	2470

NOTES:

- 1 Slopes shall be maintained from the outlet hole opening for top of benching.
- 2 A minimum benching depth shall be 300mm.
- 3 When benching is hoper-bested, it shall be given wood float finish, chomel shall be given steel trowel finish.
- 4 When specified, maintenance holes that are 1500mm in diameter with a uniform channel for 200 or 250mm pipe may be precast at the manufacturer with standardized benching slope and channel orientation.
- 5 All dimensions are nominal.
- 6 All dimensions are in millimetres unless otherwise shown.

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

ALUMINUM LADDER FOR MAINTENANCE HOLES

NOTES:

- 1 All aluminum in contact with concrete shall be thoroughly coated with asphalt paint.
- 2 All bolts, nuts, and washers shall be made of type 304 stainless steel.
- 3 All welding shall be according to CSA W47.2 and W59.
- 4 All brackets, bars, rungs, and stringers shall be fabricated from 6000 series structural aluminum.
- 5 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 2
ALUMINUM LADDER FOR MAINTENANCE HOLES
 OPSD 406.010

TANGENT

SUPERELEVATED

LEGEND:

S = Note of pavement superelevation in percent, %

NOTES:

- 1 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
- 2 When sidewalks are continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.
- 3 For forming procedure a 5% batter is acceptable.
- 4 For composite pavement the depth of concrete curb shall be adjusted to depth of concrete pavement.
- 5 When tie bars are specified, refer to OPSD 552.010 and 552.020 for details.
- 6 A treatment of entrances shall be according to OPSD 351.010.
- 7 B Outlet treatment shall be according to the OPSD 610 Series.
- 8 The transition from one curb type to another shall be a minimum length of 3.0m.
- 9 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2
CONCRETE BARRIER CURB WITH STANDARD GUTTER
 OPSD 600.040

FRAME PLAN

TYPE A CLOSED COVER

TYPE B OPEN COVER

SECTION C-C

SECTION D-D

FISH DETAIL

NOTES:

- 1 Covers shall be Type A or Type B, as specified.
- 2 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 1
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES
 OPSD 401.010

PLAN

SECTION B-B

BOTTOM VIEW

SECTION A-A

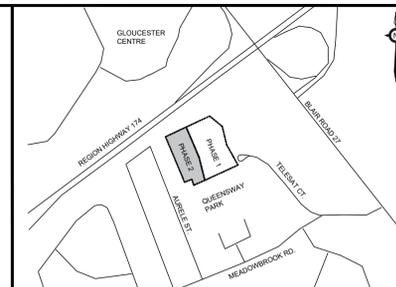
SECTION C-C

FISH DETAIL

NOTE:

- 1 This OPSD shall be read in conjunction with OPSD 400.020.
- 2 All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 1
CAST IRON, SQUARE FRAME FISH TYPE COVER
 OPSD 401.081



KEY PLAN ADDRESS: 1600 JAMES NAISMITH DRIVE, OTTAWA PHASE 2

LEGEND

BENCHMARK: ELEVATIONS ARE GEODETIC, IN METRES, AND RELATED TO BENCHMARK LOCATED IN TELESAT COURT RELATED TO THE TOP OF THE SPRINKLER, WITH AN ELEVATION OF 73.92m.

BEARING:

SITE PLAN: KWA SITE DEVELOPMENT CONSULTING

SURVEY: STANTEC, 220909

NO.	ISSUE	DATE	BY
1	SITE PLAN APPROVAL - SUBMISSION 1	FEB 2026	TF

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3. THIS DRAWING IS NOT TO BE ISSUED FOR CONSTRUCTION UNTIL ALL REQUIRED PERMITS HAVE BEEN ISSUED.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, INVERTS AND DATA ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO KWA 48 HOURS PRIOR TO ANY CONSTRUCTION.

KWA SITE DEVELOPMENT CONSULTING INC.
 2453 AUCKLAND DRIVE
 BURLINGTON, ON L7L 7A9

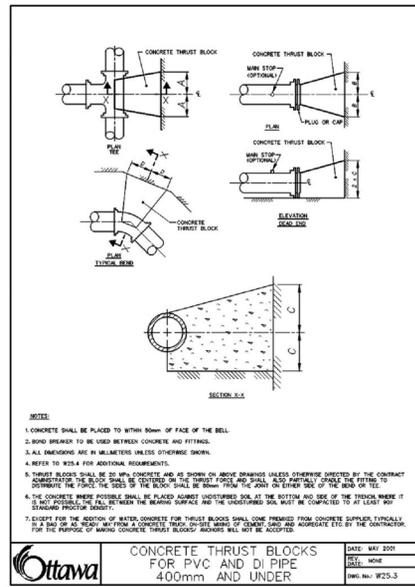
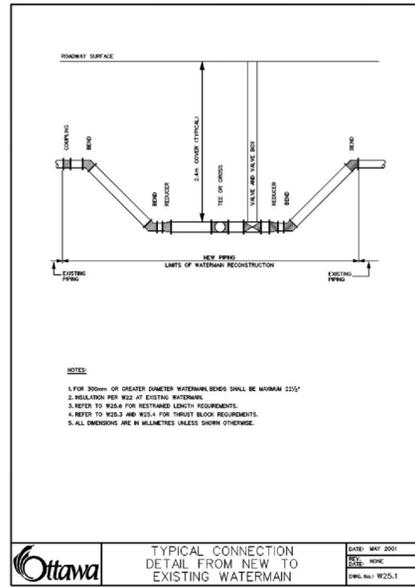
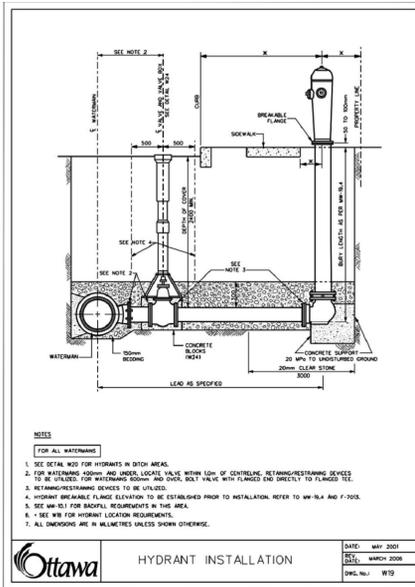
T. FAIR
 100176144
 FEB 6, 2026
 PROVINCE OF ONTARIO

CLIENT: 1600 JAMES NAISMITH DRIVE LP
 1460 THE QUEENSWAY, SUITE M264
 TORONTO, ONTARIO
 M8Z 1S4

1600 JAMES NAISMITH DRIVE, OTTAWA
 PHASE 2

DETAILS

SCALE:	PROJECT #
JANUARY 2026	24062
DRAWN BY: TF	DRAWING #
DESIGNED BY: TF	D1
CHECKED BY: TF	



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

DATE: MAY 2001
 SET: MARCH 2008
 DWG. NO.: W25.4

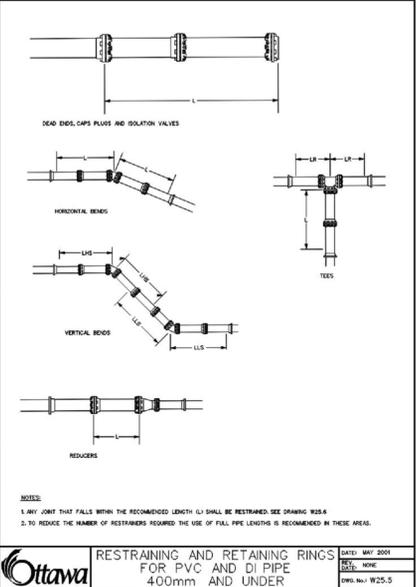
1. SOIL DESCRIPTION VERY FINE SANDS, LIMY CLAYS, CLAYS

PIPE DIAMETER	A	B	C	D
102	250	250	150	170
152	300	300	150	200
202	400	400	200	280
254	500	500	250	450
305	600	600	300	600
406	800	800	400	600

2. SOIL DESCRIPTION SILTY SAND GRAVELS OR CLAYEY SAND GRAVEL MATURES, MODERATE AMOUNT OF FINE

3. SOIL DESCRIPTION SANDS, GRAVELS AND GRAVEL-SAND MATURES, LITTLE OR NO FINE

PIPE DIAMETER	A	B	C	D
102	100	100	100	100
152	150	150	150	150
202	200	200	200	200
254	250	250	250	250
305	300	300	300	300
406	400	400	400	400



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

DATE: MAY 2001
 SET: MARCH 2008
 DWG. NO.: W25.6

1. SOIL DESCRIPTION VERY FINE SANDS, LIMY CLAYS, CLAYS

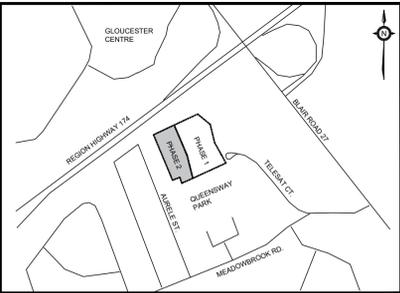
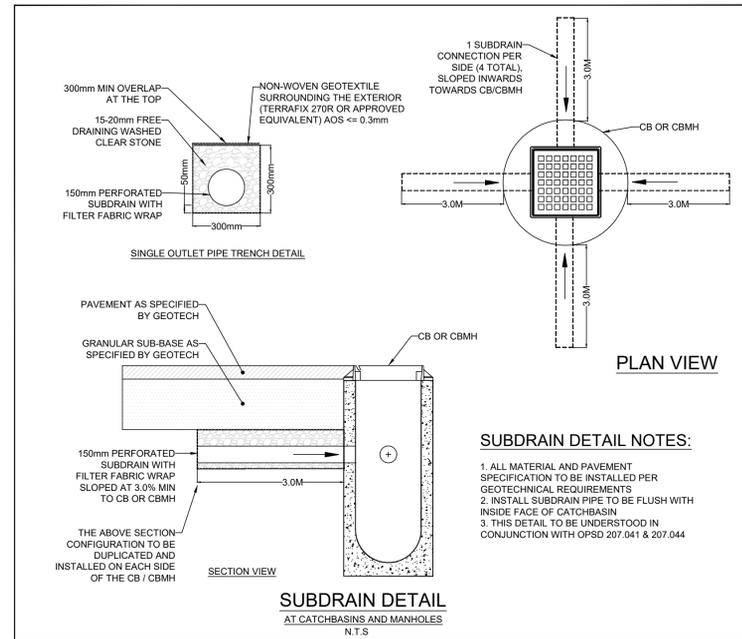
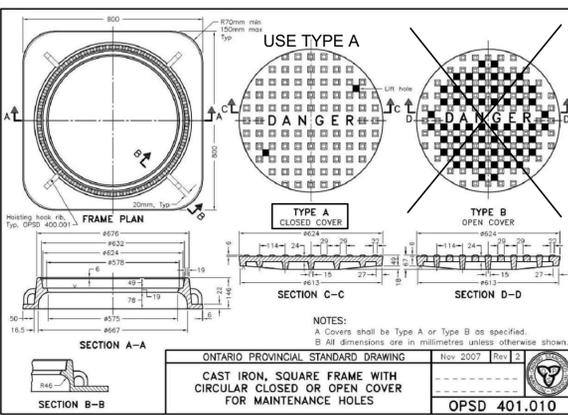
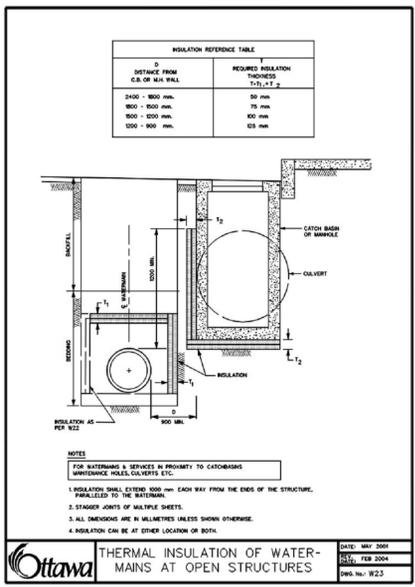
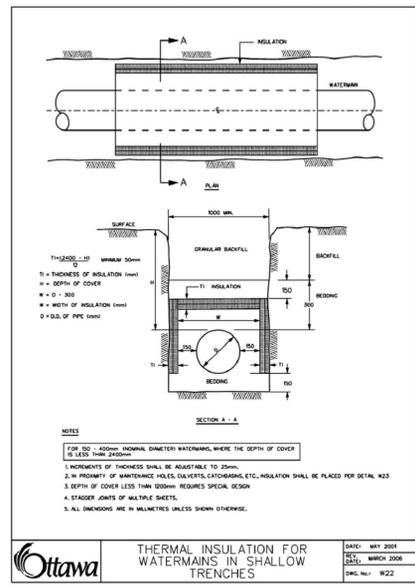
PIPE DIAMETER	100mm	150mm	200mm	250mm	300mm	400mm
DEAD ENDS, CAPS, PLUGS, VALVES	6.0	8.0	9.0	10.0	11.0	21.0
REDUCERS						
SMALLER DIAMETER						
100mm	N/A	6.0	8.0	10.0	11.0	18.0
150mm		N/A	6.0	8.0	10.0	18.0
200mm			N/A	6.0	8.0	12.0
250mm				N/A	6.0	9.0
300mm					N/A	8.0
400mm						N/A

2. SOIL DESCRIPTION SILTY SANDS GRAVELS OR CLAYEY SAND GRAVEL MATURES, MODERATE AMOUNT OF FINE

PIPE DIAMETER	100mm	150mm	200mm	250mm	300mm	400mm
DEAD ENDS, CAPS, PLUGS, VALVES	6.0	8.0	9.0	10.0	11.0	18.0
REDUCERS						
SMALLER DIAMETER						
100mm	N/A	3.0	3.0	3.0	3.0	3.0
150mm		N/A	3.0	3.0	3.0	3.0
200mm			N/A	3.0	3.0	3.0
250mm				N/A	3.0	3.0
300mm					N/A	3.0
400mm						N/A

3. SOIL DESCRIPTION SANDS, GRAVELS AND GRAVEL-SAND MATURES, LITTLE OR NO FINE

PIPE DIAMETER	100mm	150mm	200mm	250mm	300mm	400mm
DEAD ENDS, CAPS, PLUGS, VALVES	6.0	8.0	9.0	10.0	11.0	18.0
REDUCERS						
SMALLER DIAMETER						
100mm	N/A	3.0	3.0	3.0	3.0	3.0
150mm		N/A	3.0	3.0	3.0	3.0
200mm			N/A	3.0	3.0	3.0
250mm				N/A	3.0	3.0
300mm					N/A	3.0
400mm						N/A



LEGEND

BENCHMARK:	ELEVATIONS ARE GEODETIC, IN METRES, AND RELATED TO BENCHMARK LOCATED IN TELSTAT COURT RELATED TO THE TOP OF THE SPRINKLER, WITH AN ELEVATION OF 73.92m.		
BEARING:			
SITE PLAN:	KWA SITE DEVELOPMENT CONSULTING		
SURVEY:	STANTEC, 220909		
1	SITE PLAN APPROVAL - SUBMISSION 1		
NO.	ISSUE	DATE	BY
1		FEB 2026	TF

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KWA SITE DEVELOPMENT CONSULTING INC.
 2453 AUCKLAND DRIVE
 BURLINGTON, ON L7L 7A9

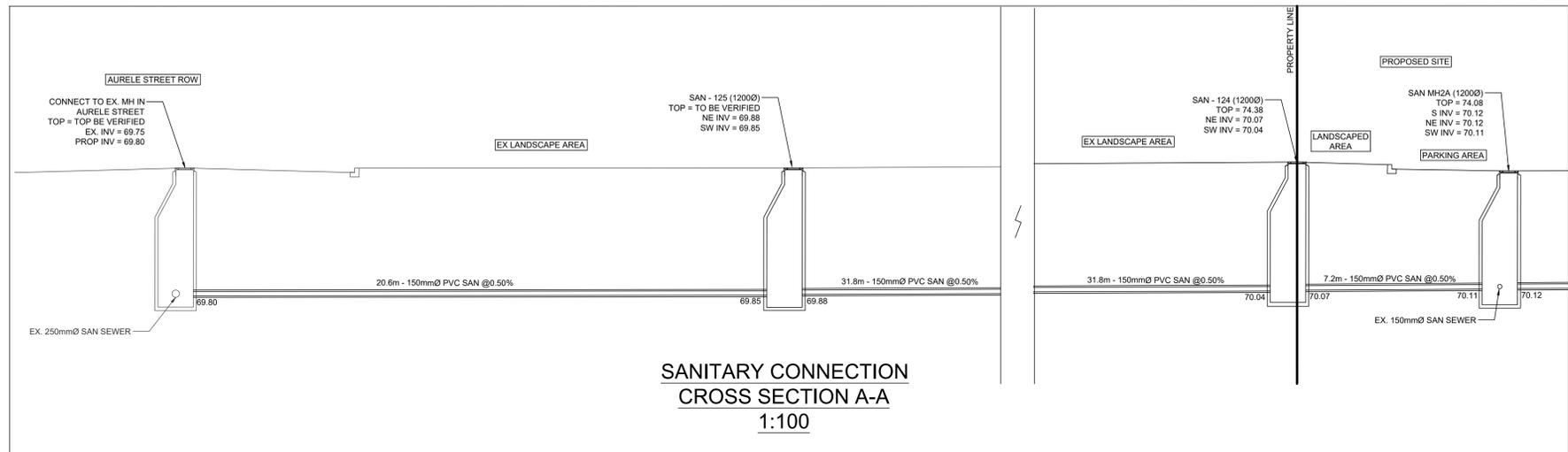
LICENSED PROFESSIONAL ENGINEER
 T. FAIR
 100176144
 FEB 6, 2026
 PROVINCE OF ONTARIO

CLIENT: 1600 JAMES NAISMITH DRIVE LP
 1460 THE QUEENSWAY, SUITE M264
 TORONTO, ONTARIO
 M8Z 1S4

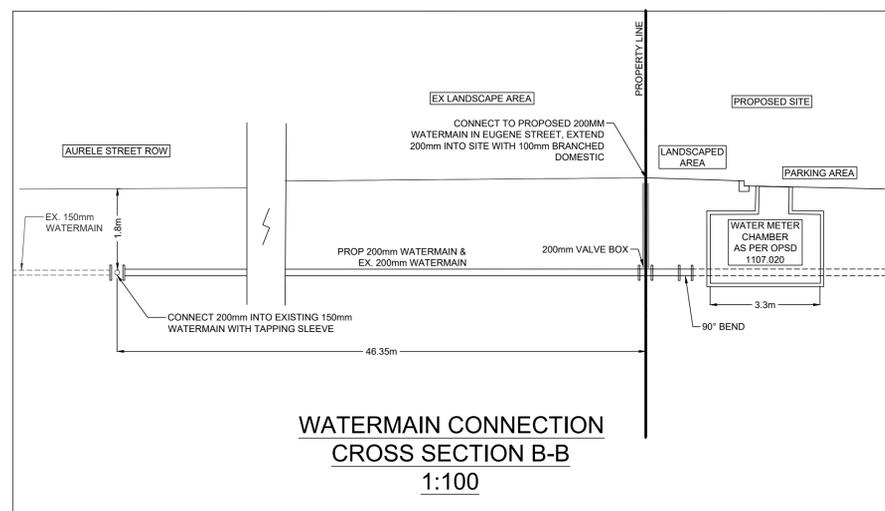
1600 JAMES NAISMITH DRIVE, OTTAWA
 PHASE 2

DETAILS

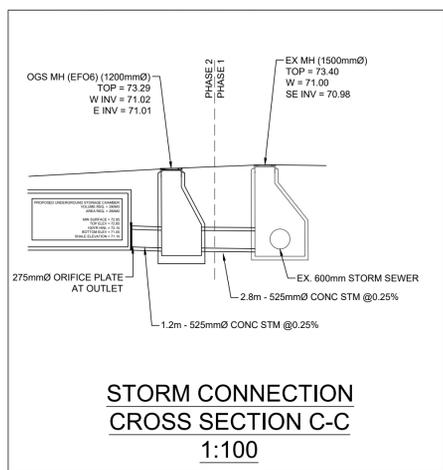
SCALE:	PROJECT #
DATE: JANUARY 2026	24062
DRAWN BY: TF	DRAWING #
DESIGNED BY: TF	D2
CHECKED BY: TF	



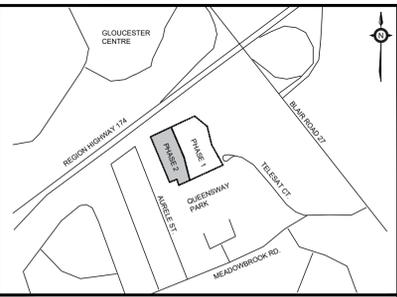
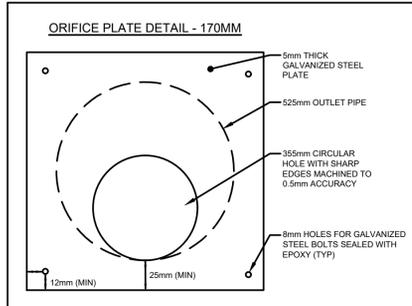
**SANITARY CONNECTION
CROSS SECTION A-A
1:100**



**WATERMAIN CONNECTION
CROSS SECTION B-B
1:100**



**STORM CONNECTION
CROSS SECTION C-C
1:100**



KEY PLAN ADDRESS: 1600 JAMES NAISMITH DRIVE, OTTAWA
N.T.S. PHASE 2

LEGEND

BENCHMARK: ELEVATIONS ARE GEODETIC, IN METRES, AND RELATED TO BENCHMARK LOCATED IN TELESAT COURT RELATED TO THE TOP OF THE SPRINKLER, WITH AN ELEVATION OF 73.92m

BEARING:

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SURVEY: STANTEC, 220909

NO.	ISSUE	DATE	BY
1	SITE PLAN APPROVAL - SUBMISSION 1	FEB 2026	TF

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CLIENT:
1600 JAMES NAISMITH DRIVE LP
1460 THE QUEENSWAY, SUITE M264
TORONTO, ONTARIO
M8Z 1S4

1600 JAMES NAISMITH DRIVE, OTTAWA
PHASE 2

DETAILS

SCALE:	PROJECT #
JANUARY 2026	24062
DRAWN BY:	DRAWING #
TF	D2
DESIGNED BY:	TF
CHECKED BY:	TF