NOTES: GENERAL

1. DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND LANDSCAPE DRAWINGS
2. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE: CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT
3. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL, CABLE TV, AND CONSUMERS GAS LINES.
5. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS AND AS PER THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT.
6. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS, LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7. TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED ON FEBRUARY 9, 2021. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. VERIFY THAT JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED.
9. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
10. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
11. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
12. ABUTTING PROPERTY GRADES TO BE MATCHED UNLESS OTHERWISE SHOWN.
13. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
14. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
15. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
16. AT PROPOSED UTILITY CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
17. CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY, COMPLETED BY OLS OR P.ENG CONFIRMING COMPLIANCE WITH DESIGN GRADING AND SERVICING. SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.
18. ABIDE BY RECOMMENDATIONS OF GEOTECHNICAL REPORT. REPORT ANY VARIATIONS IN OBSERVED CONATIONS FROM THOSE INCLUDED IN REPORT.
19. REPORT REFERENCES

i. STORMWATER MANAGEMENT REPORT, PREPARED BY WSP CANADA INC, PROJ. NO. 20M-01534-00, APRIL 12, 2021

ii. GEOTECHNICAL INVESTIGATION REPORT, PREPARED BY PATERSON GROUP, PROJ. NO. PG5283-1, APRIL, 2020

NOTES: EROSION AND SEDIMENT CONTROL

** CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES, AND MEETING ASSOCIATED LEED REQUIREMENT **

1. PRIOR TO START OF CONSTRUCTION:
   - 1.1. INSTALL SILT FENCE IN LOCATION SHOWN ON DWG C08 AND C09.
   - 1.2. INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL DETAIL).
   - 1.3. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.
2. DURING CONSTRUCTION:
   - 2.1. MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
   - 2.2. PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE, IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
   - 2.3. PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CB'S AS REQUIRED.
   - 2.4. PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
   - 2.5. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCH BASIN SUMPS WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
   - 2.6. DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION.
   - 2.7. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
   - 2.8. DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
   - 2.9. CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER).
   - 2.10. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
   - 2.11. CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
   - 2.12. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
   - 2.13. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
   - 2.14. TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
   - 2.15. ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
   - 2.16. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

FILENAME: V:\10-13 MI-LD\19M-01935-00 - 112 Montreal Road - Site Plan\3. Drawings\Working drawings\19M-01935-00_C_NEW.dwg
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NOTES: WATERMAIN

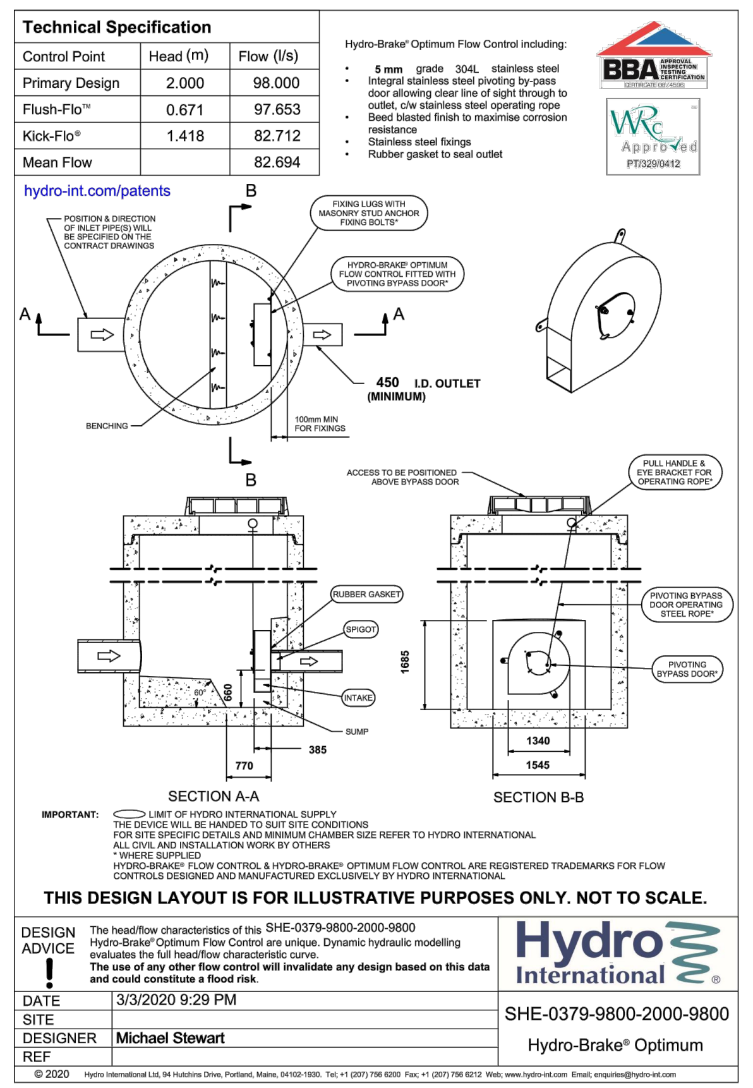
1. ALL WATERMAIN AND WATERMAIN APPURTANANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
2. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE SHALL BE MAINTAINED; WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22. WHERE A WATERMAIN IS IN CLOSE PROXIMITY TO AN OPEN STRUCTURE, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W23.
4. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
6. ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARD
7. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 & W19. CONTRACTOR TO PROVIDE FLOW TEST AND PAINTING OF NEW HYDRANT IN ACCORDANCE WITH CITY STANDARDS.
8. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

NOTES: SANITARY SEWER AND MANHOLES

9. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW SANITARY PIPING. PROVIDE DYE TESTING FOR NEW SERVICES.
10. SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
11. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
12. MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER THE OPSD 701.021
13. ANY SANITARY SEWER WITH LESS THAN 2.5m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.

NOTES: PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY

1. CONTRACTOR TO REINSTATE ROAD CUTS AS PER CITY OF OTTAWA DETAIL R10.
2. CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
3. FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
4. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
5. GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR B PLACEMENT.
6. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
7. ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR A PLACEMENT.
8. CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
9. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE CONSULTANT WITH VERIFICATION PRIOR TO PLACEMENT.
10. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY CONSULTANT. CONSULTANT TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.
11. PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESS) FOR HEAVY DUTY AND LIGHT DUTY AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND SHOWN ON THE PLANS.



Technical Specification

Control Point	Head (m)	Flow (l/s)
Primary Design	2.000	98.000
Flush-Flo™	0.671	97.653
Kick-Flo®	1.418	82.712
Mean Flow		82.694

Hydro-Brake® Optimum Flow Control including:
- 5 mm grade 304L stainless steel
- Integral stainless steel pivoting by-pass door allowing clear line of sight through to outlet, c/w stainless steel operating rope
- Beed blasted finish to maximise corrosion resistance
- Stainless steel fixings
- Rubber gasket to seal outlet

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 08/4596

WRc Approved PT/329/0412

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IMPORTANT: LIMIT OF HYDRO INTERNATIONAL SUPPLY
THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
ALL CIVIL AND INSTALLATION WORK BY OTHERS
* WHERE SUPPLIED
HYDRO-BRAKE® FLOW CONTROL & HYDRO-BRAKE® OPTIMUM FLOW CONTROL ARE REGISTERED TRADEMARKS FOR FLOW CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE ! The head/flow characteristics of this SHE-0379-9800-2000-9800 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve. **The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

Hydro International®

DATE	3/3/2020 9:29 PM
SITE	
DESIGNER	Michael Stewart
REF	

SHE-0379-9800-2000-9800
Hydro-Brake® Optimum

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michael.stewart@wsp.com

NOTES: STORM SEWERS AND STRUCTURES

14. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW STORM SEWERS, SERVICES AND CB LEADS.
15. STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3.
16. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
17. ALL STORM MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.1.
18. ANY NEW OR EXISTING STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
19. CB IN LANDSCAPE AREAS SHALL BE AS PER CITY OF OTTAWA STANDARD S31.
20. ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
21. STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWINGS S19. STORM CBMH'S AS INDICATED IN TABLE WITH SUMP AND FRAME/COVER AS PER OPSD 401.010 TYPE B. SANITARY MH'S AS PER OPSD 701.010 TYPE A BASE WITH BENCHING, AND FRAME/COVER AS PER OPSD 401.010 TYPE A. ADJUSTMENT SECTIONS SHALL BE AS PER OPSD 704.010.
22. INSTALLATION OF FLOW CONTROL ICD'S TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.

NOTES: SERVICES LATERALS

23. NO SERVICE LATERLAS ARE TO BE DIRECTLY CONNECTED TO A MANHOLE.
24. SERVICE LATERLAS THAT HAVE INSUFFICIENT COVER ARE TO BE THERMAL INSULATED AS PER CITY OF OTTAWA STANDARD W22.

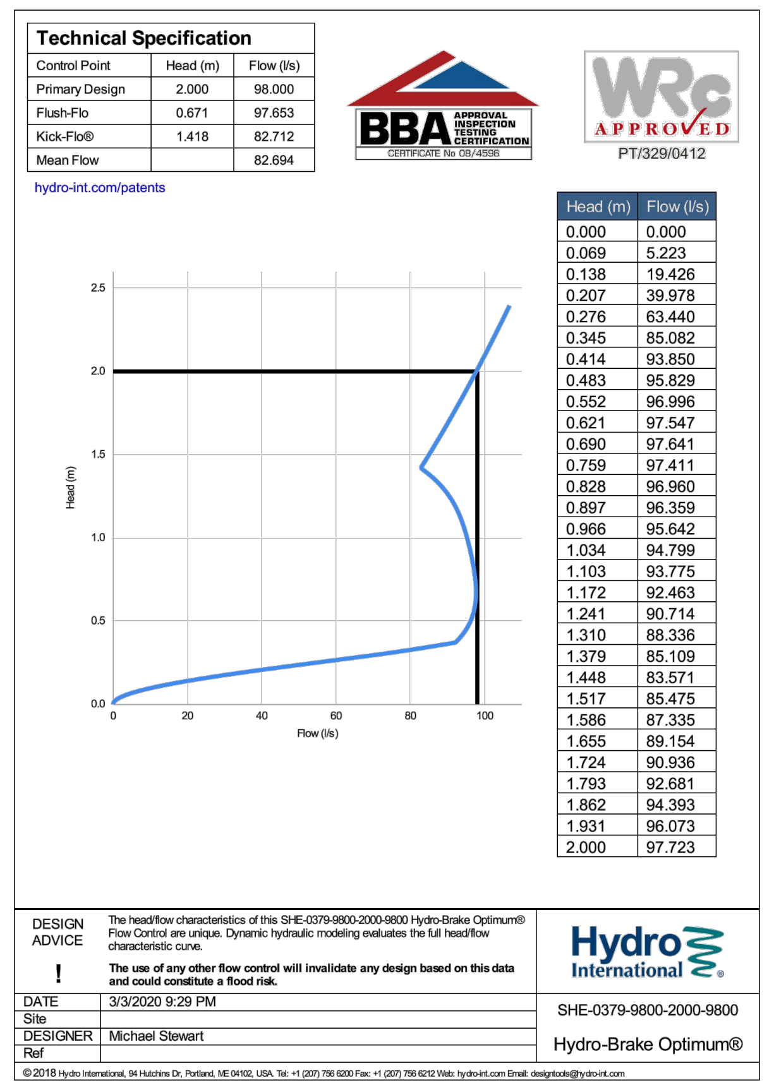
PAVEMENT STRUCTURE - HEAVY DUTY

COURSE	MATERIAL	THICKNESS
SURFACE	HL3 OR SUPERPAVE 12.5 AC	40 mm
BINDER	HL8 OR SUPERPAVE 19.0 AC	50 mm
BASECOURSE	OPSS GRANULAR 'A'	150 mm
SUBBASE	OPSS GRANULAR 'B' TYPE II	450 mm

PAVEMENT STRUCTURE - PARKING AREAS

COURSE	MATERIAL	THICKNESS
SURFACE	HL3 OR SUPERPAVE 12.5 AC	50 mm
BASECOURSE	OPSS GRANULAR 'A'	150 mm
SUBBASE	OPSS GRANULAR 'B' TYPE II	300 mm

WATERM					
STATION	DESCRIPTION	FINISHED	EXISTING	PROP. TOP	AS-BUILT
0+000	Connect to Ex. 305mm W/M with 300x200 TEE		56.390		54.280
0+003.30	Crossing Existing 600mm Sanitary Sewer		56.410	54.010	
0+005.40	Crossing Existing 1050mm Storm Sewer		56.390	52.692	
0+012.64	DMA VC	56.540		54.140	
0+013.40	45 degree bend	56.560		54.160	
0+014.06	45 degree bend	56.580		54.180	
0+016.13	200 X 200 TEE	56.570		54.170	
0+016.13	200mm V&VB	56.590		54.190	
0+016.13	W/M STUB	56.620		54.220	
0+017.13	200 X 200 TEE	56.570		54.170	
0+017.13	200mm V&VB	56.580		54.180	
0+017.13	W/M STUB	56.590		54.190	
0+025.30	45 degree bend	56.600		54.200	
0+026.52	45 degree bend	56.610		54.210	
0+081.71	200 X 200 TEE	56.680		54.280	
0+081.71	200mm V&VB	56.700		54.300	
0+081.71	Fire Hydrant	56.730		54.330	
0+155.12	45 degree bend	57.130		54.730	
0+156.61	45 degree bend	57.150		54.750	
0+158.70	200x150 TEE	57.140		54.740	
0+158.70	200mm V&VB	57.150		54.750	
0+158.70	Fire hydrant	57.150		54.750	
0+164.77	200mm V&VB	56.860		54.460	
0+167.32	45 degree bend	56.790		54.390	
0+168.94	200x150 Reducer	56.790		54.390	
0+175.49	Connect to Ex. 150mm W/M with 150x150 TEE		56.690		54.290



Technical Specification

Control Point	Head (m)	Flow (l/s)
Primary Design	2.000	98.000
Flush-Flo	0.671	97.653
Kick-Flo®	1.418	82.712
Mean Flow		82.694

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE No 08/4596

WRc APPROVED PT/329/0412

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Head (m)	Flow (l/s)
0.000	0.000
0.069	5.223
0.138	19.426
0.207	39.978
0.276	63.440
0.345	85.082
0.414	93.850
0.483	95.829
0.552	96.996
0.621	97.547
0.690	97.641
0.759	97.411
0.828	96.960
0.897	96.359
0.966	95.642
1.034	94.799
1.103	93.775
1.172	92.463
1.241	90.714
1.310	88.336
1.379	85.109
1.448	83.571
1.517	85.475
1.586	87.335
1.655	89.154
1.724	90.936
1.793	92.681
1.862	94.393
1.931	96.073
2.000	97.723

DESIGN ADVICE ! The head/flow characteristics of this SHE-0379-9800-2000-9800 Hydro-Brake Optimum® Flow Control are unique. Dynamic hydraulic modeling evaluates the full head/flow characteristic curve. **The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.**

Hydro International®

DATE	3/3/2020 9:29 PM
Site	
DESIGNER	Michael Stewart
Ref	

SHE-0379-9800-2000-9800
Hydro-Brake Optimum®

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LEGEND:

	EXISTING FIRE HYDRANT
⋈	EXISTING V&VB
⊗	EXISTING VALVE CHAMBER
	PROPOSED FIRE HYDRANT
⊗	PROPOSED VALVE AND VALVE BOX
⊗	PROPOSED VALVE AND VALVE CHAMBER
Ⓡ	PROPOSED REMOTE METER
Ⓜ	PROPOSED METER
	PROPOSED CATCHBASIN MANHOLE
□	PROPOSE CATCHBASIN
○	PROPOSE LANDSCAPE CATCHBASIN
	EXISTING CATCHBASIN MANHOLE
SA	EXISTING SANITARY SEWER AND MANHOLE
SA	PROPOSED SANITARY SEWER AND MANHOLE
ST	EXISTING STORM SEWER AND MANHOLE
ST	PROPOSED STORM SEWER AND MANHOLE
W	PROPOSED WATERMAIN
	PROPOSED SUBDRAIN
W	EXISTING WATERMAIN
	PROPOSED CENTERLINE OF SWALE
	PROPOSED TERRACING (3:1 MAX)
	PROPOSED CONCRETE CURB
	EXISTING BUILDING OR STRUCTURE
	LIMIT OF CONSTRUCTION
	EXISTING CONCRETE CURB
	PROPOSED SILT FENCE AS PER OPSD 219/110
	FILTER CLOTH PLACED UNDER CB/DD AND CBMH COVER
	ROCK CHECK DAM AS PER OPSD-219.211
	STRAW BALE CHECK DAM AS PER OPSD-219.180

× 86.43EX	EXISTING GRADE
× 86.10TW	PROPOSED GRADE AT TOP OF WALL
× 86.10	PROPOSED GRADE
× 86.15TC	PROPOSED TOP OF CURB
× 86.15s	PROPOSED SWALE ELEVATION
2.0% →	PROPOSED SLOPE
100 YR	100 YEAR PONDING LIMIT
5 YR	5 YEAR PONDING LIMIT
	SIAMESE CONNECTION
⇨	OVERLAND MAJOR FLOW ROUTE
	STORM DRAINAGE BOUNDARY
ID CONTROLLED A C	ID DENOTES WATERSHED NAME A DENOTES AREA IN HECTARES C DEONOTES RUNOFF COEFFICIENT
	SERVICE LATERAL LOCATION
	PRESSURE REDUCING VALVE
F.FL.=106.10 T.FND.=105.80 U.S.F.=103.10	FINISHED FLOOR ELEVATION TOP OF FOUNDATION ELEVATION UNDERSIDE OF FOOTING ELEVATION
▨	NEW INTERLOCK PAVING
▨	NEW ASPHALT PAVING
▨	GRASS AREA
▨	NEW CONCRETE PAVING

PIPE CROSSING TABLE

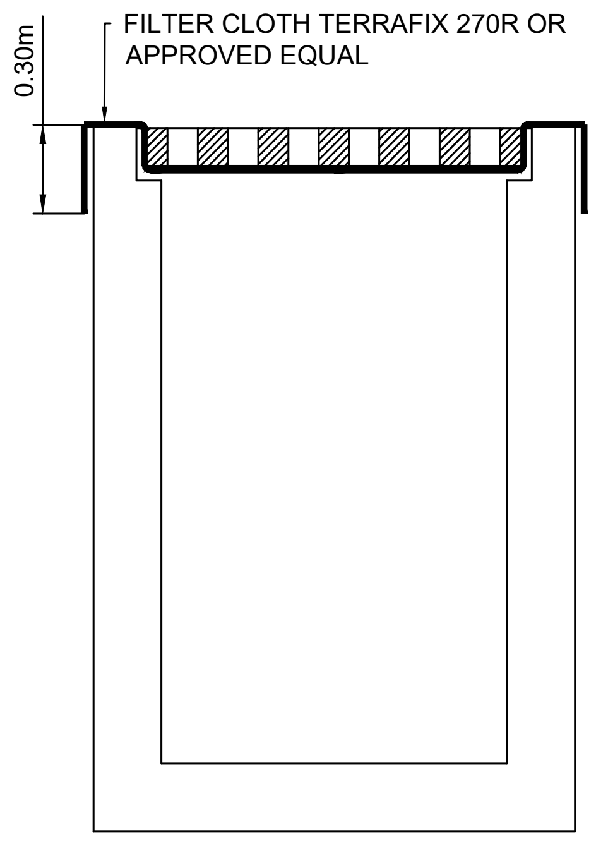
		Invert	Obvert			Invert	Obvert	
1	375mmØ PVC STM	53.977	54.352	0.500	Clearance Above	53.277	53.477	200mmØ W/M
2	*EX.1050mmØ CONC STM*	53.192	54.375	0.500	Clearance Above	52.492	52.692	200mmØ W/M
3	*EX.600mmØ CONC SAN*	53.014	53.709	0.797	Clearance Under	53.810	54.010	200mmØ W/M
4	300mmØ PVC SAN	54.680	54.980	0.315	Clearance Above	53.182	54.365	*EX.1050mmØ CONC STM*

STORM STRUCTURE TABLE

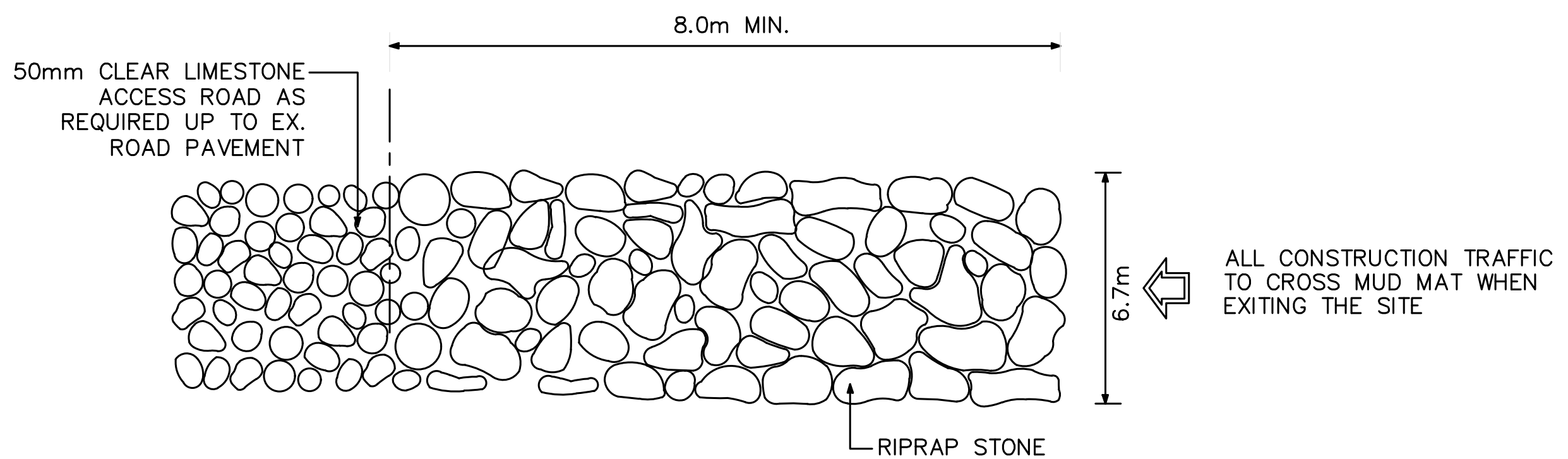
STRUCTURE ID	TOP OF GRATE	INVERT IN		INVERT OUT	DESCRIPTION		
					SIZE	OPSD	COVER
STMH01	56.94		54.870	54.850	1200mm DIA.	OPSD 701.010	S24.1
STMH02	56.79		54.820	54.760	1200mm DIA.	OPSD 701.010	S24.1
STMH03	56.88	54.720	54.760	54.700	1200mm DIA.	OPSD 701.010	S24.1
STMH04	56.63		54.010	53.990	1200mm DIA.	OPSD 701.010	S24.1
STMH05	57.06		55.010	54.950	1200mm DIA.	OPSD 701.010	S24.1
CBMH06	56.90			55.140	1200mm DIA.	OPSD 701.010	S28.4

SAN STRUCTURE TABLE

STRUCTURE ID	TOP OF GRATE ELEVATION	INVERT IN		INVERT OUT	DESCRIPTION		
					SIZE	OPSD	COVER
SAMH01	56.56		53.30	53.28	1200mm DIA.	OPSD-701.010	S24
SAMH02	56.50	53.23	53.01	53.01	1200mm DIA.	OPSD-701.010	S24



FILTER CLOTH CATCHBASIN OR MANHOLE SEDIMENT CONTROL DEVICE
(NTS)



MUD MAT DETAIL
(NTS)

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KEY PLAN
(N.T.S)

No.	REVISIONS	BY	DATE
01	ISSUED FOR SPA	D.Y.	2022-09-13

HORIZONTAL SCALE:
5m 2 0 5 10m
SCALE: 1:300

DISTANCES SHOWN ON THIS PLAN ARE IN METRES
AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

D. B. YANG
100230568
2022-09-13

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TEL.(613)727-0850 FAX(613)727-1079

DESIGNED BY:	DRAWN BY:	APPROVED BY:
D.Y.	J.T.	D.Y.

PROJECT
112 MONTREAL ROAD
RESIDENTIAL DEVELOPMENT

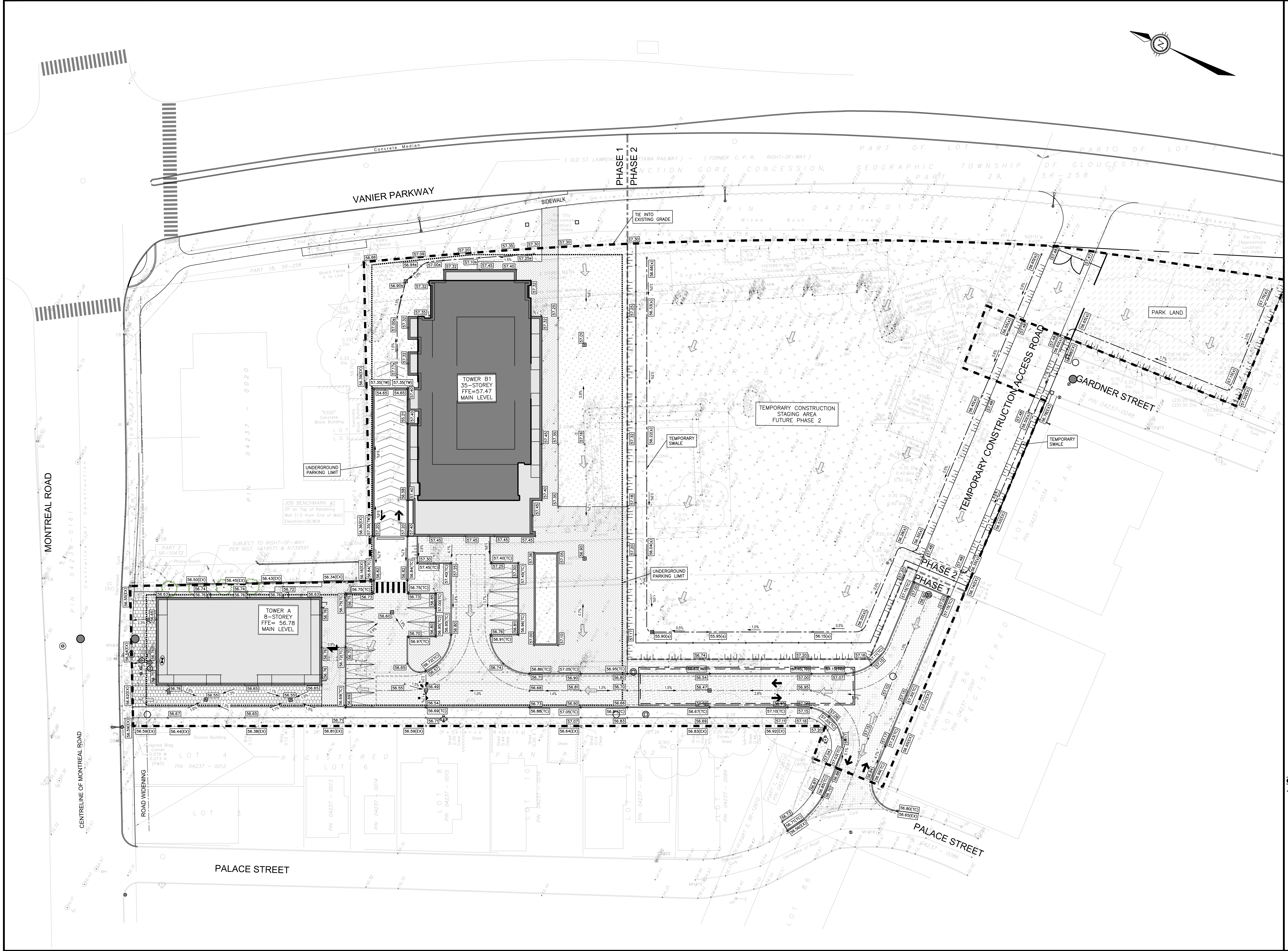
DRAWING TITLE
NOTES AND DETAILS

PROJECT NO.
19M-01935-00

DRAWING NO.
C01

D07-XX-XX-XXXX

#XXXX



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DESIGNED BY:	DRAWN BY:	APPROVED BY:
D.Y.	J.T.	D.Y.

PROJECT

112 MONTREAL ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

GRADING PLAN

PROJECT NO.
19M-01935-00

DRAWING NO.
C02

D07-XX-XX-XXXX

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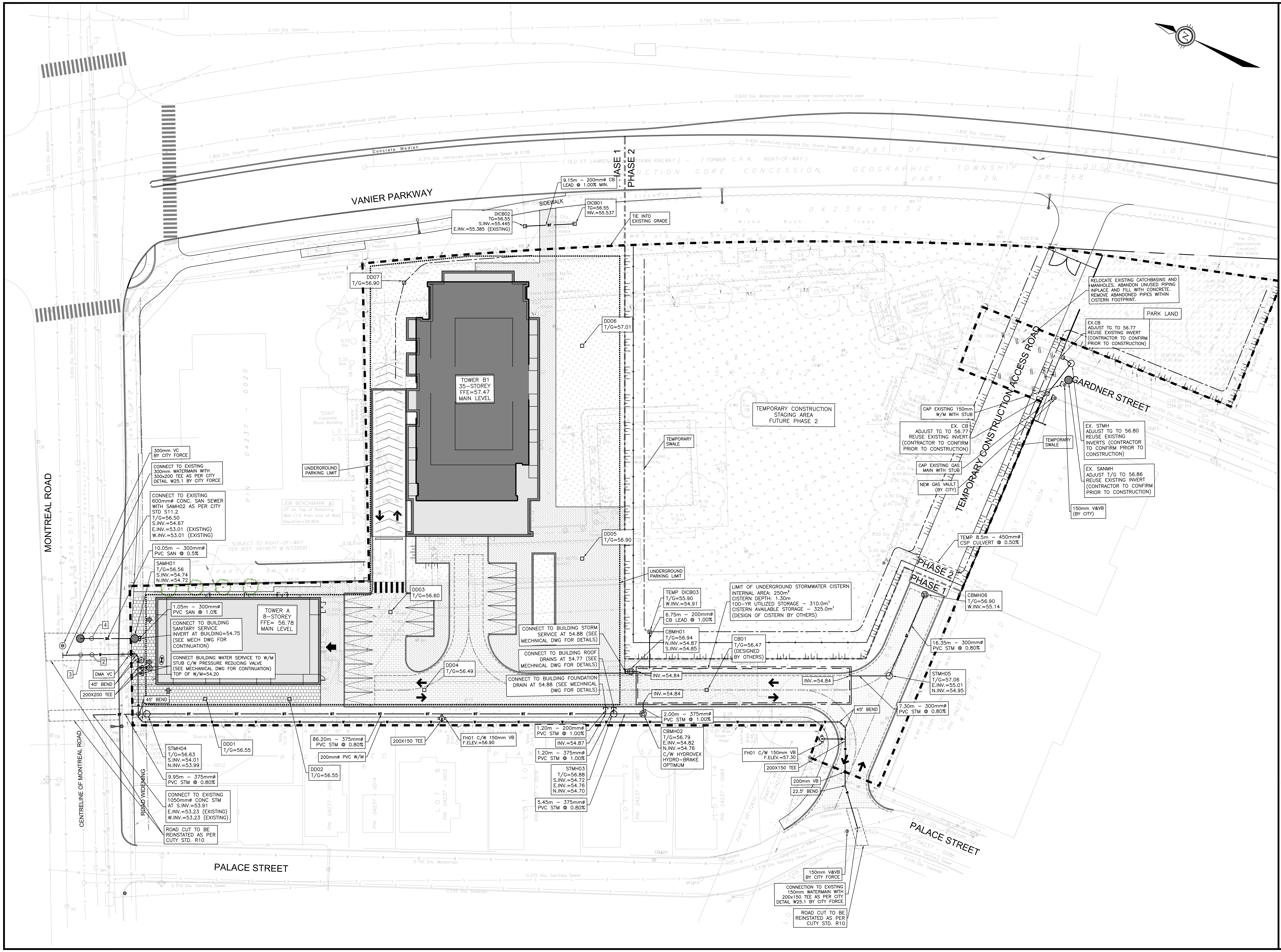

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DESIGNED BY:	DRAWN BY:	APPROVED BY:
D.Y.	J.T.	D.Y.

PROJECT
112 MONTREAL ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE
SERVICING PLAN

PROJECT NO.
19M-01935-00

DRAWING NO.
C03

D07-XX-XX-XXXX

#XXXX

FILENAME: V:\10-13 MI-LD\19M-01935-00 - 112 Montreal Road - Site Plan\3. Drawings\Working drawings\19M-01935-00_C_NEW.dwg
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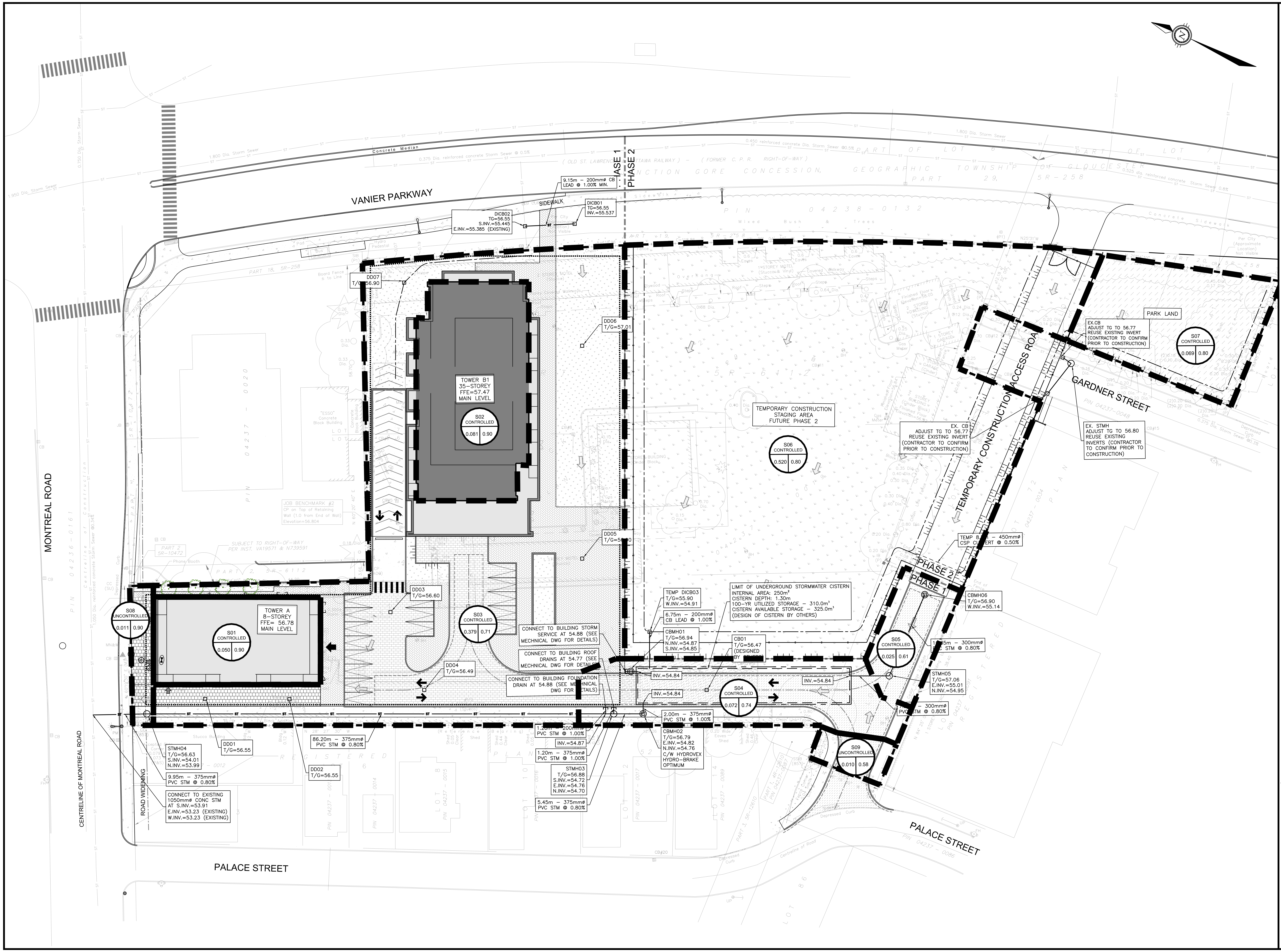

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DESIGNED BY:	DRAWN BY:	APPROVED BY:
D.Y.	J.T.	D.Y.

PROJECT

112 MONTREAL ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

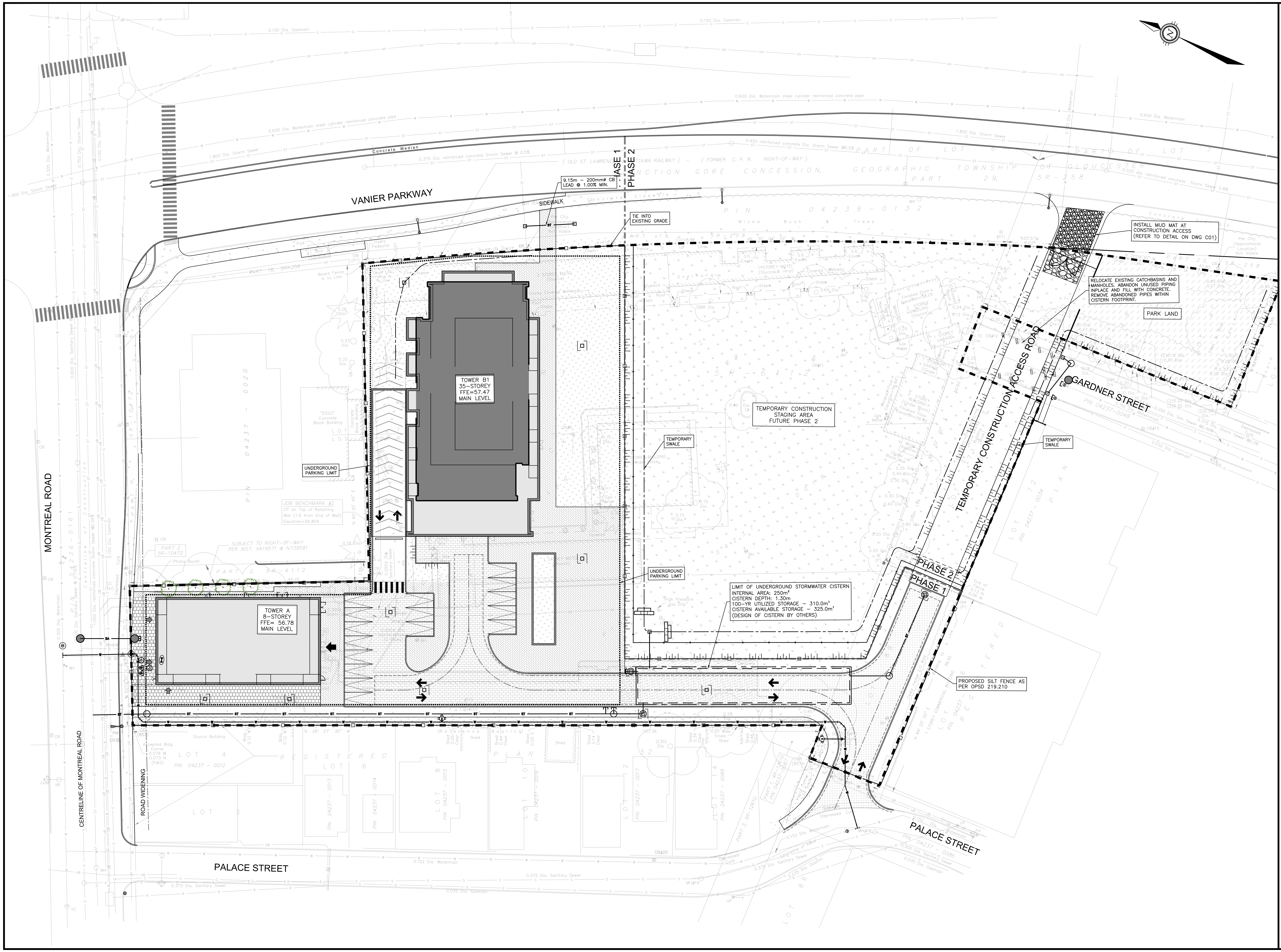
STORM DRAINAGE
AREA PLAN

PROJECT NO.
19M-01935-00

DRAWING NO.
C04

D07-XX-XX-XXXX

#XXXX



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PROJECT

112 MONTREAL ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

EROSION AND SEDIMENTATION
CONTROL PLAN

PROJECT NO.
19M-01935-00

DRAWING NO.
C05

D07-XX-XX-XXXX

#XXXX