GENERAL NOTES AND SPECIFICATIONS

1. ALL MATERIALS AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH OPS AND CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS AND OPSD SUPPLEMENT. ONTARIO PROVINCIAL STANDARDS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF SAME INCLUDING WATER PERMIT AND ASSOCIATED COSTS.
3. SERVICE AND UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SERVICES AND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATES FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REINSTATEMENT.
4. ALL DISTURBED AREAS SHALL BE REINSTATED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER & THE CITY. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH OPSD 509.010 AND OPSS 310.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATION FOR CONSTRUCTION PROJECTS". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
6. THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENTATION CONTROL PLAN THAT WILL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION FOR RECEIVING STORM SEWERS OR DRAINAGE DURING CONSTRUCTION ACTIVITIES. THIS PLAN SHALL INCLUDE BUT NOT BE LIMITED TO CATCH BASINS INSERTS, STRAW BALE CHECK DAMS AND SEDIMENT CONTROLS AROUND ALL DISTURBED AREAS. DEWATERING SHALL BE PUMPED INTO SEDIMENT TRAPS.
7. SITE PLAN PREPARED BY BDP. QUADRANGLE. DATED JUNE 2023, DRAWING A101.S , PROJECT NAME: 1299 RICHMOND ROAD. PROJECT No. 22026.
8. TOPOGRAPHIC SURVEY SUPPLIED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. PROJECT No. 22957-22 BRIGIL PTLT I PL 408456 T F2. TOPOGRAPHIC PLAN OF SURVEY OF PART OF LOT 1 AND 2, REGISTERED PLAN 408456, CITY OF OTTAWA.
9. REFER TO LANDSCAPE ARCHITECTURE PLAN FOR ALL LANDSCAPING FEATURES (ie. TREES, WALKWAYS, PARK DETAILS, NOISE BARRIERS, FENCES etc.)
10. GEOTECHNICAL INVESTIGATION PROPOSED MULTI-STOREY BUILDING, 1299 RICHMOND ROAD, OTTAWA, ON, PREPARED BY PATERSON GROUP. DATED APRIL 25, 2023. REPORT No PG6598-1. GEOTECHNICAL INFORMATION PRESENTED ON THESE DRAWINGS MAY BE INTERPOLATED FROM THE ORIGINAL REPORT. REFER TO ORIGINAL GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS AND TO VERIFY ASSUMPTIONS MADE HEREIN.
11. STREET LIGHTING TO CITY OF OTTAWA STANDARDS.
12. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO ENGINEER.
13. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL BY THE CONTRACT ADMINISTRATOR AND DIRECTOR OF ENGINEERING HAS BEEN OBTAINED.
14. HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE TO BE NOTIFIED IF DEEPLY BURRIED ARCHEOLOGICAL REMAINS ARE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES.

ROADWORKS

1. ALL TOPSOIL AND ORGANIC MATERIAL TO BE STRIPPED FROM WITHIN THE FULL RIGHT OF WAY PRIOR TO CONSTRUCTION.
2. SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.30m LAYERS.
3. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
4. ROAD SUBDRAINS SHALL BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD R1.
5. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT.
6. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE IF REQUIRED BY THE MUNICIPALITY. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
7. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD R10, AND OPSD 509.010, AND OPSS 310.
8. CONCRETE CURBS SHALL BE CONSTRUCTED AS PER CITY STANDARD SC1.1 AND SC1.3 (BARRIER OR MOUNTABLE CURB AS SHOWN ON DRAWINGS).
9. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER CITY STANDARDS SC3 AND SC1.4.
10. PAVEMENT CONSTRUCTION AS PER GEOTECHNICAL INVESTIGATION PROPOSED MULTI-STOREY BUILDING, 1299 RICHMOND ROAD, OTTAWA, ONTARIO. , PREPARED BY PATERSON GROUP. DATED APRIL 25, 2023. PROJECT No. PG6598-1

    PAVEMENT STRUCTURE - LIGHT VEHICLE PARKING
    40mm SUPERPAVE 12.5 FC2 ASPHALTIC CONCRETE
    50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
    150 OPSS GRANULAR 'A' BASE
    300 OPSS GRANULAR 'B' TYPE II

    PAVEMENT STRUCTURE - ACCESS LANES AND HEAVY TRUCK
    40mm SUPERPAVE 12.5 FC2 ASPHALTIC CONCRETE
    50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
    150 OPSS GRANULAR 'A' BASE
    400 OPSS GRANULAR 'B' TYPE II

WATER SUPPLY SERVICING

10. THE CONTRACTOR SHALL CONSTRUCT WATERMAIN, WATER SERVICES, CONNECTIONS & APPURTENANCES AS PER CITY OF OTTAWA SPECIFICATIONS & SHALL CO-ORDINATE AND PAY ALL RELATED COSTS INCLUDING THE COST OF CONNECTION, INSPECTION & DISINFECTION BY CITY PERSONNEL.
11. WATERMAIN PIPE MATERIAL SHALL BE PVC CL.150 DR18. DEFLECTION OF WATERMAIN PIPE IS NOT TO EXCEED 1/2 OF THAT SPECIFIED BY THE MANUFACTURER. PVC WATERMAINS TO BE INSTALLED WITH TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W36.
12. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STANDARD W26 (UNLESS OTHERWISE NOTED).
13. FIRE HYDRANTS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W18 AND W19.
14. WATER VALVES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W24.
15. WATERMAIN TRENCH SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W17 UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL AS PER SECTION 6.4 OF THE GEOTECH REPORT.
16. SERVICE CONNECTIONS SHALL BE INSTALLED A MINIMUM OF 2400mm FROM ANY CATCHBASIN, MANHOLE, OR OBJECT THAT MAY CONTRIBUTE TO FREEZING. THERMAL INSULATION SHALL BE INSTALLED ON ALL PROPOSED CB'S ON THE W/M STREET SIDE WHERE 2400mm SEPARATION CANNOT BE ACHIEVED.(AS PER CITY OF OTTAWA W22 & W23)
17. CATHODIC PROTECTION TO BE SUPPLIED ON METALLIC FITTINGS AS PER CITY OF OTTAWA W40 AND W42.
18. THRUST BLOCKS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25.3 AND W25.4.
19. WATERMAIN TO HAVE MIN. 2.4m COVER. WHERE WATERMAIN COVER IS LESS THAN 2.4m, INSULATION TO BE SUPPLIED IN ACCORDANCE WITH CITY STANDARD W22.
20. WATERMAIN CROSSINGS ABOVE AND BELOW SEWERS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W25 AND W25.2.
21. PRESSURE REDUCING VALVES (PRV'S) IF REQUIRED, TO BE INSTALLED AS PER ONTARIO PLUMBING CODE.

STORM AND SANITARY SEWERS

1. SANITARY SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DR35. SANITARY SEWERS LARGER THAN 375mm SHALL BE CONCRETE CSA A 257.2 CLASS 100D AS PER OPSD 807.010.
2. STORM SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DR35. STORM SEWERS LARGER THAN 375mm DIA. SHALL BE CONCRETE CSA A 257.2 CLASS 100-D AS PER OPSD 807.010
3. ALL STORM AND SANITARY SEWER BEDDING SHALL BE INSTALLED AS PER SECTION 6.4 OF THE GEOTECH REPORT.
4. STORM AND SANITARY MANHOLES SHALL BE 1200mm DIAMETER IN ACCORDANCE WITH OPSD-701.01 (UNLESS OTHERWISE NOTED) c/w FRAME AND COVER AS PER CITY OF OTTAWA S24, S24.1, AND S25 WHERE APPLICABLE. CATCH BASIN MANHOLE FRAME AND COVERS PER S25 AND S28.1. ALL STORM MANHOLES WITH SEWERS 900mm DIA SEWERS AND OVER IN SIZE SHALL BE BENCHED. ALL OTHER STORM MANHOLES SHALL BE COMPLETED WITH 300mm SUMPS AS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SUMPS.
5. ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS, TO BE INSTALLED WITH LASER AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
6. FOR STORM SEWER INSTALLATION (EXCLUDING CB LEADS) THE MINIMUM DEPTH OF COVER OVER THE CROWN OF THE SEWER IS 2.0m. FOR SANITARY SEWERS THE MINIMUM DEPTH OF COVER IS 2.5m OVER PIPE OBVERT.
7. ALL STORM AND SANITARY SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
8. STORM AND SANITARY SERVICE LATERALS TO BE SDR 28 INSTALLED AT MIN. 1.0% SLOPE.
9. CATCH BASINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS S1, S2, S3 c/w FRAME AND GRATE AS PER S19. CURB INLET FRAME AND GRATE PER S22 AND S23. CATCH BASIN MANHOLES FRAME AND GRATE AS PER S25 FRAME AND S28.1 COVER. PROVIDE 150mm ADJUSTED SPACERS. ALL CATCH BASINS SHALL HAVE SUMPS (600mm DEEP). STREET CATCH BASIN LEADS SHALL BE 200mm DIA.(MIN) PVC DR 35 AT 1.0% GRADE WHERE NOT OTHERWISE SHOWN ON PLAN. CATCH BASINS WILL BE INSTALLED WITH INLET CONTROL DEVICES (ICD) AS PER ICD SCHEDULE ON STORM DRAINAGE PLAN.
10. STREET CATCH BASINS TO BE INSTALLED c/w SUBDRAINS 3m LONG IN FOUR ORTHOGONAL DIRECTIONS OR LONGITUDINALLY WHEN PLACED ALONG A CURB, AND AT AN ELEVATION OF 300mm BELOW SUBGRADE LEVEL.
11. REAR LOT PERFORATED PIPE TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S29. REAR LOT STRUCTURES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W30 AND W31.
12. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5m LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. GENERALLY, THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUBBEDDING AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPACTABLE BROWN SILTY CLAY PLACED IN MAXIMUM 225mm THICK LOOSE LAYERS COMPACTED TO A MINIMUM OF 95% OF THE MATERIAL'S SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT STRATEGIC LOCATIONS AT NO MORE THAN 60m INTERVALS IN THE SERVICE TRENCHES. FOR DETAILS REFER TO GEOTECHNICAL INVESTIGATION .
13. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300 mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
14. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 410 AND OPSS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.
15. ANY SEWER ABANDONMENT TO BE CONDUCTED ACCORDING TO CITY OF OTTAWA STANDARD S11.4
16. SEWERS WITH LESS THAN 1.5m COVER TO BE INSULATED IN ACCORDANCE WITH CITY STANDARD W22.

GRADING

1. ALL GRANULAR BASE & SUB BASE COURSE MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAX. DRY DENSITY.
2. SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.15m LAYERS.
3. 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.
4. 100 YEAR PONDING DEPTH TO BE 0.30m (MAXIMUM).
5. EMBANKMENTS TO BE SLOPED AT MIN. 3:1, UNLESS OTHERWISE SPECIFIED.
6. ALL SWALES TO BE MIN. 0.15m DEEP WITH MIN. 3:1 SIDE SLOPES UNLESS OTHERWISE NOTED. THE MINIMUM LONGITUDINAL SLOPE TO BE 1.5% OR 1.0% WHEN PERFORATED SUBDRAIN IS INSTALLED.
7. ALL ROOF DOWNSPOUTS TO DISCHARGE TO THE GROUND ONTO SPLASH PADS AND SHALL NOT BE DIRECTED TO THE STORM SEWER , OR THE BUILDING FOUNDATION DRAIN.
8. TOP OF GRATE (T/G) ELEVATIONS FOR ALL STREET CATCHBASINS SHOWN ON PLANS. REFER TO THE ELEVATION AT EDGE OF PAVEMENT, OR GUTTERLINE WHERE APPLICABLE.
9. ALL RETAINING WALLS GREATER THAN 1.0m IN HEIGHT ARE TO BE DESIGNED, APPROVED, AND STAMPED BY STRUCTURAL ENGINEER.
10. FENCES OR RAILINGS ARE REQUIRED FOR RETAINING WALLS GREATER THAN 0.60m IN HEIGHT.
11. EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
12. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO TREE CUTTING.
13. REFER TO DRAWING EC DS-1 FOR EROSION AND SEDIMENT CONTROL DETAILS.

Best Management Practices

CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROLS (BEST MANAGEMENT PRACTICES) DURING CONSTRUCTION OF THIS PROJECT.

EROSION MUST BE MINIMIZED AND SEDIMENTS MUST BE REMOVED FROM CONSTRUCTION SITE RUN-OFF IN ORDER TO PROTECT DOWNSTREAM AREAS. DURING ALL CONSTRUCTION, EROSION AND SEDIMENTATION SHOULD BE CONTROLLED BY THE FOLLOWING TECHNIQUES:

1. LIMIT THE EXTENT OF EXPOSED SOILS AT ANY GIVEN TIME.
2. REVEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE.
3. MINIMIZE AREA TO BE CLEARED AND GRUBBED.
4. PROTECT EXPOSED SLOPES WITH PLASTIC OR SYNTHETIC MULCHES.
5. INSTALL CATCH BASIN INSERTS OR EQUIVALENT IN ALL PROPOSED CATCH BASINS AND CATCH BASIN MANHOLES AND IN ALL EXISTING CATCH BASINS THAT WILL RECEIVE RUN-OFF FROM THE SITE.
6. A SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF ALL AND ANY STOCKPILES OF MATERIAL TO BE USED OR REMOVED FROM SITE. (LOCATION TO BE DETERMINED)
7. A VISUAL INSPECTION SHALL BE DONE DAILY ON SEDIMENT CONTROL MEASURES AND CLEANED OF ANY ACCUMULATED SILT AS REQUIRED. THE DEPOSITS WILL BE DISPOSED OFF SITE AS PER THE REQUIREMENTS OF THE CONTRACT.
8. SEDIMENT CONTROL BARRIERS MAY ONLY BE REMOVED TEMPORARILY WITH APPROVAL OF CONTRACT ADMINISTRATOR TO ACCOMMODATE CONSTRUCTION OPERATIONS. ALL AFFECTED BARRIERS MUST BE REINSTATED AT NIGHT WHEN CONSTRUCTION IS COMPLETED. NO REMOVAL WILL OCCUR IF THERE IS A SIGNIFICANT RAINFALL EVENT ANTICIPATED (>10mm) UNLESS A NEW DEVICE HAS BEEN INSTALLED TO PROTECT EXISTING STORM AND SANITARY SEWER SYSTEMS, OR DOWNSTREAM WATERCOURSES.
9. NO REFUELING OR CLEANING OF EQUIPMENT IS PERMITTED NEAR ANY EXISTING WATERWAY.
10. CONTRACTOR SHALL REMOVE SEDIMENT CONTROL MEASURES WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE(S) IS NO LONGER REQUIRED. NO CONTROL MEASURES SHALL BE PERMANENTLEY REMOVED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR.
11. THE CONTRACTOR SHALL PERIODICALLY, OR WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENTS AS REQUIRED.
12. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO THE WATERCOURSE. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
13. CONTRACTOR SHALL INSTALL MUD MATS AT BOTH ENTRANCES TO THE SITE.
14. STORMWATER SWALES TO BE COVERED WITH HYDRO-SEED AND MULCH.

LEGEND

EXISTING CONDITIONS

- EXISTING WATERMAIN
- EXISTING VALVE AND VALVE BOX
- EXISTING VALVE CHAMBER
- EXISTING REDUCER
- EXISTING FIRE HYDRANT
- EXISTING SANITARY MH AND SEWER
- EXISTING STORM MH AND SEWER
- EXISTING CATCHBASIN MANHOLE
- EXISTING CATCHBASIN
- REMOVAL ITEMS
- ASPHALT REMOVAL
- GAS — GAS: EXISTING GASMAIN
- B — B: EXISTING BELL LINE
- C — C: EXISTING ROGERS
- OHW — OHW: EXISTING OVERHEAD WIRES
- U/H — U/H: EXISTING UNDERGROUND HYDRO

SERVICES

- PROPOSED WATERMAIN
- PROPOSED VALVE AND VALVE BOX
- PROPOSED VALVE CHAMBER
- PROPOSED W3 CHAMBER
- PROPOSED REDUCER
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- PROPOSED TRENCH AND AREA DRAINS TO BE CONNECTED TO BUILDING MECHANICAL (PART OF U/G STRUCTURE)
- EXISTING WATERMAIN
- EXISTING VALVE AND VALVE BOX
- EXISTING VALVE CHAMBER
- EXISTING REDUCER
- EXISTING FIRE HYDRANT
- EXISTING COMBINED SEWER
- EXISTING STORM SEWER
- EXISTING CATCHBASIN MANHOLE
- EXISTING CATCHBASIN
- DC: PROPOSED DEPRESSED CURB LOCATIONS
- PROPOSED BARRIER CURB
- THERMAL INSULATION ON STORM SEWER WHERE COVER IS LESS THAN 1.5m. THERMAL INSULATION ON WATERMAIN WHERE COVER IS LESS THAN 2.4m AS PER W22.
- M: WATER METER
- RM: REMOTE WATER METER

SANITARY DRAINAGE

- R100A / 0.31 / 50:
  - R100A: SANITARY DRAINAGE AREA ID#
  - 50: POPULATION COUNT
  - 0.31: SANITARY DRAINAGE AREA ha.
- G100A / 0.11 / INFL:
  - G100A: SANITARY DRAINAGE AREA ID#
  - INFL: INFILTRATION RATE OF 0.33 L/s/Ha APPLIED
  - 0.11: SANITARY DRAINAGE AREA ha.
- SANITARY DRAINAGE AREA
- PROPOSED SANITARY MH AND SEWER
- EXISTING COMBINED MH AND SEWER

EROSION CONTROL

- PROPOSED SILT FENCE BOUNDARY AS PER OPSD 219.110
- PROPOSED CONSTRUCTION FENCING
- PROPOSED CATCH BASIN PROTECTION AS PER FLEX STORM INLET FILTERS DETAIL. ITEM CODE P-RD-240-223-FX
- PROPOSED CATCH BASIN MH PROTECTION AS PER FLEX STORM INLET FILTERS DETAIL. ITEM CODE P-RD-290-270-FX
- PROPOSED CATCH BASIN PROTECTION AS PER TERRAFIX SILTSACK DETAIL
- PROPOSED MUD MAT LOCATION
- PROPOSED VALVE BOX
- PROPOSED VALVE CHAMBER
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- PROPOSED CATCHBASIN

GRADING

- 99.99: ORIGINAL GROUND ELEVATION
- 99.99: PROPOSED ELEVATION
- 99.99 / 98.88: PROPOSED LOT CORNER ELEVATION / EXISTING ELEVATION AT LOT CORNER
- 2.0%: FLOW DIRECTION AND GRADE
- FFE=100.00: FINISHED FIRST FLOOR ELEVATION
- USF=97.00: UNDERSIDE OF FOOTING ELEVATION
- E.F.: ENGINEERED FILL REQUIRED
- 3:1: TERRACING 3:1 SLOPE MAXIMUM (UNLESS OTHERWISE SHOWN)
- DIRECTION OF OVERLAND FLOW
- PROPOSED VALVE BOX
- PROPOSED VALVE CHAMBER
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- D.C.: PROPOSED DEPRESSED CURB LOCATION
- PROPOSED BARRIER CURB
- PROPOSED HEAVY DUTY ASPHALT
- OVERLAND SPILL LOCATION
- TWSI LOCATION AS PER CITY STD

STORM DRAINAGE

- L101A / 1.00 / 0.85:
  - L101A: AREA ID
  - 0.85: RUNOFF COEFFICIENT
  - 1.00: STORM DRAINAGE AREA ha.
- STORM DRAINAGE BOUNDARY
- EXT-1 / 1.00 / 0.50:
  - EXT-1: AREA ID
  - 0.50: EXTERNAL RUNOFF COEFFICIENT
  - 1.00: EXTERNAL STORM DRAINAGE AREA ha.
- EXTERNAL STORM DRAINAGE BOUNDARY
- DIRECTION OF OVERLAND FLOW
- PROPOSED STORM MH AND SEWER
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- EXISTING STORM MH AND SEWER
- EXISTING CATCHBASIN
- EXISTING COMBINED MH AND SEWER
- THERMAL INSULATION ON STORM SEWER WHERE COVER IS LESS THAN 1.5m. THERMAL INSULATION ON WATERMAIN WHERE COVER IS LESS THAN 2.4m AS PER W22.
- MAXIMUM STATIC PONDING LIMITS

Stantec

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Legend

Notes

0	ISSUED FOR SPA	MJS	PM	23.06.01
Revision		By	Appd.	YY.MM.DD

File Name: 160401697 DB.dwg	MJS	DT	MJS	23.05.01
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
P. MOROZ
90493552
2023-06-05
PROVINCE OF ONTARIO

Client/Project

BRIGIL HOMES
CLIENT2

1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT
OTTAWA, ON, CANADA

Title

NOTES AND LEGENDS PLAN

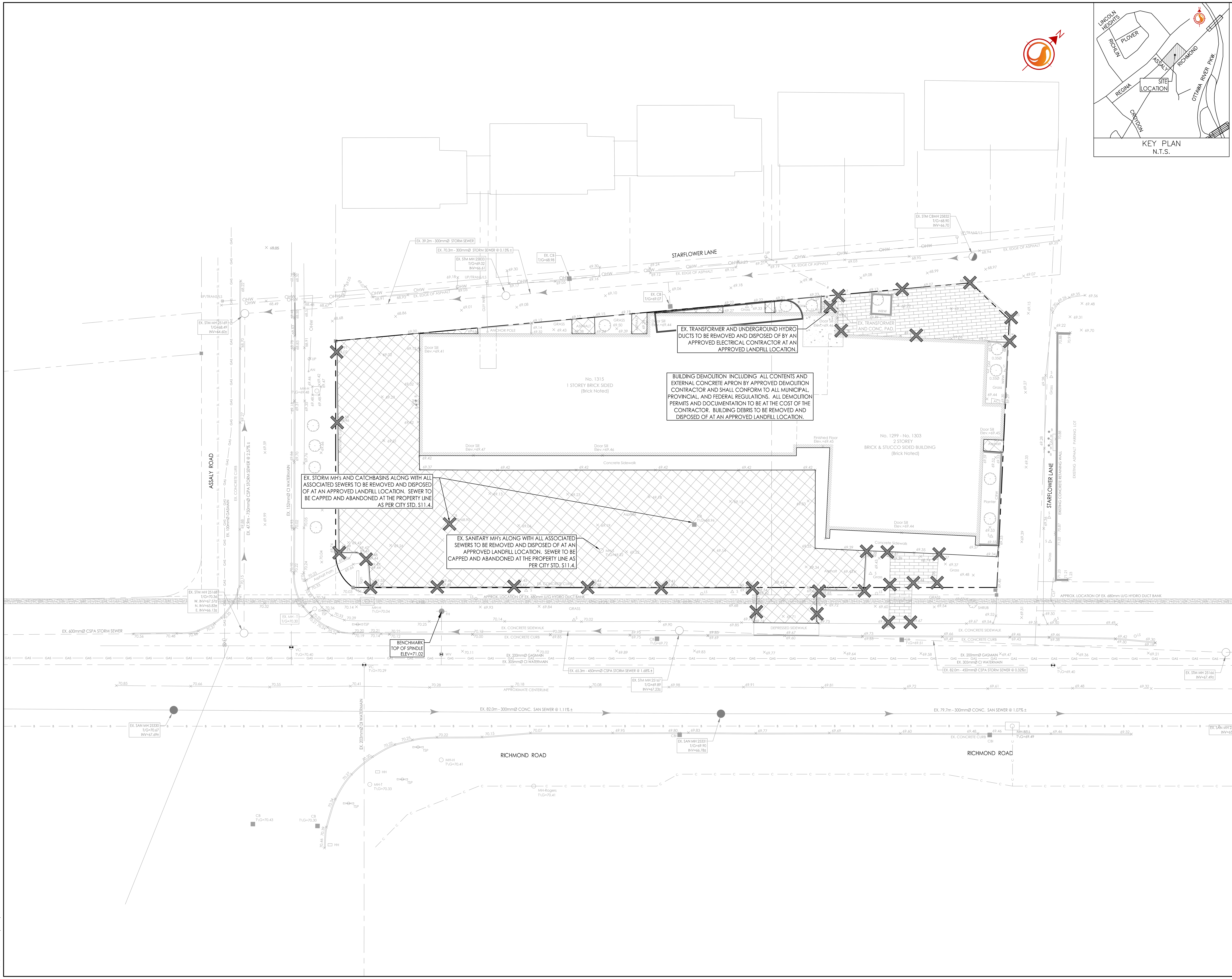
Project No. 160401697

Scale 1:500 (0 5 15 25m)

Drawing No. NL-1

Sheet 1 of 7

Revision 0



Stantec

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Legend

- EXISTING WATERMAIN
- EXISTING VALVE AND VALVE BOX
- EXISTING VALVE CHAMBER
- EXISTING REDUCER
- EXISTING FIRE HYDRANT
- EXISTING SANITARY MH AND SEWER
- EXISTING STORM MH AND SEWER
- EXISTING CATCHBASIN MANHOLE
- EXISTING CATCHBASIN
- REMOVAL ITEMS
- ASPHALT REMOVAL
- GAS — EXISTING GASMAIN
- B — EXISTING BELL LINE
- C — EXISTING ROGERS
- OHW — EXISTING OVERHEAD WIRES
- U/H — EXISTING UNDERGROUND HYDRO

Notes

1. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR THEIR PROTECTION AND THE IMPLEMENTATION OF ANY NECESSARY PROCEDURES CALLED FOR IN THE APPROPRIATE STANDARD AND REGULATIONS.
2. ASPHALT AREA FOR REMOVAL AND DISPOSAL = $1610m^2$
3. CONCRETE AREA FOR REMOVAL AND DISPOSAL = $230m^2$
4. INTERLOCK STONE AREA FOR REMOVAL AND DISPOSAL = $225m^2$
5. CONTRACTOR TO LOCATE EXISTING WATER, STORM AND SANITARY SERVICES TO BE REMOVED. EXISTING WATER SERVICE TO BE BLANKED AT MAIN, EXISTING STORM AND SANITARY SERVICES TO BE ABANDONED AS PER CITY STANDARD S11.4.

0	ISSUED FOR SPA	MJS	PM	23.06.01
Revision		By	Appd.	YY.MM.DD

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1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT
OTTAWA, ON, CANADA

Title

EXISTING CONDITIONS AND REMOVALS PLAN

Project No.	Scale
160401697	1:250 (0, 2.5, 7.5, 12.5m)

Drawing No.	Sheet	Revision
EXRM-1	2 of 7	0

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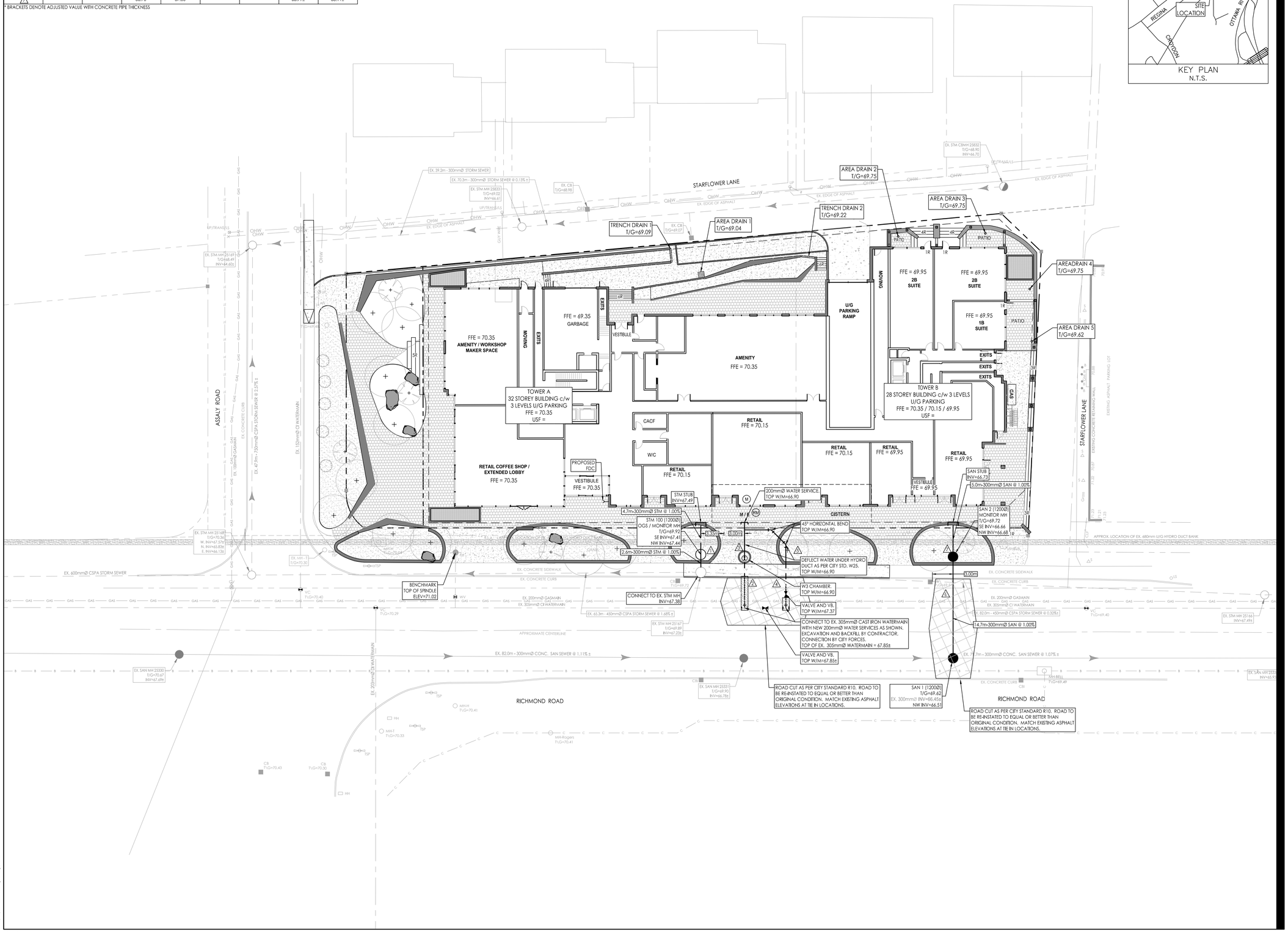
ORIGINAL SHEET - ARCH D



SEWER AND WATERMAIN CROSSING TABLE								
CROSSING	STM INV	STM OBV	SAN INV	SAN OBV	WTR TOP	WTR BTM	HYDRO TOP	HYDRO BTM
1	67.46	67.76					68.96±	68.28±
2	67.25±	67.70±			66.90	66.70		
3					66.90	66.70	68.85±	68.17±
4	67.27±	67.72±			66.90	66.70		
5					66.90	66.70	68.83±	68.15±
6	67.35±	67.80±	66.62	66.92	67.62±	67.32±		
7			66.70	67.00			68.79±	68.11±

* BRACKETS DENOTE ADJUSTED VALUE WITH CONCRETE PIPE THICKNESS

KEY PLAN
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Stantec

Stantec Consulting Ltd.
400 - 1331 Clyde Avenue
Ottawa ON
Tel. 613.722.4420
www.stantec.com

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Legend

— – —	PROPOSED WATERMAIN
⋈	PROPOSED VALVE AND VALVE BOX
⊗	PROPOSED VALVE CHAMBER
◎	PROPOSED W3 CHAMBER
◀	PROPOSED REDUCER
⊕	PROPOSED FIRE HYDRANT
—●—	PROPOSED SANITARY SEWER
–○–	PROPOSED STORM SEWER
◐	PROPOSED CATCHBASIN MANHOLE
– ■ –	PROPOSED CATCHBASIN
▭ ▦ •	PROPOSED TRENCH AND AREA DRAINS TO BE CONNECTED TO BUILDING MECHANICAL (PART OF U/G STRUCTURE)
— – —	EXISTING WATERMAIN
⋈	EXISTING VALVE AND VALVE BOX
⊗	EXISTING VALVE CHAMBER
◀	EXISTING REDUCER
⊕	EXISTING FIRE HYDRANT
—●—	EXISTING COMBINED SEWER
–○–	EXISTING STORM SEWER
◐	EXISTING CATCHBASIN MANHOLE
– ■ –	EXISTING CATCHBASIN
DC	PROPOSED DEPRESSED CURB LOCATIONS
═	PROPOSED BARRIER CURB
▨	THERMAL INSULATION ON STORM SEWER WHERE COVER IS LESS THAN 1.5m. THERMAL INSULATION ON WATERMAIN WHERE COVER IS LESS THAN 2.4m AS PER W22.
Ⓜ	WATER METER
(RM)	REMOTE WATER METER

Notes

1. ALL CATCH BASINS AND TRENCH DRAINS TO BE CONNECTED TO INTERNAL PLUMBING AND COLLECTED IN STORM WATER MANAGEMENT CISTERN. INSTALLATION BY OTHERS.
2. FINAL METER AND REMOTE METER LOCATINS TO BE CONFIRMED BY MECHANICAL CONSULTANT.
3. SEWER AND WATER AS-BUILT INFORMATION IS APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR PRIOR TO INSTALLATION OF SERVICING. ENGINEER MUST BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
4. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR SHALL PROVE THE LOCATION OF UTILITIES AND SHALL BE RESPONSIBLE FOR THEIR PROTECTION AND THE IMPLEMENTATION OF ANY NECESSARY PROCEDURES CALLED FOR IN THE APPROPRIATE STANDARD AND REGULATIONS.
5. INTERNAL PLUMBING AND SUMP PUMPS TO BE DESIGNED BY THE MECHANICAL CONSULTANT.
6. STORMWATER MANAGEMENT TO BE PROVIDED THROUGH A 150.0m³ CISTERN LOCATED IN THE UNDERGROUND PARKING.
7. MAX. CISTERN RELEASE RATE TO STORM SEWER = 9.54L/s
8. BOOSTER PUMPS TO BE PROVIDED TO MAINTAIN MINIMUM PRESSURES FOR TOWERS 6-STOREYS AND HIGHER.
9. SUMP PUMP REQUIRED TO DISCHARGE TO INTERNAL SANITARY SEWER. (REFER TO MECHANICAL DRAWINGS FOR DETAILS)
10. FLOOR DRAINS LOCATED INSIDE PARKING GARAGE TO BE CONNECTED TO BUILDING INTERNAL SANITARY SEWER.
11. USF TO BE CONFIRMED BY THE STRUCTURAL CONSULTANT.

Revision		By	Appd.	YY.MM.DD
0	ISSUED FOR SPA	MJS	PM	23.06.01

	Dwn.	Chkd.	Dsgn.	YY.MM.DD
File Name: 160401697 DB.dwg	MJS	DT	MJS	23.05.01

Permit-Seal

P. MOROZ
90493552
2023-06-05

Client/Project
BRIGIL HOMES

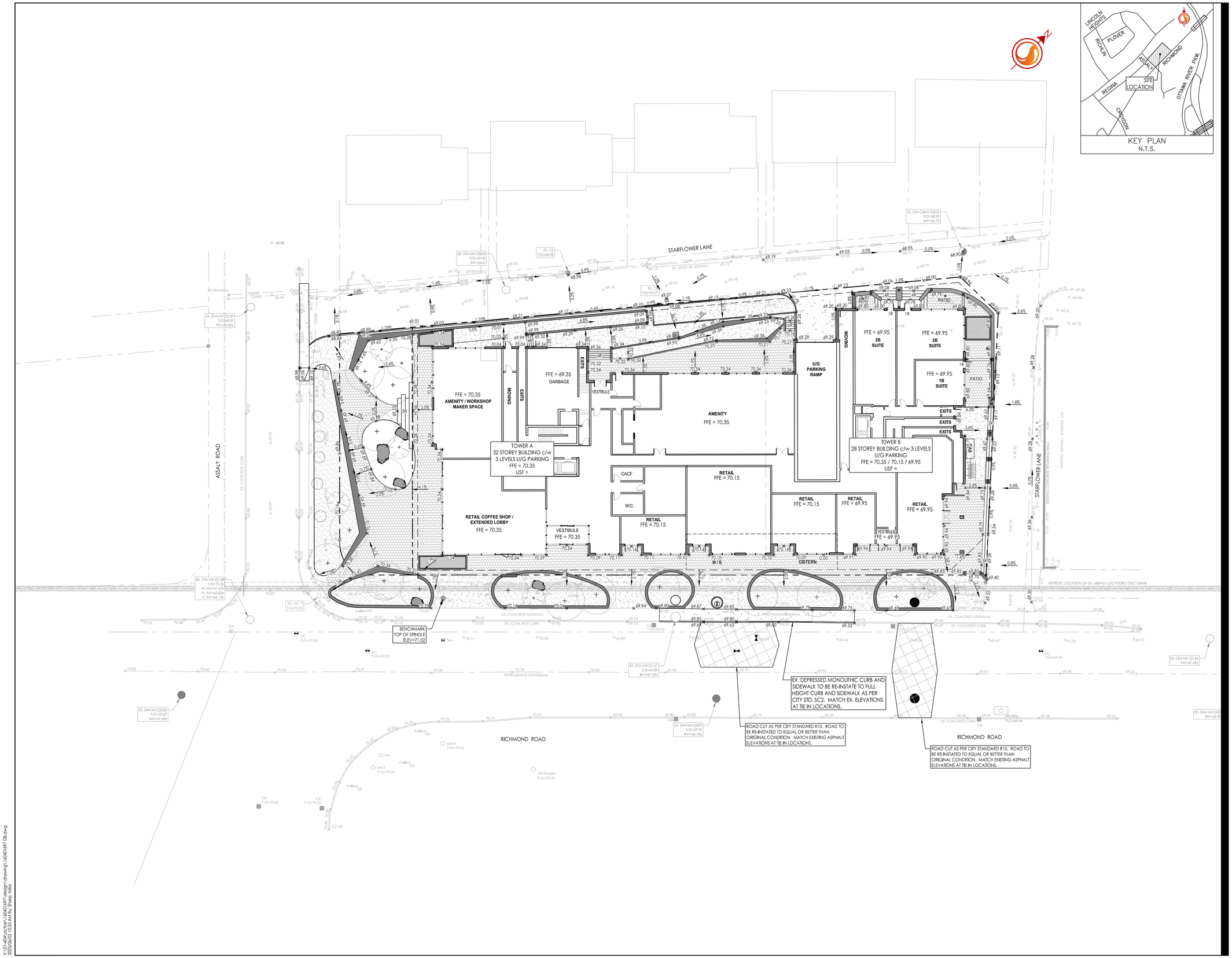
1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT
OTTAWA, ON, CANADA

Title
SITE SERVICING PLAN

Project No. 160401697
Scale 1:250 (0, 2.5, 7.5, 12.5m)
Drawing No. SSP-1
Sheet 3 of 7
Revision 0

V:\01-604\active\160401697\design\drawing\160401697 DB.dwg
2023/06/02 10:32 AM By: Sharp, Mike

ORIGINAL SHEET - ARCH D



KEY PLAN
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Legend

- ORIGINAL GROUND ELEVATION
- PROPOSED ELEVATION
- PROPOSED LOT CORNER ELEVATION / EXISTING ELEVATION AT LOT CORNER
- FLOW DIRECTION AND GRADE
- FFE=100.00 — FINISHED FIRST FLOOR ELEVATION
- USF=97.00 — UNDERSIDE OF FOOTING ELEVATION
- E.F. — ENGINEERED FILL REQUIRED
- 3:1 — TERRACING 3:1 SLOPE MAXIMUM (UNLESS OTHERWISE SHOWN)
- DIRECTION OF OVERLAND FLOW
- PROPOSED VALVE BOX
- PROPOSED VALVE CHAMBER
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- D.C. — PROPOSED DEPRESSED CURB LOCATION
- PROPOSED BARRIER CURB
- PROPOSED HEAVY DUTY ASPHALT
- OVERLAND SPILL LOCATION
- TWSI LOCATION AS PER CITY STD

Notes

PAVEMENT STRUCTURE - LIGHT VEHICLE PARKING
40mm SUPERPAVE 12.5 FC2 ASPHALTIC CONCRETE
50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
150 OPSS GRANULAR 'A' BASE
300 OPSS GRANULAR 'B' TYPE II

PAVEMENT STRUCTURE - ACCESS LANES AND HEAVY TRUCK
40mm SUPERPAVE 12.5 FC2 ASPHALTIC CONCRETE
50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
150 OPSS GRANULAR 'A' BASE
400 OPSS GRANULAR 'B' TYPE II

0 ISSUED FOR SPA	MJS	PM	23.06.01
Revision	By	Appd.	YY.MM.DD
File Name: 160401697 DB.dwg	MJS	DT	MJS	23.05.01
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
P.MOROZ
90493552
2023-06-05
PROVINCE OF ONTARIO

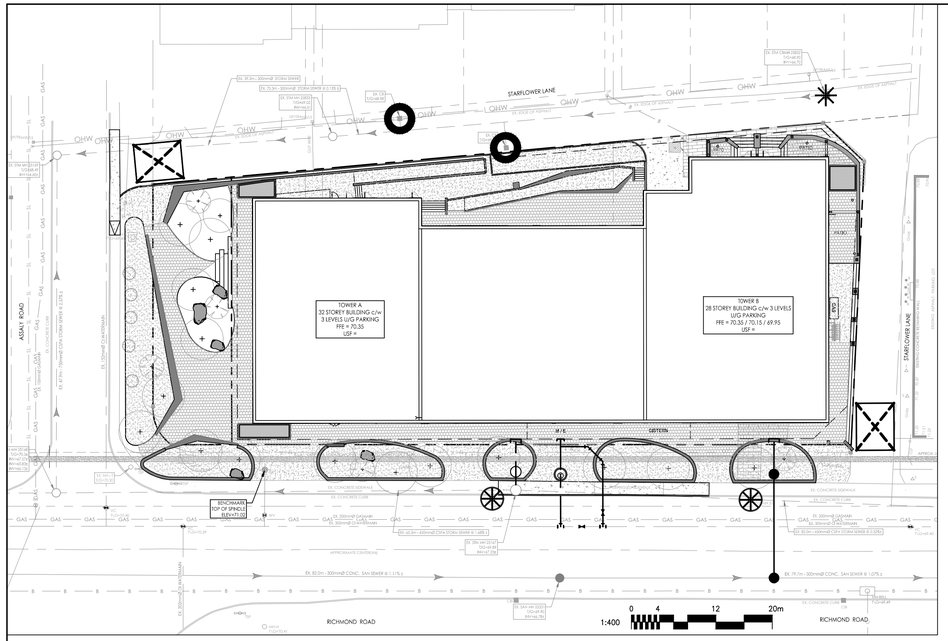
Client/Project
BRIGIL HOMES

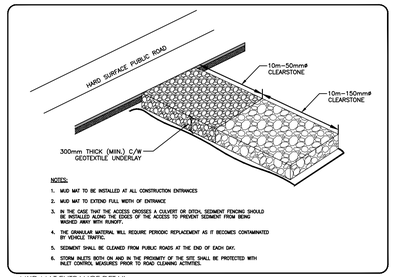
1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT
OTTAWA, ON, CANADA

Title
GRADING PLAN

Project No.	Scale	Drawing No.	Sheet	Revision
160401697	1:250 (0 2.5 7.5 12.5m)	GP-1	4 of 7	0

ORIGINAL SHEET - ARCH D

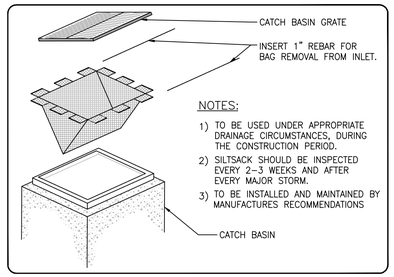




MUD MAT ENTRANCE DETAIL
SCALE: N.T.S.

NOTES:

1. MUD MAT TO BE INSTALLED AT ALL CONSTRUCTION ENTRANCES
2. MUD MAT TO EXTEND FULL WIDTH OF ENTRANCE
3. IN THE CASE THAT THE ACCESS CROSSES A CULVERT OR DITCH, SEDIMENT FENCING SHOULD BE INSTALLED ALONG THE EDGES OF THE ACCESS TO PREVENT SEDIMENT FROM BEING WASHED AWAY WITH RUNOFF.
4. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.
5. SEDIMENT SHALL BE CLEANED FROM PUBLIC ROADS AT THE END OF EACH DAY.
6. STORM INLETS BOTH ON AND IN THE PROXIMITY OF THE SITE SHALL BE PROTECTED WITH INLET CONTROL MEASURES PRIOR TO ROAD CLEARING ACTIVITIES.



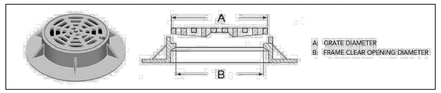
NOTES:

1) TO BE USED UNDER APPROPRIATE DRAINAGE CIRCUMSTANCES, DURING THE CONSTRUCTION PERIOD.
2) SILTSACK SHOULD BE INSPECTED EVERY 2–3 WEEKS AND AFTER EVERY MAJOR STORM.
3) TO BE INSTALLED AND MAINTAINED BY MANUFACTURES RECOMMENDATIONS

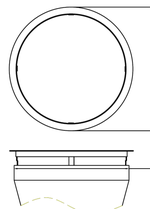
ROADSIDE CATCH BASIN PROTECTION DETAIL: TERRAFIX SILTSACK
SCALE: N.T.S.

FLEXSTORM P/Ns 62MHDRFX & 62MHDRFXP

RD INLET TYPE: RAISED CAST IRON FRAME AND ROUND GRATE



Pure Frame with FX Bag		Field Inlet Dimensions		Flexstorm Framing Dim's		Flexstorm Ratings (80%)			Pure Frame with FX+ Bag	
		A	B	B1	A1	Bag Capacity (lit)	PCPC+ Flow Rate (CFS)	Bypass (CFS)		
ADS P/N	Flexstorm Item Code								ADS P/N	Flexstorm Item Code
62MHDRFX	P-RD-240-218-FX	24	21.75	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-240-218-FXP
62MHDRFX	P-RD-223-223-FX	23.25	22	21.3	23.3	0.7	1.3	2.5	62MHDRFXP	P-RD-223-223-FXP
62MHDRFX	P-RD-238-220-FX	23.75	22	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-220-FXP
62MHDRFX	P-RD-238-223-FX	23.75	22.25	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-223-FXP
62MHDRFX	P-RD-238-223-FX	23.87	22	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-223-FXP
62MHDRFX	P-RD-360-220-FX	26	22	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-360-220-FXP
62MHDRFX	P-RD-255-221-FX	23.75	22.125	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-255-221-FXP
62MHDRFX	P-RD-238-223-FX	23.75	22.25	20.5	23.5	0.7	1.3	2.4	62MHDRFXP	P-RD-238-223-FXP
62MHDRFX	P-RD-238-223-FX	23.75	22.25	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-223-FXP
62MHDRFX	P-RD-240-223-FX	24	22.25	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-240-223-FXP
62MHDRFX	P-RD-238-224-FX	23.75	22.375	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-224-FXP
62MHDRFX	P-RD-239-224-FX	23.87	22.375	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-239-224-FXP
62MHDRFX	P-RD-238-225-FX	23.75	22.5	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-225-FXP
62MHDRFX	P-RD-240-225-FX	24	22.5	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-240-225-FXP
62MHDRFX	P-RD-248-226-FX	24.75	22.62	22.9	24.5	0.9	1.4	2.5	62MHDRFXP	P-RD-248-226-FXP
62MHDRFX	P-RD-239-226-FX	23.87	22.75	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-239-226-FXP
62MHDRFX	P-RD-238-226-FX	23.75	23	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-238-226-FXP
62MHDRFX	P-RD-239-230-FX	24	23	21.3	23.3	0.8	1.4	2.5	62MHDRFXP	P-RD-240-230-FXP
62MHDRFX	P-RD-260-230-FX	26	23	22.5	24.5	0.9	1.4	2.6	62MHDRFXP	P-RD-260-230-FXP
62MHDRFX	P-RD-254-230-FX	25.375	23	22.5	24.5	0.9	1.4	2.6	62MHDRFXP	P-RD-254-230-FXP
62MHDRFX	P-RD-256-230-FX	25.62	23	22.5	24.5	0.9	1.4	2.6	62MHDRFXP	P-RD-256-230-FXP
62MHDRFX	P-RD-255-230-FX	25.75	23	22.5	24.5	0.9	1.4	2.6	62MHDRFXP	P-RD-255-230-FXP
62MHDRFX	P-RD-248-234-FX	24.75	23.375	22.5	24.5	0.9	1.4	2.5	62MHDRFXP	P-RD-248-234-FXP
62MHDRFX	P-RD-360-235-FX	36	23.5	23.5	25.5	0.9	1.5	2.7	62MHDRFXP	P-RD-360-235-FXP
62MHDRFX	P-RD-238-236-FX	23.75	23.62	23.5	25.5	0.9	1.5	2.7	62MHDRFXP	P-RD-238-236-FXP
62MHDRFX	P-RD-258-238-FX	25.75	23.812	23.5	25.5	0.9	1.5	2.7	62MHDRFXP	P-RD-258-238-FXP
62MHDRFX	P-RD-253-240-FX	25.25	24	22.5	24.5	0.9	1.5	2.6	62MHDRFXP	P-RD-253-240-FXP
62MHDRFX	P-RD-258-240-FX	25.75	24	23.5	25.5	0.9	1.5	2.7	62MHDRFXP	P-RD-258-240-FXP
62MHDRFX	P-RD-360-240-FX	36	24	23.5	25.5	1.0	1.5	2.7	62MHDRFXP	P-RD-360-240-FXP
62MHDRFX	P-RD-268-240-FX	26.75	24	23.5	25.5	1.0	1.5	2.7	62MHDRFXP	P-RD-268-240-FXP
62MHDRFX	P-RD-360-241-FX	36	24.1	23.5	25.5	1.0	1.5	2.7	62MHDRFXP	P-RD-360-241-FXP
62MHDRFX	P-RD-363-241-FX	36.25	24.1	23.5	25.5	1.0	1.5	2.7	62MHDRFXP	P-RD-360-241-FXP
62MHDRFX	P-RD-258-241-FX	25.75	24.125	23.5	25.5	0.9	1.5	2.7	62MHDRFXP	P-RD-258-241-FXP
62MHDRFX	P-RD-258-243-FX	25.75	24.25	23.5	25.5	0.9	1.5	2.7	62MHDRFXP	P-RD-258-243-FXP



NOTES:

1. RATINGS SHOWN ARE FOR STANDARD 22" BAG DEPTH; "SHORT" 12" DEPTH BAGS ARE AVAILABLE WITH -S SUFFIX; RATINGS REDUCED BY ~50%
2. THE FOLLOWING REQUIRES ADDITIONAL REVIEW

-GRATES WITH EXTENDED BOTTOMS

-ANY OBSTRUCTED INLET OPENINGS

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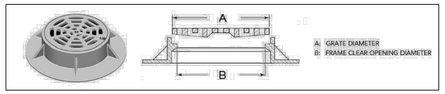
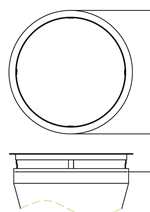
SIZE	DRAWING TYPE	DWG No	REV
C	HDR	RD-62MHDR-FX	A
SCALE		SHEET 2 OF 2	

FLEXSTORM P/Ns 62LHDRFX & 62LHDRFXP

RD INLET TYPE: RAISED CAST IRON FRAME AND ROUND GRATE



Pure Frame with FX Bag		Field Inlet Dimensions		Flexstorm Framing Dim's		Flexstorm Ratings (Flow at 50% max)			Pure Frame with FX+ Bag	
		A	B	B1	A1	Bag Capacity (lit)	PCPC+ Flow Rate (CFS)	Bypass (CFS)		
ADS P/N	Flexstorm Item Code								ADS P/N	Flexstorm Item Code
62LHDRFX	P-RD-275-252-FX	27.5	25 1/8	25.0	27.0	2.1	1.6	5.8	62LHDRFXP	P-RD-275-252-FXP
62LHDRFX	P-RD-275-258-FX	27.5	25.75	25.0	27.0	2.2	1.6	5.8	62LHDRFXP	P-RD-275-258-FXP
62LHDRFX	P-RD-279-260-FX	27.875	26	25.0	27.0	2.2	1.6	5.8	62LHDRFXP	P-RD-279-260-FXP
62LHDRFX	P-RD-290-270-FX	29	27	26.5	28.5	2.4	1.7	6.1	62LHDRFXP	P-RD-290-270-FXP
62LHDRFX	P-RD-288-271-FX	28.75	27.125	26.5	28.5	2.4	1.7	6.1	62LHDRFXP	P-RD-288-271-FXP
62LHDRFX	P-RD-318-300-FX	31.75	30	29.5	31.5	3.0	1.9	6.8	62LHDRFXP	P-RD-318-300-FXP
62LHDRFX	P-RD-319-300-FX	31.87	30	29.5	31.5	3.0	1.9	6.8	62LHDRFXP	P-RD-319-300-FXP
62LHDRFX	P-RD-320-300-FX	32	30	29.5	31.5	3.0	1.9	6.8	62LHDRFXP	P-RD-320-300-FXP
62LHDRFX	P-RD-323-303-FX	32.25	30.25	29.5	31.5	3.1	1.9	6.8	62LHDRFXP	P-RD-323-303-FXP
62LHDRFX	P-RD-341-315-FX	34.125	31.5	31.3	33.3	3.3	2.0	7.2	62LHDRFXP	P-RD-341-315-FXP
62LHDRFX	P-RD-341-323-FX	34.125	32.25	32.0	34.0	3.5	2.0	7.4	62LHDRFXP	P-RD-341-323-FXP
62LHDRFX	P-RD-343-323-FX	34.25	32.25	32.0	34.0	3.5	2.0	7.4	62LHDRFXP	P-RD-343-323-FXP
62LHDRFX	P-RD-341-325-FX	34.125	32.5	32.0	34.0	3.5	2.0	7.4	62LHDRFXP	P-RD-341-325-FXP
62LHDRFX	P-RD-360-340-FX	36	34	33.5	35.5	3.9	2.1	7.8	62LHDRFXP	P-RD-360-340-FXP
62LHDRFX	P-RD-360-360-FX	36	36	35.5	37.5	4.4	2.3	8.2	62LHDRFXP	P-RD-360-360-FXP



NOTES:

1. RATINGS SHOWN ARE FOR STANDARD 22" BAG DEPTH; "SHORT" 12" DEPTH BAGS ARE AVAILABLE WITH -S SUFFIX; RATINGS REDUCED BY ~50%
2. THE FOLLOWING REQUIRES ADDITIONAL REVIEW

-GRATES WITH EXTENDED BOTTOMS

-ANY OBSTRUCTED INLET OPENINGS

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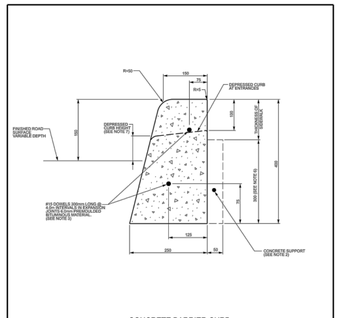
SIZE	DRAWING TYPE	DWG No	REV
C	HDR	RD-62LHDR-FX	A
SCALE		SHEET 1 OF 1	



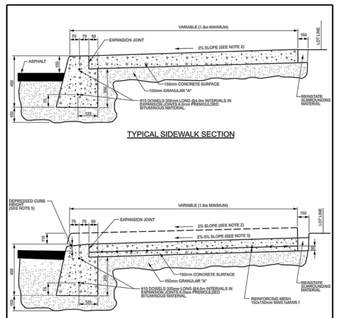
CONCRETE BARRIER CURB

NOTES:

1. THE FULL CURB DEPTH SHALL BE CARRIED THROUGH THE DEPRESSED ACCESS CROSSING.
2. A CONCRETE SUPPORT IS REQUIRED WHEN BUILT ADJACENT TO THE SIDEWALK.
3. IF AN EXTRUSION CURBING SHOWN IS USED:
   a. THE EXPANSION BITUMINOUS MATERIAL AND THE #15 DOWELS ARE TO BE PLACED AT THE END OF THE EXTRUSION.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
5. DUMMY JOINTS SHALL BE 25mm DEEP, FRONT, BACK AND TOP OF SECTION AT 4m SPACING OR MATCH JOINTING WHERE SIDEWALK IS ADJACENT.
6. FOR DEPRESSED CURB AT ENTRANCES USE 200.
7. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 13mm.

N.T.S.

Ottawa	CONCRETE BARRIER CURB FOR GRANULAR BASE PAVEMENT (MODIFIED OPSD-600.110)	DATE:	JANUARY 2009
		REV. DATE:	MARCH 2021
		DWG. No.:	SC1.1



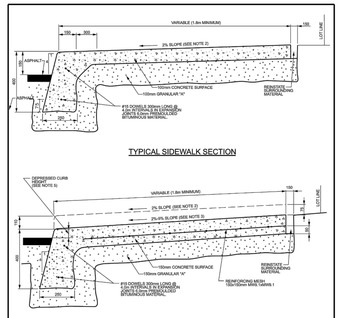
SECTION AT PRIVATE ENTRANCE AND PEDESTRIAN RAMPS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. THE MAXIMUM SLOPE IS NOT TO EXCEED 2%.
3. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
4. EXPANSION AND DUMMY JOINTS AS PER SC5.
5. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 13 mm.

N.T.S.

Ottawa	CONCRETE BARRIER CURB WITH SIDEWALK	DATE:	JANUARY 2009
		REV. DATE:	MARCH 2021
		DWG. No.:	SC1.4



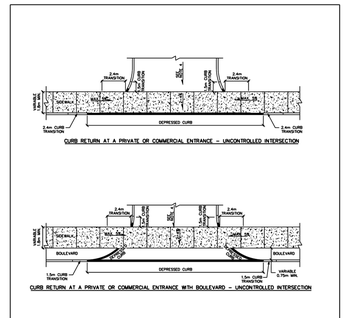
SECTION AT PRIVATE ENTRANCE AND PEDESTRIAN RAMPS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. THE MAXIMUM SLOPE IS NOT TO EXCEED 2%.
3. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
4. EXPANSION AND DUMMY JOINTS AS PER SC5.
5. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 13 mm.

N.T.S.

Ottawa	MONOLITHIC CONCRETE CURB AND SIDEWALK	DATE:	MAY 2001
		REV. DATE:	MARCH 2021
		DWG. No.:	SC2



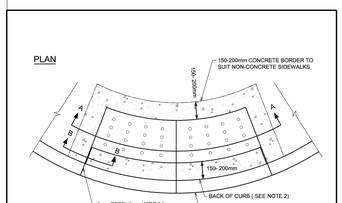
CURB RETURN AT A PRIVATE OR COMMERCIAL ENTRANCE – UNCONTROLLED INTERSECTION

CURB RETURN AT A PRIVATE OR COMMERCIAL ENTRANCE WITH BOULEVARD – UNCONTROLLED INTERSECTION

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. CURB DETAILS SEE SC1.1, SC1.2 AND SC1.3.
3. SIDEWALK DETAILS SEE SC2 AND SC3.
4. MAXIMUM SLOPE VARIES, SEE PRIVATE APPROACH BYLAW.
5. UNCONTROLLED INTERSECTION MEANS AN ENTRANCE NOT LOCATED AT A TRAFFIC SIGNAL OR ALL-WAY STOP CONTROL.

Ottawa	CURB RETURN ENTRANCES - UNCONTROLLED INTERSECTIONS	DATE:	MARCH 2007
		REV. DATE:	MARCH 2021
		DWG. No.:	SC7.1

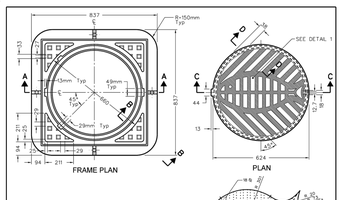


NOTES:

1. TOPS OF TWSI'S (TACTILE WALKING SURFACE INDICATOR) SHALL BE ALIGNED & LEVEL WITH THE ADJACENT CONCRETE SURFACE & INSTALLATION IN WET CONCRETE SHALL BE EFFECTIVE IN PERMANENTLY SECURING THE TWSI IN PLACE.
2. FOR MONOLITHIC SIDEWALKS, TWSI SHALL BE 300 TO 350mm BACK FROM THE CURB FACE.

N.T.S.

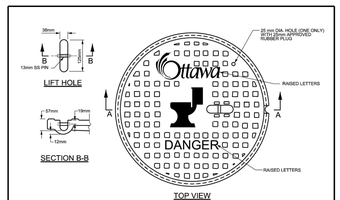
Ottawa	TWSI DETAIL	DATE:	MARCH 2015
		REV. DATE:	MARCH 2018
		DWG. No.:	SC7.3



NOTES:

1. ALL DIMENSIONS SHOWN ARE FOR FINISHED CASTINGS ONLY. PATTERN MAKERS AND CASTING SHOP SHOULD MAKE ALLOWANCES ACCORDINGLY.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
3. FOR NEW CONSTRUCTION WHERE SURFACE INLETS ARE SPECIFIED.
4. COMPANIES WITH GRATE DIMENSIONS NOT EXACTLY THE SAME AS SHOWN ABOVE WILL ALSO BE CONSIDERED.
5. ALTERNATE SOLID COVER TO HAVE EYE 25mm DIA HOLE WITH 25mm APPROVED PLUG

Ottawa	HEAVY DUTY "FISH" TYPE ROUND CATCH BASIN COVER (MODIFIED OPSD-400.07)	DATE:	MAY 2005
		REV. DATE:	MARCH 2017
		DWG. No.:	S19

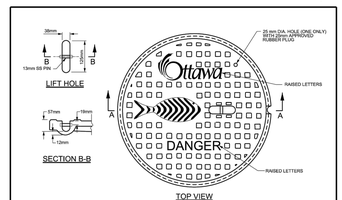


NOTES:

1. PIN TO BE SS.
2. FOR FRAME DETAIL SEE DWG No. S25.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

N.T.S.

Ottawa	STANDARD CIRCULAR SANITARY & COMBINED MAINTENANCE HOLE COVER	DATE:	MARCH 2008
		REV. DATE:	MARCH 2017
		DWG. No.	S24

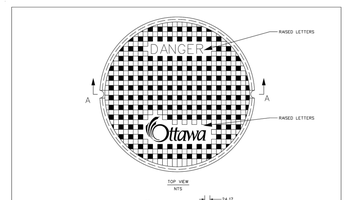


NOTES:

1. PIN TO BE SS.
2. FOR FRAME DETAIL SEE DWG No. S25.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

N.T.S.

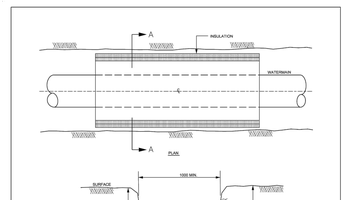
Ottawa	STANDARD CIRCULAR STORM MAINTENANCE HOLE COVER	DATE:	MARCH 2010
		REV. DATE:	MARCH 2017
		DWG. No.	S24.1



NOTES:

1. MATERIAL - GREY IRON.
2. FOR FRAME DETAIL SEE DETAIL DWG No. S25.
3. ALL DIMENSIONS ARE IN MM.
4. FOR CATCHBASIN MAINTENANCE HOLE APPLICATIONS ONLY.

Ottawa	CATCH BASIN MAINTENANCE HOLE COVER (MODIFIED OPSD-401.020)	DATE:	MARCH 2009
		REV. DATE:	MARCH 2017
		DWG. No.:	S28.1



NOTES

FOR 150 - 400mm (NOMINAL DIAMETER) WATERMAINS, WHERE THE DEPTH OF COVER IS LESS THAN 2400mm

1. INCREMENTS OF THICKNESS SHALL BE ADJUSTABLE TO 25mm.
2. IN PROXIMITY OF MAINTENANCE HOLES, CULVERTS, CATCHBASINS, ETC., INSULATION SHALL BE PLACED PER DETAIL W23.
3. DEPTH OF COVER LESS THAN 1200mm REQUIRES SPECIAL DESIGN.
4. STAGGER JOINTS OF MULTIPLE SHEETS.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

Ottawa	THERMAL INSULATION FOR WATERMAINS IN SHALLOW TRENCHES	DATE:	MAY. 2001
		REV. DATE:	MARCH 2013
		DWG. No.:	W22

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Legend

- PROPOSED SILT FENCE BOUNDARY AS PER OPSD 219.110
- PROPOSED CONSTRUCTION FENCING
- PROPOSED CATCH BASIN PROTECTION AS PER FLEX STORM INLET FILTERS DETAIL, ITEM CODE P-RD-240-223-FX
- PROPOSED CATCH BASIN MH PROTECTION AS PER FLEX STORM INLET FILTERS DETAIL, ITEM CODE P-RD-290-270-FX
- PROPOSED CATCH BASIN PROTECTION AS PER TERRAFIX SILTSACK DETAIL
- PROPOSED MUD MAT LOCATION
- PROPOSED VALVE BOX
- PROPOSED VALVE CHAMBER
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- PROPOSED CATCHBASIN

Best Management Practices

CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROLS (BEST MANAGEMENT PRACTICES) DURING CONSTRUCTION OF THIS PROJECT.

EROSION MUST BE MINIMIZED AND SEDIMENTS MUST BE REMOVED FROM CONSTRUCTION SITE RUN-OFF IN ORDER TO PROTECT DOWNSTREAM AREAS, DURING ALL CONSTRUCTION, EROSION AND SEDIMENTATION SHOULD BE CONTROLLED BY THE FOLLOWING TECHNIQUES:

1. LIMIT THE EXTENT OF EXPOSED SOILS AT ANY GIVEN TIME.
2. REVEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE.
3. MINIMIZE AREA TO BE CLEARED AND GRUBBED.
4. PROTECT EXPOSED SLOPES WITH PLASTIC OR SYNTHETIC MULCHES.
5. INSTALL CATCH BASIN INSERTS OR EQUIVALENT IN ALL PROPOSED CATCH BASINS AND CATCH BASIN MANHOLES AND IN ALL EXISTING CATCH BASINS THAT WILL RECEIVE RUN-OFF FROM THE SITE.
6. A SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF ALL AND ANY STOCKPILES OF MATERIAL TO BE USED OR REMOVED FROM SITE. (LOCATION TO BE DETERMINED)
7. A VISUAL INSPECTION SHALL BE DONE DAILY ON SEDIMENT CONTROL MEASURES AND CLEANED OF ANY ACCUMULATED SILT AS REQUIRED. THE DEPOSITS WILL BE DISPOSED OFF SITE AS PER THE REQUIREMENTS OF THE CONTRACT.
8. SEDIMENT CONTROL BARRIERS MAY ONLY BE REMOVED TEMPORARILY WITH APPROVAL OF CONTRACT ADMINISTRATOR TO ACCOMMODATE CONSTRUCTION OPERATIONS. ALL AFFECTED BARRIERS MUST BE REINSTATED AT NIGHT WHEN CONSTRUCTION IS COMPLETED, NO REMOVAL WILL OCCUR IF THERE IS A SIGNIFICANT RAINFALL EVENT ANTICIPATED (>10mm) UNLESS A NEW DEVICE HAS BEEN INSTALLED TO PROTECT EXISTING STORM AND SANITARY SEWER SYSTEMS, OR DOWNSTREAM WATERCOURSES.
9. NO REFUELING OR CLEANING OF EQUIPMENT IS PERMITTED NEAR ANY EXISTING WATERWAY.
10. CONTRACTOR SHALL REMOVE SEDIMENT CONTROL MEASURES WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE(S) IS NO LONGER REQUIRED. NO CONTROL MEASURES SHALL BE PERMANENTLY REMOVED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR.
11. THE CONTRACTOR SHALL PERIODICALLY, OR WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENTS AS REQUIRED.
12. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO THE WATERCOURSE. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
13. CONTRACTOR SHALL INSTALL MUD MATS AT BOTH ENTRANCES TO THE SITE.
14. STORMWATER SWALES TO BE COVERED WITH HYDRO-SEED AND MULCH.

0	ISSUED FOR SPA	MJS	PM	23.06.01
Revision		By	Appd.	YY.MM.DD
File Name: 160401697 DB.dwg		MJS	DT	MJS 23.05.01
		Dwn.	Chkd.	Dsgn. YY.MM.DD

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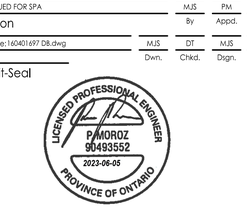


Client/Project

BRIGIL HOMES
CLIENT2

1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT

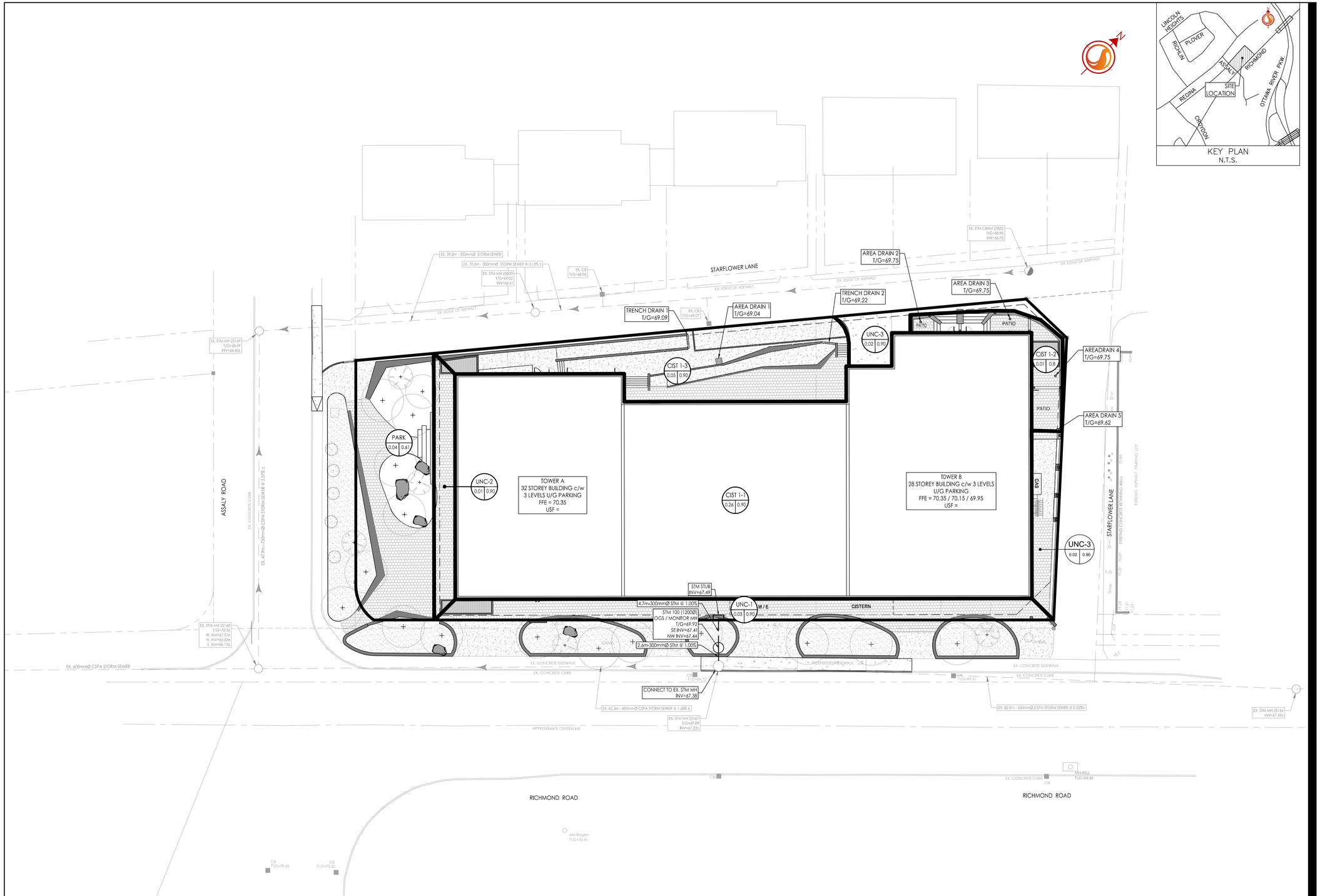
OTTAWA, ON, CANADA

Title

EROSION CONTROL PLAN AND DETAIL SHEET

Project No.	Scale	
160401697		
Drawing No.	Sheet	Revision
EC/DS-1	5 of 7	0

ORIGINAL SHEET - ARCH D



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ORIGINAL SHEET - ARCH D

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Legend

L101A	AREA ID
1.00 | 0.85	RUNOFF COEFFICIENT
	STORM DRAINAGE AREA ha.
━	STORM DRAINAGE BOUNDARY
EXT-1	AREA ID
1.00 | 0.50	EXTERNAL RUNOFF COEFFICIENT
	EXTERNAL STORM DRAINAGE AREA ha.
━	EXTERNAL STORM DRAINAGE BOUNDARY
➡	DIRECTION OF OVERLAND FLOW
– ○ –	PROPOSED STORM MH AND SEWER
◐	PROPOSED CATCHBASIN MANHOLE
■	PROPOSED CATCHBASIN
– ○ –	EXISTING STORM MH AND SEWER
■	EXISTING CATCHBASIN
– ● –	EXISTING COMBINED MH AND SEWER
▨	THERMAL INSULATION ON STORM SEWER WHERE COVER IS LESS THAN 1.5m. THERMAL INSULATION ON WATERMAIN WHERE COVER IS LESS THAN 2.4m AS PER W22.
⬚	MAXIMUM STATIC PONDING LIMITS

Notes

1. ALL CATCH BASINS AND TRENCH DRAINS TO BE CONNECTED TO INTERNAL PLUMBING AND COLLECTED IN STORM WATER MANAGEMENT CISTERN. INSTALLATION BY OTHERS.
2. STORMWATER MANAGEMENT TO BE PROVIDED THROUGH A CISTERN.
   CISTERN VOLUME = 150.0m³
   MAX. CISTERN RELEASE RATE TO STORM SEWER 9.54L/s

Revision	By	Appd.	YY.MM.DD
0 ISSUED FOR SPA	MJS	PM	23.06.01

File Name	Dwn.	Chkd.	Dsgn.	YY.MM.DD
160401697 DB.dwg	MJS	DT	MJS	23.05.01

Permit-Seal

P MOROZ
90493552
2023-06-05

Client/Project

BRIGIL HOMES

1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT
OTTAWA, ON, CANADA

Title

STORM DRAINAGE PLAN

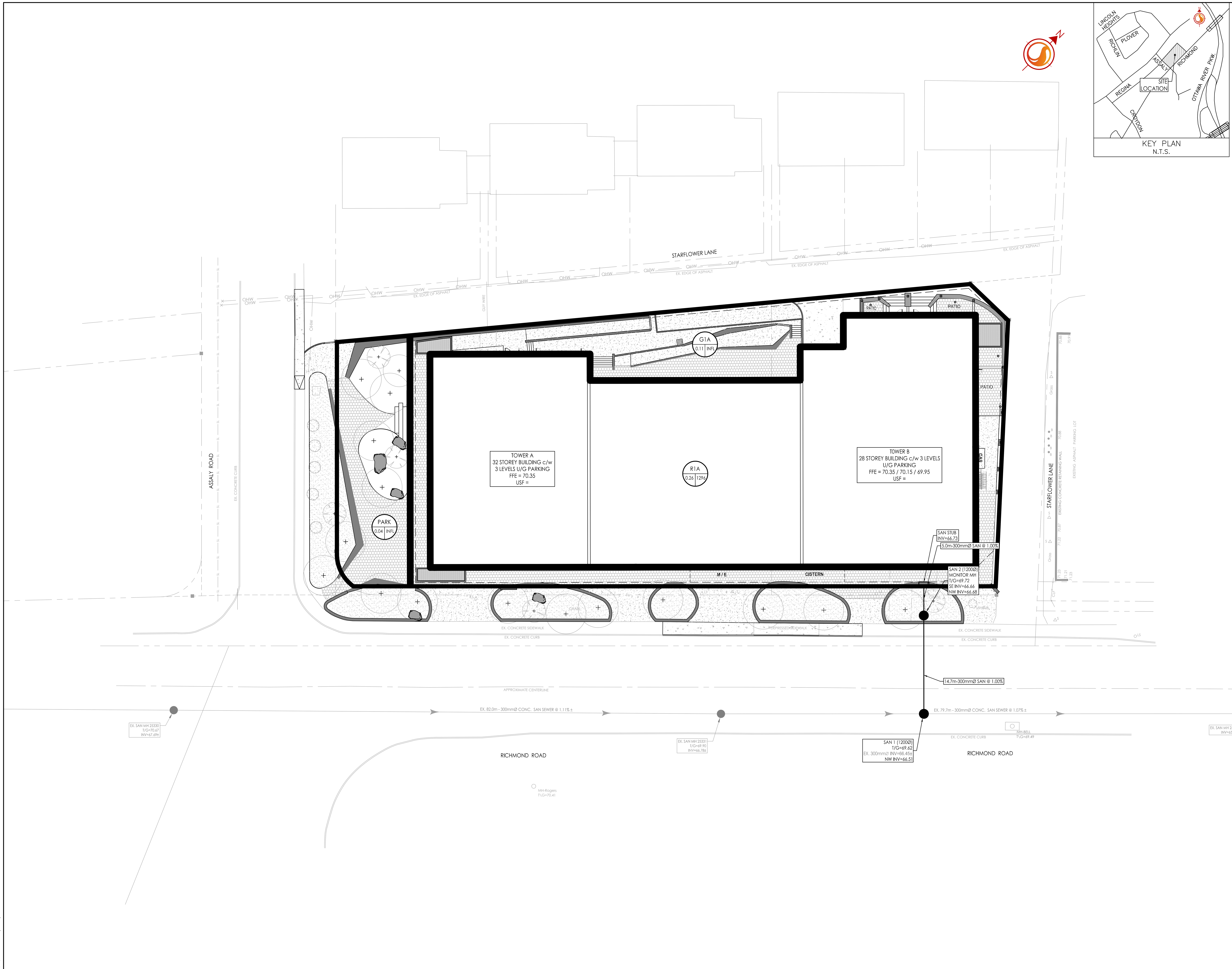
Project No. 160401697

Scale 1:250 (0 2.5 7.5 12.5m)

Drawing No. SD-1

Sheet 6 of 7

Revision 0



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Legend

- R100A / 0.31 / 50 — SANITARY DRAINAGE AREA ID#; POPULATION COUNT; SANITARY DRAINAGE AREA ha.
- G100A / 0.11 / INFL — SANITARY DRAINAGE AREA ID#; INFILTRATION RATE OF 0.33 L/s/Ha APPLIED; SANITARY DRAINAGE AREA ha.
- SANITARY DRAINAGE AREA
- PROPOSED SANITARY MH AND SEWER
- EXISTING COMBINED MH AND SEWER

Notes

SANITARY STATS

POPULATION COUNT

TOWER A

168 - 1 BEDROOM APTS @ 1.4PPU = 235 PEOPLE
112 - 2 BEDROOM + DEN APTS @ 3.1PPU = 347 PEOPLE
TOTAL POPULATION TOWER A = 582 PEOPLE

BUILDING B

144 - 1 BEDROOM APTS @ 1.4PPU = 202 PEOPLE
96 - 2 BEDROOM + DEN APTS @ 3.1PPU = 298 PEOPLE
TOTAL POPULATION TOWER B = 500 PEOPLE

PODIUM

14 - 1 BEDROOM APTS @ 1.4PPU = 20 PEOPLE
2 - 1 BEDROOM + DEN APTS @ 2.1PPU = 4 PEOPLE
39 - 2 BEDROOM APTS @ 2.1PPU = 82 PEOPLE
14 - 2 BEDROOM + DEN APTS @ 3.1PPU = 43 PEOPLE
21 - 3 BEDROOM APTS @ 3.1PPU = 65 PEOPLE

TOTAL POPULATION PODIUM = 214 PEOPLE

TOTAL POPULATION = 1296

TOTAL COMMERCIAL SPACE = 747.5m² (0.075ha) @ 28,000 L/ha/day

Revision		By	Appd.	YY.MM.DD
0	ISSUED FOR SPA	MJS	PM	23.06.01

File Name	Dwn.	Chkd.	Dsgn.	YY.MM.DD
160401697 DB.dwg	MJS	DT	MJS	23.05.01

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LICENSED PROFESSIONAL ENGINEER
P. MOROZ
90493552
2023-06-05
PROVINCE OF ONTARIO

Client/Project

BRIGIL HOMES

1299 RICHMOND ROAD
MIXED USE TOWER DEVELOPMENT
OTTAWA, ON, CANADA

Title

SANITARY DRAINAGE PLAN

Project No.	Scale
160401697	1:250

Drawing No.	Sheet	Revision
SA-1	7 of 7	0

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