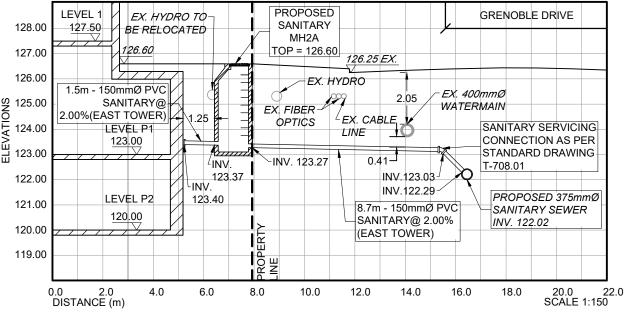
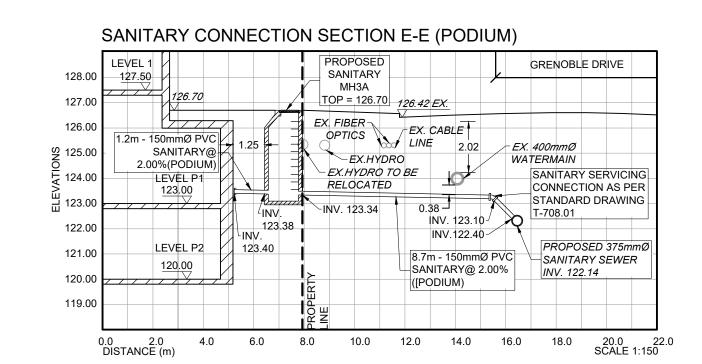




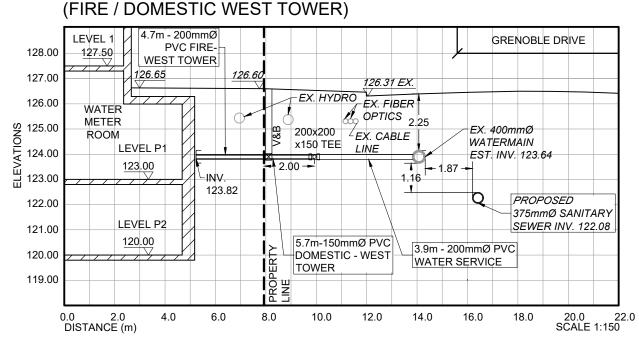
© 2023 GOOGLE, MAP DATA © 2023 TELE ATLAS LOCATION PLAN NTS

## SANITARY CONNECTION SECTION D-D (EAST TOWER)

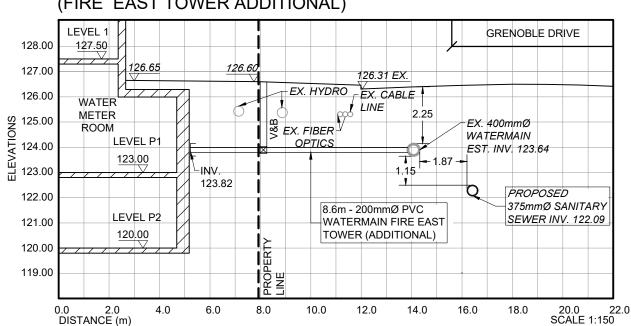




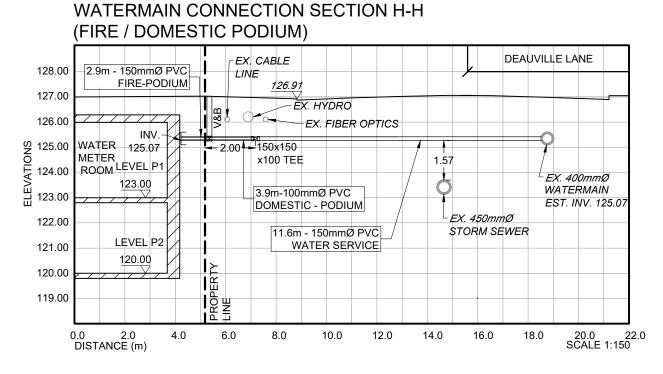
# WATERMAIN CONNECTION SECTION F-F

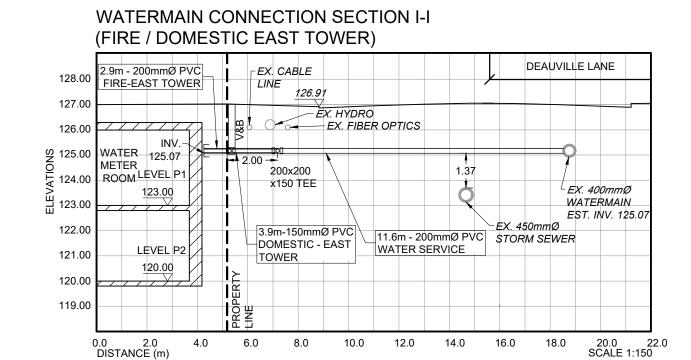


# WATERMAIN CONNECTION SECTION G-G (FIRE EAST TOWER ADDITIONAL)

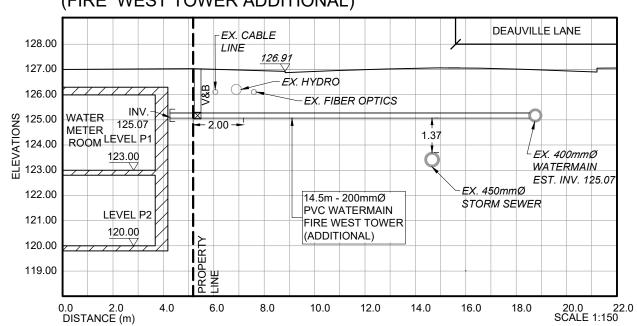


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# WATERMAIN CONNECTION SECTION J-J (FIRE WEST TOWER ADDITIONAL)



SG-01 (SITE GRADING PLAN)
SS-01 (SITE SERVICING PLAN)
SS-02 (SITE SERVICING PLAN-CROSS SECTIONS)
EC-01 (EROSION CONTROL PLAN)
CM-01 (CONSTRUCTION MANAGEMENT PLAN)
DD-01 (DETAIL DRAWINGS)
PU-01 (PUBLIC UTILITIES PLAN)

## SITE PLAN INFORMATION

LIST OF DRAWINGS

DIAMOND SCHMITT ARCHITECTS
384 ADELAIDE STREET WEST, SUITE 100,
TORONTO ON M5V 1R7
TEL.: (416) 862-880
FAX.: (416) 862-5508

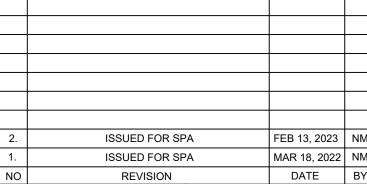
# SURVEY INFORMATION

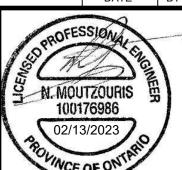
HAVING AN ELEVATION OF 127.392 METRES.

R. AVIS SURVEYING INC. 235 YORKLAND BOULEVARD, SUITE 203, TORONTO ON M2J 4Y8 TEL.: (416) 490-8352

# www. ravissurveying.com BENCHMARK

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCH MARK No. NY6015





Date

# CITY OF TORONTO

SITE SERVICING - CROSS

SECTIONS

RESIDENTIAL USE DEVELOPMENT
48 GRENOBLE DRIVE

TORONTO ONTARIO



ACCEPTED TO BE IN ACCORDANCE WITH THE CITY OF TORONTO STANDARDS. THIS ACCEPTANCE IS NOT TO BE CONSTRUCTED AS VERIFICATION OF ENGINEERING CONTENT.

Manager, Development Engineering

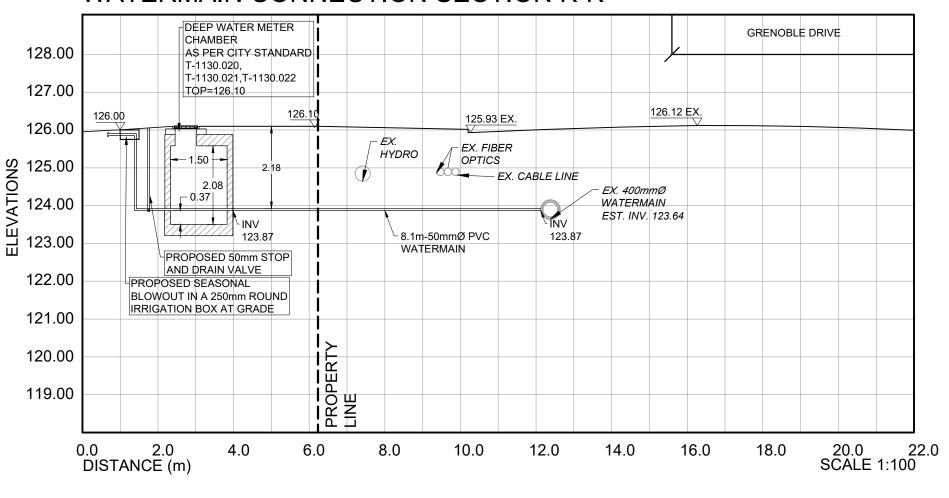
Lithos Group Ltd.

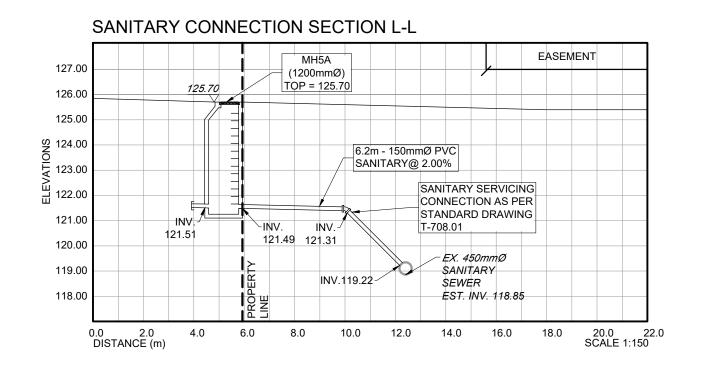
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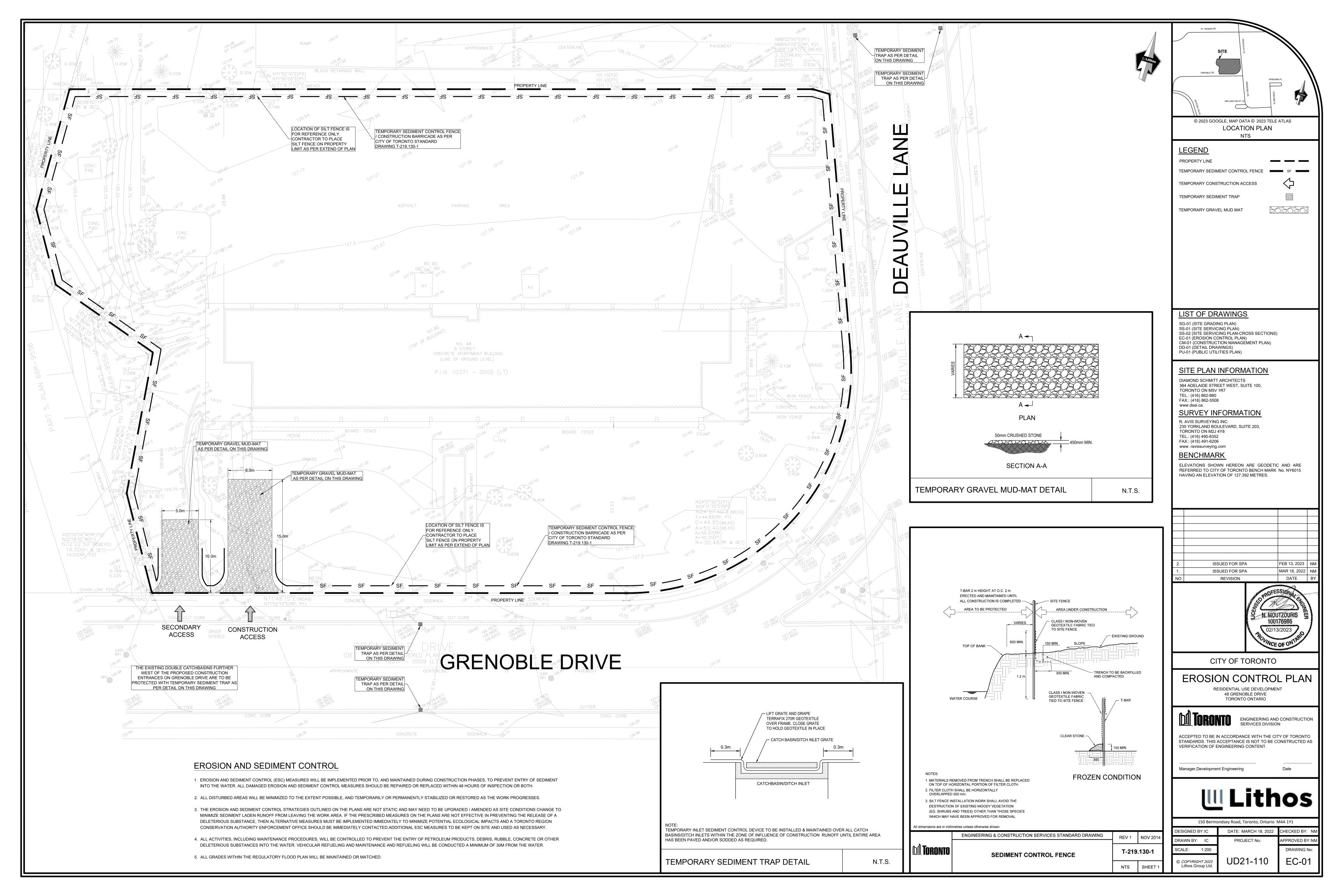
150 Bermondsey Road, Toronto, Ontario M4A 1Y1			
DESIGNED BY:IC	DATE: MARCH 18, 2022	CHECKED BY: NM	
DRAWN BY: IC	PROJECT No:	APPROVED BY:NM	
SCALE: 1:200		DRAWING No:	
© COPYRIGHT 2023	UD21-110	SS-02	

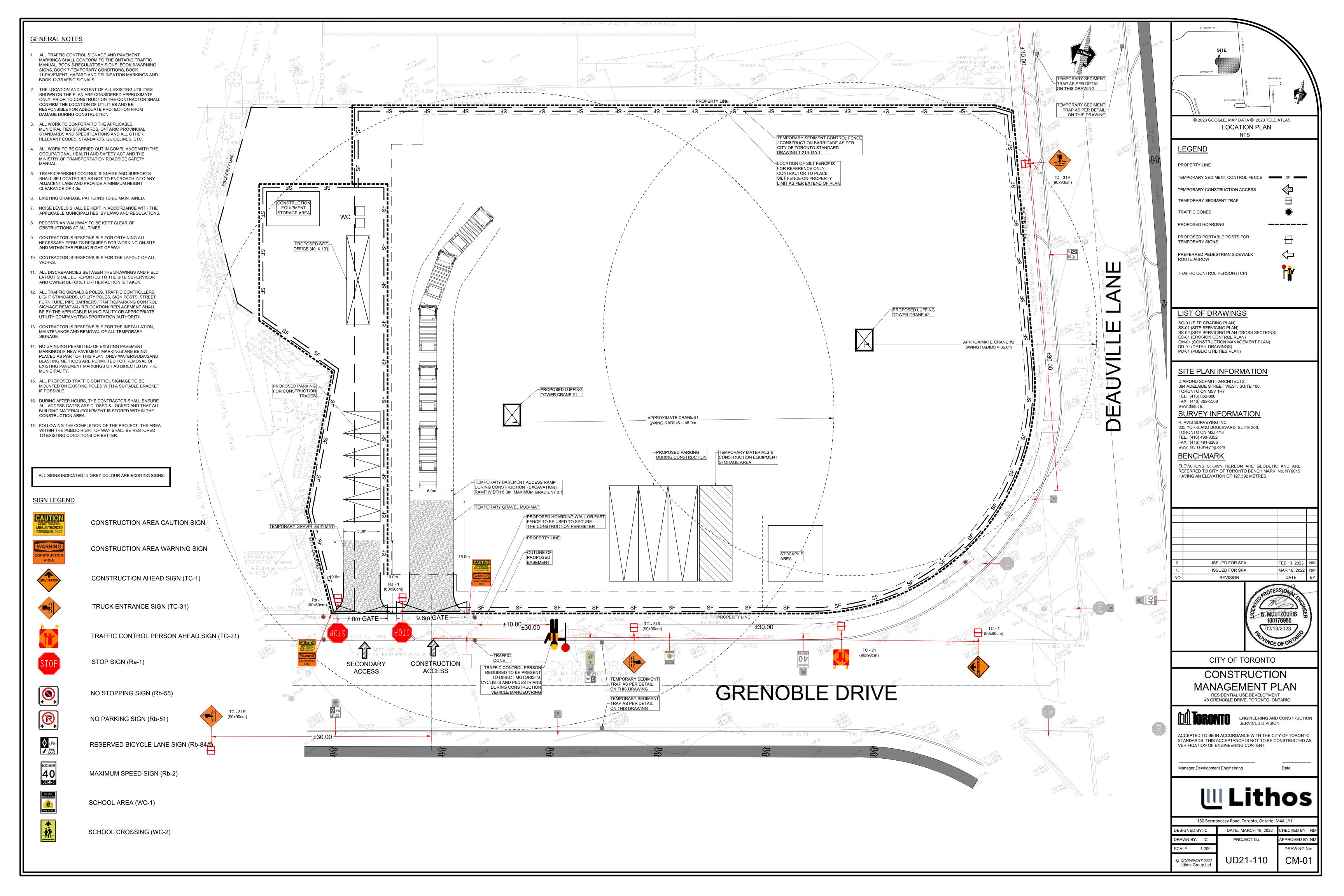
# WATERMAIN CONNECTION SECTION K-K





#### STORM CONNECTION SECTION M-M (1200mmØ) STORM SERVICING 6.2m - 150mmØ CONNECTION AS PER 124.00 STORM @ 2.00% STANDARD DRAWING **9** 123.00 F 122.00 122.59 122.55 片 121.00 2.74 122.30 120.00 *└ EX. 375mmØ* STORM SEWE EX. 450mmØ~ SANITARY 6.0 8.0 10.0 12.0 14.0 16.0 SCALE 1:150





### **SANITARY & STORM SEWERS**

- A. MAINTENANCE HOLES AS PER CITY OF TORONTO STANDARD, T-701.010 (1200mm), T-701.011 (1500mm), T-701.012-1 (1800mm) OR T-701.013 (2400mm). FRAME AND COVER AS PER OPSD 401.010 TYPE A CLOSED (SANITARY) TYPE B OPEN (STORM)
- 3. SANITARY SERVICE CONNECTIONS SHALL BE SINGLE. 150mm Ø MINIMUM, PVC CLASS DR 28 INSTALLED AT 2% AND ANY COLOUR EXCEPT WHITE, FOR SINGLE RESIDENTIAL DWELLINGS.
- C. SERVICE CONNECTIONS AND UTILITY CUTS TO BE BACKFILLED WITH UNSHRINKABLE FILL.
- D. DROP STRUCTURES SHALL BE ACCORDING TO T-1003.01 (EXTERNAL) AND T-1003.01-2 (INTERNAL).

#### WATERMAINS

- A. ALL WATERMAIN SERVICE CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH T-1104.02-3.
- B. WATERMAIN AND WATERMAIN APPURTENANCES SHALL CONFORM TO CITY OF TORONTO MATERIAL / MANUFACTURER
- C. ALL POLYVINYL CHLORIDE (PVC) PIPES, RANGING IN SIZE FROM 100MM THROUGH 300MM IN DIAMETER, SHALL BE CLASS 235, SDR-18 AND MANUFACTURED IN ACCORDANCE TO AWWA C900-07 STANDARD AND CSA B137.3-05 AND SHALL HAVE CAST IRON OUTSIDE DIAMETER DIMENSIONS.

#### D. COVER REQUIRED ON WATERMAIN IS 1.8M MINIMUM.

- E. PROVISIONS FOR FLUSHING THE WATER LINE PRIOR TO TESTING ETC. MUST BE PROVIDED WITH AT LEASE A 50MM OUTLET ON 100MM AND LARGER LINES AS PER T-1104.03-1. ON FIRE LINES, FLUSHING OUTLET TO BE 100MM DIAMETER MINIMUM OR A HYDRANT.
- F. WATERMAINS TO BE INSTALLED TO GRADES AS SHOWN IN APPROVED PLANS, COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.

#### G. ALL CURB AND VALVE BOXES TO BE LOCATED ON STREET LINE.

- H. MECHANICAL RESTRAINS SHALL BE INSTALLED AT ALL JOINTS BETWEEN FITTINGS, BENDS, TEES, CROSSED AND VALVES. MECHANICAL RESTRAINS SHALL CONFORM TO CITY OF TORONTO MATERIAL / MANUFACTURER SPECIFICATIONS.
- AS PER CITY OF TORONTO STANDARD T-1103.01, T-1103.020.

. ALL TREES, PLUGS HORIZONTAL AND VERTICAL BENDS, REDUCERS AND HYDRANTS TO HAVE CONCRETE THRUST BLOCKS

- J. WATERMAINS MUST FOLLOW THE MINISTRY OF THE ENVIRONMENT PROCEDURES THAT GOVERN THE SEPARATION OF SEWERS AND WATERMAINS F-6-1. A MINIMUM VERTICAL CLEARANCE 0.30M OVER, 0.50M UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING. MUST ALSO MAINTAIN 2.5M HORIZONTAL SEPARATION.
- K. ALL VALVES LESS THAN 400MM TO BE IN A VALVE AND BOX AS PER CITY OF TORONTO STANDARD T-1101.02-2.
- .. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATION FROM THE EXISTING SYSTEM. FLUSHING, SWABBING AND TESTING OF WATERMAIN AS PER ONTARIO STANDARDS AND SPECIFICATIONS, AS WELL AS CITY OF TORONTO SPECIFICATION T.S. 7.30 OR LATEST AMENDMENT.
- M. AFTER PASSING THE HYDROSTATIC PRESSURE TEST AND LEAKAGE TEST, CHLORINATION CAN PROCEED. SAMPLING OF THE NEW MAINS IS TO BE DONE AT THE REQUIRED LOCATIONS PRIOR TO CONNECTING TO THE CITY WATERMAIN SYSTEM. THE TEE FITTING IS TO BE CUT INTO THE EXISTING WATERMAIN TO MAKE THE CONNECTION. TO MAINTAIN THE PRESSURE IN THE NEW MAIN DURING INSTALLATION OF SERVICE, A 50MM BY-PASS WITH AN APPROVED PRESSURE DIFFERENTIAL BACKFLOW PREVENTER, MOUNTED ABOVE GROUND LEVEL IS TO BE INSTALLED AROUND THE CLOSED ISOLATING VALVE.
- N. CITY WATER VALVES CAN ONLY BE OPERATED BY CITY STAFF.
- O. BOTH THE FIRE AND DOMESTIC WATER SERVICES MUST COMPLY WITH THE CURRENT BUILDING CODE ACT, THE WATER SUPPLY BY-LAW, CHAPTER 851 AND CSA B-64 SERIES STANDARDS.

## WATERMAIN - FILL AREAS

- A. PIPES ARE NOT TO BE LAID ON FILL UNTIL THE FIELD DENSITY TEST REPORTS HAVE BEEN SUBMITTED AND APPROVED BY THE ENGINEER.
- B. FILL TO BE PLACED TO A MINIMUM OF 600MM ABOVE THE WATERMAIN GRADES AND TO 3.0M MINIMUM ON EACH SIDE PRIOR TO WATERMAIN LAYING COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR DENSITY IN 300MM LIFTS.
- C. TESTS SHALL BE TAKEN ALONG CENTRELINE OF THE WATERMAIN AND ON LINES 1.5M ON EITHER SIDE OF SAME AT A MAXIMUM INTERVAL OF 30.0M. TESTS TO BE TAKEN AT EACH 600MM LIFT.
- D. ALL HYDRANTS, TEES, VALVES, BENDS, PLUGS AND EACH PIPE JOINT ARE TO BE MECHANICALLY RESTRAINED.

# GRADING & ROAD / PAVEMENTS

- A. ALL AREA GRADING AND RESULTING DRAINAGE PATTERNS SHALL NOT ADVERSELY AFFECT ADJACENT LANDS.
- 3. THE STORM DRAINAGE SHALL BE SELF CONTAINED WITHIN THE SUBJECT PROPERTY UNTIL IT CAN BE DISCHARGED, REUSED, INFILTRATED AND / OR EVAPOTRANSPIRED IN MANNER ACCEPTABLE TO THE CITY.

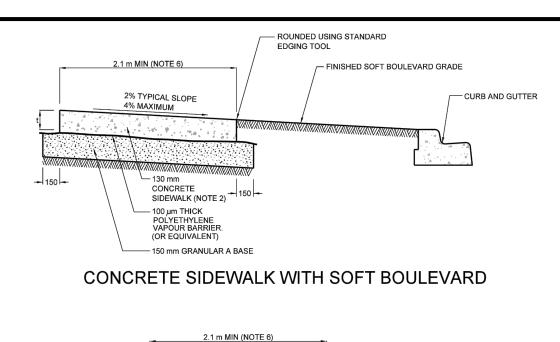
# C. MINIMUM GENERALLY ACCEPTED GRADIENT - 2.0%.

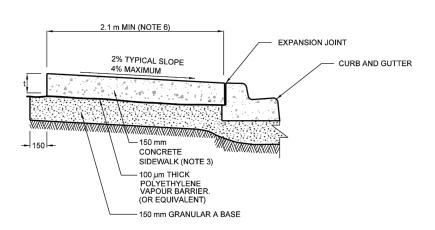
# D. MAXIMUM GENERALLY ACCEPTED GRADIENT - 5.0%.

- E. 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
- G. PROPOSED SPOT ELEVATIONS SHOWN ARE ON ASPHALT, LANDSCAPE OR CONCRETE AREAS. UNLESS OTHERWISE NOTED TOP OF CURB ELEVATIONS ARE 0.15M ABOVE ASPHALT ELEVATIONS EXCEPT AT CURB DEPRESSIONS AND WHEEL

# ADDITIONAL ROAD IMPROVEMENT NOTES

- A. UNLESS INDICATED OTHERWISE, ALL WORK WITHING THE CITY RIGHT-OF-WAY SHALL BE UNDERTAKEN IN ACCORDANCE WITH CITY OF TORONTO DESIGN STANDARDS AND SPECIFICATIONS AND THE UNDERTAKING. ONTARIO PROVINCIAL STANDARDS MAY, SUBJECT TO THE APPROVAL OF THE CITY OF TORONTO, BE USED WHERE NO STANDARD OR
- 3. ANY DISCREPANCIES BETWEEN SITE CONDITIONS AND THE DRAWINGS MUST BE REPORTED TO THE CONSULTANT PRIOR TO COMMENCEMENT OF CONSTRUCTION AND APPROPRIATE ACTION TAKEN TO THE SATISFACTION OF THE CITY OF
- C. ALL SURVEY POINTS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE LAYOUT SHALL BE REPORTED TO THE CONSULTANT AND THE CONSULTANT SHALL NOTIFY THE CITY OF THE NECESSARY CHANGES.
- ). NO PORTION OF WORK SHALL BE CARRIED OUT WITHOUT FIRST HAVING OBTAINED APPROVED CONSTRUCTION DRAWINGS, APPROVED PROJECT SCHEDULE(S), APPROVED TRAFFIC STAGING PLANS AND PERMITS FOR SUCH PORTION OF THE INFRASTRUCTURE WORK IN ACCORDANCE WITH THE PROVISIONS HEREOF AND GIVING 10 WORKING DAYS PRIOR WRITTEN NOTICE TO THE EXECUTIVE DIRECTOR OF TECHNICAL SERVICES THAT SUCH WORK IS TO BE CARRIED OUT WITH SUCH NOTICE TO SPECIFY THE ANTICIPATED DATE OF COMMENCEMENT OF THE WORK. A PRE-CONSTRUCTION COORDINATION MEETING WITH CITY STAFF IS TO BE HELD A MINIMUM OF 5 WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY OF THE WORK.
- E. ALL AREAS DISTURBED DURING CONSTRUCTION WITHIN THE CITY'S RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION. GRASSED AREAS SHALL BE PROVIDED WITH 100mm OF TOPSOIL AND SHALL SOBBED AS PER T.S.
- . THE CONTRACTOR SHALL REFER TO THE ONTARIO TRAFFIC MANUAL BOOK 7, TEMPORARY CONDITIONS FOR TEMPORARY CONSTRUCTION SIGNAGE.
- CONTRACTOR SHALL VERIFY AND MATCH EXISTING PAVEMENT STRUCTURE IN DEPTH AND MATERIAL. ANY DISCREPANCIES SHALL BE REPORTED TO THE CONSULTANT PRIOR TO COMMENCEMENT OF CONSTRUCTION AND APPROPRIATE ACTION TAKEN TO THE SATISFACTION OF THE CITY OF TORONTO.
- H. ANY DAMAGE TO THE PROPERTY ADJACENT TO THE CONSTRUCTION SITE SHALL BE THE RESPONSIBILITY OF THE





## CONCRETE SIDEWALK ADJACENT TO CURB AND GUTTER

- 1. FOR CONCRETE SIDEWALK ABUTTING CURB OR CURB AND GUTTER REFER TO T-600.05-1 AND T-600.11-1.
- . SIDEWALK THICKNESS 130 mm EXCEPT ACROSS COMMERCIAL, INDUSTRIAL AND HIGH DENSITY RESIDENTIAL DRIVEWAY WHERE
- THICKNESS SHALL BE 180 mm. . SIDEWALK THICKNESS 150 mm EXCEPT ACROSS COMMERCIAL
- INDUSTRIAL AND HIGH DENSITY RESIDENTIAL DRIVEWAY WHERE THICKNESS SHALL BE 180 mm.
- 4. t = THICKNESS OF SIDEWALK. 5. JOINTS SHALL BE ACCORDING TO T-310.010-1

FRAME & GRATE

AS SPECIFIED

TAPERED TOP SEE ALTERNATIVE D

IN RISER JOINTS

RISER SECTIONS AS REQUIRED

B PRECAST SLAB BASE

1. THE SUMP IS MEASURED FROM THE LOWEST INVERT. 2. 150 mm OF COMPACTED GRANULAR A OR

UNSHRINKABLE FILL TO BE PLACED ALL AROUND

3. PRECAST CONCRETE COMPONENTS ACCORDING TO

SAFETY PLATFORM ACCORDING TO OPSD 404.020

4. STRUCTURES EXCEEDING 4.5m IN DEPTH TO INCLUDE

6. FOR BENCHING DETAILS, MAXIMUM PIPE HOLE DIAMETERS

OPSD 701.030, OPSD 701.031 AND OPSD 701.032.

5. PIPE SUPPORT ACCORDING TO T-708.020.

AND FLOW CONFIGURATIONS, SEE T-701.021. All dimensions are in millimetres unless otherwise show

BOTTOM RISER SECTION WITH INLET

AND OUTLET OPENINGS TO SUIT

THE MAINTENANCE HOLE.

MONOLITHIC BASE WITH INLET AND OUTLET

OPENINGS TO SUIT. SEE

ALTERNATIVES A, B & C

- 6. ON LOCAL ROADS, THE MINIMUM SIDEWALK WIDTH
- CAN BE REDUCED TO 1.8 m, EXCEPT FOR NEW DEVELOPMENTS, WHICH MUST ADHERE TO THE TORONTO GREEN STANDARDS AND DIPS.

All dimensions are in millimetres unless otherwise shown.				
	ENGINEERING & CONSTRUCTION SERVICES STANDARD DRAWING	REV 4	SEP 201	
<b>M</b> Toronto	CONCRETE SIDEWALK WITH SOFT BOULEVARD OR CONCRETE SIDEWALK ADJACENT TO CURB		T-310.010-2	

15 mm PARGING

C CAST IN PLACE BASE

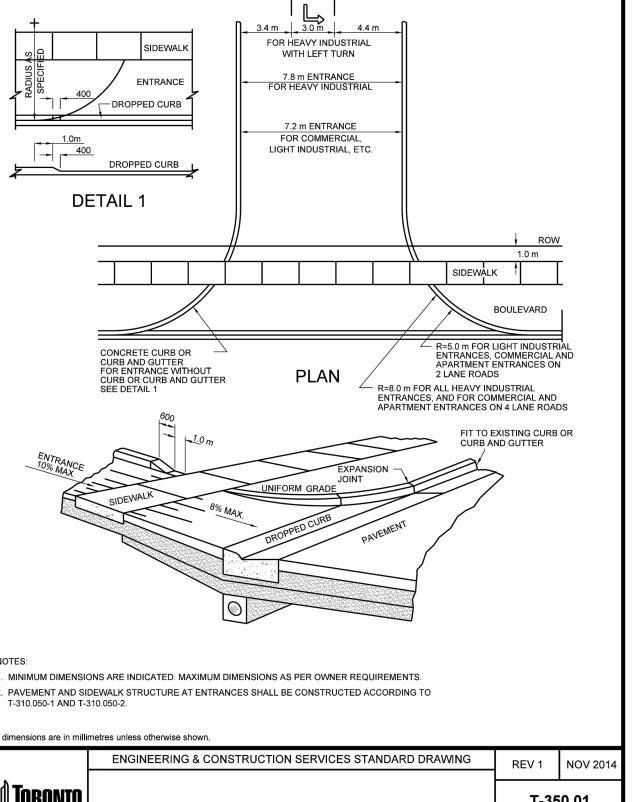
**ENGINEERING & CONSTRUCTION SERVICES STANDARD DRAWING** 

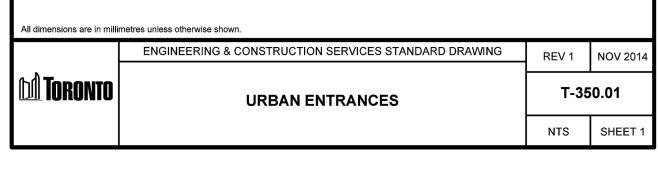
PRECAST MAINTENANCE HOLE

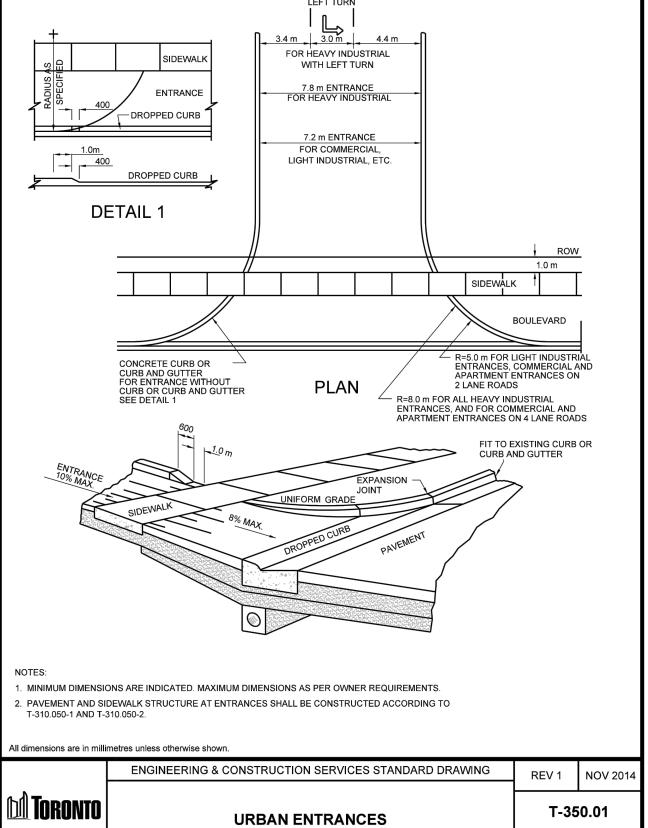
1200 mm DIAMETER

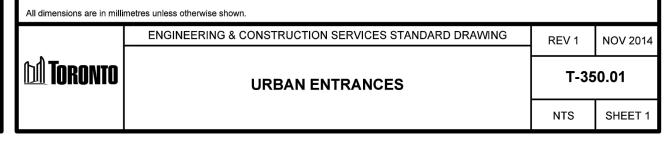
1200 mm DIA.

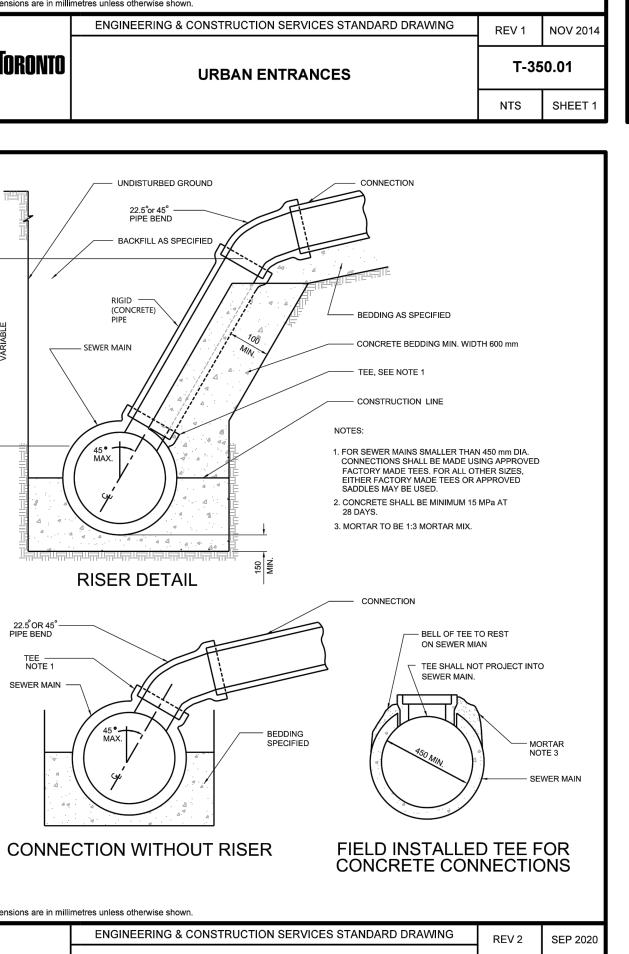
XX. 300 mm OF BRICK OR PRECAST











All dimensions are in milli	metres unless otherwise shown.			
	ENGINEERING & CONSTRUCTION SERVICES STANDARD DRAWING	REV 2	SEP 20	
<b>1 Toronto</b>	CATCHBASINS LEADS CONNECTED TO		T-708.01	
	RIGID SEWER MAIN PIPE	NTS	SHEET	
	_			

SHEET 1

# 410.07.16.04.03 LOW PRESSURE AIR TESTING

7. ALL DIMENSIONS ARE NOMINAL

COATS OF BITUMEN.

8. PARGING SHALL BE 1:3 MORTAR MIX.

9. WATERPROOFING OVER PARGING TO BE TWO HEAVY

10. WHERE PIPES JOIN AT MAINTENANCE HOLE, JOINTS

11. FIRST STEP TO BE 75 mm TO 300 mm BELOW FRAME.

LAST STEP TO BE 300 mm ABOVE BENCHING OR

600mm ABOVE INVERT IF NO BENCHING.

ARE TO BE WATERTIGHT WITH THE APPROVED SEAL.

THE CONTRACT ADMINISTRATOR MAY ALLOW OR REQUIRE TESTING BY USE OF AIR WHEN WATER IS NOT READILY AVAILABLE OR THE DIFFERENTIAL HEAD IN THE TEST SECTION IS GREATER THAN 8 M OR FREEZING TEMPERATURES EXIST.

REV 4 SEP 2020

T-701.010

NTS SHEET 1

NTS

ALTERNATIVES

D PRECAST FLAT CAP

RISER SECTION

A SUMP FOR STORM SEWER

MAINTENANCE HOLE

SHEET

AIR CONTROL EQUIPMENT THAT INCLUDES A SHUT OFF VALVE, SAFETY VALVE, PRESSURE REGULATING VALVE, PRESSURE REDUCTION VALVE AND MONITORING PRESSURE GAUGE WITH PRESSURE RANGE FROM 0 TO 35 KPA WITH MINIMUM DIVISIONS OF 0.5 KPA AND ACCURACY OF APPROXIMATELY

TESTS SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MAINTENANCE HOLES. THE TEST SECTION SHALL BE PLUGGED AT EACH END. ONE PLUG SHALL BE EQUIPPED WITH AN AIR INLET CONNECTION TO FILL THE PIPE SEWER SYSTEM WITH AIR.

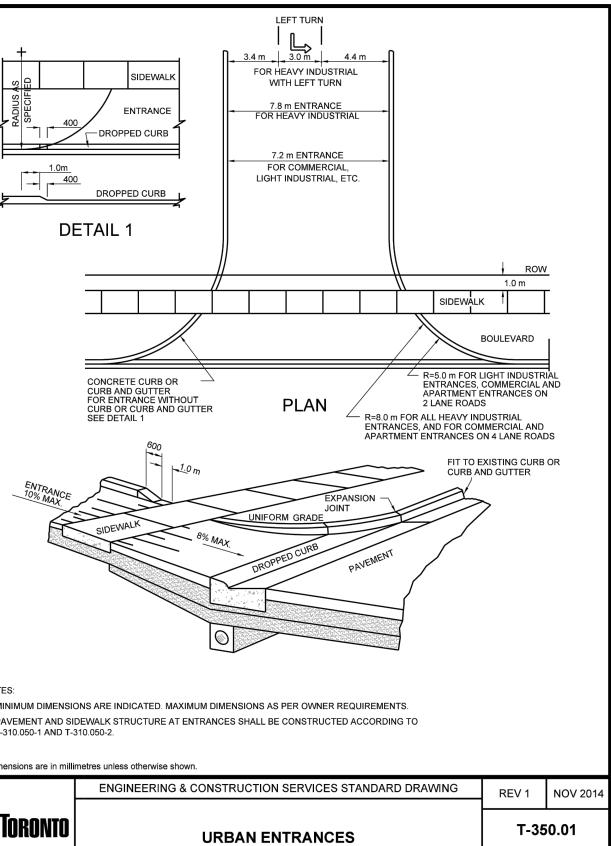
THE TEST SECTION SHALL BE FILLED SLOWLY UNTIL A CONSTANT PRESSURE OF 24 KPA IS MAINTAINED. IF THE GROUNDWATER IS ABOVE THE PIPE

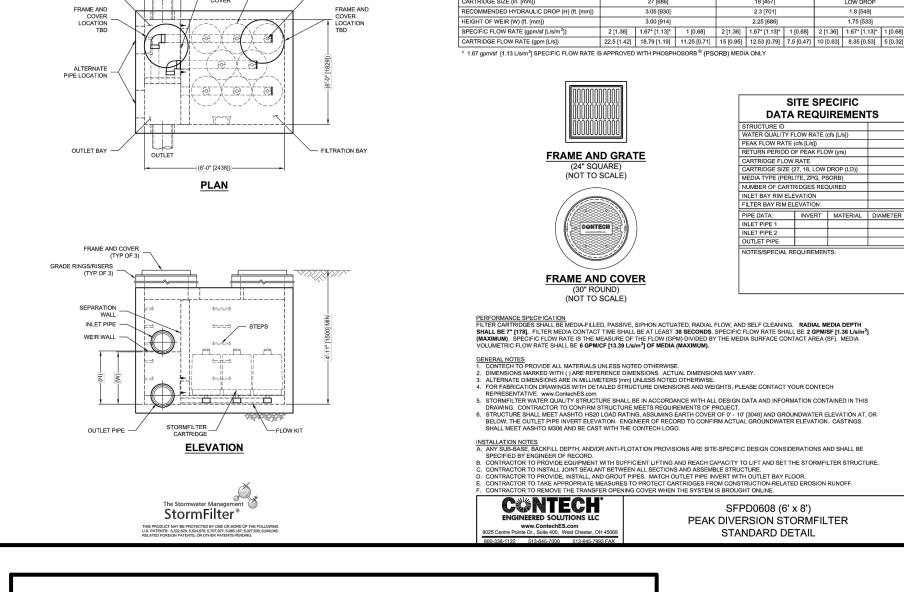
SEWER BEING TESTED, THE AIR PRESSURE SHALL BE INCREASED BY 3.0 KPA FOR EACH 300 MM THAT THE GROUNDWATER LEVEL IS ABOVE THE INVERT THE AIR PRESSURE SHALL BE STABILIZED FOR FIVE MINUTES AND THEN REGULATED TO MAINTAIN IT TO 20.5 KPA PLUS THE ALLOWANCE FOR

 ${\tt GROUNDWATER, IF ANY. AFTER THE STABILIZATION PERIOD, THE TIME TAKEN FOR A PRESSURE LOSS OF 3.5~KPA SHALL BE RECORDED.}$ THE TIME TAKEN FOR A PRESSURE DROP OF 3.5 KPA SHALL NOT BE LESS THAN THE TIMES SHOWN IN TABLE 1.

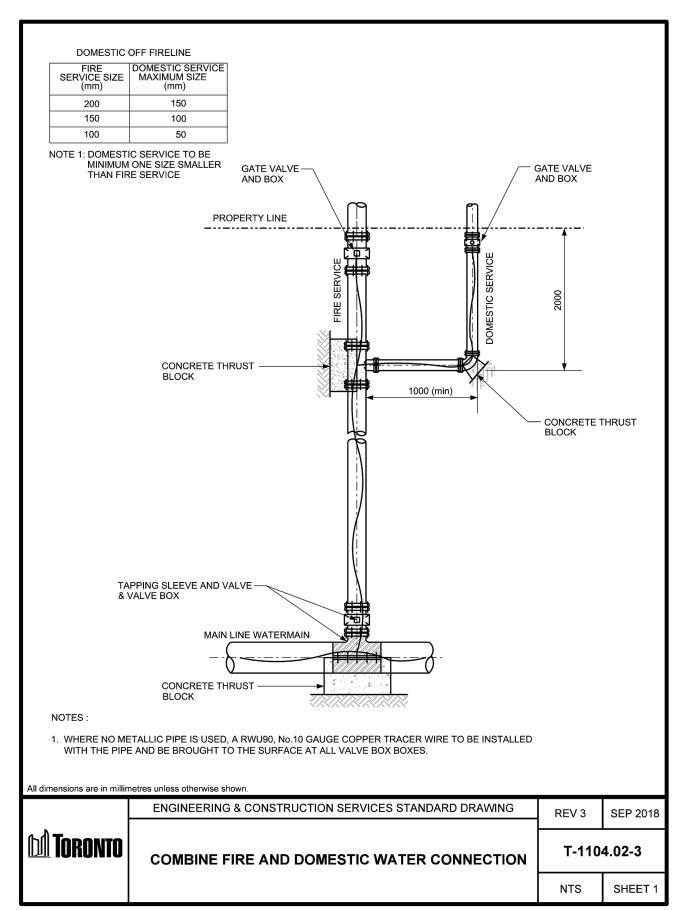
IF THE LENGTH OF THE TEST SECTION IS GREATER THAN THE LENGTH FOR MINIMUM TIME, THE NEW TESTING TIME SHALL BE A PRODUCT OF THE LENGTH OF TEST SECTION MULTIPLIED BY THE TIME SHOWN IN TABLE 1 FOR THE APPROPRIATE SIZE PIPE.

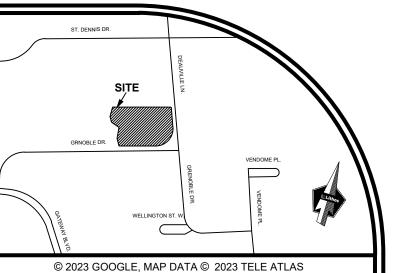
IF THE RESULTS OF AN AIR TEST ARE MARGINAL, THE CONTRACT ADMINISTRATOR MAY REQUIRE THE SECTION TO BE RETESTED USING WATER.





STORMFILTER DESIGN NOTES





LOCATION PLAN NTS

## LIST OF DRAWINGS

SG-01 (SITE GRADING PLAN)

SS-01 (SITE SERVICING PLAN) SS-02 (SITE SERVICING PLAN-CROSS SECTIONS) EC-01 (EROSION CONTROL PLAN)

CM-01 (CONSTRUCTION MANAGEMENT PLAN) DD-01 (DETAIL DRAWINGS) PU-01 (PUBLIC UTILITIES PLAN)

### SITE PLAN INFORMATION

DIAMOND SCHMITT ARCHITECTS 384 ADELAIDE STREET WEST, SUITE 100, TORONTO ON M5V 1R7 TEL.: (416) 862-880 FAX.: (416) 862-5508

#### **SURVEY INFORMATION**

R AVIS SURVEYING INC. 235 YORKLAND BOULEVARD, SUITE 203, TORONTO ON M2J 4Y8 TEL.: (416) 490-8352

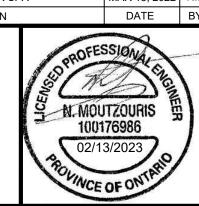
#### www. ravissurveying.com **BENCHMARK**

FAX.: (416) 491-6206

www.dsai.ca.

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF TORONTO BENCH MARK No. NY6015 HAVING AN ELEVATION OF 127.392 METRES.

2.	ISSUED FOR SPA	FEB 13, 2023	NN
1.	ISSUED FOR SPA	MAR 18, 2022	NN
NO	REVISION	DATE	BY



CITY OF TORONTO

# **DETAIL DRAWINGS**

48 GRENOBLE DRIVE TORONTO ONTARIO



ACCEPTED TO BE IN ACCORDANCE WITH THE CITY OF TORONTO STANDARDS. THIS ACCEPTANCE IS NOT TO BE CONSTRUCTED AS

VERIFICATION OF ENGINEERING CONTENT.

Manager, Development Engineering

150 Bermondsey Road, Toronto, Ontario M4A 1Y1 DESIGNED BY:IC DATE: MARCH 18, 2022 CHECKED BY: DRAWN BY: IC PROJECT No: PPROVED BY: N

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