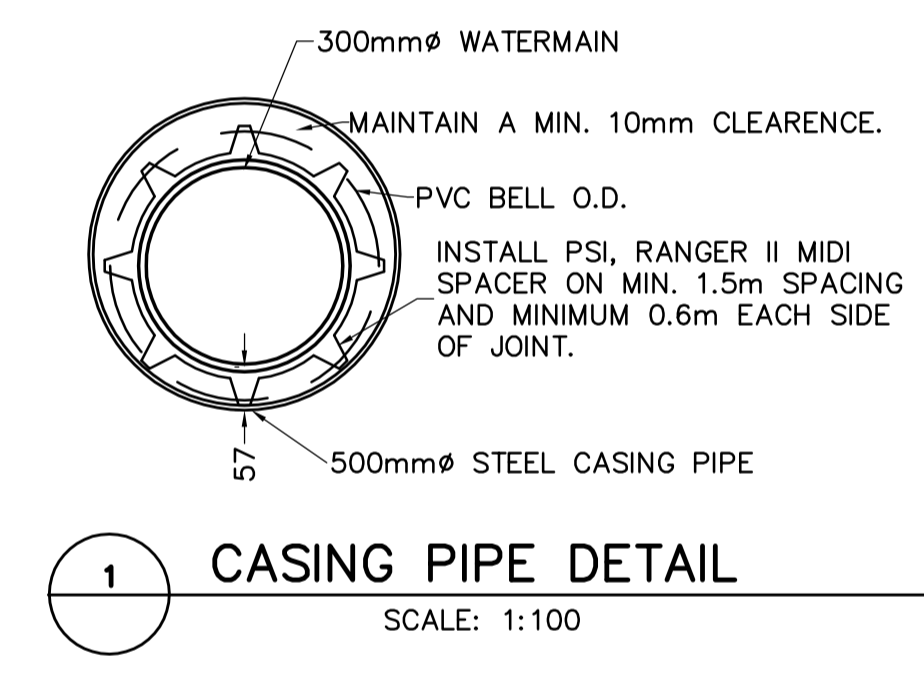
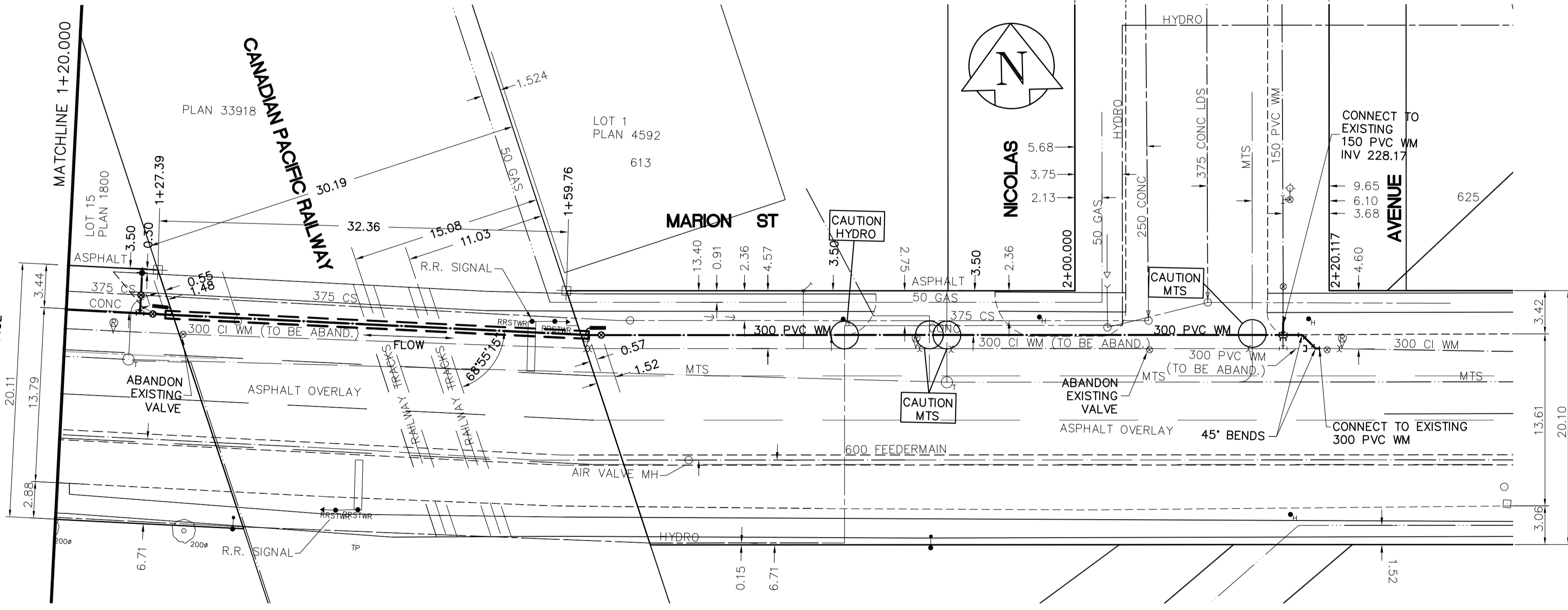


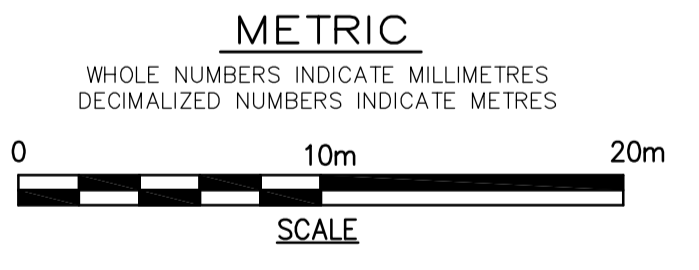
RAIL CROSSING NOTES:

RAILWAY MILEAGE AND SUBDIVISION:	MILE 1.55 EMERSON SUB.	
MUNICIPAL DESCRIPTION OF ADJACENT PROPERTIES:	MARION STREET BETWEEN ARCHIBALD STREET AND NICOLAS AVENUE	
NAME OF PIPELINE OWNER:	CITY OF WINNIPEG, WATER AND WASTE DEPARTMENT	
CONTENTS TO BE HANDLED:	POTABLE WATER	
MAXIMUM OPERATING PRESSURE:	450 KPa (65 psi)	
MAXIMUM SURGE AND TEST PRESSURE:	1000 KPa (145 psi)	
MAXIMUM OPERATING TEMPERATURE:	20°C	
MINIMUM OPERATING TEMPERATURE:	4°C	
PIPING MATERIALS	CARRIER	CASING
NOMINAL DIAMETER	300 mm	500 mm
OUTSIDE DIAMETER	335.3 mm	508 mm
MATERIAL	PVC	STEEL
SPECIFICATION AND GRADE	AWWA C900 DR18	MIN. YIELD STRENGTH 241 MPa
WALL THICKNESS	18.62 mm	9.53 mm MIN.
TYPE OF JOINT	RUBBER GASKET BELL AND SPIGOT	WELDED
COATING	NA	NA
LOCATION OF SHUT OFF VALVES	MARION STREET: 1.0m WEST OF WEST LIMIT OF CPR ROW MARION STREET: 1.0m EAST OF EAST LIMIT OF CPR ROW	
METHOD OF INSTALLATION	TRENCHLESS - CASING TO BE JACKED WITH NO SOIL REMOVAL AHEAD OF PIPE	
VENTS:	NA	NUMBER: NA
SEALS:	BOTH ENDS: YES	HEIGHT ABOVE GROUND: NA
BURY:	TYPE: PERMEABLE GEOTEXTILE FABRIC	
EXTENT OF CASING MEASURED PERPENDICULAR TO CENTERLINE OF TRACK	31.283m	
CENTERLINE OF TRACK TO FACE OF JACKING/RECEIVING PITS	15.07m WEST TRACK & 11.02 EAST TRACK	
TYPE, SIZE, AND SPACING OF INSULATORS OR SUPPORTS	PSI RANGER II SPACERS 1.8m O.C.	
CATHODIC PROTECTION	NA	
GEOTECHNICAL BOREHOLES	NA	
SOIL TYPE	NA	
BASE OF RAIL TO GROUND WATER	NA	
TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH TC-E10		

- CONSTRUCTION NOTES**
- EXPOSE WATERMAIN CONNECTIONS AND CONFIRM INVERTS PRIOR TO CONSTRUCTION.
 - INSTALL WATERMAIN BY TRENCHLESS METHODS.
 - ALL MATERIALS SHALL CONFORM TO THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
 - MINIMUM COVER TO TOP OF PROPOSED WATERMAIN SHALL BE 2.5m FROM STREET CENTERLINE.
 - INSTALL ALL HYDRANTS WITH FLANGE ELEVATION 50mm-150mm ABOVE FINISHED GRADE.
 - REPLACE ALL EXISTING LEAD SERVICES FROM THE PROPOSED WATERMAIN TO PROPERTY LINE.
 - NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES 24 HOURS IN ADVANCE OF ANY WATER SHUTDOWN OR DISRUPTION OF SERVICE.
 - LOCATION OF WATER SERVICES SHOWN ON DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD LOCATE ALL WATER SERVICES PRIOR TO CONSTRUCTION.
 - ALL VALVES SHALL BE BLACK TOP (CLOCKWISE TO CLOSE).
 - BACKFILL UNDER OR WITHIN 1.0m OF PAVEMENTS ON ARCHIBALD OR MARION SHALL BE CLASS 1 BACKFILL EXCEPT AS NOTED. BACKFILL UNDER SIDEWALKS SHALL BE CLASS 3 BACKFILL.



APEGM
Certificate of Authorization
Earth Tech Canada Inc.
No. 730



ADDRESS	NATURE OF SERVICE	SIZE	MATERIAL	DISTANCE SC TO PROPERTY	POSITION OF SC (curb stop)		POSITION OF CC (corp)		COMMENTS
					Long	Short	Long	Short	
613 MARION ST	COMMERCIAL	0 mm	COPPER	9.8 m	BUILDING	2.7 m	2.7 m	W	CORNER OF HOUSE

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PROFILE	PROPOSED
150 mm W.W.	WATERMAIN	150 mm W.W.	HYDRO	TELEPHONE	150 mm W.W.
300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	CONCRETE	CONCRETE	300 mm L.D.S.
250 mm W.W.S.	WASTEWATER SEWER	250 mm W.W.S.	ASPHALT	PROPERTY LINE	250 mm W.W.S.
○	MANHOLE	●	SURVEY BAR	CURB STOP	○
□	CATCH BASIN	■	TREE	ANODE	○
▽	CURB INLET	▽	CONCRETE SIDEWALK	FENCE	○
+	JUNCTIONS	+			
—	CULVERT	—			
—	GAS	—			

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

EARTH TECH
Earth Tech (Canada) Inc. Winnipeg, Manitoba 204.477.5381

DESIGNED BY: GSK, GDL
CHECKED BY: GSK

DRAWN BY: DKA
APPROVED BY: KWF

HOR. SCALE: 1:250
VERTICAL: 1:50

ISSUED FOR TENDER: 2008/07/03 GSK
ISSUED FOR REVIEW: 2008/06/19 GSK

NO. REVISIONS DATE BY

DATE: 2008/06/19
DATE: 2008/07/03

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL SIGNED BY
K.W. FITCHETT
2008/07/03
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
104449-003

THE CITY OF WINNIPEG
Winnipeg WATER AND WASTE DEPARTMENT

2008 WATERMAIN RENEWALS CONTRACT 5

MARION STREET
45m N. OF MARION ST. TO NICOLAS AVE.
STA. 1+25 TO STA. 2+20

SHEET 3 OF 12
CITY DRAWING NUMBER
D-11453