

APPENDICES

APPENDIX A
CERTIFICATES OF TITLE

ANNEX A-1

WENZEL STREET WELL AND TREATMENT PLANT

DATE: 2008/05/22
TIME: 11:52

**MANITOBA
STATUS OF TITLE**

TITLE NO: 1569192
PAGE: 1

STATUS OF TITLE..... ACCEPTED
ORIGINATING OFFICE..... WINNIPEG
REGISTERING OFFICE..... WINNIPEG
REGISTRATION DATE..... 1998/05/04
COMPLETION DATE..... 1998/05/12

PRODUCED FOR.. X
ADDRESS.....

PRODUCED BY... V.CASTELLI

LEGAL DESCRIPTION:

THE RURAL MUNICIPALITY OF EAST ST. PAUL
IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON IN THE
FOLLOWING DESCRIBED LAND:

PARCEL A PLAN 35858 WLTO
IN OTM LOT 101 PARISH OF ST PAUL

ACTIVE TITLE CHARGES:

1923107 WPG ACCEPTED CAVEAT REG'D: 1995/06/29
DESCRIPTION: AGREEMENT OF PURCHASE AND SALE
FROM/BY: ALLREDEKOPP LTD.
TO: AGENT: R. DOUGLAS STEINBURG
CONSIDERATION: NOTES:

CHARGES AFFECTING THIS INSTRUMENT:
1939212 WPG ACCEPTED ASSIGNMENT OF CAVEAT

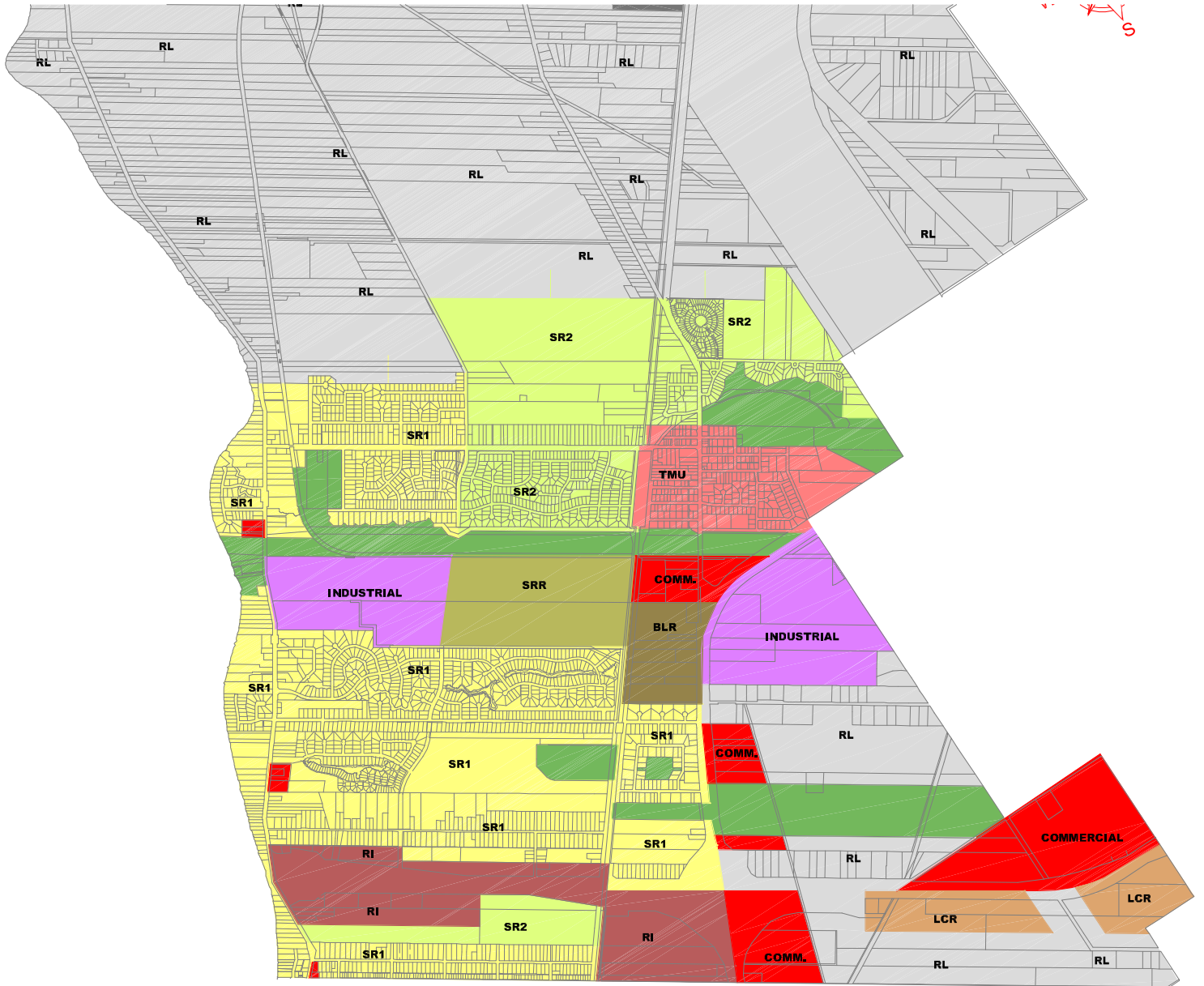
1939212 WPG ACCEPTED ASSIGNMENT OF CAVEAT REG'D: 1995/08/21
FROM/BY: ALLREDEKOPP LTD.
TO: THE BANK OF MONTREAL
CONSIDERATION: NOTES:

ACCEPTED THIS 4TH DAY OF MAY, 1998
BY J.MOFFAT FOR THE DISTRICT REGISTRAR OF
THE LAND TITLES DISTRICT OF WINNIPEG.

UNCERTIFIED EXTRACT PRODUCED FROM THE LAND TITLES DATA
STORAGE SYSTEM ON 2008/05/22 OF TITLE NUMBER 1569192.

***** END OF STATUS OF TITLE FOR TITLE 1569192 WPG *****

ANNEX A-2
LAND USE PLAN



LEGEND :

- SERVICED RESIDENTIAL 1 (2 Lots per Acre) (SR1)
- SERVICED RESIDENTIAL 2 (3 Lots per Acre) (SR2)
- SERVICED RESIDENTIAL RESERVE (SRR)
- COMMERCIAL
- INDUSTRIAL
- RURAL LIMITED

- MIXED USE RESIDENTIAL / INSTITUTIONAL (RI)
- MIXED USE LIMITED COMMERCIAL/RESIDENTIAL (LCR)
- MIXED USE TOWNSITE (TMU)
- MIXED USE BUSINESS/LIMITED RESIDENTIAL (BLR)
- RECREATION/OPEN SPACE
- TRANSFER STATION

V:\117\paula.11120950\Utility\paula.11120950\GIS\GIS-117.dwg
 2008-02-12 08:13AM By: paula



Client/Project
 R.M. OF EAST ST. PAUL
 WATER DISTRIBUTION
 MASTER PLAN

Figure No.
1.0

Title
LAND USE PLAN

APPENDIX B
LICENCES

ANNEX B-1

ENVIRONMENT ACT LICENSE 2035 – MAY 9, 1995

Environment Act Licence

Manitoba
Environment



Licence No. 2035

Issue Date May 9, 1995

In accordance with the Manitoba-Environment Act (C.C.S.M. c. E125)

THIS LICENCE IS ISSUED TO:

THE RURAL MUNICIPALITY OF EAST ST. PAUL; "the Licencee"

for the construction and operation of the Development being a municipal water supply system using wells located immediately east of the Red River Floodway and immediately south of Springhill Winter Park in the Rural Municipality of Springfield, and a reservoir, pumphouse and distribution system, subject to the following specifications, limits, terms and conditions:

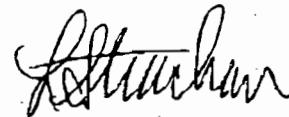
SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

1. The Licencee shall construct the Development in accordance with the Environment Act Proposal dated January 24, 1995, and additional information contained in a letter from I.D. Engineering Canada Inc. to Manitoba Environment dated March 23, 1995.
2. The Licencee shall, prior to the commencement of construction activities, submit final plans of all components of the Development for the approval of the Director.
3. The Licencee shall ensure that the pipeline crossing of the Red River Floodway is constructed in a manner satisfactory to Manitoba Natural Resources.
4. The Licencee shall, prior to undertaking construction on or adjacent to highway rights-of-way, obtain all necessary permits and agreements from Manitoba Highways and Transportation and the Highway Traffic Board.
5. The Licencee shall stabilize and re-vegetate any areas of soil disturbed by the construction of the Development.
6. The Licencee shall, prior to operation of the Development, submit for the approval of the Director a plan for the monitoring of the effects of the Development on adjacent wells. The plan shall include the locations and frequency of monitoring proposed.
7. The Licencee shall ensure that the combined rate of water withdrawal from the wells of the Development does not exceed 19 litres per second (250 Imperial gallons per minute).

8. The Licencee shall ensure that check valves are installed where necessary to prevent cross-connections between the Development and existing private water supply systems.
9. The Licencee shall ensure that private water supply wells which are abandoned as a result of the Development are sealed by grouting in accordance with direction from Manitoba Natural Resources.
10. The Licencee shall ensure that the operation of the municipal water supply is in accordance with Manitoba Regulations under the Public Health Act and all operating requirements as recommended by Manitoba Environment.
11. The Licencee shall ensure that all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and operation of the Development are collected and disposed of in accordance with all applicable Manitoba Environment and legislation requirements.
12. The Licencee shall ensure that fuel storage areas established for the construction and operation of the Development shall comply with the requirements of *Manitoba Regulation 97/88R* respecting *Storage and Handling of Gasoline and Associated Products*.

REVOCATION

If, in the opinion of the Director, the Licencee has exceeded or is exceeding the limits, or has not complied or is not complying with the specifications, terms or conditions set out herein, the Director may revoke this Licence either temporarily or permanently.




Larry Strachan, P. Eng.
Director
Environment Act

ANNEX B-2

WATER RIGHTS LICENSE 2005-060 – JULY 15, 2005

**Licence to Use Water for
Municipal-Distribution System
Purposes**

Manitoba Water Stewardship
Infrastructure and Operations Division
200 Saulteaux Cresc.
Winnipeg, Manitoba
R3J 3W3



Issued in accordance with the provisions of
The Water Rights Act and regulations made thereunder.

Licence No.: 2005-060

U.T.M.: Zone 14 644572 E
5536474 N

Know all men by these presents that in consideration of and subject to the provisos, conditions and restrictions hereinafter contained, the Minister of Water Stewardship for the Province of Manitoba does by these presents give full right and liberty, leave and licence to

The Rural Municipality of East St. Paul in the Province of Manitoba (hereinafter called "the LICENSEE") to divert water from a **fractured limestone** aquifer by means of a water well, pump, pipeline(s) and other appurtenances (hereinafter called "the WORKS"), located on the following described lands:

the Southeast Quarter of Section 33, in Township 11 and Range 41 East of the Principal Meridian in Manitoba,

and more particularly shown on a plan filed in the office of the Executive Director, Infrastructure and Operations Division, a copy of which plan is hereto attached and marked Exhibit "A" for **municipal-distribution system** purposes on the following described lands:

River Lots 60 to 119, in the Parish of East St. Paul.

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulations and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **municipal-distribution system** purposes.
2. The WORKS shall be operated in accordance with the terms herein contained.
3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.020 cubic metres per second (0.7 cubic feet per second)** *20 L/S 26 m³/hr*
- b) The total quantity of water diverted in any one year shall not exceed **195 cubic decametres (158.09 acre feet)**
4. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **municipal-distribution system** purposes.
5. Without limiting condition 4 of this Licence, the LICENSEE, on behalf of itself and its employees and agents, hereby releases Her Majesty the Queen in right of the Prince of Manitoba and the Manitoba Floodway Authority from all claims, liabilities or demands relating to:
 - a) any effects of surface water entering the well, including any claims, liabilities or demands resulting from the operation of the Red River Floodway (including any expansion of the Red River Floodway); and
 - b) any effects to water quality resulting from or relating to the operation of the Red River Floodway (including any expansion of the Red River Floodway).
6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.
7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Executive Director, Infrastructure and Operations Division, for cancellation on behalf of the Minister.
8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.
9. If for any reason whatsoever the Minister deems it advisable to cancel this Licence, he may do so by letter addressed to the LICENSEE at **3021 Birds Hill Road, East St. Paul, MB, R2E 1A7, Canada** and thereafter this Licence shall be determined to be at an end.
10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental, lease, or other agreement, of the lands on which the WORKS shall be placed.

11. The term of this Licence shall be **twenty (20) years** and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Water Stewardship. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.
12. This Licence expires automatically upon the loss of the legal control of the land on which the WORKS are located unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.
13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Executive Director, Infrastructure and Operations Division, not later than February 1st of the following year.
14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.
15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to other currently existing wells, dugouts, or other forms of supply, which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.
16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

COPY

In witness whereof I the undersigned hereby agree to accept the aforesaid Licence on the terms and conditions set forth therein and hereby set my hand and seal this 8TH day of JULY A.D. 20 05.

SIGNED, SEALED AND DELIVERED
in the presence of

[Signature]
Witness

} [Signature] (Seal)
Licensee **CHIEF ADMINISTRATIVE OFFICER
RM OF EAST ST. PAUL**

Canada, PROVINCE OF MANITOBA To Wit:

I, _____ of the _____
of _____ in the Province of Manitoba, MAKE OATH AND SAY:

1. That I was personally present and did see _____
the within named party, execute the within Instrument.
2. That I know the said _____
and am satisfied that he/she is of the full age of eighteen years.
3. That the said Instrument was executed at _____
aforesaid and that I am subscribing witness thereto.

COPY

SWORN BEFORE me at the _____
in the Province of Manitoba this _____ day of _____ A.D. 20 _____.

} _____
A COMMISSIONER FOR OATHS
in and for the Province of Manitoba
Witness

My Commission expires _____

Issued at the City of Winnipeg, in the Province of Manitoba, this 10 day of July A.D. 20 05.

[Signature]
The Honourable the Minister of Water Stewardship

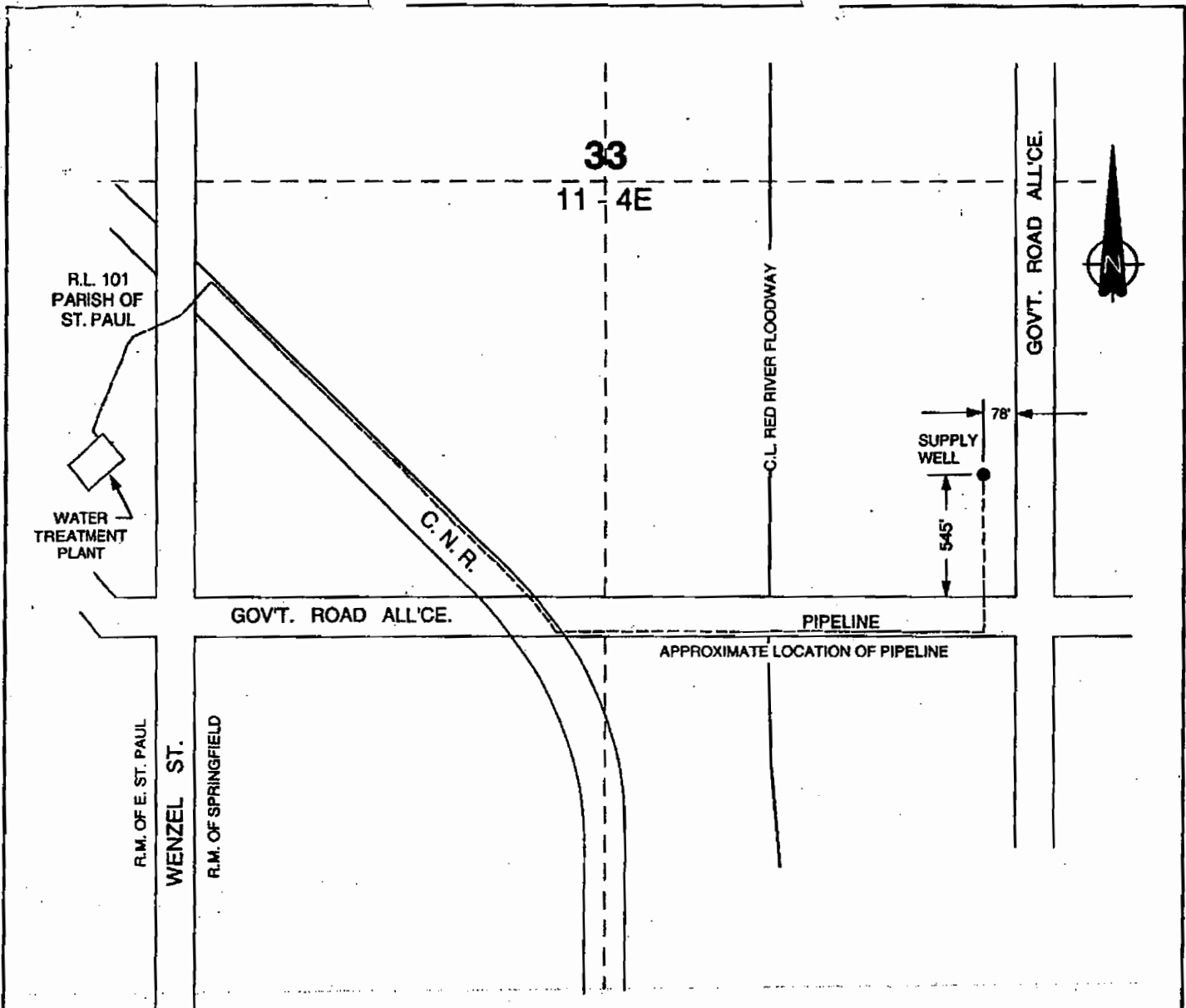


EXHIBIT "A"
 THIS PLAN IS AN INTEGRAL PART OF
 LICENSE NO. 2005-060
 ISSUED UNDER THE WATER RIGHTS ACT

N.T.S.

COPY

LOCATION PLAN OF PRODUCTION WELL
 FOR
THE R. M. OF EAST ST. PAUL
 IN S.E. 1/4 SEC. 33 - 11 - 4E

ANNEX B-3

WATER RIGHTS LICENSE 2007-074

**Water Stewardship**

*Regulatory and Operational Services Division
Regulatory Services Branch
Water Use Licensing Section
Box 16, 200 Saulteaux Crescent
Winnipeg MB R3J 3W3*

Telephone : (204) 945-3983
Fax : (204) 945-7419

RECEIVED
SEP 20 2007

September 15, 2007

File: East St. Paul, The R.M. of (-1)

The Rural Municipality of East St. Paul
3021 Birds Hill Road
East St. Paul MB R2E 1A7

Dear Sir or Madam:

Herewith you will find your copy of Licence No. 2007-074 issued under The Water Rights Act. This licence will expire on September 5, 2027. You may apply for renewal of this licence not more than 365 days and not less than 90 days prior to the expiry date.

I have also enclosed a form that may be used to record your daily and annual water use as per Clause 13 of your licence. This form is to be completed and returned to this Branch no later than February 1st of the following year. Additional water use forms are available on-line at www.gov.mb.ca/waterstewardship under *Licensing, Regulation & Policy – Water Use Licensing – Forms*.

If you have any questions regarding this licence please contact John Little in Winnipeg at 945-7424.

Yours truly,

Shirley P. Romano
Database Manager
Water Use Licensing Branch

Enclosures

cc: John Little

SPR:spr

Manitoba
Water Stewardship
Water Licensing Branch

Box 16
200 Saulteaux Crescent
Winnipeg MB R3J 3W3



Annual Water Use Report for 20____
Rapport annuel de 20____
sur l'utilisation de l'eau conformément à

Gestion des ressources
hydriques Manitoba
Direction des licences d'utilisation
de l'eau

C.P. 16
200, croissant Saulteaux
Winnipeg MB R3J 3W3

Pursuant to The Water Rights Act/
la Loi sur les droits d'utilisation de l'eau

LICENSEE'S NAME/ NOM DU TITULAIRE DE LA LICENCE	LICENCE NO./ N° DE LA LICENCE
POST OFFICE ADDRESS/ ADRESSE POSTALE	PHONE NO. N° DE TELEPHONE

SOURCE OF WATER SUPPLY (CHECK ONE)
SOURCE D'APPROVISIONNEMENT EN EAU (COCHER UNE CASE) **WELL/
PUITS**

LOCATION OF PUMP (OR WELL):/
EMPLACEMENT DE LA POMPE OU DU PUIXS: **SURFACE WATER/
EAU DE SURFACE** (Name of River, Creek, etc./Nom de la rivière, du ruisseau, etc.)

QUARTER/ QUART	SECTION/ SECTION	TOWNSHIP/ TOWNSHIP	RANGE/ RANG	OR OTHER (SPECIFY) OU AUTRE EMPLACEMENT (PRÉCISER)

DESIGN PUMPING RATE:/ **LITRES PER SECOND/
DEBIT DE POMPAGE ENVISAGE:** **LITRES À LA SECONDE** _____ **OR OTHER (SPECIFY)/**
OU AUTRE DÉBIT (PRÉCISER) _____

NOTE 1:/ **QUANTITIES OF WATER IN TABLE BELOW EXPRESSED IN (CHECK ONE)**
NOTA 1: **LES QUANTITÉS D'EAU FIGURANT CI-DESSOUS SONT INDICUÉES (COCHER UNE CASE):**

**LITRES/
EN LITRES** **DECAMETRES
EN DÉCAMÈTRES**

OTHER (SPECIFY):/
AU MOYEN D'UNE AUTRE UNITÉ DE MESURE (PRÉCISER) _____

METER READING DECEMBER 31/20____ / RELEVÉ DU COMPTEUR 31 DÉCEMBRE 20____								
DAY OF MONTH JOUR DU MOIS	JANUARY/JANVIER		FEBRUARY/FÉVRIER		MARCH/MARS		APRIL/AVRIL	
	METER READING/ RELEVÉ DU COMPTEUR	MONTHLY CONSUMPTION/ CONSOMMATION MENSUELLE	METER READING/ RELEVÉ DU COMPTEUR	MONTHLY CONSUMPTION/ CONSOMMATION MENSUELLE	METER READING/ RELEVÉ DU COMPTEUR	MONTHLY CONSUMPTION/ CONSOMMATION MENSUELLE	METER READING/ RELEVÉ DU COMPTEUR	MONTHLY CONSUMPTION/ CONSOMMATION MENSUELLE
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31								
TOTAL/ TOTAUX								

NOTE2:/
NOTA2:
LICENSEE MUST COMPLETE "ANNUAL WATER USE REPORT" FOR EACH CALENDAR YEAR AND FORWARD THE REPORT TO THE WATER LICENSING BRANCH AT THE ABOVE ADDRESS NOT LATER THAN FEB. 1 OF THE FOLLOWING YEAR./
CHAQUE ANNÉE CIVILE, LE TITULAIRE DOIT REMPLIR LE RAPPORT ANNUEL SUR L'UTILISATION DE L'EAU ET LE RETOURNER, AU PLUS TARD LE 1^{er} FÉVRIER DE L'ANNÉE SUIVANTE, DIRECTION DES LICENCES D'UTILISATION DE L'EAU, SISE À L'ADRESSE SUSMENTIONÉE.

**Licence to Use Water for
Municipal-Distribution System
Purposes**



Issued in accordance with the provisions of
The Water Rights Act and regulations made thereunder.

Licence No.: **2007-074**

U.T.M.: Zone 14 644560 E
5536458 N

Know all men by these presents that in consideration of and subject to the provisos, conditions and restrictions hereinafter contained, the Minister of Water Stewardship for the Province of Manitoba does by these presents give full right and liberty, leave and licence to **The Rural Municipality of East St. Paul** in the Province of Manitoba (hereinafter called "the LICENSEE") to divert water from a **sand and gravel** aquifer by means of four water wells, pumps, pipeline(s) and other appurtenances (hereinafter called "the WORKS"), located on the following described lands:

the Southeast Quarter of Section 33, in Township 11 and Range 4, East of the Principal Meridian in Manitoba,

and more particularly shown on a plan filed in the office of the Executive Director, Regulatory and Operational Services Division, a copy of which plan is hereto attached and marked Exhibit "A" for **municipal-distribution system** purposes on the following described lands:

River Lots 60 to 199, in the Parish of East St. Paul.

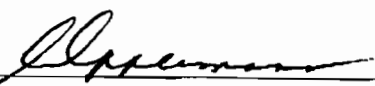
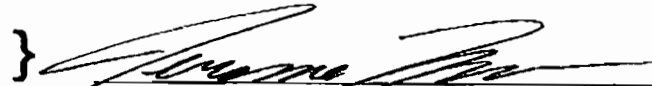
This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulations and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **municipal-distribution system** purposes.
2. The WORKS shall be operated in accordance with the terms herein contained.
3. a) The maximum rate at which water may be diverted pursuant hereto shall not exceed **0.0114 cubic metres per second (0.4 cubic feet per second)**
b) The total quantity of water diverted in any one year shall not exceed **358 cubic decametres (290.23 acre feet)**
4. Without limiting condition 5 of this Licence, the LICENSEE, on behalf of itself and its employees and agents, hereby releases Her Majesty the Queen in right of the Province of Manitoba and the Manitoba Floodway Authority from all claims, liabilities or demands relating to:
 - a) any effects of surface water entering the wells, including any claims, liabilities or demands resulting from the operation of the Red River Floodway (including any expansion of the Red River Floodway); and
 - b) any effects to water quality resulting from or relating to the operation of the Red River Floodway (including any expansion of the Red River Floodway).
5. The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for **municipal-distribution system** purposes.
6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.
7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Executive Director, Regulatory and Operational Services Division, for cancellation on behalf of the Minister.
8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.
9. This Licence may be amended, suspended or cancelled by the Minister in accordance with The Water Rights Act by letter addressed to the LICENSEE at **3021 Birds Hill Road, East St. Paul, MB, R2E 1A7, Canada** and thereafter this Licence shall be determined to be at an end.
10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental, lease, or other agreement, of the lands on which the WORKS shall be placed and the water shall be used.

- 11. The term of this Licence shall be **twenty (20) years** and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Water Stewardship. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.
- 12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.
- 13. The LICENSEE shall keep records of daily and annual water use and shall provide a copy of such records to the Executive Director, Regulatory and Operational Services Division, not later than February 1st of the following year.
- 14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.
- 15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to other currently existing wells, dugouts, or other forms of supply, which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.
- 16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

In witness whereof I the undersigned hereby agree to accept the aforesaid Licence on the terms and conditions set forth therein and hereby set my hand and seal this 20 day of AUGUST A.D. 20 07.

SIGNED, SEALED AND DELIVERED
in the presence of

 Witness _____ Licensee _____ (Seal)
 CAROL ANN ... CAO - RM OF EAST ST. PAUL
 Canada, PROVINCE OF MANITOBA To Wit:
 MY COMMISSION EXPIRES VENEUELE 2007

I, _____ of the _____
of _____ in the Province of Manitoba, MAKE OATH AND SAY:

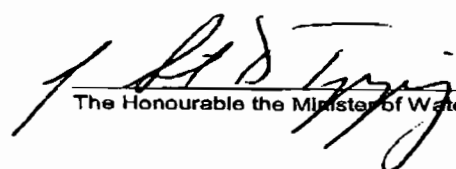
- 1. That I was personally present and did see _____ the within named party, execute the within Instrument.
- 2. That I know the said _____ and am satisfied that he/she is of the full age of eighteen years.
- 3. That the said Instrument was executed at _____ aforesaid and that I am subscribing witness thereto.

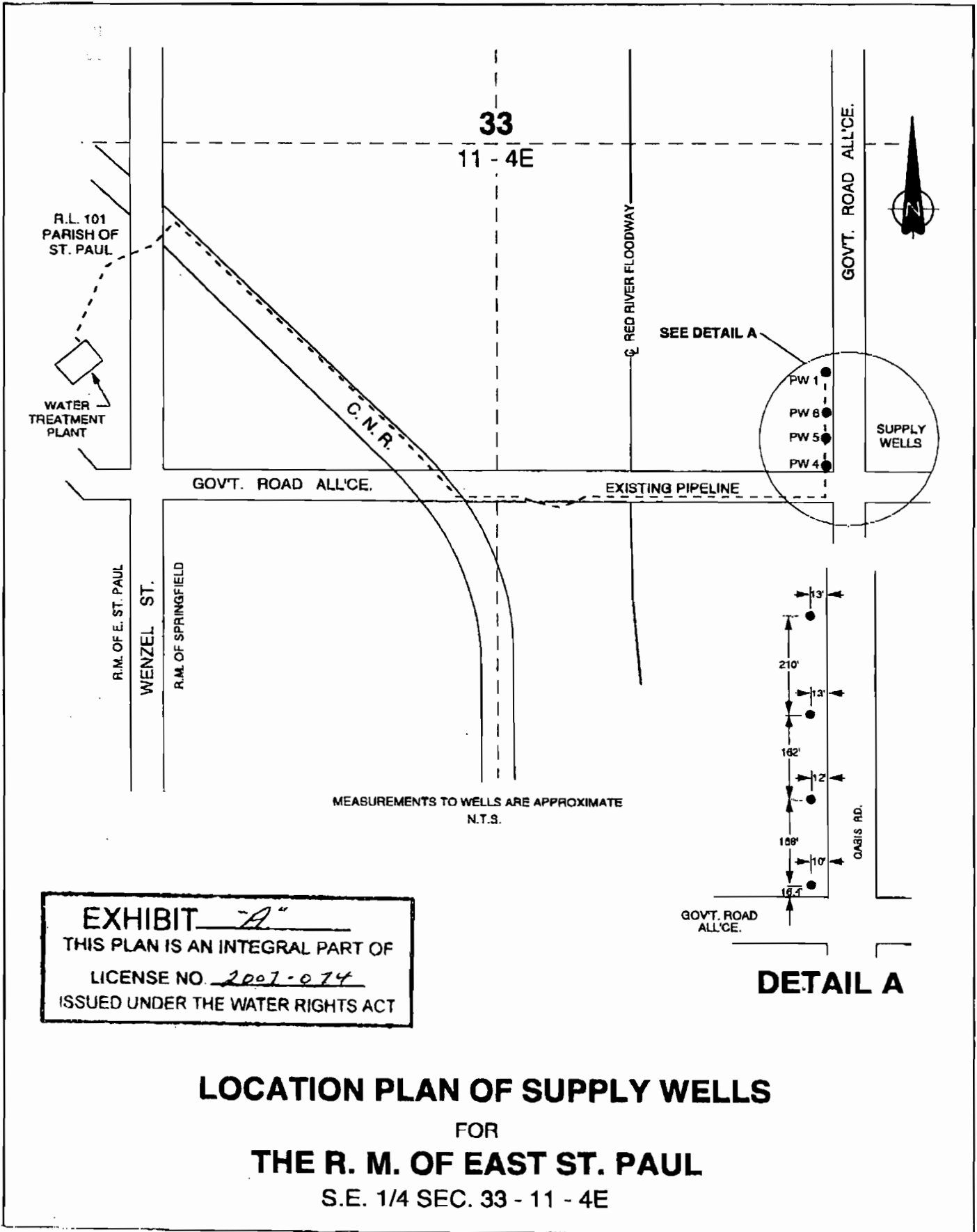
SWORN BEFORE me at the _____
in the Province of Manitoba this _____ day of _____ A.D. 20 _____

_____ } _____
 A COMMISSIONER FOR OATHS in and for the Province of Manitoba Witness

My Commission expires _____

Issued at the City of Winnipeg, in the Province of Manitoba, this 5 day of SEPTEMBER A.D. 20 07.


 The Honourable the Minister of Water Stewardship



APPENDIX C

WATER SYSTEM USE

REFERENCE: R.M. OF EAST ST. PAUL WATER DISTRIBUTION MASTER PLAN

4.3.1 Equivalent Residential Units (ERUs)

At present, all new residential lots that are created under development agreements, or lot splits that will be able to access the Municipal sewer and water systems are charged a one time fee to allow the connection of the house to the sewer or water system. This charge is generally understood to cover the capital cost of providing one residential lot's worth of sewage treatment or water treatment plant capacity.

Based on a report completed by Stantec in 2004 and an analysis of typical residences in the Municipality, East St. Paul has set the typical residential water usage to be based on 40 fixture units. The Canadian Plumbing Code provides conversion factors to convert actual fixtures as installed or indicated on building plans into fixture units for comparison.

All residences are assumed to be equal to one equivalent residential unit (ERU) for connection fee purposes. However, for commercial or institutional customers, the total fixture units are converted to ERUs to allow a determination of the connection fees at the time of building permit issuance.

If actual usage is determined to be significantly different from the ERUs initially assessed, procedures are in place to adjust the charges in the future.

4.4 WATER USAGE DATA

The volume of treated water distributed to municipal customers is recorded at the WTP by Public Works staff on a daily basis. Although the initial phase of the water treatment and distribution system was constructed in 1995, we have utilized data from 1998 to 2007 inclusive for this analysis. We have excluded the first few years of operational data because they are not believed to be representative of current usage patterns.

Table 4.1 below summarizes the total volume of residential treated water consumed in the R.M. on an annual basis as well as average daily per capita usage from 1998 through 2007.

Table 4.1 - Historical Residential Treated Water Consumption

Year	New Residential Connections	Total Residential Connections	Average Daily Usage(L)	Per Capita Usage(Lpcpd)
1998	101	204	190,806	307
1999	84	288	228,667	257
2000	61	349	305,513	281
2001	85	434	388,307	286
2002	84	518	479,142	294
2003 ¹	77	595	551,391	294

¹ The total number of ERUs connected to the system is based on an estimated 2003 service population of 1904 (Water Supply Assessment, Stantec 2004). This population is equivalent to 595 ERUs.

2004	96	691	517,575	237
2005	47	738	550,539	236
2006	15	753	829,775	348
2007	16	769	623,146	256
Average				280

A per capita water consumption of 270 lpcpd (litres per capita per day) was selected for this study. Since water conservation and education has become an important part of development planning the R.M.

In addition to these residential consumers, additional commercial/business consumers (Table 4.2) are included in the system demand calculations. The number of extra ERU's added to the system to account for these demands was calculated from the annual consumption data provided by the R.M.

Table 4.2 - Commercial/Business ERU's and Total ERU's

Year	Commercial ERU's Added to System	Total ERU's (Residential + Commercial)
1997	1.8	105
1998	0	206
1999	1	291
2000	0	352
2001	7.0	444
2002	3.4	531
2003	0	608
2004	0.4	705
2005	18.4	770
2006	17.4	802
2007	0	818

4.5 PEAKING FACTORS

Average daily usage figures provide the total volume of water that must be supplied to meet the demand over a 24-hour period; however, the demand is of course not constant so the system must be designed to accommodate daily and hourly peaks. The flows used in designing a water distribution system are the maximum day and peak hour flows. These flows are typically expressed as a factor (peaking factor) of the average daily flow.

The maximum daily flow is the maximum system demand over any 24-hour period within a calendar year. The peak hour flow is the maximum system demand within any one-hour period within a calendar year. Typically, system performance is analyzed under two specific conditions:

- maximum day demand plus an allowance for fire flow; and,
- peak hour demand.

Table 4.3 shows the maximum day demands for each calendar year from 1998 to 2007 based on daily usage records provided by the R.M.

Table 4.3 - Maximum Day Values

Year	Average Daily Usage(L)	Maximum Day Usage(L)	Date of Maximum Usage	Maximum Day Factor
1998	192,622	864,000	July 18	4.5
1999	231,345	842,000	July 30	3.6
2000	308,192	955,000	August 2	3.1
2001	397,019	1,716,000	July 9	4.3
2002	490,827	3,767,000	July 15	7.7
2003	563,077	2,519,000	July 14	4.5
2004	529,625	1,744,000	July 25	3.3
2005	578,518	1,491,000	August 24	2.6
2006	882,299	2,526,000	July 12	2.9
2007	670,955	2,246,000	July 25	3.3
Average				4.0

A maximum day factor of 3.0 was selected for this analysis since over the last 4 years the peaking factor has started to trend towards this number. We expect that continuing education on the importance of water conservation and initiatives towards landscaping features in new developments that require less water will have a beneficial impact on peak day demands. In addition, as the community continues to grow the peaks should be less prominent.

Hourly usage data is not currently recorded by the R.M. Based on the American Water Works Association recommendations we have assumed a peak hour demand factor of 4.0 for the system analysis.

Commercial and industrial peaking factors used were generally accepted industry standards, however, water demands for these types of developments are very specific to the type of business. For this study we have assumed an average daily demand of 16,800 litres per hectare per day (1500 IGAD) and peak hour factors of 1.3 and 1.7, respectively. We have

APPENDIX D
WATER CONSERVATION

THE RURAL MUNICIPALITY OF EAST ST. PAUL

BY-LAW NO. 2002 - 31

**BEING A BY-LAW OF
THE RURAL MUNICIPALITY OF EAST ST. PAUL
TO REGULATE THE SPRINKLING OF WATER**

WHEREAS The Municipal Act, S.M. 1996, c. 58 Cap. M225 provides in part as follows:

“232(1) A council may pass by-laws for municipal purposes respecting the following matters:

- (a) The safety, health, protection and well-being of people and the safety and protection of property;....
- (l) public utilities;...
- (o) the enforcement of by-laws.

232(2) Without limiting the generality of subsection (1), a council may in a by-law passed under this Division:

- (a) regulate or prohibit....
- (c) deal with any development, activity, industry, business, or thing in different ways, or divide any of them into classes and deal with each class in different ways;
- (d) establish fees or other charges for services, activities or things provided or done by the municipality or for the use of property under the ownership, direction, management or control of the municipality;
- (e) subject to the regulations, provide for a system of licences, permits or approvals, including any or all of the following:
 - (i) establishing fees, and terms for payment of fees, for inspections, licences, permits and approvals, including fees related to recovering the costs of regulation,
 - (v) providing for the duration of licences, permits and approvals and their suspension or cancellation or any other remedy, including undertaking remedial action, and charging and collecting the costs of such action, for failure to pay a fee or comply with a term or condition or with the by-law or for any other reason specified in the by-law, and....

233 A by-law under clause 232(1)(c) (activities or things in or on private property) may contain provisions only in respect of....

(d) Activities or things that in the opinion of the council are or could become a nuisance, which may include noise, weeds odours, unsightly property, fumes and vibrations.

250(1) A municipality is a corporation and, subject to this Act, has the rights and is subject to the liabilities of a corporation and may exercise its powers for municipal purposes.

250(2) Without limiting the generality of subsection (1), a municipality may for municipal purposes do the following:

(a)

(b)

(c) acquire, establish, maintain and operate services, facilities and utilities;

252(1) A municipality exercising powers in the nature of those referred to in clauses 250(2)(b), (c) and (e) may set terms and conditions in respect of users, including

(a) setting the rates or amounts of deposits, fees and other charges, and charging and collecting them;

(b) providing for a right of entry onto private property to determine compliance with other terms and conditions, to determine the amount of deposits, fees or other charges, or to disconnect a service; and

(c) discontinuing or disconnecting a service and refusing to provide the service to users who fail to comply with the terms and conditions.”

WHEREAS Council of the Rural Municipality of East St. Paul deems it expedient and in the best interest of the public of the Rural Municipality of East St. Paul to regulate the sprinkling of water;

NOW, THEREFORE, the Council of the Rural Municipality of East St. Paul IN OPEN SESSION DULY ASSEMBLED enacts as follows:

1.0 Definitions

1.1 Municipality – Means the Rural Municipality of East St. Paul.

1.2 Person – Means any individual, firm, partnership, association, corporation, company or organization of any kind.

1.3 Premises – Means all land and premises within the Municipality which is used as a residence and/or for commercial activity;

1.4 Sprinkle or Sprinkling – Means the application or distribution of water on lawns or boulevards by sprinkling or spraying but does not include the method known as “drip irrigation”, i.e., supplying water to plants through capillary tubing at a rate of a few drops a minute as and when required.

2.0 Empowerment –

The Superintendent of Public Works for the Municipality is hereby authorized to impose restrictions to regulate the use of water for non-essential purposes and, where he deems appropriate, may issue permits to relax restrictions in specific circumstances. These restrictions shall only apply to residents on the Municipality’s Water Supply.

3.0 Prohibition

3.1 Between the last Saturday of May and September 30th in each year, no person shall sprinkle or allow sprinkling except in compliance with the provision of this By-law.

4.0 Sprinkling Restrictions Stage I

4.1 No person shall sprinkle or allow sprinkling except at Premises:

(a) with even numbered civic addresses on Wednesdays, Fridays and Sundays between the hours of 4:00 a.m. and 9:00 a.m. and between the hours of 7:00 p.m. and 10:00 p.m.; and

(b) with odd numbered civic addresses on Tuesdays, Thursdays and Saturdays between the hours of 4:00 a.m. and 9:00 a.m. and between the hours of 7:00 p.m. and 10:00 p.m.

4.2 Sprinkling Restrictions Stage II

If the Public Works Superintendent for the Municipality notifies the Chief Administrative Officer of the Municipality that a reduction in water use is necessary requiring Stage II restrictions, no person shall:

- (a) sprinkle or allow sprinkling except at Premises:
 - (i) with even numbered civic addresses on Wednesdays and Sundays between the hours of 4:00 a.m. and 9:00 a.m. and between the hours of 7:00 p.m. and 10:00 p.m.;
 - (ii) with odd numbered civic addresses on Tuesdays and Fridays between the hours of 4:00 a.m. and 9:00 a.m. and between the hours of 7:00 p.m. and 10:00 p.m.
- (b) wash down or hose sidewalks or driveways or other outdoor surfaces at any time;
- (c) wash motor vehicles with a hose unless the hose is equipped with a shut off device that is spring loaded and operates by using hand pressure.

4.3 Sprinkling Restrictions Stage III

If the Superintendent of Public Works for the Municipality notifies the Chief Administrative Officer of the Municipality that a reduction in water use is necessary requiring Stage III restrictions, no person shall:

- (a) sprinkling or allow sprinkling at any time;
- (b) wash down or hose sidewalks or driveways or other outdoor surfaces at any time;
- (c) at any time water or spray any trees, shrubs, flowers, or vegetables (except for larger gardens where hand watering is impractical) or wash motor vehicles with a hose unless such spraying, watering or washing is done by way of a hand held container or hose equipped with a shut off device that is spring loaded and operates by using hand pressure.

- 4.4 The provisions of Section 4.1 and 4.3 inclusive do not apply to a person who has a valid and subsisting permit issued under Section 6.1 or to the class of water users exempted in Section 7.1, and the provisions of paragraphs 4.2(b) and 4.3(b) do not apply to restaurants or other commercial eating establishments which may be required by law to clean outdoor areas to comply with health standards.

5.0 Notice

5.1 Sufficient notice of the restrictions set out in Section 4 of this By-law or in any change or revocation thereof shall be deemed to have been given by an announcement made on behalf of the Municipality through one publication in a newspaper having circulation in the Municipality or in the form of a newsletter not less than 72 hours prior to the commencement, change or revocation of the restrictions.

6.0 Permits

6.1 A person who has installed a new lawn, either by placing sod or turf or by seeding, or who has installed new landscaping on a substantial part of the outdoor portion of a Premises may apply to the Municipality for a permit which will entitle the permittee to sprinkle outside the restricted times.

6.2 The Municipality shall issue a permit to an applicant pursuant to Section 6.1 upon payment to the Municipality of a fee in the amount of \$30.00 for a single family dwelling unit and in an amount determined by Council for a multi-family dwelling unit or commercial Premises.

6.3 A permit issued under Section 6.1 shall be valid for period of 21 days after the date of its issue and shall be conspicuously displayed at the Premises for which it was issued.

6.4 After the expiration of a permit issued under Section 6.1 a person may apply for and obtain only one subsequent renewal of the permit for the same Premises in any one calendar year for a fee under Section 6.2.

7.0 Exemptions

7.1 The provisions of Section 4.1 to 4.3 inclusive shall not apply to the following class of water users which rely upon the steady supply and use of water:

- (a) licensed nurseries;
- (b) licensed golf courses and driving ranges;
- (c) playing fields and public gardens owned by the Municipality where failure to water would result in permanent loss, will be exempt but on a very selective basis as the need arises;
- (d) for dust control if safety or sanitary concerns exist or for compaction during construction if no reasonable alternative exists.

8.0 Penalty

8.1 Any person found guilty of any breach of any of the provisions of this By-law shall, on summary conviction, be liable to pay a fine of not less than One Hundred (\$100.00) Dollars and not more than Five Hundred (\$500.00) Dollars in addition to costs for each offence.

8.2 Where the contravention, refusal, neglect, omission, or failure, continues for more than one day, the person is guilty of separate offence for each day that it continues.

9.0 Existing By-laws

9.1 This By-law is supplementary to the Municipality's By-law No. 96-20 as amended by By-laws No. 96-43, 97-15 and 99-11 and any conflict shall be governed by the provisions of this By-law.

DONE AND PASSED by the Council of the Rural Municipality of East St. Paul in Open session assembled at East St. Paul, in Manitoba, this 18th day of December, 2002.

Original signed by Deputy Reeve Lawrence

Morris

Reeve

Original signed by Jerome Mauws

Chief Administrative Officer

Read a first time the 4th day of December, 2002.

Read a second time the 18th day of December, 2002.

Read a third time the 18th day of December, 2002.

APPENDIX E
WATER SUPPLY WELLS

LOCATION: SE33-11-4E

Owner: EAST ST PAUL

Driller: Friesen Drillers Ltd.

Well Name: BH 95-04 SOUTH SUPPLY WELL #1

ESP PW4

Well Use: PRODUCTION

Water Use: Municipal

Date Completed: 1995 Oct 01

WELL LOG

From (ft.)	To (ft.)	Log
0	10.0	SANDY CLAY TILL
10.0	22.0	FINE SANDY TILL
22.0	42.0	FINE SANDY TILL
42.0	51.0	FINE SAND
51.0	60.0	FINE SANDY GRAVEL
60.0	62.0	COARSE SAND
62.0	73.5	COARSE SAND AND GRAVEL
73.5	75.0	TILL
75.0	78.5	LIMESTONE

WELL CONSTRUCTION

From (ft.)	To (ft.)	Casing Type	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0	61.0	CASING	8.00			WELDED	BLACK IRON
58.0	63.0	PERFORATIONS		7.70	8.00	0.005	WIRE WOUND S. S.
63.0	73.0	PERFORATIONS			8.00	0.140	WIRE WOUND S. S.
73.0	78.0	PERFORATIONS			8.00	0.005	WIRE WOUND S. S.

Top of Casing: 3.0 ft. above ground

No pump test data for this well.

REMARKS

EAST ST PAUL WATER SUPPLY (BIRDS HILL VILLAGE) ,K PACKER AT 58FT.

LOCATION: SE33-11-4E

Owner: EAST ST PAUL
Driller: Friesen Drillers Ltd.
Well Name: BH95-03 NORTH SUPPLY WELL ESP PW1
Well Use: PRODUCTION
Water Use: Municipal
Date Completed: 1995 Feb 13

WELL LOG

From (ft.)	To (ft.)	Log
0	12.0	SANDY CLAY WITH GRAVEL
12.0	35.0	SANDY WITH SMALL PEBBLES
35.0	47.0	COARSE SAND WITH FINES
47.0	67.0	COARSE SANDY GRAVEL
67.0	71.0	SILTY SAND TILL
71.0	71.5	LIMESTONE

WELL CONSTRUCTION

From (ft.)	To (ft.)	Casing Type	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0	52.5	casing	10.00				
52.5	65.5	perforations		10.00	0.100	WIRE WOUND	S. S.

Top of Casing: 3.7 ft. above ground

PUMPING TEST

Date: 1995 Feb 16
Pumping Rate: 83.0 Imp. gallons/minute
Water level before pumping: 43.0 ft. below ground
Pumping level at end of test: 51.0 ft. below ground
Test duration: 68 hours, minutes
Water temperature: ?? degrees F

REMARKS

EAST ST PAUL WATER SUPPLY (BIRDS HILL VILLAGE), APPROX 30 M W OF N/S
RD ALLOW CHEMICAL ANALYSIS (1995), GROUND LEVEL ELEV MEASURED 242.090
M

Driller's Report

Well Location	QTR SE SEC 33 TWP 11 RGE 4 E <input checked="" type="checkbox"/> W <input type="checkbox"/>				Location Sketch of Well
	R. Lot	Parish		# 001 South Well PWS	
Well Owner	Name R.M. of East St. Paul				
	Address				
	Phone				
Well Identification					
Well Use	Production <input checked="" type="checkbox"/>	Test Well <input type="checkbox"/>	Recharge <input type="checkbox"/>	Observation <input type="checkbox"/>	
Water Use	Domestic <input type="checkbox"/>	Livestock <input type="checkbox"/>	Industrial <input type="checkbox"/>	Irrigation <input type="checkbox"/>	
	Air-condition <input type="checkbox"/>	Other <input checked="" type="checkbox"/>	Specify	Municipal <input type="checkbox"/>	

Date well completed		November 15 2000		Water Record
Depth Below Ground in Feet	DESCRIPTION WELL LOG			
0	15	Till		
15	20	Silty Till		
20	30	Silty Sand		
30	35	Silty Sand & Gravel		
35	68	Sand & Gravel		
68	72	Boulders & Gravel		
72	73	Till		
73	77	Limestone - Till		

WELL CONSTRUCTION										TYPE	MATERIAL	MAKE
Depth Below Ground Level	Casing	Open Hole	Perforations	Gravel Pack	Casing Grout	Inside Diameter	Outside Diameter	Screen Slot size				
0	60	<input checked="" type="checkbox"/>				8	8 5/8			Weld	Black Iron	
56	61	<input checked="" type="checkbox"/>				7	7 1/2	00		Wire Wound	Stainless Steel	Johnson
61	71		<input checked="" type="checkbox"/>			7	7 1/2	120		Wire Wound	Stainless Steel	Johnson
71	76	<input checked="" type="checkbox"/>				7	7 1/2	00		Wire Wound	Stainless Steel	Johnson

Top of Casing 2.4 Feet above Below

REMARKS:

PUMPING TEST				CONTRACTOR	
Date of Test:	November 14 2000			License Number	595 00
Pumping	<input checked="" type="checkbox"/>	Flowing	<input type="checkbox"/>	Rate	54 U.S.G.P.M.
Water level before pumping	40.52	Above	<input type="checkbox"/>	Below	<input checked="" type="checkbox"/>
Pumping level at end of test	59.02	Above	<input type="checkbox"/>	Below	<input checked="" type="checkbox"/>
Duration of test	3 HRS	Minutes			
Recommended pumping rate	I.G.P.M.			Drill Operator	James Friesen
Depth pump intake at	Feet below ground level			Signature of Contractor	

SOUTH WEL

EA ST. PAUL

PW5

GROUND LEVEL

8-10 PITLESS UNIT

4" ELBOW

8" FLANGES

8 5/8" O.D. STEEL CASING

K-PACKER

00 SLOT 7 1/2" O.D. S.S. SCREEN

CASING SHOE

120 SLOT 7 1/2" O.D. S.S. SCREEN

00 SLOT S.S. SCREEN

STAINLESS STEEL

60' BOTTOM OF CASING

61'

10'

71'

56'

20'

76'

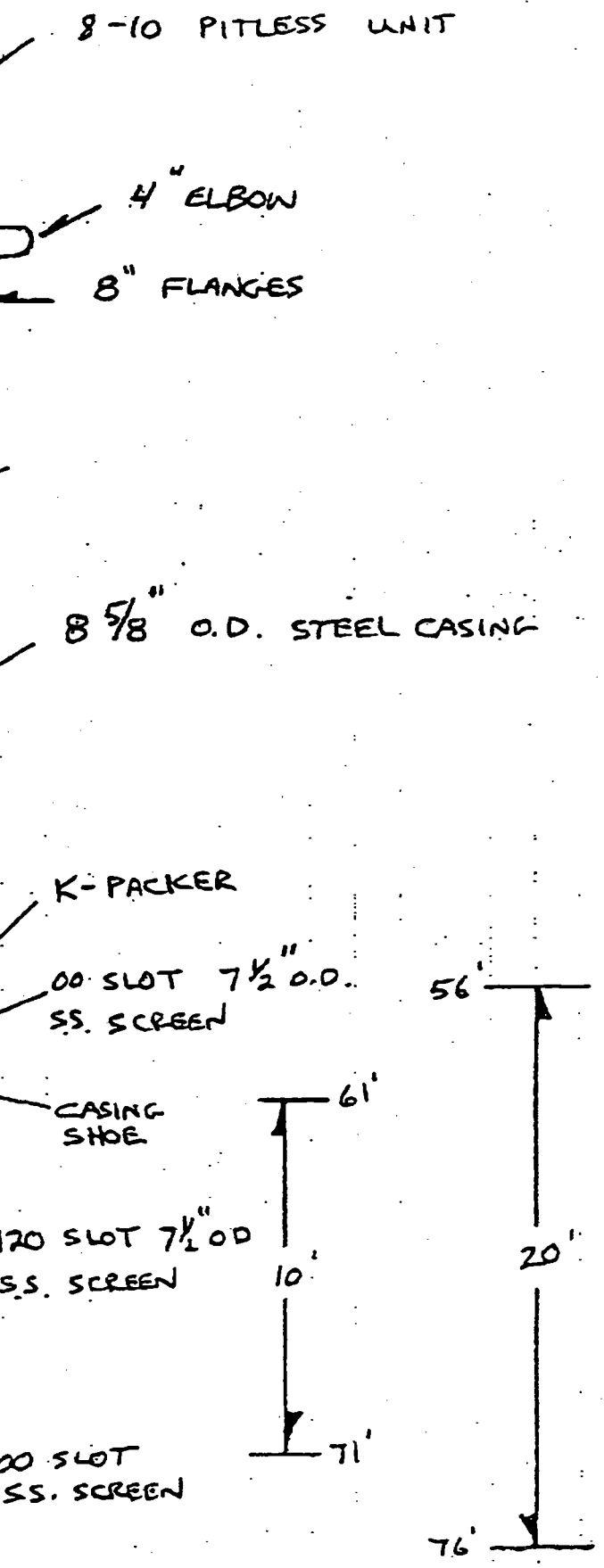
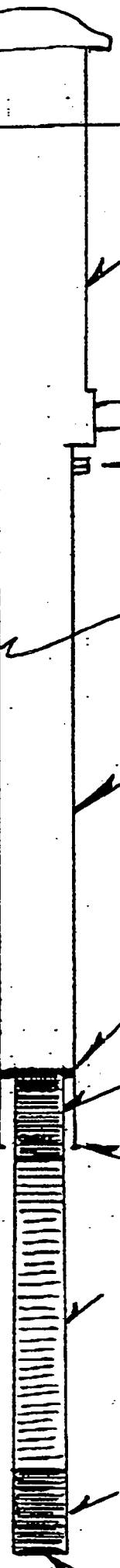
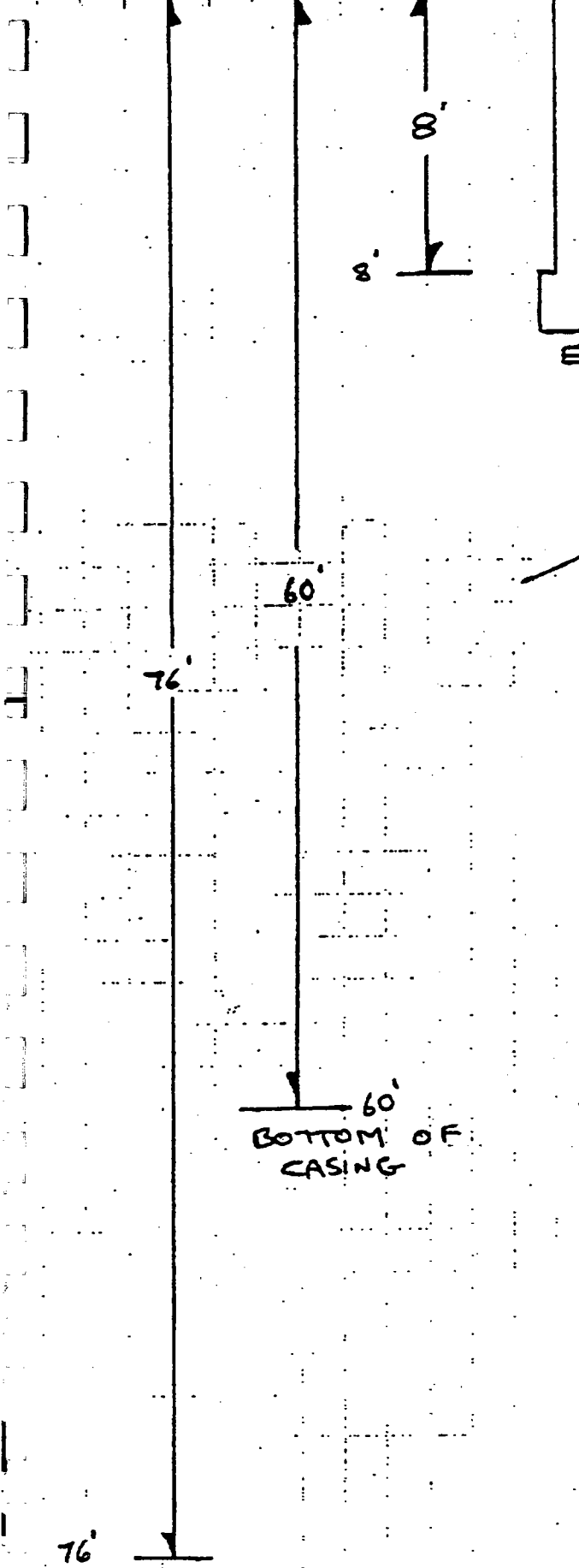
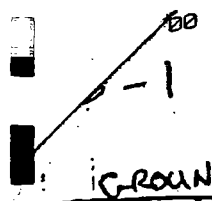
76'

60'

8'

8'

76'



Driller's Report

Well Location	QTR SE SEC 33 TWP 11 RGE 4 E <input checked="" type="checkbox"/> W <input type="checkbox"/>	Location Sketch of Well
	R. Lot Parish	
Well Owner	Remarks 002 North Well PW6	
	Name R.M. of East St. Paul	
	Address _____ Phone _____	
Well Identification		
Well Use	Production <input checked="" type="checkbox"/> Test Well <input type="checkbox"/> Recharge <input type="checkbox"/> Observation <input type="checkbox"/>	
Water Use	Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Industrial <input type="checkbox"/> Irrigation <input type="checkbox"/> Air-condition <input type="checkbox"/> Other <input checked="" type="checkbox"/> Specify Municipal	
Date well completed	November 15 2000	

Depth Below Ground in Feet	DESCRIPTION	WELL LOG	Water Record
0	15	Till	
15	20	Silty Till	
20	30	Gravel	
30	45	Sand	
45	74	Sand & Gravel	
74	76	Till	
76	78	Limestone	

WELL CONSTRUCTION										TYPE	MATERIAL	MAKE
Depth Below Ground Level	Casing	Open Hole	Perforations	Gravel Pack	Casing Grout	Inside Diameter	Outside Diameter	Screen Slot size				
0	61	<input checked="" type="checkbox"/>				8	8 5/8			Weld	Black Iron	
57	62	<input checked="" type="checkbox"/>				7	7 1/2	00		Wire Wound	Stainless Steel	Johnson
62	72		<input checked="" type="checkbox"/>			7	7 1/2	100		Wire Wound	Stainless Steel	Johnson
72	77	<input checked="" type="checkbox"/>				7	7 1/2	00		Wire Wound	Stainless Steel	Johnson

Top of Casing 1.65 Feet above Below

REMARKS:

PUMPING TEST	CONTRACTOR
Date of Test: November 13 2000	License Number 595 00
Pumping <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Rate 60 U.S.G.P.M.	Name Friesen Drillers Ltd.
Water level before pumping 43.41 Above <input type="checkbox"/> Below <input checked="" type="checkbox"/>	Address Box 1, Grp. 15, R.R.#1 Steinbach, MB. R0A 2A0
Pumping level at end of test 60.44 Above <input type="checkbox"/> Below <input checked="" type="checkbox"/>	Drill Operator James Friesen
Duration of test 3 HRS Minutes	
Recommended pumping rate I.G.P.M.	
With pump intake at Feet below ground level	Signature of Contractor

NORTH WELL

EA

ST. PAUL

PWG

GROUND LEVEL

8-10 PITLESS UNIT

4" ELBOW

8" FLANGES

8 5/8" O.D. STEEL CASING

K-PACKER

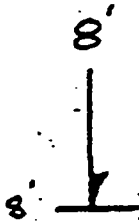
00 SLOT 7 1/2" O.D. SS. SCREEN

CASING SHOE

100 SLOT 7 1/2" O.D. SS. SCREEN

00 SLOT SS. SCREEN

STAINLESS STEEL



61'

77'

61' BOTTOM OF CASING

57'

62'

10'

72'

20'

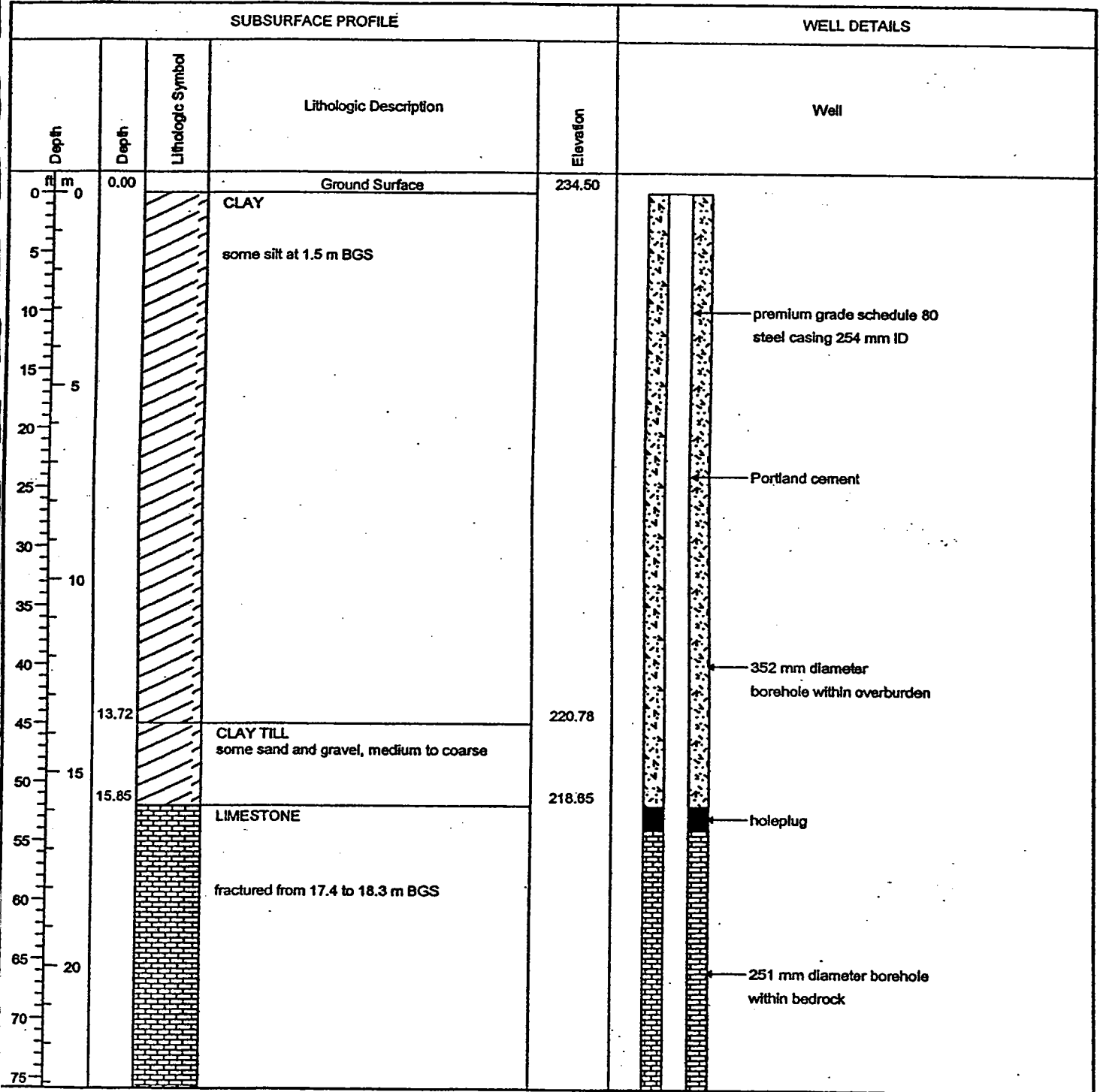
77'

77'

Borehole No.: TW1-04 (PW7)

Project: East St. Paul Water Supply Assessment
 Project No: 1112-07170
 Location: East St. Paul, Manitoba
 Contractor: Friesen Drillers Ltd.
 Drilling Method: Air & Mud Rotary

Date: 23-Feb-04
 Field Investigator: L. Veale
 Ground Surface: 234.5 m AMSL
 Top of Casing: 234.9 m AMSL



Casing interval: 0 to 18.5 m BGS
 Well seal interval: 0 to 18.5 m BGS

Notes:
 mBGS - metres below ground surface
 GS - Grab sample of cuttings



Stantec Consulting Ltd.
 49 Frederick Street
 Kitchener, Ontario
 N2H 6M7

Drawn By/Checked By: OR/LV

Stantec

Borehole No.: TW1-04 (PW 7)

Project: East St.Paul Water Supply Assessment

Date: 23-Feb-04

Project No: 1112-07170

Field Investigator: L.Veale

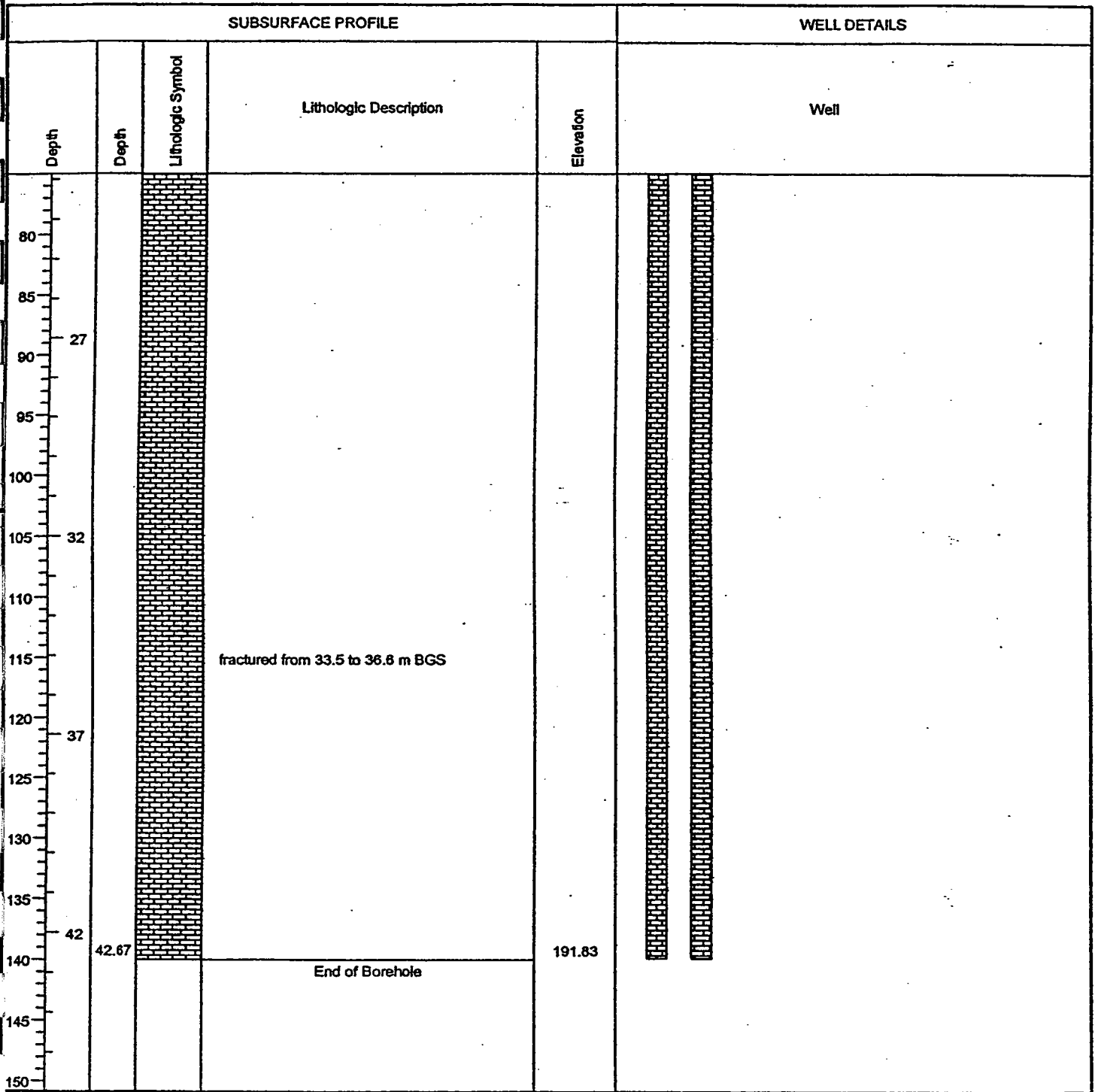
Location: East St.Paul, Manitoba

Ground Surface: 234.5 m AMSL

Contractor: Friesen Drillers Ltd.

Top of Casing: 234.9 m AMSL

Drilling Method: Air & Mud Rotary



Casing interval: 0 to 16.5 m BGS

Well seal interval: 0 to 16.5 m BGS

Notes:
 mBGS - metres below ground surface
 GS - Grab sample of cuttings



Stantec Consulting Ltd.
 49 Frederick Street
 Kitchener, Ontario
 N2H 6M7

Drawn By/Checked By: OR/LV

Stantec

PW8 (TW2-04)
enlarged well

Driller's Report

Location	QTR	SEC	TWP	RGE	E	<input checked="" type="checkbox"/> W	<input type="checkbox"/>	Location Sketch of Well
	GPS		N 49° 57' 40"	W 96° 58' 45"				
	R. Lot		Parish					
	Remarks							
Owner	Name	R.M. of East St. Paul						
	Address	c/o Stantec						
		Phone						
Identification	Well Field (Ski Hill)							
Use	Production	<input checked="" type="checkbox"/>	Test Well	<input type="checkbox"/>	Recharge	<input type="checkbox"/>	Observation	<input type="checkbox"/>
Other Use	Domestic	<input type="checkbox"/>	Livestock	<input type="checkbox"/>	Industrial	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
	Air-condition		Other	<input type="checkbox"/>	Specify			
Well completed	February 23 2005							

Depth Below Ground in Feet		DESCRIPTION WELL LOG	Water Record
0	73	Sand & Gravel	
73	140	Limestone	

WELL CONSTRUCTION											
Depth Below Ground Level	Casing	Open Hole	Perforations	Gravel Pack	Casing Grout	Inside Diameter	Outside Diameter	Screen Slot size	TYPE	MATERIAL	MAKE
0	75	X				10	10 3/4		Welded	Black Iron	
75	140	X					9 7/8				
10	75				X				Bentonite Grout		

Depth of Casing: 2 Feet above Below

REMARKS:

Well must be vented

5" PVC well overdrilled to 10"

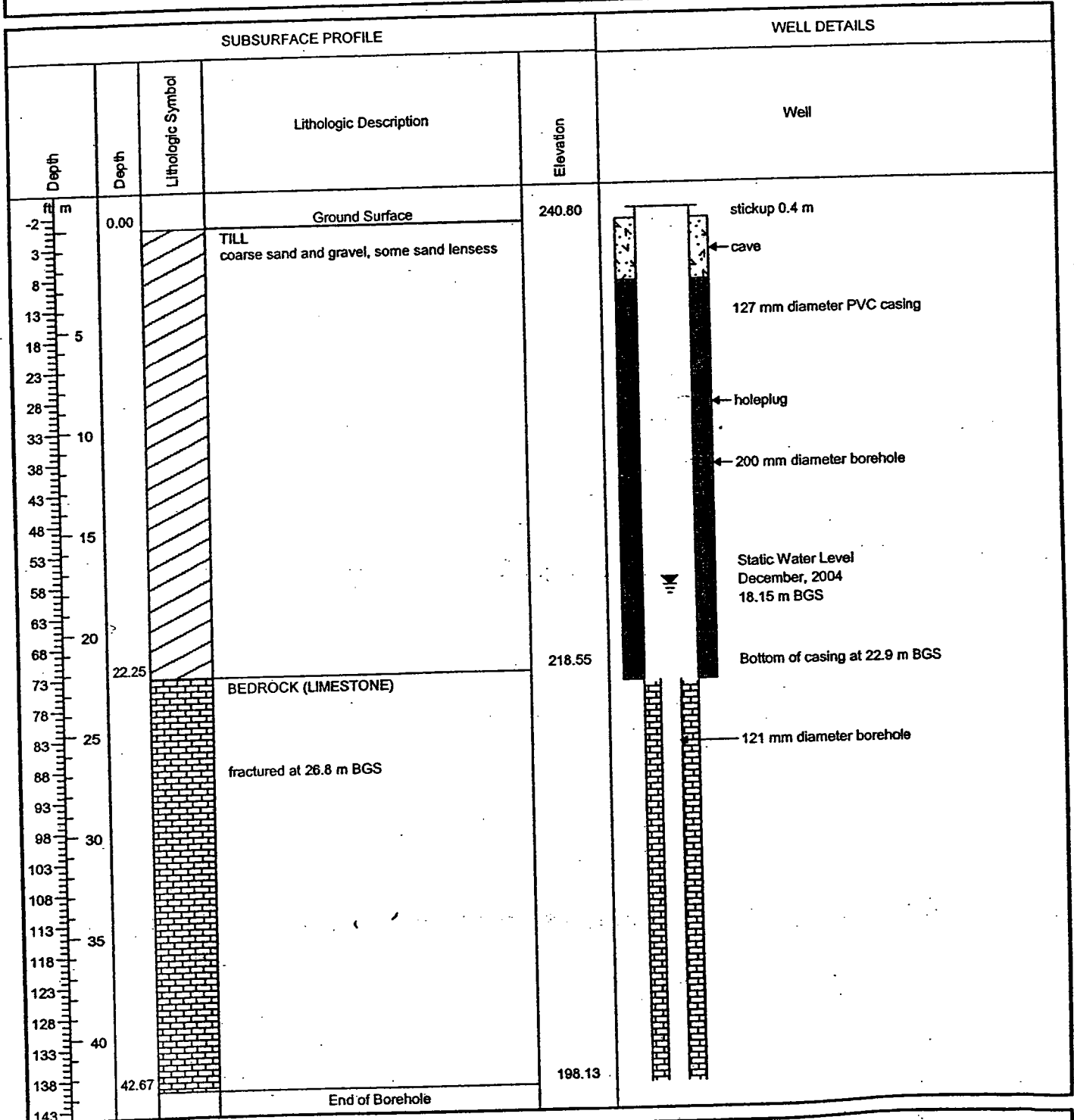
PUMPING TEST	CONTRACTOR
Date of Test: March 3 2005	License Number 595 5
Pumping <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Rate 310 U.S.G.P.M.	Name Friesen Drillers Ltd.
Water level before pumping 59' 11" Above <input type="checkbox"/> Below <input checked="" type="checkbox"/>	Address Box 1, Grp. 15, R.R.#1 Steinbach, MB. R5G 1L9
Water level at end of test 66' Above <input type="checkbox"/> Below <input checked="" type="checkbox"/>	Drill Operator James Friesen
Duration of test 72 HRS Minutes	
Recommended pumping rate I.G.P.M.	
Pump intake at Feet below ground level	

PW8

Borehole No.: TW2-04
original well

Project: East StPaul Water Supply Assessment
Project No: 1112-07170
Location: Municipal Well Field, East StPaul, Manitoba
Contractor: Friesen Drillers Ltd.
Drilling Method: Air & Mud Rotary

Date: 6-Dec-04
Field Investigator: L.Veale
Ground Surface: 240.8 m AMSL
Top of Casing: 241.2 m AMSL



Casing interval: 1.0 m AGS to 22.9 m BGS
Well seal interval: 3.1 m BGS to 22.9 m BGS

Notes:
mBGS - metres below ground surface
mAGS - metres above ground surface



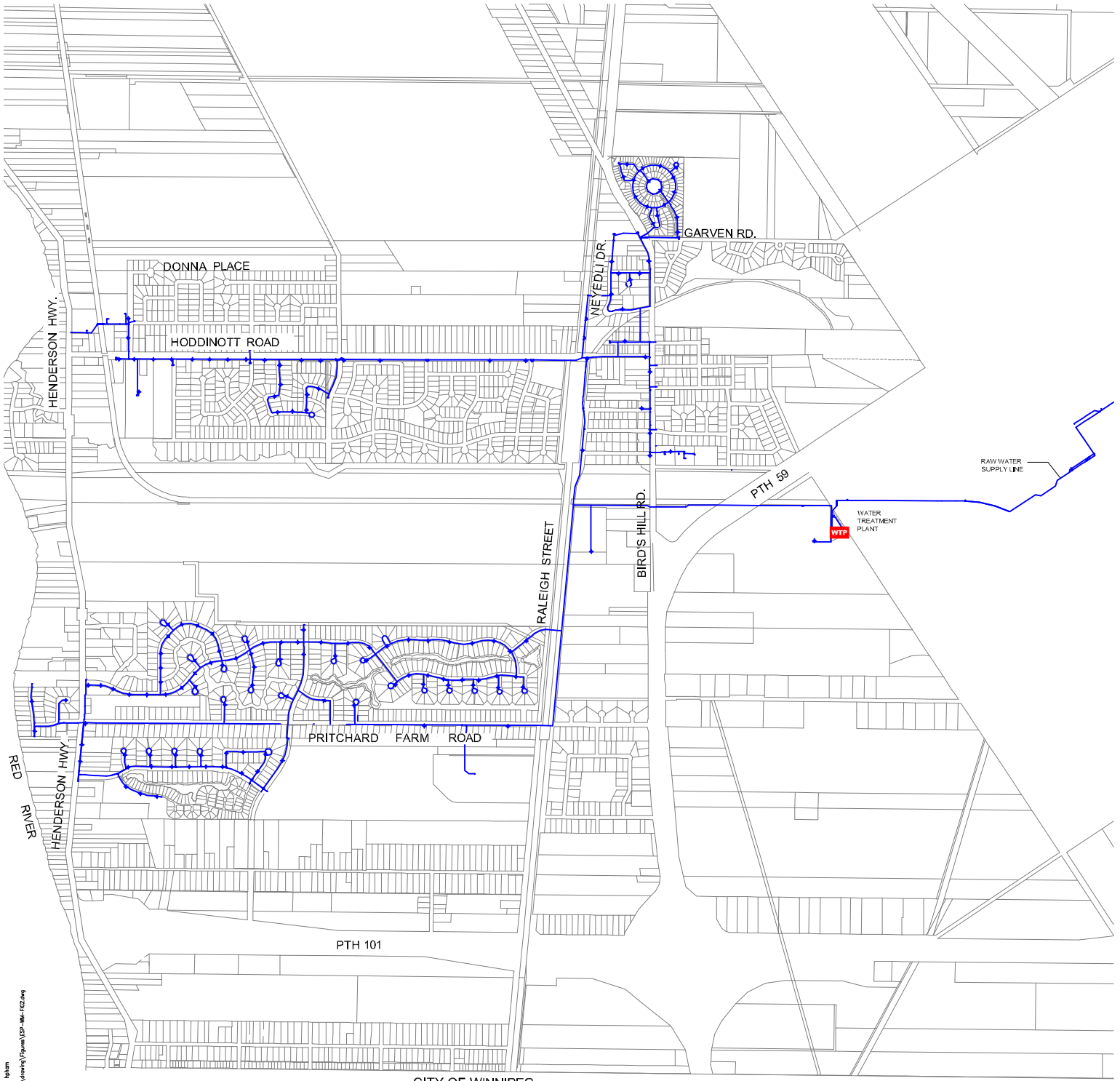
Stantec Consulting Ltd.
49 Frederick Street
Kitchener, Ontario
N2H 6M7

Stantec

Drawn By/Checked By: OR/LV

APPENDIX F
WATER SUPPLY PIPELINES

ANNEX F-1
WATER DISTRIBUTION



2008-05-14 04:52PM By: hplm
 \\s1112\estpa\11120500\winmap\Figure\ESP-08-02.dwg



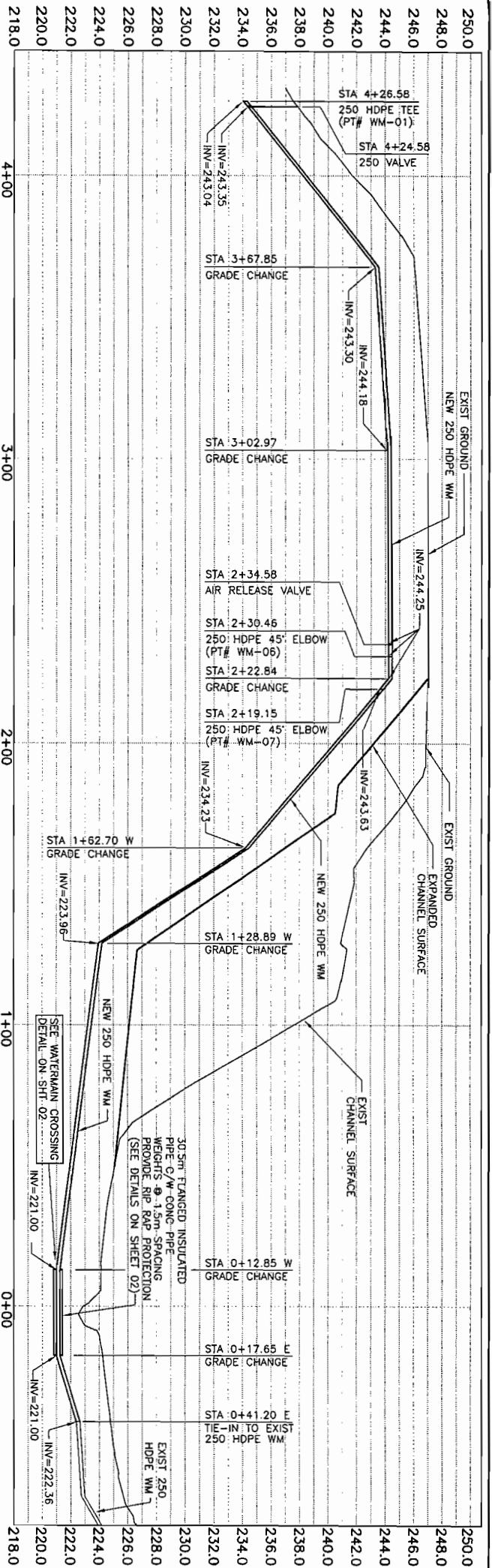
EXISTING WATERMAIN

Client/Project
 R.M. OF EAST ST. PAUL
 WATER DISTRIBUTION
 MASTER PLAN

Figure No.
2.0

Title
EXISTING WATER DISTRIBUTION

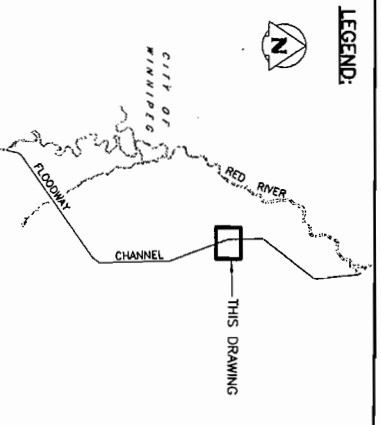
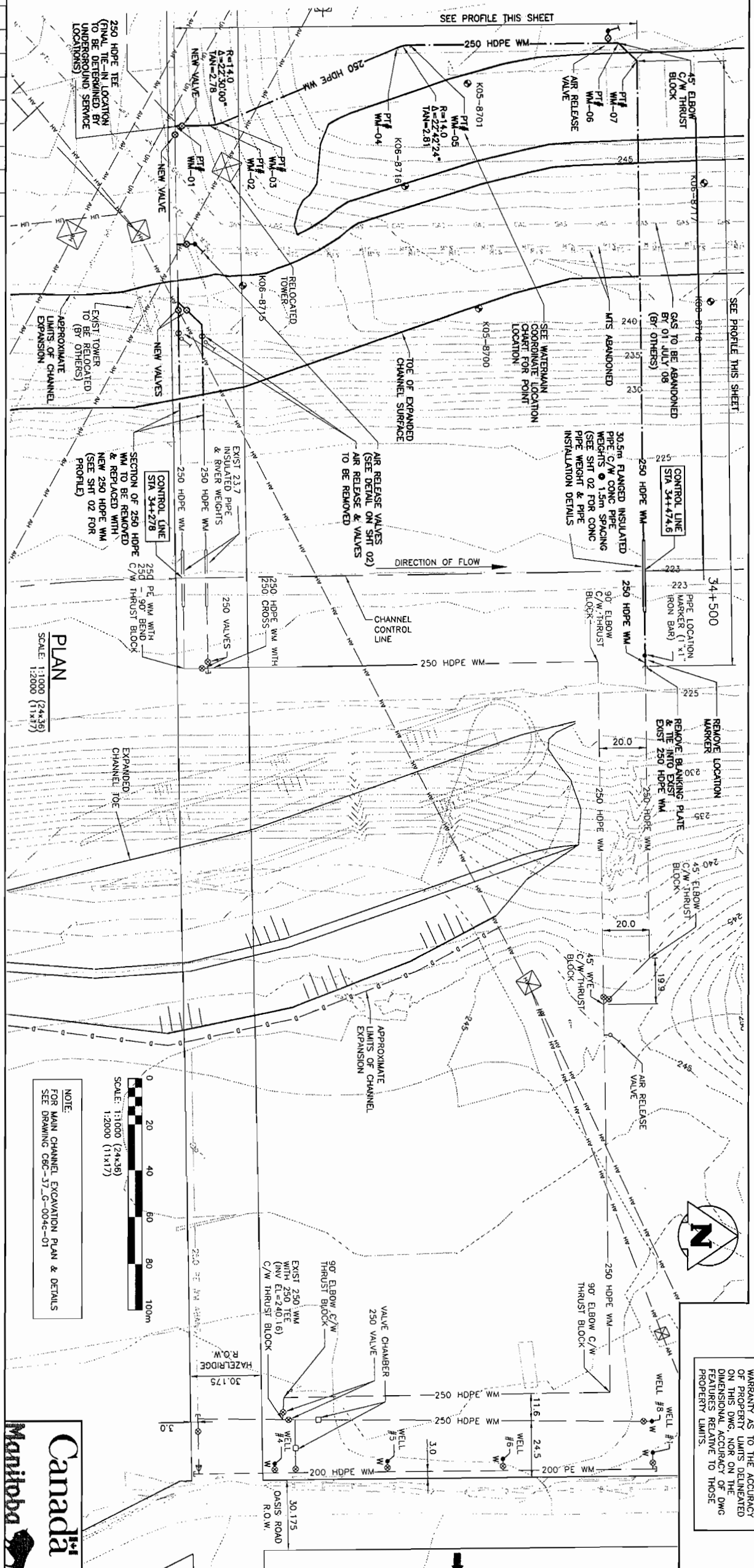
ANNEX F-2
WATER LINE FLOODWAY CROSSINGS



NOTE:
 1. PROFILE BASE LINE IS @ OF NEW WATERMAIN
 2. PROFILE STA 0+00 IS INTERSECTION OF BASE LINE AT CHANNEL CONTROL LINE STA 34+474.6

NOTE:
 1. MINIMUM COVER OVER WATERMAIN IS 2.5m WITH EXCEPTION OF NEW INSULATED PIPE (SEE PIPE INSULATION DETAIL ON SHT 02)
 2. HDPE PIPES ARE 250mm, DR11

PROPERTY LIMITS DELINEATION
 DELINEATION OF PROPERTY LIMITS AS SHOWN ON THIS DWG DOES NOT REPRESENT A LEGAL SURVEY. KGS GROUP MAKES NO REPRESENTATION OR WARRANTY AS TO THE ACCURACY OF PROPERTY LIMITS DELINEATED ON THIS DWG, NOR ON THE DIMENSIONAL ACCURACY OF THOSE PROPERTY LIMITS.



WATERMAIN COORDINATE LOCATION CHART

POINT #	NORTHING	EASTING	REMARKS
WM-01	5535087.325	644373.887	250-TEE
WM-02	5535610.1809	644373.821	B.C.
WM-03	5535610.7146	644373.497	B.C.
WM-04	5535618.1827	644339.903	B.C.
WM-05	5535618.7251	644338.728	E.C.
WM-06	5535627.320	644337.423	250-45° ELBOW
WM-07	5535628.438	644345.304	250-90° ELBOW

KGS GROUP

NO.	DATE	ISSUED FOR TENDER AND CONSTRUCTION	BY	SCALE
00	22/04/08	ISSUED FOR TENDER AND CONSTRUCTION	RJH	AS NOTED

MANITOBA FLOODWAY AUTHORITY

RED RIVER FLOODWAY EXPANSION
 MAIN CHANNEL CONTRACT NO C6C

APEN
 KGS Group
 No. 245 Date: _____

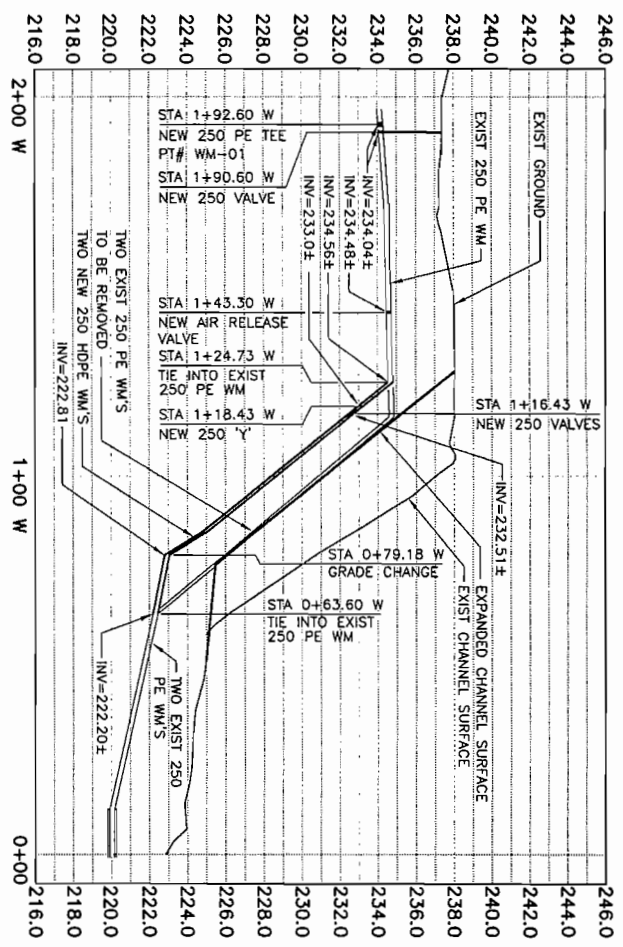
RESIGNED: RJH
 DESIGNED: JBS
 CHECKED: RJH
 DATE: JANUARY, 2008

ISSUED FOR CONSTRUCTION

DOUG MCNEIL
 VICE PRESIDENT OF ENGINEERING AND CONSTRUCTION

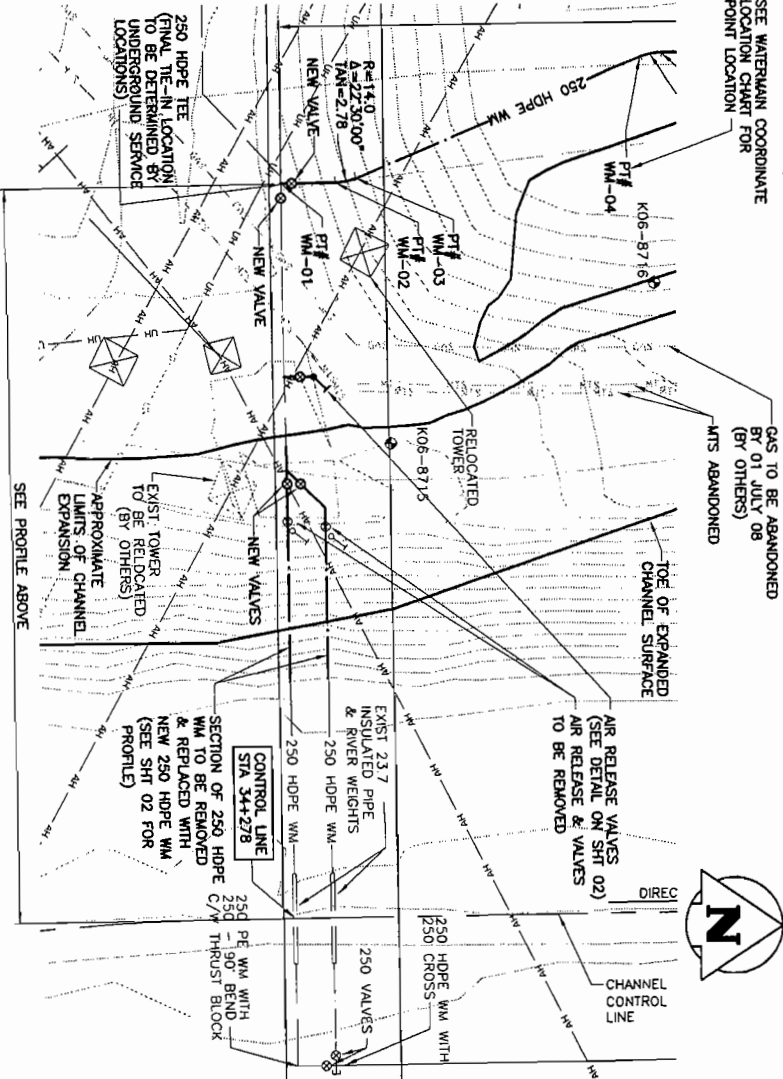
C6C-52_C-001c





NOTE:
1. PROFILE BASE LINE IS ϕ OF EXIST WATERMAIN
2. PROFILE STA 0+00 IS INTERSECTION OF BASE LINE AT CHANNEL CONTROL LINE STA 34+278

PROFILE (AT CONTROL LINE STA 34+278)
SCALE: HOR 1:1000 (24x36) 1:2000 (11x17)
VERT 1:200 (24x36) 1:400 (11x17)

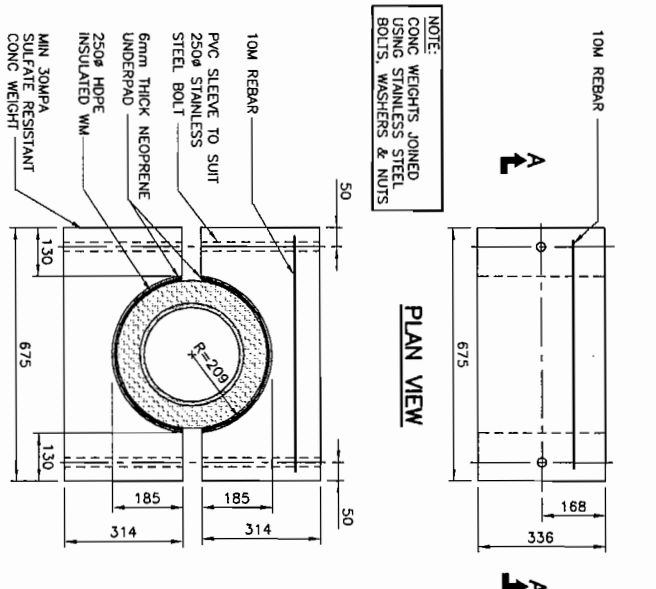


SCALE: 1:1000 (24x36) 1:2000 (11x17)

NOTE:
1. MINIMUM COVER OVER WATERMAIN IS 2.5m
2. HDPE PIPES ARE 250mm, DR11

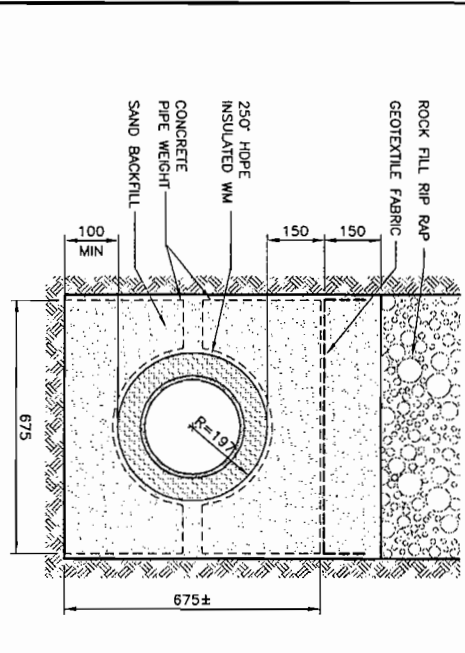
PLAN
SCALE: 1:1000 (24x36) 1:2000 (11x17)

PROPERTY LIMITS DELINEATION
DELINEATION OF PROPERTY LIMITS AS SHOWN ON THIS DWG DOES NOT REPRESENT A LEGAL SURVEY. KGS GROUP MAKES NO REPRESENTATION OR WARRANTY AS TO THE ACCURACY OF PROPERTY LIMITS DELINEATED ON THIS DWG, NOR ON THE DIMENSIONAL ACCURACY OF DWG FEATURES RELATIVE TO THOSE PROPERTY LIMITS.

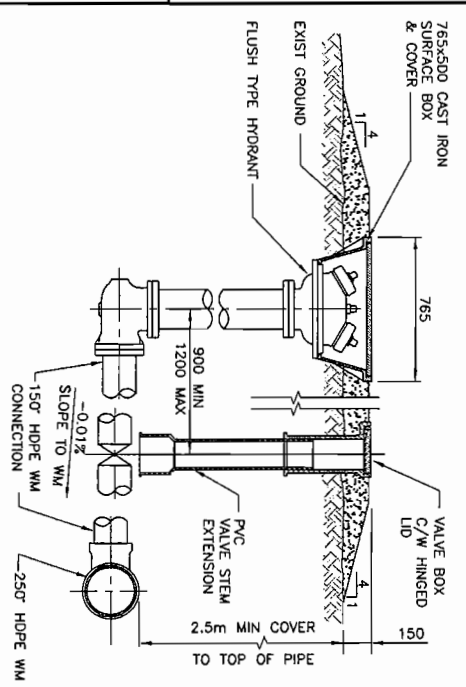


SECTION A-A

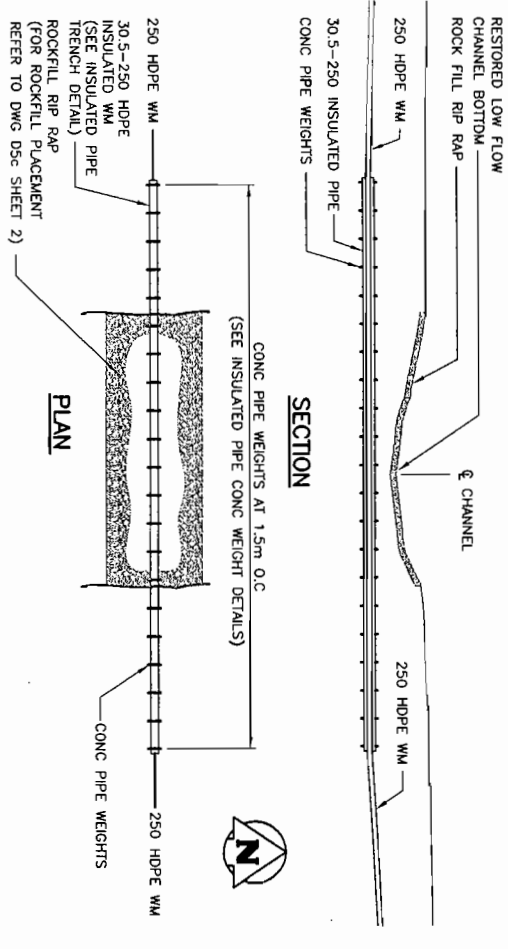
INSULATED PIPE CONG WEIGHT DETAILS
SCALE: 1:10 (AT CONTROL LINE STA 34+454)



INSULATED PIPE TRENCH SECTION
SCALE: 1:10 (AT CONTROL LINE STA 34+454)



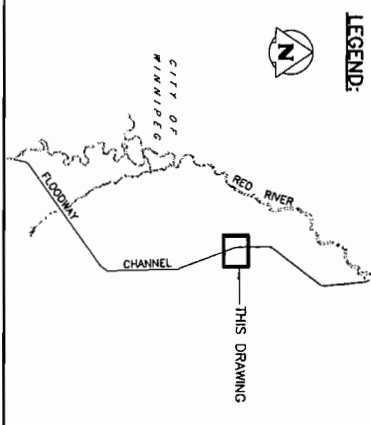
AIR RELEASE VALVE DETAIL
SCALE: NTS



SECTION

PLAN

WATERMAIN CROSSING DETAIL
SCALE: 1:200



1:6 DENOTES CHANNEL SIDE SLOPES AS 1 VERTICAL TO 6 HORIZONTAL

POINT#	NORTHING	EASTING	REMARKS
WM-01	5538087.325	644373.887	250-TEE
WM-02	553101.809	644373.621	B.C.
WM-03	553107.146	644372.457	E.C.
WM-04	5536181.827	644339.903	B.C.
WM-05	5536187.251	644338.738	E.C.
WM-06	5536276.423	644337.423	250-45° ELBOW
WM-07	5536284.438	644345.304	250-90° ELBOW

KGS GROUP



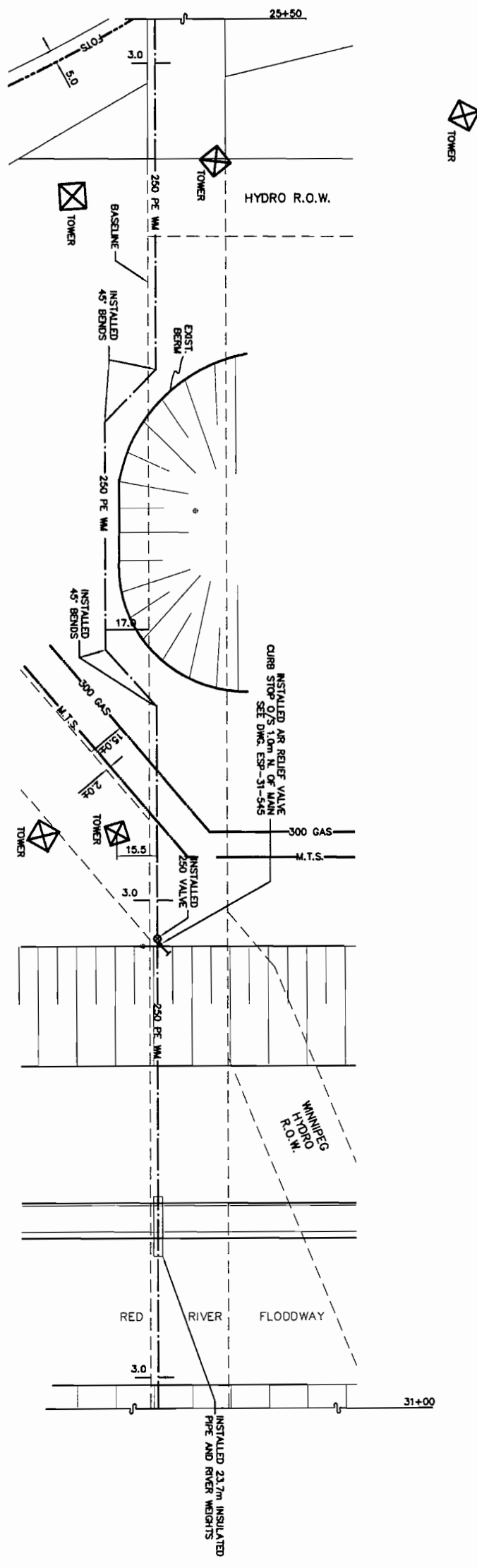
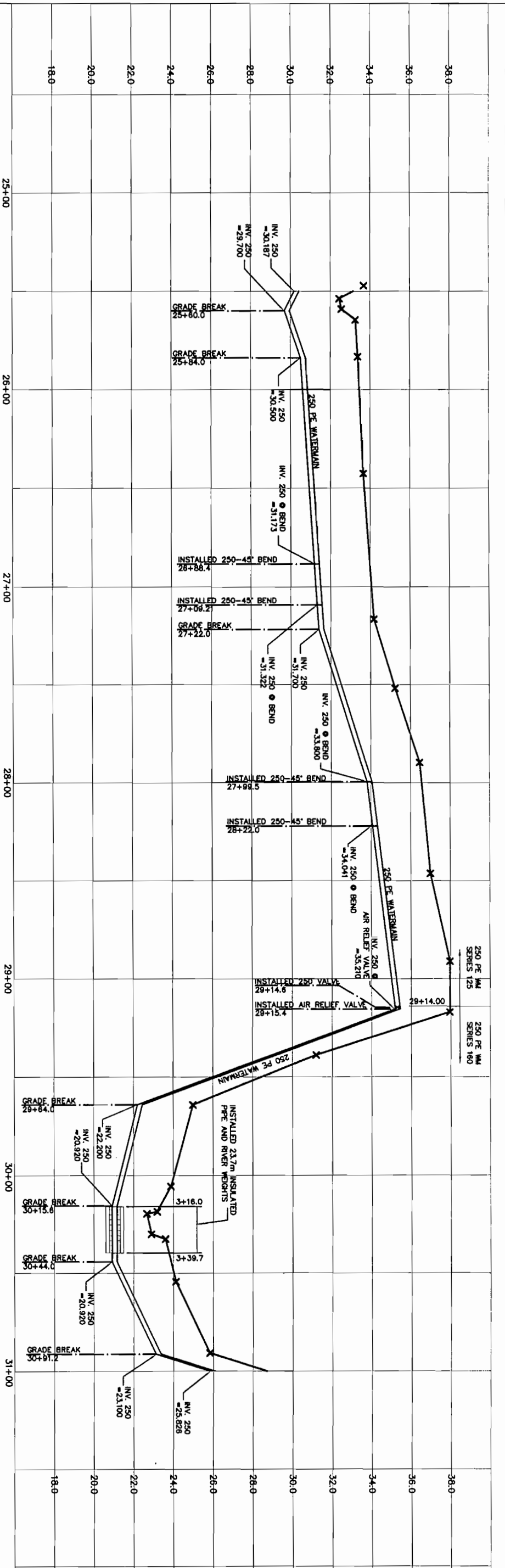
NO.	DATE	ISSUED FOR TENDER AND CONSTRUCTION	BY	CHKD	APP.
00	22/04/08	ISSUED FOR TENDER AND CONSTRUCTION	RJH	RJH	JBS

OWNER: MANITOBA FLOODWAY AUTHORITY
PROJECT: RED RIVER FLOODWAY EXPANSION
DRAWING: MAIN CHANNEL CONTRACT NO C6C



ISSUED FOR CONSTRUCTION
DOUG MANNIL
VICE PRESIDENT OF ENGINEERING AND CONSTRUCTION
C6C-52_C-001c
SHEET 02 OF 00

ANNEX F-3
WATER LINE LOCATION



METRIC
WHOLE NUMBERS INDICATE MILLIMETERS
DECIMALIZED NUMBERS INDICATE METRES

WARNING

1. POWER EQUIPMENT OR PERSONS ARE TO BE USED FROM EXCAVATION ON THIS PROJECT. THE CONTRACTOR MUST BE THE OWNER OF THE PROPERTY LOCATED BY EXCAVATION.
2. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
3. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
4. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
5. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
6. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

NOTES

1. STANDPICES REQUIRED BETWEEN STA. AND STA.
2. ALL SEWER HOUSE SERVICES TO BE INSTALLED BELOW STREET WATERMAIN EXCEPT AS NOTED.
3. ALL SEWER HOUSE SERVICES TO BE A MINIMUM OF 1.0m N. OF MAIN EXCEPT AS NOTED.
4. STREET INTERSECTION FUTURE RADIUS LINE PALLETS RADIUS EXCEPT AS NOTED.
5. LOCATION AND DEPTH OF EXISTING UNDERGROUND SERVICES AS SHOWN ON DRAWINGS IS APPROXIMATE ONLY. CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITIES BEFORE BEGINNING EXCAVATION.
6. BENCH MARK :

EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE	PROPOSED	NO.	REVISIONS
150.0MM	WATERMAIN	150.0MM	M.T.S	CONCRETE	150.0MM	150.0MM	WATERMAIN	150.0MM	1	REVISED TO AS BUILT
300.0LDS	HYDRANT VALVE	300.0LDS	CONCRETE	ASPHALT	300.0LDS	300.0LDS	HYDRANT VALVE	300.0LDS		
300.0LDS	LAND DRAINAGE SEWER	300.0LDS	CONCRETE	ASPHALT	300.0LDS	300.0LDS	LAND DRAINAGE SEWER	300.0LDS		
250.0MM	WASTE WATER SEWER	250.0MM	CONCRETE	ASPHALT	250.0MM	250.0MM	WASTE WATER SEWER	250.0MM		
300.0MM	MANHOLE	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	MANHOLE	300.0MM		
300.0MM	CAATCH INLET	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	CAATCH INLET	300.0MM		
300.0MM	CURB INLET	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	CURB INLET	300.0MM		
300.0MM	JUNCTIONS	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	JUNCTIONS	300.0MM		
300.0MM	CULVERT	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	CULVERT	300.0MM		
300.0MM	GAS	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	GAS	300.0MM		
300.0MM	HYDRO	300.0MM	CONCRETE	ASPHALT	300.0MM	300.0MM	HYDRO	300.0MM		

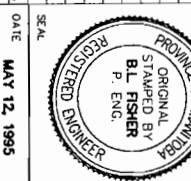
REVISED AS CONSTRUCTED
DATE: 10/01/96. BY: K.M.H.
CHECKED BY: R.M.

SCALE CHANGE HORIZ. 1:1000 / VERT. 1:100
CHAINAGE CALCULATED ALONG SOUTH PROPERTY LINE
CANADA/MANTOBA INFRASTRUCTURE WORKS

R.M. OF EAST ST. PAUL

250 SUPPLY LINE
STA. 25+50 TO STA. 31+00

DESIGNED BY: K.E.M.
DRAWN BY: K.R.
CHECKED BY: K.E.M.
SCALE: 1:1000 HORIZ. / 1:100 VERT.
APPROVED BY: B.L.F.



IDE
I.D. ENGINEERING CANADA INC.
PROFESSIONAL ENGINEERS
WINNIPEG
MANITOBA

