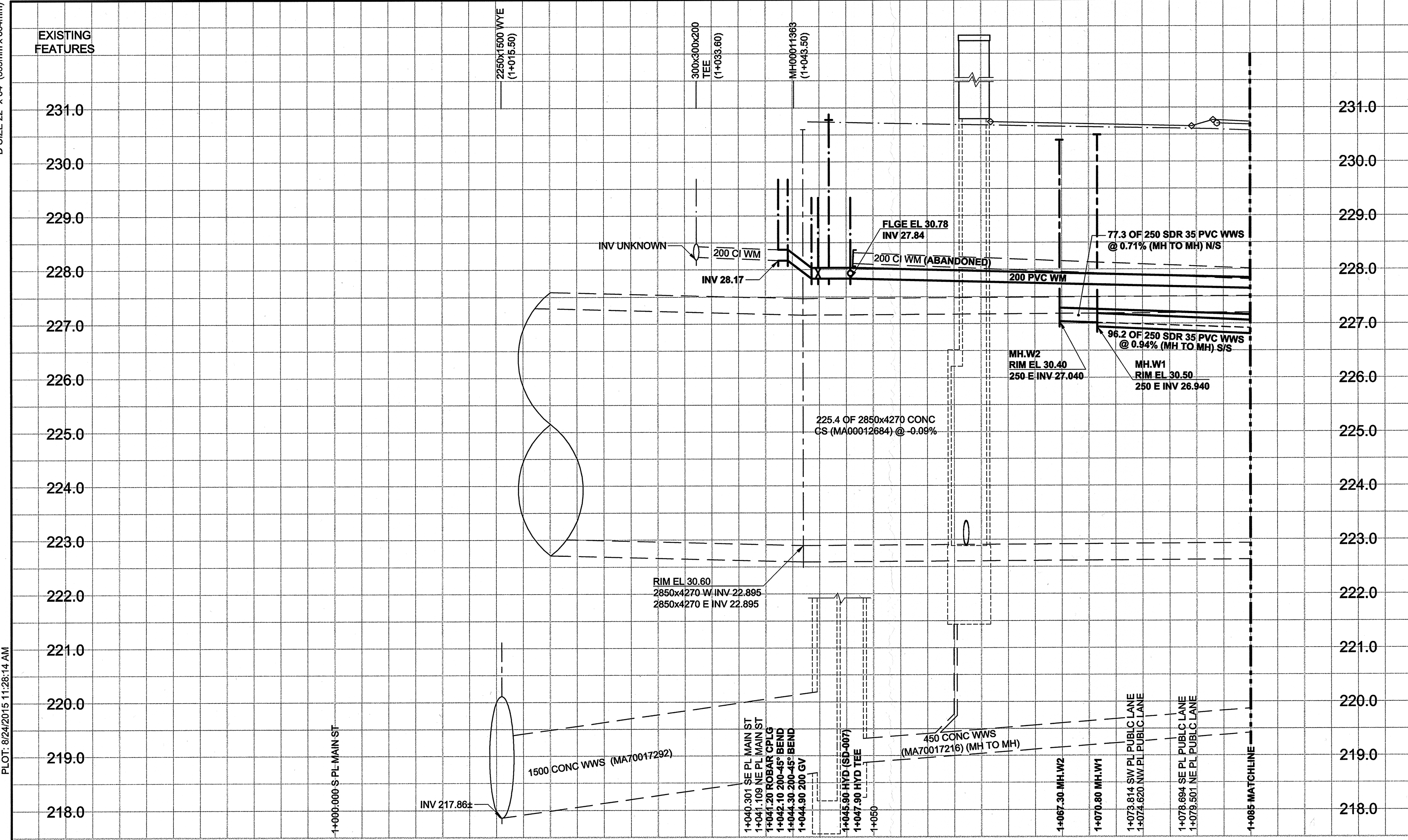
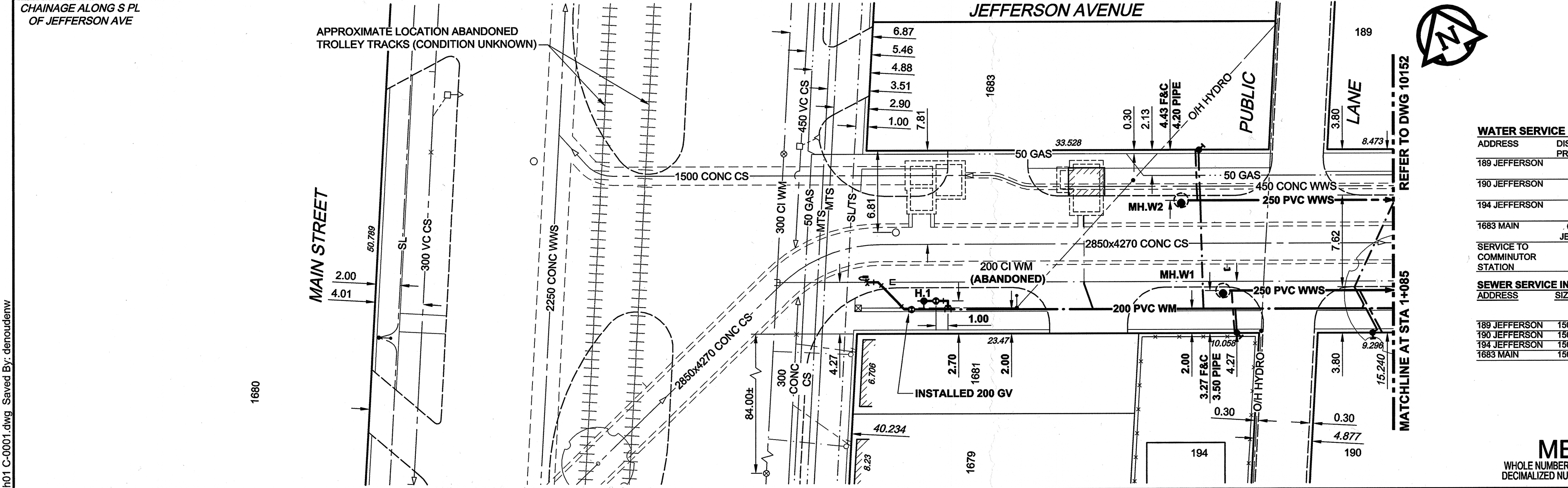


## **APPENDIX B – JEFFERSON CONSTRUCTION DRAWINGS AND PICTURES OF JEFFERSON DIVERSION CHAMBER**

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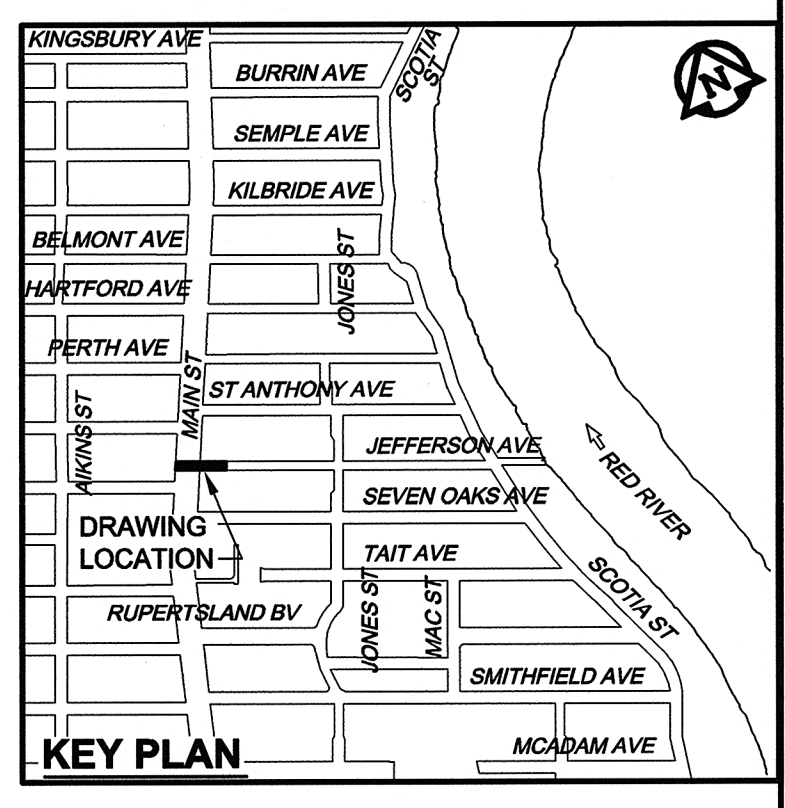
ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
<b>MATERIAL LIST</b>			
<b>WATER WORKS</b>			
200 PVC PIPE	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
200 MOULDED PVC FITTINGS	IPEX INC.	AWWA C907 CSA B137.2	"BLUE BRUTE" DR-18
FIRE HYDRANTS	MUELLER CANADA INC.	AWWA C502	"CENTURION"
GATE VALVES	CLOW CANADA	AWWA C509 MODEL F-6112	RESILIENT WEDGE GATE VALVE C/W TO OPEN (BLACK TOP)
VALVE BOX LOWER CASING	IPEX INC.	AWWA C900 CSA B137.3 CONFORMS TO AP-001	PVC DR18
VALVE BOX UPPER CASING	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-001	CASING MARKED "WDVB", "AII" & "WD46" LID MARKED "WDVB" & "W"
PVC COUPLINGS	IPEX INC.	AWWA C907 B137.2	"BLUE BRUTE" CL150 INJECTION MOLDED
IRON COUPLINGS	ROBAR INDUSTRIES LTD.	AWWA C219 AWWA C213 ASTM A536 GRADE 65-45-12	FBE-COATED D.I. SLEEVE & END RINGS TYPE 304 S.S. NUTS, BOLTS, WASHERS AND D-ELECTRIC WASHERS
D.I. RESTRAINER CLAMPS FOR C800 PVC PIPE	W.D. VALVE BOXES LTD.	ASTM A536 GR. 65-45-12, GRADE 2 ZINC-PLATED BOLTS	TWO-PIECE D.I. CLAMP
D.I. RESTRAINER CLAMPS FOR C800 PVC FITTINGS	W.D. VALVE BOXES LTD.	ASTM A536 GR. 65-45-12, GRADE 2 ZINC-PLATED BOLTS	TWO-PIECE D.I. CLAMP PART WD57 FOR 150 FITTING PART WD58 FOR 200 FITTING
ANODES - ZINC	CORROSION SERVICE CO. LTD.	ASTM B418 - TYPE II	ZINC WEIGHT 10.9 kg
<b>SEWER WORKS</b>			
250 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
250 MOULDED PVC FITTINGS	IPEX INC.	ASTM D3034 ASTM F1336 CSA B182.2	SDR-35 "RING-TITE" TEES, WYES & BENDS
150 FLEXIBLE SEWER COUPLINGS	MISSION RUBBER CO.	CSA B802 ASTM A240 MODEL "FLEX-SEAL"	FLEXIBLE PVC SEALING SLEEVE WITH TYPE 316 SS SHEAR RING AND STRAPS
MANHOLE COMPONENTS	LAFARGE CONSTRUCTION MATERIALS INC.	ASTM C478	750 I.D. PRECAST CONCRETE ADJUSTING RINGS
MANHOLE & CATCHBASIN ADJUSTING RINGS	LAFARGE CONSTRUCTION MATERIALS INC.	ASTM C478	CONCRETE ADJUSTING RINGS
MANHOLE/CATCHBASIN JOINT GASKETS	CONCRETE SEALANTS INC.	ASTM C990 MODEL "CS-102"	BUTYL RUBBER SEALANT
MANHOLE/CATCHBASIN JOINT GASKETS	HENRY COMPANY (LAFARGE CONST. MATERIALS LTD.)	ASTM C990 MODEL "RUBR-NEK LTM"	BUTYL RUBBER SEALANT FLEXIBLE ROPE
MANHOLE FRAMES & COVERS	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-004 & AP-005 OR AP-006	MH FRAME WD50F & SOLID COVER WD50S, GRATED COVER WD50G
MANHOLE FRAME LIFTER RINGS	W.D. VALVE BOXES LTD.	D.I. - ASTM A536 GRADE 65-45-12 CONFORMS TO AP-007	38, 51, 64 AND 76 SIZES
<b>WATER SERVICE CONNECTIONS</b>			
COPPER WATER TUBE	WOLVERINE DIV. OF UOP LTD.	ASTM B88 C12200 COPPER	TYPE K SEAMLESS TUBE
CORPORATION STOP	MUELLER CANADA INC.	AWWA C900 ASTM B62 MODEL "A-220"	PLUG STYLE VALVE WITH AWWA THREAD INLET & FLARED OUTLET
CURB STOP	MUELLER CANADA	AWWA C900 ASTM B62 MODEL "825154"	BALL VALVE WITH FLARED INLET/OUTLET MINNEAPOLIS PATTERN
CURB STOP BOXES	W.D. VALVE BOXES LTD.	MODEL "SB20CV"	IRON TOP, TYPE 304 S.S. RISERS & ABS BASE & CRADLE, WITH MAGNET AS PER AP-019
CONNECTION FITTINGS UNION	MUELLER CANADA INC.	AWWA C900 ASTM B62 MODEL "H-15400"	FLARED FITTINGS
CONNECTION FITTINGS ADAPTER	MUELLER CANADA INC.	AWWA C900 ASTM B62 MODELS "H-15505", "H-15506" & "H-15510"	COPPER FLARE TO LEAD FLANGE
GROUND CLAMP	THOMAS & BETTS CORPORATION (BLACKBURN)	MODEL "GLUV"	U BOLT GROUND CONNECTOR FOR COPPER CABLE
<b>SEWER SERVICE CONNECTIONS</b>			
150 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
MOULDED PVC CONNECTION FITTINGS	GPX PRODUCTS INC.	ASTM D3034 CSA B182.2	SDR-35
MOULDED PVC CONNECTION FITTINGS	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
<b>ROAD WORKS</b>			
CONCRETE	NORTHLAND READY MIX CONCRETE		
CONCRETE	PERIMETER CONCRETE LTD.		
ASPHALT	MAPLE LEAF CONSTRUCTION LTD.		
<b>CONTRACT INFORMATION</b>			
CONTRACTOR:	DARCO ENTERPRISES LTD.		
CONSTRUCTION PERIOD:	SEPTEMBER 2012 TO JUNE 2013		
FIELD BOOK NO.:	12-18 & 12-27		



ADDRESS	DISTANCE	PROPERTY	SIZE (mm) & TYPE	SHORT & LONG MEASUREMENT	CORPORATION LOCATION	REMARKS
189 JEFFERSON	0.22	20	1.35 WEL HOUSE	3.57 W OF SC	RENEWED TO NEW WM. (OCT. 24, 2012)	
190 JEFFERSON	0.10	20	1.85 WEL HOUSE	1.31 W OF SC	RECOGN TO NEW WM. (OCT. 24, 2012)	
194 JEFFERSON	0.25	20	0.72 WEL HOUSE	1.13 W OF SC	RENEWED TO NEW WM. (OCT. 24, 2012)	
1683 MAIN	0.35 SNL	25	4.04 EWL BLDG.	0.36 E OF SC	RENEWED TO NEW WM. SERVICED OFF JEFFERSON NEW CS BOX. (OCT. 24, 2012)	
SERVICE TO COMMUNICATOR STATION	20	20	18.95 EWL MAIN	18.70 EWL MAIN	UNION 0.75 W OF CORP. 2.1 N OF NEW WM. 2.10 RENEWED, CONNECTED TO EX SERVICE. ANODE INSTALLED	

ADDRESS	SIZE	JUNCTION TIE	LOCATION AT PL	INVERT @ PROP	LENGTH RENEW	RISER @ MAIN	REMARKS
189 JEFFERSON	150	17.99m E OF TST MH E OF NE COR MAIN	1.05 WEL HOUSE	44.9 EEL MAIN	28.28	4.8	0.6 CPLG TO CLAY AT PL
190 JEFFERSON	150	11.38m E OF MH AT #194 JEFFERSON	1.05 WEL HOUSE	43.77 EEL MAIN	28.04	4.0	1.0 CPLG TO CLAY AT PL
194 JEFFERSON	150	0.72m E OF MH AT #194 JEFFERSON	3.73 WEL HOUSE	31.42 EEL MAIN	27.94	3.5	0.3 CPLG TO CLAY AT PL
1683 MAIN	150	1.49m E OF TST MH E OF NE COR MAIN	4.04 EWL BLDG.	27.4 EEL MAIN	28.05	4.7	0.3 CPLG TO CONC AT PL



150 WM	WATERMAIN	150 WM	150 WM	WATERMAIN	150 WM	WATERMAIN	150 WM	WATERMAIN
○	HYDRANT	○	○	○	○	○	○	○
○	VALVE	○	○	○	○	○	○	○
○	LAND DRAINAGE SEWER	○	○	○	○	○	○	○
○	WASTE WATER SEWER	○	○	○	○	○	○	○
○	MANHOLE	○	○	○	○	○	○	○
○	CATCH BASIN	○	○	○	○	○	○	○
○	CURB INLET	○	○	○	○	○	○	○
○	CULVERT	○	○	○	○	○	○	○
○	PIPE ABANDONMENTS	○	○	○	○	○	○	○
○	SURVEY BAR	○	○	○	○	○	○	○
○	EXISTING	○	○	○	○	○	○	○
○	LEGEND - PLAN	○	○	○	○	○	○	○

150 WM	WATERMAIN	150 WM	150 WM	WATERMAIN	150 WM	WATERMAIN
○	HYDRANT	○	○	○	○	○
○	REDUCER	○	○	○	○	○
○	COUPLING	○	○	○	○	○
○	ANODE	○	○	○	○	○
○	HYDRO	○	○	○	○	○
○	MTS	○	○	○	○	○
○	GAS	○	○	○	○	○
○	TESTHOLE	○	○	○	○	○
○	LAMP STANDARD	○	○	○	○	○
○	TREE	○	○	○	○	○
○	LEGEND - PROFILE	○	○	○	○	○

NO.	ISSUED FOR RECORD	15/08/24	WJD
1	ISSUED FOR RECORD	15/08/24	WJD
0	ISSUED FOR CONSTRUCTION	12/06/06	ADL
NO.	REVISIONS	YYMMDD	BY

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

Certificate of Authorization  
AECOM Canada Ltd.  
No. 4671 Date: Aug 26, 2015

**PROFESSIONAL'S SEAL**  
W.D.J. TOUPIN  
Member  
Aug 26, 2015  
REGISTERED PROFESSIONAL ENGINEER

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**JEFFERSON EAST**  
**COMBINED SEWER RELIEF**  
**CONTRACT 1**  
**JEFFERSON AVENUE**

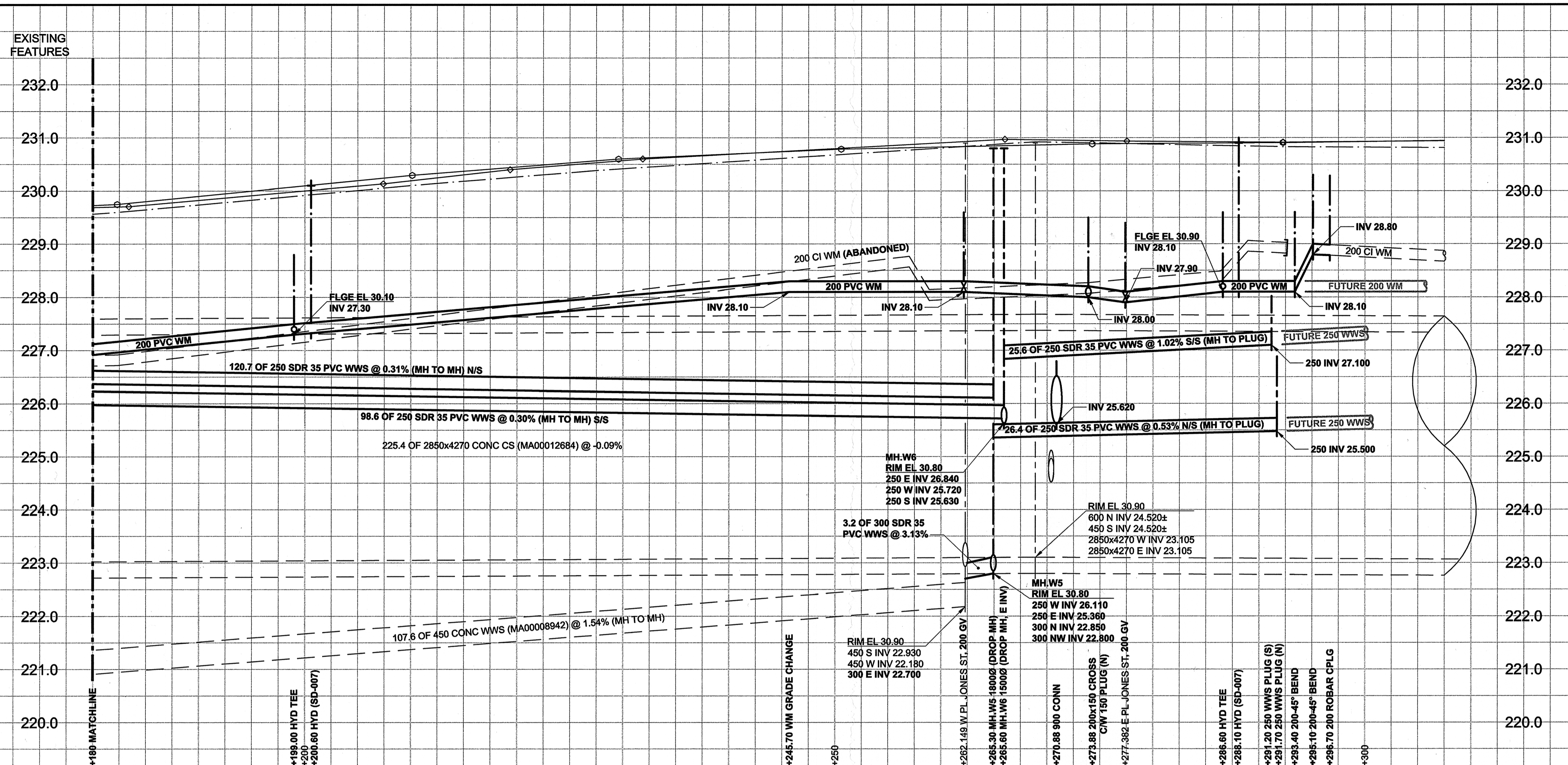
MAIN STREET TO 180m WEST OF JONES STREET  
CSR AND WATER MAIN RENEWAL

SHEET 1 OF 20  
CITY DRAWING NUMBER  
**10151**  
REV 1



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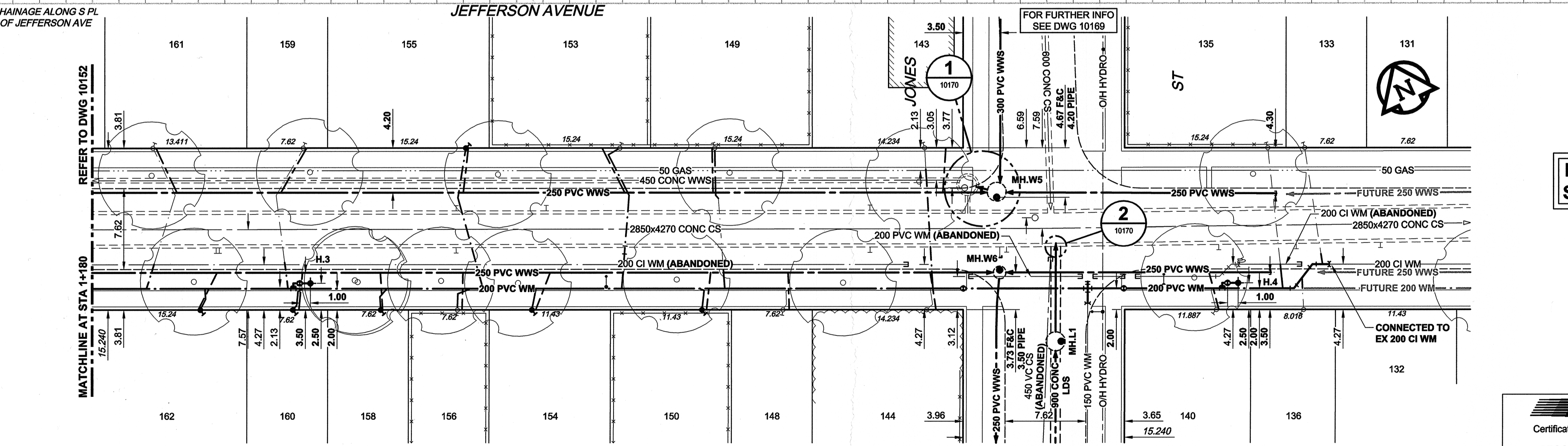


**WATER SERVICE INFORMATION**

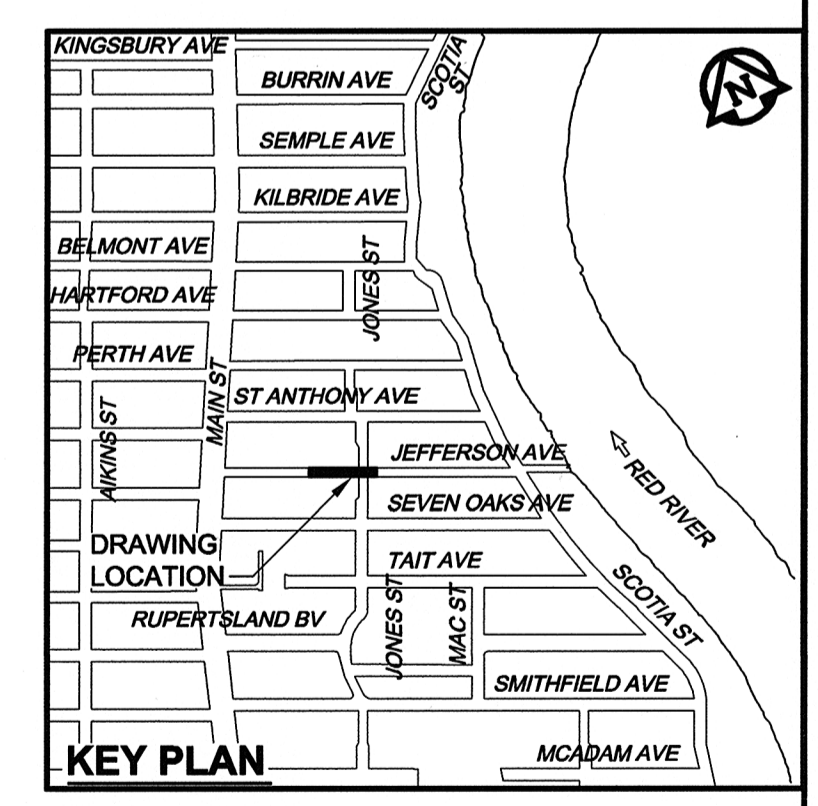
ADDRESS	DISTANCE	SIZE(mm)	SHORT & LONG PROPERTY & TYPE MEASUREMENT	CORPORATION LOCATION	REMARKS
133 JEFFERSON	0.00	20	1.92 WEL HOUSE COPPER 17.0 EEL JONES	1.7 E OF SC 18.7 EEL JONES	RECONN TO NEW WM. HSE-LEAD. (NOV. 6, 2012)
135 JEFFERSON	0.18	20	0.9 WEL HOUSE COPPER 13.52 EEL JONES	1.43 E OF SC 14.95 EEL JONES	RECONN TO NEW WM. (NOV. 6, 2012)
136 JEFFERSON	0.20	20	1.3 WEL HOUSE COPPER 16.89 EEL JONES	0.26 W OF SC 16.63 EEL JONES	RECONN TO NEW WM. HSE-LEAD. (NOV. 6, 2012)
140 JEFFERSON	0.10	20	2.0 WEL HOUSE COPPER 8.66 EEL JONES	0.45 W OF SC 8.21 EEL JONES	RECONN TO NEW WM. (OCT. 10, 2012)
143 JEFFERSON	0.05	20	3.4 WEL HOUSE COPPER 3.63 WWL JONES	0.79 E OF SC 2.85 WWL JONES	RENEWED TO NEW WM. HSE-LEAD. UNION 3.0 SNL. (OCT. 10, 2012)
144 JEFFERSON	0.50	20	2.9 WEL HOUSE COPPER 3.45 WWL JONES	0.46 E OF SC 2.99 WWL JONES	RECONN TO NEW WM. (OCT. 10, 2012)
148 JEFFERSON	0.26	20	2.47 WEL HOUSE COPPER 17.0 WWL JONES	0.9 E OF SC 16.1 WWL JONES	RECONN TO NEW WM. EXIST. CS BOX (OCT. 10, 2012)
149 JEFFERSON	0.28	20	4.24 EWL HOUSE COPPER 23.42 WWL OF JONES	0.96 E OF SC 24.4 WWL JONES	RECONN TO NEW WM. UNIONS 4.76 SNL. 2.3 N OF WM. (OCT. 11, 2012)
150 JEFFERSON	0.75	20	2.35 WEL HOUSE COPPER 24.63 WWL JONES	0.26 W OF SC 24.89 WWL JONES	RENEWED TO NEW WM. HSE-LEAD. (OCT. 11, 2012)
153 JEFFERSON	0.00	20	1.45 WEL HOUSE COPPER 32.37 WWL JONES	0.2 E OF SC 32.17 WWL JONES	RECONN TO NEW WM. (SEPT. 24, 2012)
154 JEFFERSON	0.15	20	2.88 EWL HOUSE COPPER 40.67 WWL JONES	0.39 E OF SC 40.28 WWL JONES	RENEWED TO NEW WM. (OCT. 11, 2012)
155 JEFFERSON	0.05	20	46.88 WWL JONES COPPER 46.88 WWL JONES	1.63 E OF SC 45.25 WWL JONES	RECONN TO NEW WM. NEW SC BOX. HSE-LEAD. (OCT. 11, 2014)
158 JEFFERSON	45.00	20	2.05 WEL HOUSE COPPER 47.69 WWL JONES	1.24 E OF SC 46.45 WWL JONES	RENEWED TO NEW WM. (OCT. 11, 2012)
158 JEFFERSON	0.47	20	2.27 WEL HOUSE COPPER 54.92 WWL JONES	0.87 E OF SC 54.05 WWL JONES	RENEWED TO NEW WM. NEW SC BOX. HSE-LEAD. (OCT. 11, 2012)
159 JEFFERSON	0.28	20	1.77 WEL HOUSE COPPER 62.23 WWL JONES	1.42 W OF SC 63.65 WWL JONES	RECONN TO NEW WM. UNION 2.5 SNL. HSE-LEAD (OCT. 15, 2012)
160 JEFFERSON	0.30	20	2.5 WEL HOUSE COPPER 63.21 WWL JONES	0.91 E OF SC 62.30 WWL JONES	RENEWED TO NEW WM. (OCT. 15, 2012)
161 JEFFERSON	0.30	20	2.7 EWL HOUSE COPPER 76.4 WWL JONES	0.6 W OF SC 77.0 WWL JONES	RECONN TO NEW WM. UNION 2.4 N OF WM. NEW SC BOX. (OCT. 15, 2012)
162 JEFFERSON	0.00	20	2.1 WEL HOUSE COPPER 71.95 WWL JONES	0.45 E OF SC 71.50 WWL JONES	RENEWED TO NEW WM. HSE-LEAD (OCT. 15, 2012)

**SEWER SERVICE INFORMATION**

ADDRESS	SIZE	JUNCTION TIE	LOCATION AT PL	INVERT @ PROP	LENGTH RENEW	RISER @ MAIN	REMARKS
140 JEFFERSON	150	19.75m E OF MH SW CORNER JONES	SHORT LONG	1.77 WEL HOUSE 8.89 EEL JONES	28.34	3.70	0.50 CPLG TO CLAY AT PL
143 JEFFERSON	150	5.08m W OF MH NW CORNER JONES	3.63 WWL HOUSE 1.63 WWL JONES	28.12	5.50	0.98	CPLG TO CLAY AT PL
144 JEFFERSON	150	2.58m W OF MH SW CORNER JONES	2.0 WEL HOUSE 6.55 WWL JONES	27.78	3.50	0.65	CPLG TO CLAY AT PL
148 JEFFERSON	150	19.95m W OF MH SW CORNER JONES	1.87 WEL HOUSE 16.4 WWL JONES	28.12	3.50	1.76	CPLG TO CLAY AT PL
149 JEFFERSON	150	26.75m W OF MH NW CORNER JONES	4.13 EWL HOUSE 23.53 WWL JONES	28.15	4.70	0.83	CPLG TO CONC AT PL
150 JEFFERSON	150	27.25m W OF MH SW CORNER JONES	1.93 WEL HOUSE 24.21 WWL JONES	27.68	3.50	1.78	CPLG TO CLAY AT PL
153 JEFFERSON	150	35.07m W OF MH NW CORNER JONES	3.13 WEL HOUSE 34.05 WWL JONES	27.71	5.20	0.50	CPLG TO CLAY AT PL
154 JEFFERSON	150	42.4m W OF MH SW CORNER JONES	3.25 EWL HOUSE 40.3 WWL JONES	27.80	3.60	1.78	CPLG TO CLAY AT PL
155 JEFFERSON	150	50.28m W OF MH NW CORNER JONES	1.57 WEL HOUSE 46.65 WWL JONES	27.83	4.20	1.00	CPLG TO CLAY AT PL
156 JEFFERSON	150	48.0m E OF MH AT #166 JEFFERSON	1.61 WEL HOUSE 47.25 WWL JONES	27.74	3.50	1.50	CPLG TO CLAY AT PL
158 JEFFERSON	150	40.2m E OF MH AT #166 JEFFERSON	2.1 WEL HOUSE 54.75 WWL JONES	27.67	3.50	0.80	CPLG TO CLAY AT PL
159 JEFFERSON	150	53.15m E OF MH AT #171 JEFFERSON	2.55 EEL HOUSE 61.91 WWL JONES	27.37	7.50	0.30	CPLG TO CLAY AT PL
160 JEFFERSON	150	32.85m E OF MH AT #166 JEFFERSON	1.94 WEL HOUSE 62.65 WWL JONES	27.44	3.50	0.90	CPLG TO CLAY AT PL
161 JEFFERSON	150	43.35m E OF MH AT #171 JEFFERSON	2.72 EWL HOUSE 76.38 WWL JONES	27.30	5.30	0.30	CPLG TO CLAY AT PL
162 JEFFERSON	150	24.80m E OF MH AT #166 JEFFERSON	2.3 WEL HOUSE 72.15 WWL JONES	27.46	4.10	0.50	CPLG TO CLAY AT PL



**FOR MATERIAL LIST SEE DRAWING 10154**



**RECORD DRAWING**  
BID OPPORTUNITY NO. 430-2012

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
○	150 WM	○	150 WM	○	150 WM
○	WATERMAIN	○	WATERMAIN	○	WATERMAIN
○	HYDRANT	○	HYDRANT	○	HYDRANT
○	VALVE	○	VALVE	○	VALVE
○	LAND DRAINAGE SEWER	○	LAND DRAINAGE SEWER	○	LAND DRAINAGE SEWER
○	WASTE WATER SEWER	○	WASTE WATER SEWER	○	WASTE WATER SEWER
○	MANHOLE	○	MANHOLE	○	MANHOLE
○	CATCH BASIN	○	CATCH BASIN	○	CATCH BASIN
○	CURB INLET	○	CURB INLET	○	CURB INLET
○	CULVERT	○	CULVERT	○	CULVERT
○	PIPE ABANDONMENTS	○	PIPE ABANDONMENTS	○	PIPE ABANDONMENTS
○	SURVEY BAR	○	SURVEY BAR	○	SURVEY BAR
○	EXISTING	○	NEW	○	EXISTING

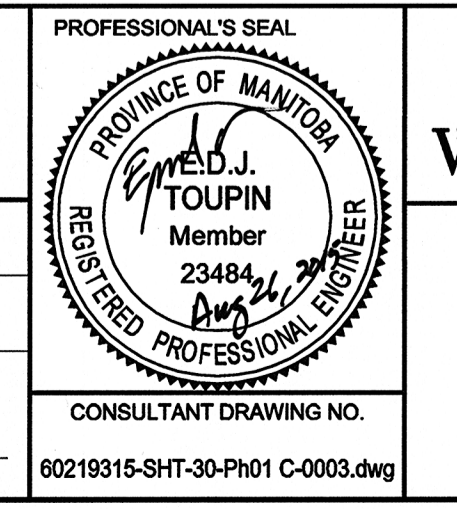
**LOCATION APPROVED UNDERGROUND STRUCTURES**

DATE COMMITTEE

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

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

NO.	REVISIONS	DATE	BY
2	ISSUED FOR RECORD	15/08/24	WJD
1	REVISED WWS & WM INVS	12/09/17	ADL
0	ISSUED FOR CONSTRUCTION	12/08/08	ADL



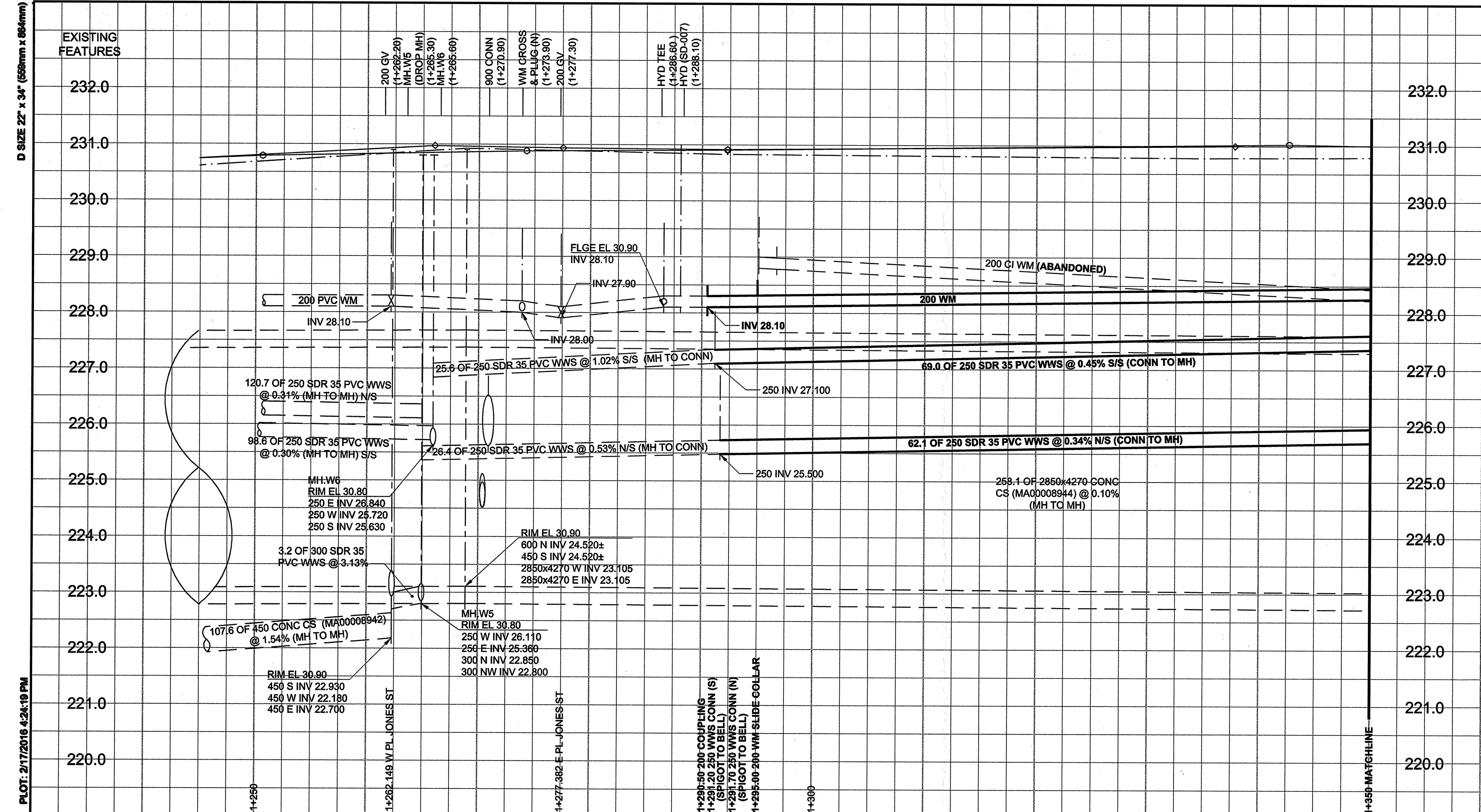
**THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT**

**JEFFERSON EAST COMBINED SEWER RELIEF CONTRACT 1**

**JEFFERSON AVENUE**

140m EAST OF MAIN STREET TO JONES STREET  
CSR AND WATER MAIN RENEWAL

SHEET 3 OF 20  
CITY DRAWING NUMBER 10153  
REV 2



**MATERIAL LIST**

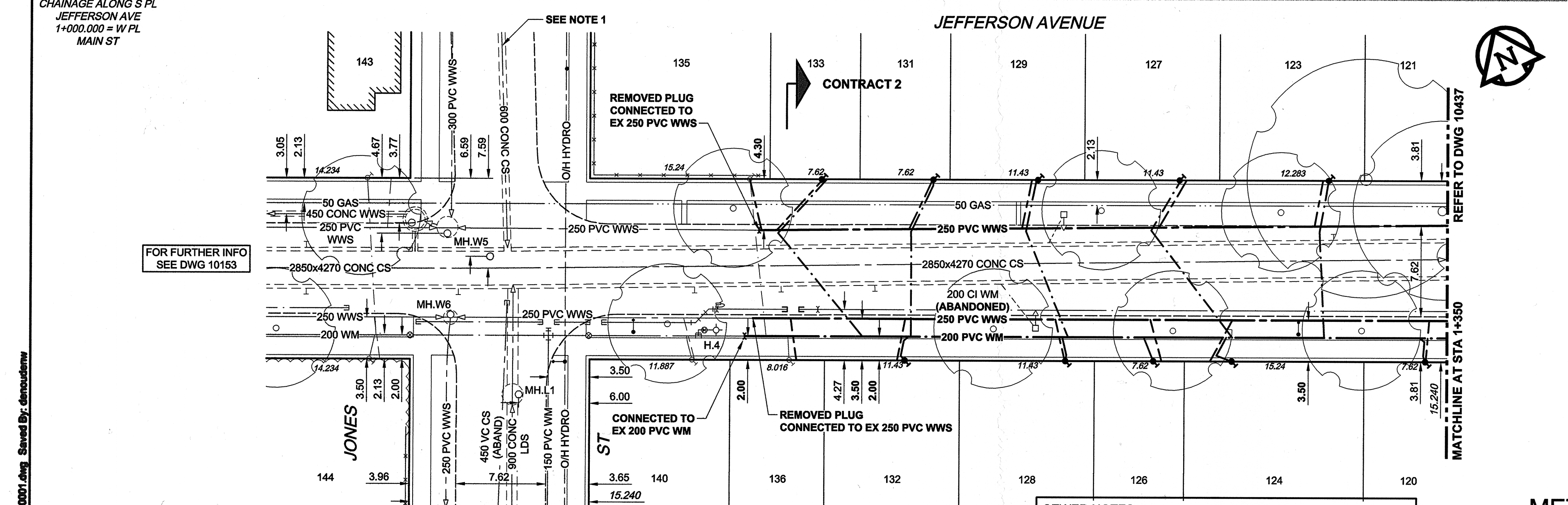
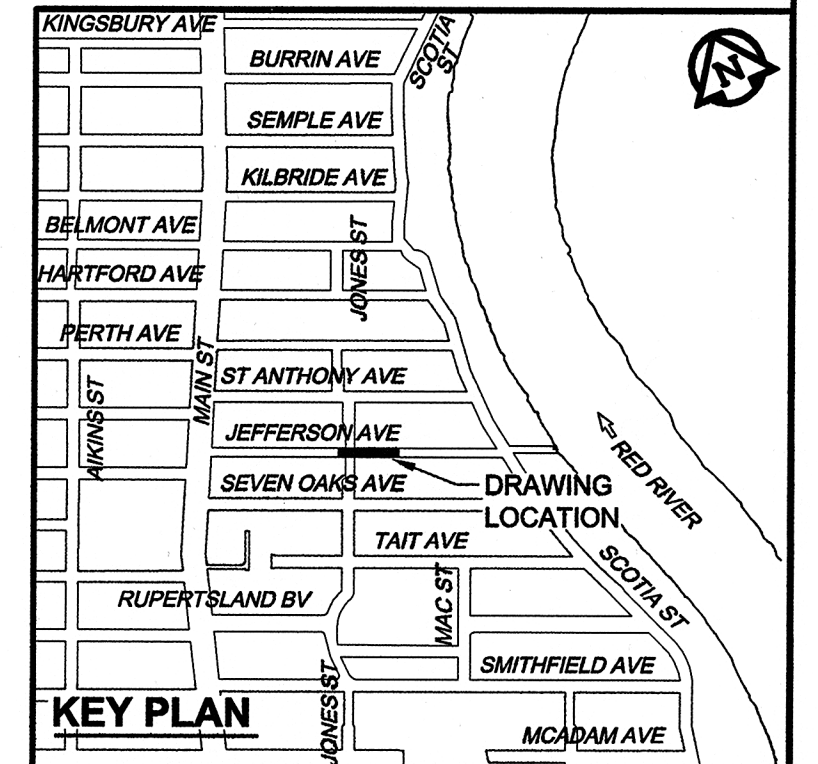
ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
<b>WATER WORKS</b>			
200 PVC PIPE	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
200 FABRICATED PVC FITTINGS TEES & BENDS	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
ANODES - ZINC	INTERPROVINCIAL CORROSION CONTROL COMPANY LIMITED	ASTM B418 - TYPE II	ZINC WEIGHT 10.9 kg
<b>SEWER WORKS</b>			
250 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
250 FABRICATED PVC FITTINGS	GPX PRODUCTS INC.	ASTM D3034 ASTM F1336 CSA B182.2	SDR-35 TEES, WYES & BENDS
<b>WATER SERVICE CONNECTIONS</b>			
20 COPPER WATER TUBE	CERRO COPPER PRODUCTS CO	ASTM B88 C12200 COPPER	TYPE K SEAMLESS TUBE
20 CORPORATION STOP	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODEL "A-220"	PLUG STYLE VALVE WITH AWWA THREAD INLET & FLARED OUTLET
20 CURB STOP	MUELLER CANADA	AWWA C800 ASTM B62 MODEL "B25154"	BALL VALVE WITH FLARED INLET/OUTLET MINNEAPOLIS PATTERN
20 CURB STOP BOXES	W.D. VALVE BOXES LTD.	MODEL "SB20CW"	IRON TOP, TYPE 304 S.S. RISERS & ABS BASE & CRADLE, WITH MAGNET
CONNECTION FITTINGS ADAPTER	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODELS "H-15505", "H-15506" & "H-15510"	COPPER FLARE TO LEAD FLANGE
GROUND CLAMP	THOMAS & BETTS CORPORATION (BLACKBURN)	MODEL "GUV"	U BOLT GROUND CONNECTOR FOR COPPER CABLE
<b>SEWER SERVICE CONNECTIONS</b>			
150 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
150 FLEXIBLE SEWER COUPLINGS	MISSION RUBBER CO.	CSA B602 ASTM A240 MODEL "FLEX-SEAL"	FLEXIBLE PVC SEALING SLEEVE WITH TYPE 316 SS SHEAR RING AND STRAPS
150 MOULDED PVC CONNECTION FITTINGS	GPX PRODUCTS INC.	ASTM D3034 CSA B182.2	SDR-35
<b>ROAD WORKS</b>			
CONCRETE	BUILDING PRODUCTS & CONCRETE SUPPLY LTD.		
ASPHALT	BORLAND CONSTRUCTION LTD.		
<b>CONTRACT INFORMATION</b>			
CONTRACTOR:	BORLAND CONSTRUCTION LTD.		
CONSTRUCTION PERIOD:	JULY - NOVEMBER 2013		
FIELD BOOK NO.:	1302, 1322		

**SEWER SERVICE INFORMATION**

ADDRESS	SIZE	PL TIE (SHORT/LONG)	JUNCTION TIE	INVERT @ PROP.	LENGTH RENEWED	RISER @ MAIN	REMARKS
120 JEFFERSON	150	1.3 WEL HOUSE 70.82 EEL JONES	11.70 W OF MH.W13	28.50	3.70	0.30	CPLG TO CLAY AT PL
123 JEFFERSON	150	1.75 WEL HOUSE 62.07 EEL JONES	15.00 W OF MH.W12	28.60	3.70	1.80	CPLG TO CONC AT PL
124 JEFFERSON	150	2.4 WEL HOUSE 52.62 EEL JONES	28.40 W OF MH.W13	28.40	3.80	0.30	CPLG TO CLAY AT PL
126 JEFFERSON	150	0.9 WEL HOUSE 48.42 EEL JONES	35.35 W OF MH.W13	28.50	3.70	0.30	CPLG TO CLAY AT PL
127 JEFFERSON	150	0.35 WEL HOUSE 59.52 EEL JONES	28.20 W OF MH.W12	28.40	4.50	1.80	CPLG TO CLAY AT PL
128 JEFFERSON	150	0.45 WEL HOUSE 40.22 EEL JONES	43.40 W OF MH.W13	28.50	3.70	0.30	CPLG TO CLAY AT PL
129 JEFFERSON	150	2.75 WEL HOUSE 37.42 EEL JONES	39.80 W OF MH.W12	28.50	4.00	1.80	CPLG TO CLAY AT PL
131 JEFFERSON	150	0.9 WEL HOUSE 29.02 EEL JONES	39.10 E OF MH.W5	28.00	4.30	1.80	CPLG TO CLAY AT PL
132 JEFFERSON	150	3.6 WEL HOUSE 28.02 EEL JONES	38.50 E OF MH.W6	28.30	3.70	0.30	CPLG TO CLAY AT PL
133 JEFFERSON	150	2.2 WEL HOUSE 19.72 EEL JONES	27.90 E OF MH.W5	28.30	6.00	1.80	CPLG TO CLAY AT PL
135 JEFFERSON	150	0.9 WEL HOUSE 13.52 EEL JONES	26.60 E OF MH.W5	28.30	4.30	1.80	CPLG TO CLAY AT PL
136 JEFFERSON	150	1.2 WEL HOUSE 17.5 EEL JONES	28.80 E OF MH.W6	28.20	3.70	0.30	CPLG TO CLAY AT PL

**WATER SERVICE INFORMATION**

ADDRESS	DISTANCE TO PROPERTY	SIZE & TYPE	SHORT & LONG MEASUREMENT	CORPORATION LOCATION	REMARKS
120 JEFFERSON	0.25	20 COPPER	1.25 WEL HOUSE 70.77 EEL JONES	0.45 W OF SC 70.32 EEL JONES	RENEWED TO NEW MAIN
123 JEFFERSON	0.10	20 COPPER	1.25 WEL HOUSE 62.57 EEL JONES	0.35 W OF SC 62.22 EEL JONES	RENEWED TO NEW MAIN
124 JEFFERSON	0.50	20 COPPER	2.25 WEL HOUSE 54.37 EEL JONES	0.45 W OF SC 53.92 EEL JONES	RENEWED TO NEW MAIN
126 JEFFERSON	0.20	20 COPPER	1.6 WEL HOUSE 47.72 EEL JONES	0.80 W OF SC 46.92 EEL JONES	RENEWED TO NEW MAIN
127 JEFFERSON	0.20	20 COPPER	0.95 WEL HOUSE 49.92 EEL JONES	4.50 E OF SC 54.42 EEL JONES	RENEWED TO NEW MAIN
128 JEFFERSON	0.30	20 COPPER	0.4 WEL HOUSE 40.27 EEL JONES	0.25 W OF SC 40.02 EEL JONES	RENEWED TO NEW MAIN
129 JEFFERSON	0.35	20 COPPER	2.25 WEL HOUSE 37.42 EEL JONES	2.60 E OF SC 40.52 EEL JONES	RENEWED TO NEW MAIN
131 JEFFERSON	0.00	20 COPPER	0.9 WEL HOUSE 29.07 EEL JONES	1.85 W OF SC 27.12 EEL JONES	RENEWED TO NEW MAIN
132 JEFFERSON	0.30	20 COPPER	3.0 WEL HOUSE 26.87 EEL JONES	0.30 E OF SC 26.97 EEL JONES	RENEWED TO NEW MAIN
133 JEFFERSON	-0.15	20 COPPER	2.3 WEL HOUSE 19.62 EEL JONES	3.48 E OF SC 23.1 EEL JONES	RENEWED TO NEW MAIN
135 JEFFERSON	0.18	20 COPPER	0.9 WEL HOUSE 13.52 EEL JONES	1.43 E OF SC 14.95 EEL JONES	RECONN TO NEW MAIN



**SEWER NOTES:**  
1. 600 CONC CS HAS BEEN CONVERTED TO A 600 CONC LDS

**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMAL NUMBERS INDICATE METRES

**APEGN**  
Certificate of Authorization  
AECOM Canada Ltd.  
No. 4671 Date: Feb 26, 2016

**RECORD DRAWING**  
BID OPPORTUNITY NO. 863-2012

150 WM	WATERMAIN	150 WM	CURB STOP	150 WM	WATERMAIN	150 WM
Hydrant	HYDRANT	Reducer	REDUCER	Hydrant	HYDRANT	Valve
Valve	VALVE	Coupling	COUPLING	Valve	VALVE	Valve
300 LDS	LAND DRAINAGE SEWER	Anode	ANODE	300 LDS	LAND DRAINAGE SEWER	300 LDS
250 WWS	WASTE WATER SEWER	Hydro	HYDRO	250 WWS	WASTE WATER SEWER	250 WWS
Manhole	MANHOLE	MTS	MTS	Pavement Crown	PAVEMENT CROWN	
Catch Basin	CATCH BASIN	Gas	GAS	N/W Property Line	N/W PROPERTY LINE	
Curb Inlet	CURB INLET	Testhole	TESTHOLE	S/E Property Line	S/E PROPERTY LINE	
Culvert	CULVERT	Lamp Standard	LAMP STANDARD	N/W Gutter	N/W GUTTER	
Pipe Abandonments	PIPE ABANDONMENTS	Tree	TREE	S/E Gutter	S/E GUTTER	
Survey Bar	SURVEY BAR					
Existing	LEGEND - PLAN	NEW	LEGEND - PLAN	NEW	LEGEND - PROFILE	NEW

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES

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 SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
1	ISSUED FOR RECORD	15/10/14	Wjd
0	ISSUED FOR CONSTRUCTION	12/11/13	ADL

**AECOM**

DESIGNED BY: FMI  
DRAWN BY: ADL  
HOR. SCALE: 1:250  
VERT. SCALE: 1:50

CHECKED BY: EDT  
APPROVED BY: [Signature]  
RELEASED FOR CONSTRUCTION: [Signature]  
DATE: \_\_\_\_\_

PROFESSIONAL SEAL  
PROVINCE OF MANITOBA  
REGISTERED PROFESSIONAL ENGINEER  
Member  
23484  
26/10/2016

CONSULTANT DRAWING NO.  
60219315-SHT-30-Ph02 C-0001

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**JEFFERSON EAST**  
COMBINED SEWER RELIEF  
CONTRACT 2  
JEFFERSON AVENUE

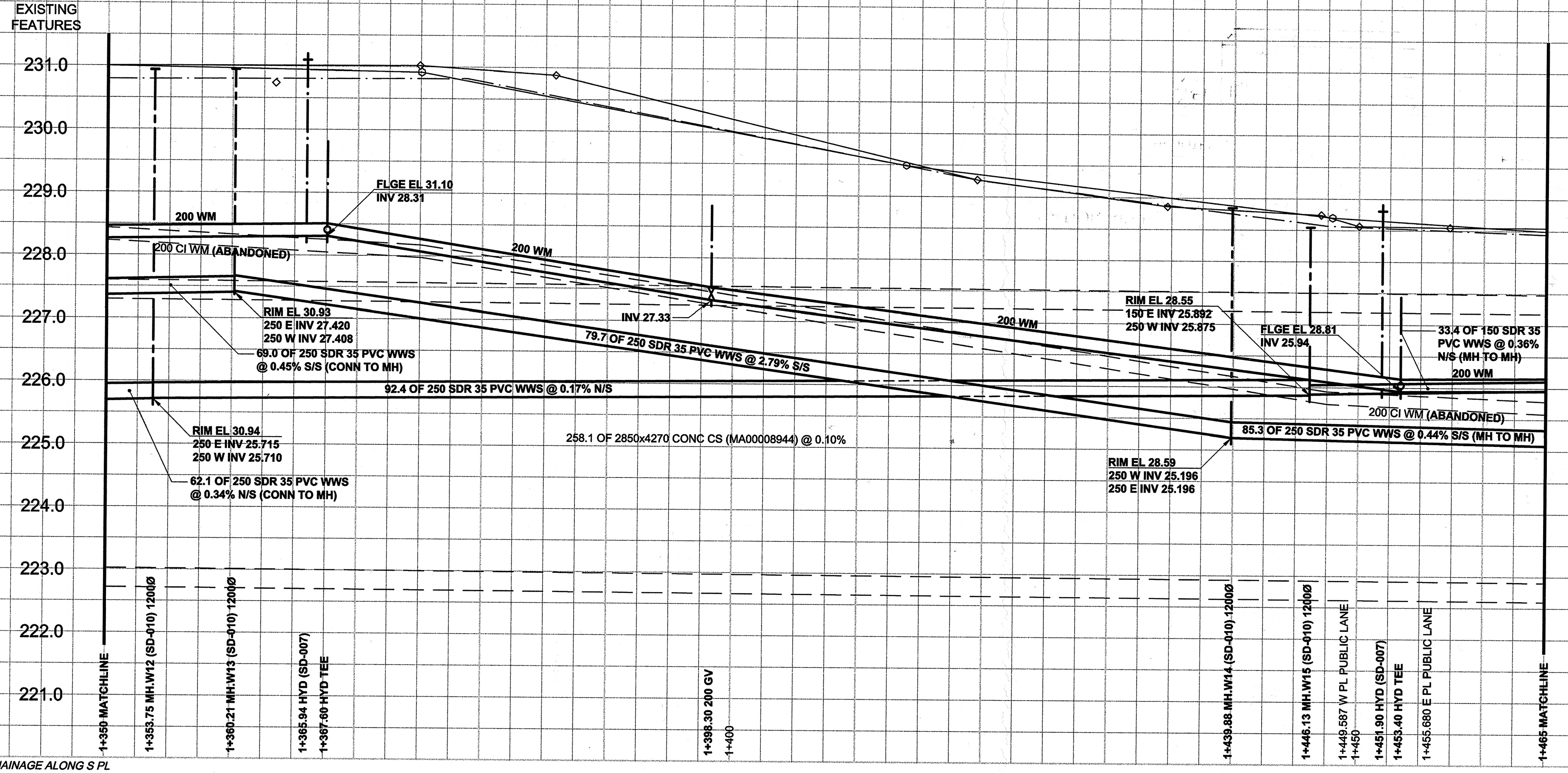
JONES STREET TO 170m WEST OF SCOTIA STREET  
WATER MAIN & SEWER MAIN RENEWALS

SHEET 01 OF 19  
CITY DRAWING NUMBER  
10436  
REV 1

AECOM REVIEW DRAFT CHK

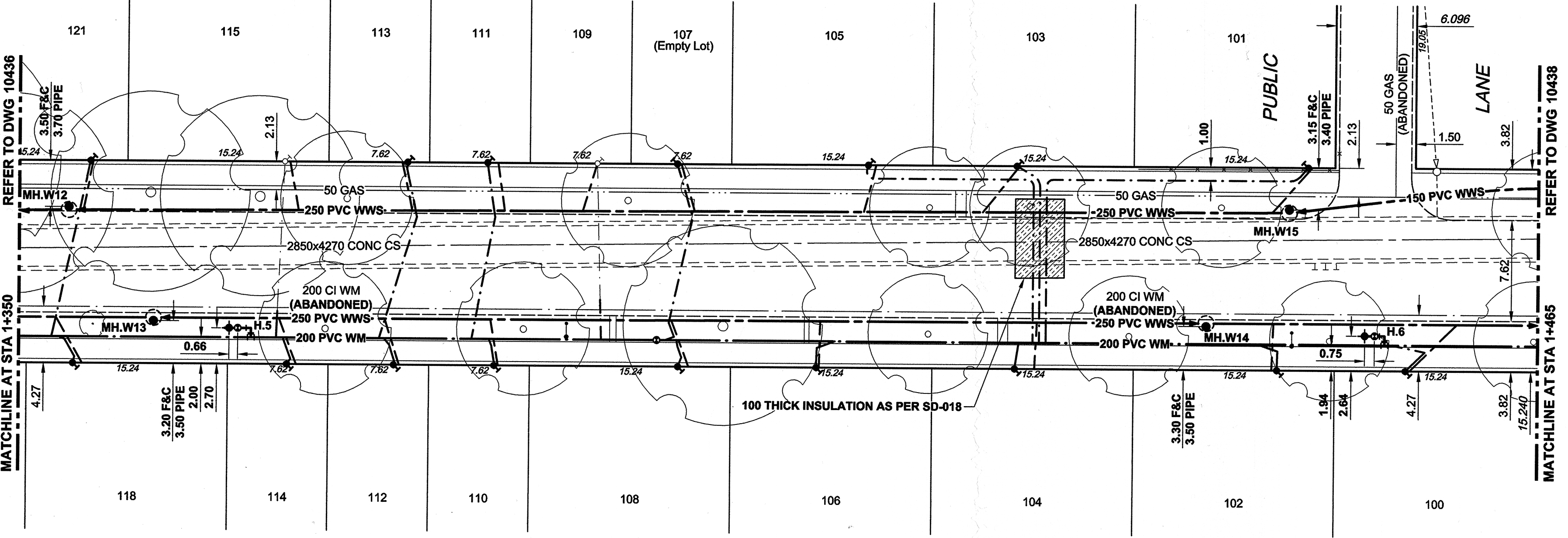
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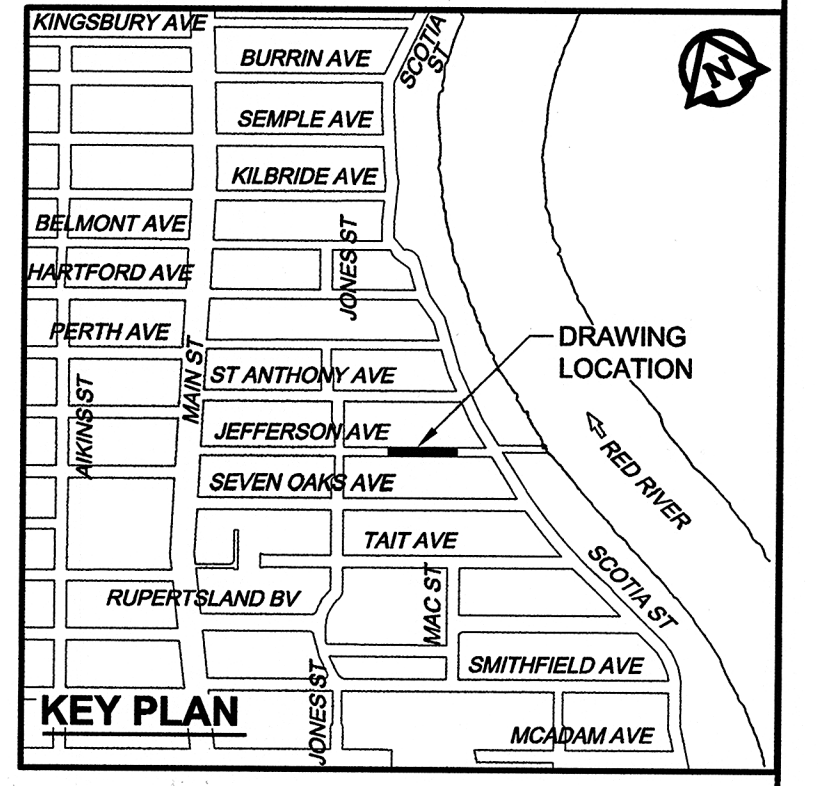


WATER SERVICE INFORMATION					
ADDRESS	DISTANCE TO PROPERTY	SIZE & TYPE	SHORT & LONG MEASUREMENT	CORPORATION LOCATION	REMARKS
100 JEFFERSON	0.10	20 COPPER	3.55 EWL HOUSE 66.52 WWL SCOTIA	1.0 W OF SC 66.26 WWL SCOTIA	RENEWED TO NEW MAIN
101 JEFFERSON	0.60	20 COPPER	0.7 WEL HOUSE 64.37 WWL SCOTIA	19.85 W OF SC 92.56 WWL SCOTIA	INSULATED COMMON TRENCH WITH 103 RENEWED TO NEW MAIN
102 JEFFERSON	0.20	20 COPPER	0.75 WEL HOUSE 76.27 WWL SCOTIA	1.45 W OF SC 76.46 WWL SCOTIA	RENEWED TO NEW MAIN
103 JEFFERSON	0.30	20 COPPER	3.35 EWL HOUSE 86.42 WWL SCOTIA	1.7 E OF SC 93.06 WWL SCOTIA	INSULATED TRENCH OVER SEWER MAIN RENEWED TO NEW MAIN
104 JEFFERSON	0.10	20 COPPER	4.7 EWL HOUSE 86.12 WWL SCOTIA	0.3 E OF SC 94.56 WWL SCOTIA	RENEWED TO NEW MAIN
105 JEFFERSON	0.30	20 COPPER	0.65 WEL HOUSE 97.67 WWL SCOTIA	12.55 E OF SC 93.46 WWL SCOTIA	INSULATED COMMON TRENCH WITH 103 RENEWED TO NEW MAIN
106 JEFFERSON	0.10	20 COPPER	4.8 EWL HOUSE 111.12 WWL SCOTIA	1.4 E OF SC 108.46 WWL SCOTIA	RENEWED TO NEW MAIN
107 JEFFERSON	0.10	20 COPPER	4.0 WEL LOT 112.12 WWL SCOTIA	1.0 W OF SC 121.46 WWL SCOTIA	RENEWED TO NEW MAIN
108 JEFFERSON	0.10	20 COPPER	1.4 WEL HOUSE 121.6 WWL SCOTIA	0.1 W OF SC 121.46 WWL SCOTIA	RENEWED TO NEW MAIN
109 JEFFERSON	0.40	20 COPPER	2.0 WEL HOUSE 116.37 EEL JONES	0.35 E OF SC 116.72 EEL JONES	RECONN. 3.0 m N OF NEW MAIN
110 JEFFERSON	0.30	20 COPPER	1.9 WEL HOUSE 108.62 EEL JONES	0.4 W OF SC 108.22 EEL JONES	RENEWED TO NEW MAIN
111 JEFFERSON	0.20	20 COPPER	2.15 WEL HOUSE 108.07 EEL JONES	1.15 W OF SC 106.92 EEL JONES	RENEWED TO NEW MAIN
112 JEFFERSON	0.10	20 COPPER	1.3 WEL HOUSE 101.02 EEL JONES	0.75 W OF SC 100.27 EEL JONES	RENEWED TO NEW MAIN
113 JEFFERSON	0.15	20 COPPER	0.8 WEL HOUSE 102.02 EEL JONES	2.1 W OF SC 99.92 EEL JONES	RENEWED TO NEW MAIN
114 JEFFERSON	0.30	20 COPPER	2.6 WEL HOUSE 92.92 EEL JONES	0.3 W OF SC 92.62 EEL JONES	RENEWED TO NEW MAIN
115 JEFFERSON	0.20	20 COPPER	1.3 WEL HOUSE 92.72 EEL JONES	0.6 W OF SC 92.12 EEL JONES	RECONN. 2.0 N OF NEW MAIN
118 JEFFERSON	0.40	20 COPPER	3.1 EWL HOUSE 76.72 EEL JONES	1.1 W OF SC 75.62 EEL JONES	RENEWED TO NEW MAIN
121 JEFFERSON	0.10	20 COPPER	1.55 WEL HOUSE 79.02 EEL JONES	2.9 W OF SC 75.12 EEL JONES	RENEWED TO NEW MAIN

SEWER SERVICE INFORMATION							
ADDRESS	SIZE	PL TIE (SHORT/LONG)	JUNCTION TIE	INVERT @ PROP	LENGTH RENEWED	RISER @ MAIN	REMARKS
100 JEFFERSON	150	3.85 EWL HOUSE 66.22 WWL SCOTIA	19.00 E OF MH.W14	26.65	4.00		CPLG TO CLAY AT PL
101 JEFFERSON	150	0.40 WEL HOUSE 64.07 WWL SCOTIA	1.30 W OF MH.W15	26.30	4.00		CPLG TO CLAY AT PL
102 JEFFERSON	150	1.15 WEL HOUSE 76.67 WWL SCOTIA	5.10 E OF MH.W14	26.79	3.70		CPLG TO CLAY AT PL
103 JEFFERSON	150	3.55 EEL HOUSE 66.22 WWL SCOTIA	23.20 W OF MH.W15	26.60	4.00		CPLG TO CONC AT PL
104 JEFFERSON	150	6.20 EWL HOUSE 94.62 WWL SCOTIA	12.80 W OF MH.W14	26.70	4.00		CPLG TO CLAY AT PL
105 JEFFERSON	150	0.05 WEL HOUSE 97.07 WWL SCOTIA	32.20 W OF MH.W15	27.10	3.00	0.60	CPLG TO CLAY AT PL
106 JEFFERSON	150	5.0 WEL HOUSE 110.92 WWL SCOTIA	29.20 W OF MH.W14	26.85	3.80		CPLG TO CLAY AT PL
107 JEFFERSON	150	3.7 WEL LOT 111.82 WWL SCOTIA	45.00 W OF MH.W15	27.60	3.50	0.80	CAPPED AT PL
108 JEFFERSON	150	0.4 EEL HOUSE 120.8 WWL SCOTIA	39.20 E OF MH.W13	27.60	4.20		CPLG TO CLAY AT PL
109 JEFFERSON	150	2.0 WEL HOUSE 116.37 EEL JONES	38.90 E OF MH.W12	28.10	3.30	0.80	CPLG TO CLAY AT PL
110 JEFFERSON	150	1.8 WEL HOUSE 108.92 EEL JONES	25.50 E OF MH.W13	28.10	3.80	0.30	CPLG TO CLAY AT PL
111 JEFFERSON	150	1.38 WEL HOUSE 108.87 EEL JONES	33.00 E OF MH.W12	28.40	3.50	1.10	CPLG TO CLAY AT PL
112 JEFFERSON	150	0.9 WEL HOUSE 101.42 EEL JONES	17.50 E OF MH.W13	28.50	3.80	0.30	CPLG TO CLAY AT PL
113 JEFFERSON	150	1.0 WEL HOUSE 101.62 EEL JONES	26.00 E OF MH.W12	28.40	3.70	1.40	CPLG TO CLAY AT PL
114 JEFFERSON	150	1.9 WEL HOUSE 93.62 EEL JONES	9.50 E OF MH.W13	28.30	4.00	0.30	CPLG TO CLAY AT PL
115 JEFFERSON	150	0.9 WEL HOUSE 93.12 EEL JONES	17.40 E OF MH.W12	28.40	3.50	1.50	CPLG TO CONC AT PL
118 JEFFERSON	150	3.8 EWL HOUSE 77.42 EEL JONES	7.40 W OF MH.W13	28.50	4.40	0.80	CPLG TO CLAY AT PL
121 JEFFERSON	150	1.35 WEL HOUSE 78.22 EEL JONES	1.10 E OF MH.W12	28.50	3.50	1.80	CPLG TO CLAY AT PL



**SEE DRAWING 10438 FOR MATERIAL LIST**



**AECOM**  
Certificate of Authorization  
AECOM Canada Ltd.  
No. 4671 Date: Feb 26, 2016

ALL VALVES ARE CLOCKWISE TO CLOSE (BLACK OPERATING NUT)

**RECORD DRAWING**  
BID OPPORTUNITY NO. 863-2012

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
○	150 WM	○	150 WM
○	WATERMAIN	○	WATERMAIN
○	HYDRANT	○	HYDRANT
○	VALVE	○	VALVE
○	300 LDS	○	300 LDS
○	LAND DRAINAGE SEWER	○	LAND DRAINAGE SEWER
○	WASTE WATER SEWER	○	WASTE WATER SEWER
○	MANHOLE	○	MANHOLE
○	CATCH BASIN	○	CATCH BASIN
○	CURB INLET	○	CURB INLET
○	CULVERT	○	CULVERT
○	PIPE ABANDONMENTS	○	PIPE ABANDONMENTS
○	SURVEY BAR	○	SURVEY BAR
○	EXISTING	○	NEW

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES

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 SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
1	ISSUED FOR RECORD	15/10/14	WJD
0	ISSUED FOR CONSTRUCTION	12/11/13	ADL

**AECOM**

DESIGNED BY: FMI  
CHECKED BY: EDT  
DRAWN BY: ADL  
APPROVED BY: [Signature]  
HOR. SCALE: 1:250  
VERT. SCALE: 1:50  
DATE: \_\_\_\_\_

PROFESSIONAL'S SEAL  
E.D.J. TOUPIN  
Member  
23484  
26 Feb 2016  
REGISTERED PROFESSIONAL ENGINEER

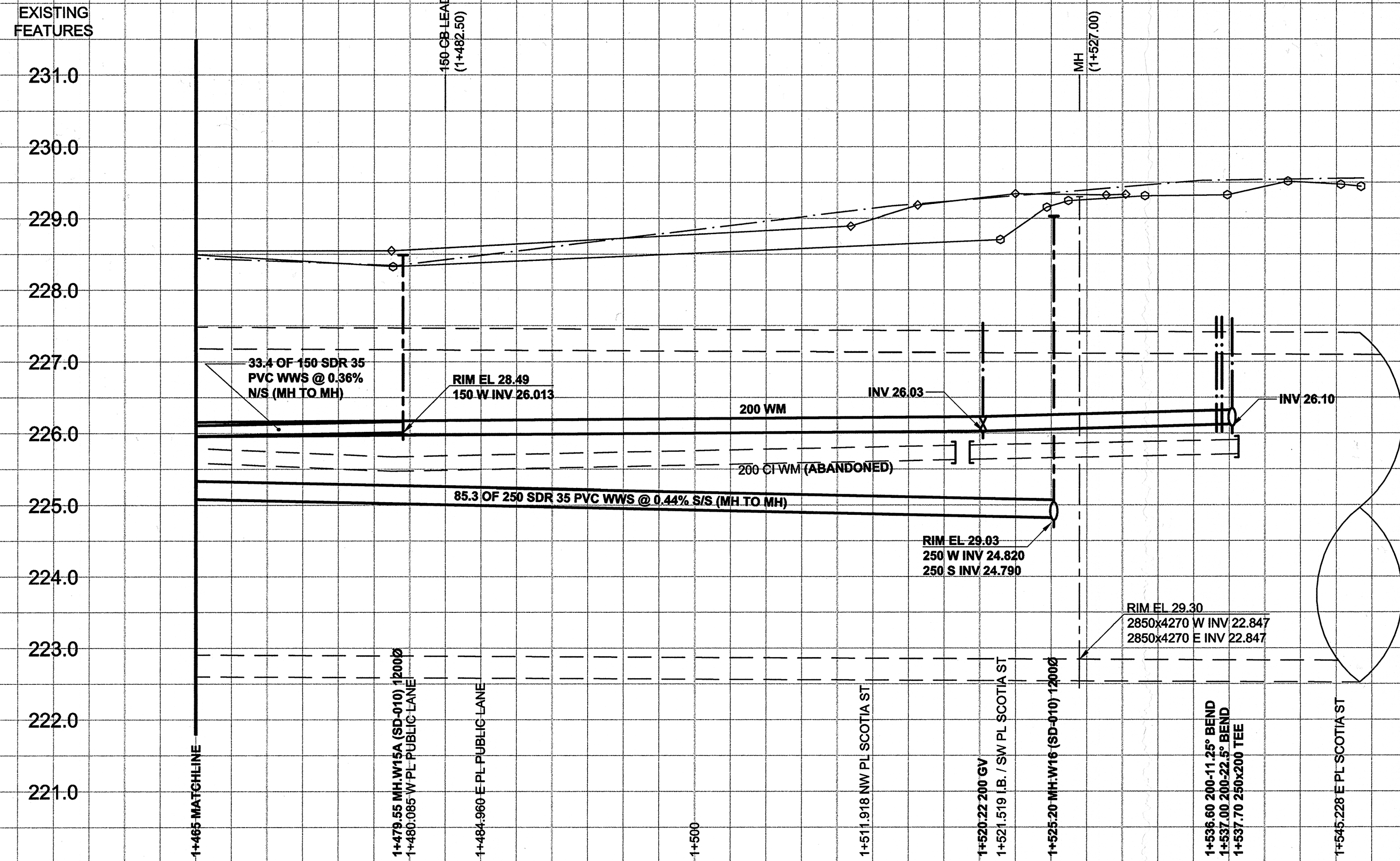
**THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT**

**JEFFERSON EAST COMBINED SEWER RELIEF CONTRACT 2**  
JEFFERSON AVENUE

70m EAST OF JONES STREET TO 55m WEST OF SCOTIA STREET  
WATER MAIN & SEWER MAIN RENEWALS

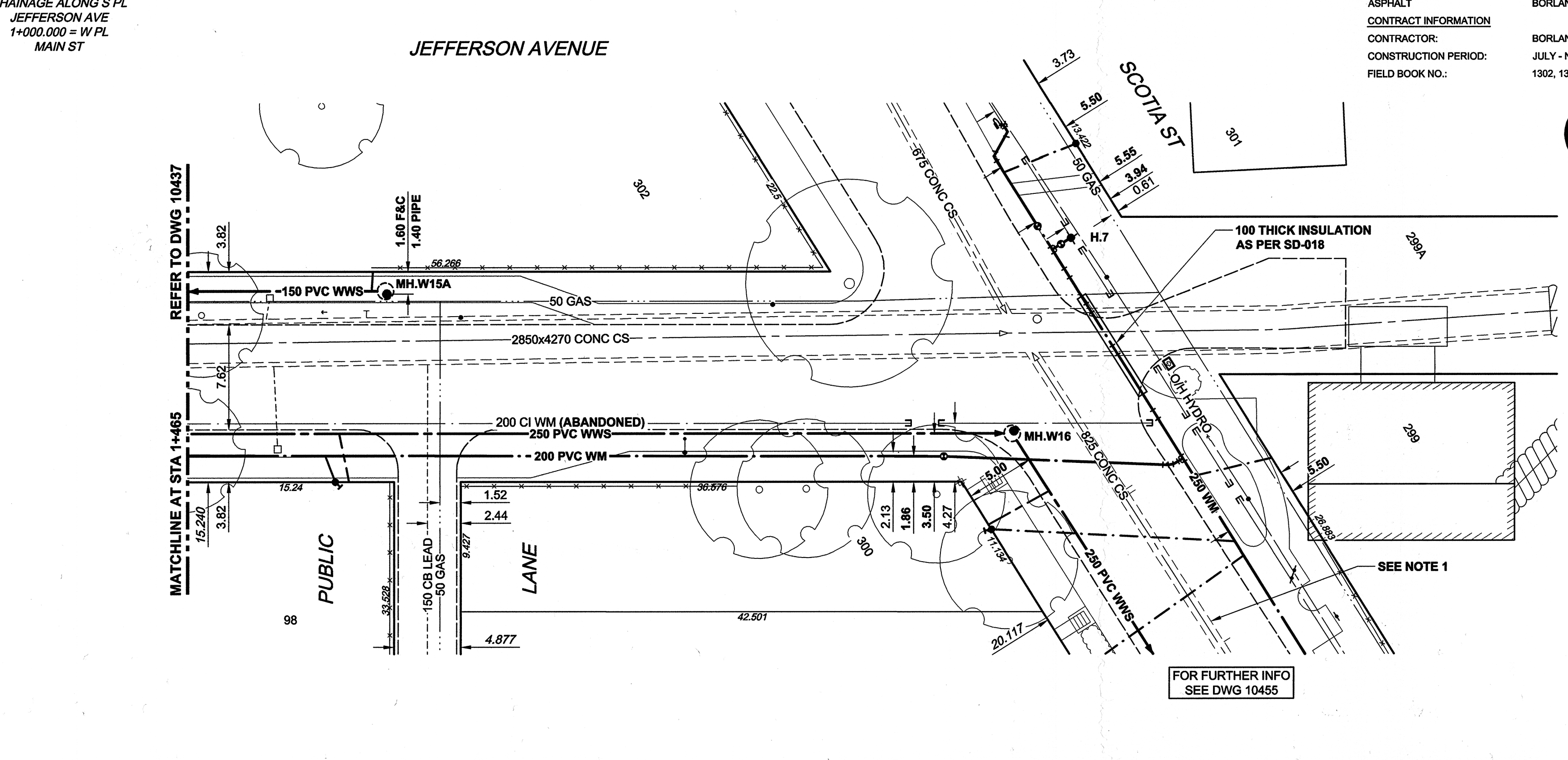
SHEET 02 OF 19  
CITY DRAWING NUMBER  
**10437**

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MATERIAL LIST - DRAWING 10437			
ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
<b>WATER WORKS</b>			
200 PVC PIPE	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
200 FABRICATED PVC FITTINGS TEES & BENDS	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
FIRE HYDRANTS	MUELLER CANADA INC.	AWWA C502	CANADA VALVE "ALBERTVILLE"
200 GATE VALVES	MUELLER CANADA INC.	AWWA C509 MODEL A-2380-40	RESILIENT WEDGE GATE VALVE C/W TO OPEN (BLACK TOP)
VALVE BOX LOWER CASING	IPEX INC.	AWWA C900 CSA B137.3 CONFORMS TO AP-001	PVC DR18
VALVE BOX UPPER CASING	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-001	CASING MARKED "WDVB", "AIL" & "WD46" LID MARKED "WDVB" & "W"
VALVE STEM EXTENSION	W.D. VALVE BOXES LTD.	CONFORMS TO AP-002	TOP MARKED "AIL" & STENCILED "WDVB"
ANODES - ZINC	INTERPROVINCIAL CORROSION CONTROL COMPANY LIMITED	ASTM B418 - TYPE II	ZINC WEIGHT 10.9 kg
<b>SEWER WORKS</b>			
250 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
250 FABRICATED PVC FITTINGS	GPX PRODUCTS INC.	ASTM D3034 ASTM F1336 CSA B182.2	SDR-35 TEES, WYES & BENDS
MANHOLE COMPONENTS	INLAND PIPE LTD.	ASTM C78-CL2 ASTM C-478	PRECAST, STEEL REINFORCED
MANHOLE & CATCHBASIN ADJUSTING RINGS	INLAND PIPE LTD.	ASTM C478	750 L.D. PRECAST CONCRETE ADJUSTING RINGS
MANHOLE/CATCHBASIN JOINT GASKETS	HAMILTON KENT OF CANADA LIMITED	ASTM C443 CSA A257.3 MODEL "165"	TYLOX SUPERSEAL SELF-LUBRICATING RUBBER GASKET
MANHOLE/CATCHBASIN JOINT GASKETS	HAMILTON KENT OF CANADA LIMITED (INLAND PIPE LTD)	ASTM C990 MODEL "KENT SEAL NO. 2"	BUTYL RUBBER SEALANT FLEXIBLE ROPE
MANHOLE FRAMES & COVERS	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-004 & AP-005 OR AP-006	MH FRAME WD50F & SOLID COVER WD50S, GRATED COVER WD50G
<b>WATER SERVICE CONNECTIONS</b>			
20 COPPER WATER TUBE	CERRO COPPER PRODUCTS CO	ASTM B88 C12200 COPPER	TYPE K SEAMLESS TUBE
20 CORPORATION STOP	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODEL "A-220"	PLUG STYLE VALVE WITH AWWA THREAD INLET & FLARED OUTLET
20 CURB STOP	MUELLER CANADA	AWWA C800 ASTM B62 MODEL "B25154"	BALL VALVE WITH FLARED INLET/OUTLET MINNEAPOLIS PATTERN
20 CURB STOP BOXES	W.D. VALVE BOXES LTD.	MODEL "SB20CW"	IRON TOP, TYPE 304 S.S. RISERS & ABS BASE & CRADLE, WITH MAGNET FLARED FITTINGS
20 CONNECTION FITTINGS - UNION	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODEL "H-15400"	COPPER FLARE TO LEAD FLANGE
CONNECTION FITTINGS - ADAPTER	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODELS "H-15509", "H-15506" & "H-15510"	U BOLT GROUND CONNECTOR FOR COPPER CABLE
GROUND CLAMP	THOMAS & BETTS CORPORATION (BLACKBURN)	MODEL "GUV"	
<b>SEWER SERVICE CONNECTIONS</b>			
150 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
150 FLEXIBLE SEWER COUPLINGS	MISSION RUBBER CO.	CSA B602 ASTM A240 MODEL "FLEX-SEAL"	FLEXIBLE PVC SEALING SLEEVE WITH TYPE 316 SS SHEAR RING AND STRAPS
150 MOULDED PVC CONNECTION FITTINGS	GPX PRODUCTS INC.	ASTM D3034 CSA B182.2	SDR-35
<b>ROAD WORKS</b>			
CONCRETE	BUILDING PRODUCTS & CONCRETE SUPPLY LTD.		
ASPHALT	BORLAND CONSTRUCTION LTD.		
<b>CONTRACT INFORMATION</b>			
CONTRACTOR:	BORLAND CONSTRUCTION LTD.		
CONSTRUCTION PERIOD:	JULY - NOVEMBER 2013		
FIELD BOOK NO.:	1302, 1322		

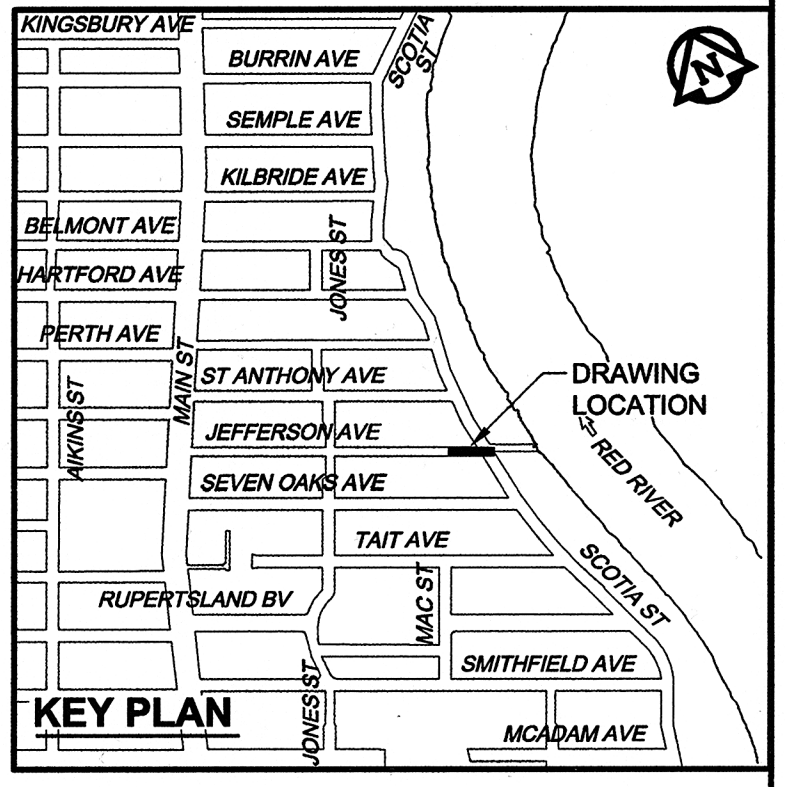
MATERIAL LIST - DRAWING 10438			
ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
<b>WATER WORKS</b>			
150, 200, 250 PVC PIPE	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
FABRICATED PVC FITTINGS TEES & BENDS	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
FIRE HYDRANTS	MUELLER CANADA INC.	AWWA C502	CANADA VALVE "ALBERTVILLE"
GATE VALVES	MUELLER CANADA INC.	AWWA C509 MODEL A-2380-40	RESILIENT WEDGE GATE VALVE C/W TO OPEN (BLACK TOP)
VALVE BOX LOWER CASING	IPEX INC.	AWWA C900 CSA B137.3 CONFORMS TO AP-001	PVC DR18
VALVE BOX UPPER CASING	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-001	CASING MARKED "WDVB", "AIL" & "WD46" LID MARKED "WDVB" & "W"
VALVE STEM EXTENSION	W.D. VALVE BOXES LTD.	CONFORMS TO AP-002	TOP MARKED "AIL" & STENCILED "WDVB"
IRON COUPLINGS	ROBAR INDUSTRIES LTD.	AWWA C219 AWWA C213 ASTM A538 GRADE 65-45-12 MODEL "1506"	FBE-COATED D.I. SLEEVE & END RISERS TYPE 304 S.S. NUTS, BOLTS, WASHERS AND DI-ELECTRIC WASHERS
ANODES - ZINC	INTERPROVINCIAL CORROSION CONTROL COMPANY LIMITED	ASTM B418 - TYPE II	ZINC WEIGHT 10.9 kg
<b>SEWER WORKS</b>			
150, 250 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
150, 250 FLEXIBLE SEWER COUPLINGS	MISSION RUBBER CO.	CSA B602 ASTM A240 MODEL "FLEX-SEAL"	FLEXIBLE PVC SEALING SLEEVE WITH TYPE 316 SS SHEAR RING AND STRAPS
MANHOLE COMPONENTS	INLAND PIPE LTD.	ASTM C78-CL2 ASTM C-478	PRECAST, STEEL REINFORCED
MANHOLE & CATCHBASIN ADJUSTING RINGS	INLAND PIPE LTD.	ASTM C478	750 L.D. x (50 TO 125) PRECAST CONCRETE ADJUSTING RINGS
MANHOLE/CATCHBASIN JOINT GASKETS	HAMILTON KENT OF CANADA LIMITED	ASTM C443 CSA A257.3 MODEL "165"	TYLOX SUPERSEAL SELF-LUBRICATING RUBBER GASKET
MANHOLE/CATCHBASIN JOINT GASKETS	HAMILTON KENT OF CANADA LIMITED	ASTM C990 MODEL "KENT SEAL NO. 2"	BUTYL RUBBER SEALANT FLEXIBLE ROPE
MANHOLE FRAMES & COVERS	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-004 & AP-005 OR AP-006	MH FRAME WD50F & SOLID COVER WD50S, GRATED COVER WD50G
<b>WATER SERVICE CONNECTIONS</b>			
20 COPPER WATER TUBE	CERRO COPPER PRODUCTS CO	ASTM B88 C12200 COPPER	TYPE K SEAMLESS TUBE
20 CORPORATION STOP	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODEL "A-220"	PLUG STYLE VALVE WITH AWWA THREAD INLET & FLARED OUTLET
20 CURB STOP	MUELLER CANADA	AWWA C800 ASTM B62 MODEL "B25154"	BALL VALVE WITH FLARED INLET/OUTLET MINNEAPOLIS PATTERN
20 CURB STOP BOXES	W.D. VALVE BOXES LTD.	MODEL "SB20CW"	IRON TOP, TYPE 304 S.S. RISERS & ABS BASE & CRADLE, WITH MAGNET
<b>SEWER SERVICE CONNECTIONS</b>			
150 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
150 MOULDED PVC CONNECTION FITTINGS	GPX PRODUCTS INC.	ASTM D3034 CSA B182.2	SDR-35
<b>ROAD WORKS</b>			
CONCRETE	BUILDING PRODUCTS & CONCRETE SUPPLY LTD.		
ASPHALT	BORLAND CONSTRUCTION LTD.		
<b>CONTRACT INFORMATION</b>			
CONTRACTOR:	BORLAND CONSTRUCTION LTD.		
CONSTRUCTION PERIOD:	JULY - NOVEMBER 2013		
FIELD BOOK NO.:	1302, 1322		



WATER SERVICE INFORMATION					
ADDRESS	DISTANCE TO PROPERTY	SIZE & TYPE	SHORT & LONG MEASUREMENT	CORPORATION LOCATION	REMARKS
98 JEFFERSON	0.10	20 1.95 WEL HOUSE COPPER	45.72 WWL SCOTIA	0.75 W OF SC 45.21 WWL SCOTIA	RENEWED TO NEW MAIN

SEWER SERVICE INFORMATION							
ADDRESS	SIZE	PL TIE (SHORT/LONG)	JUNCTION TIE	INVERT @ PROP	LENGTH RENEWED	RISER @ MAIN	REMARKS
98 JEFFERSON	150	0.95 WEL HOUSE 44.72 WWL SCOTIA	36.20 E OF MH.W14	25.93	3.70		CPLG TO CLAY AT PL
302 SCOTIA	100	4.4 EWL HOUSE 33.4 WWL SCOTIA	1.00 W OF MH.W15A	26.04	0.50		CPLG TO IRON AT PL

**SEWER NOTES:**  
1. 825 CONC CS HAS BEEN CONVERTED TO A 875 CONC LDS



150 WM	WATERMAIN	150 WM	CURB STOP	150 WM	WATERMAIN	150 WM	LOCATION APPROVED
HYDRANT	HYDRANT	REDUCER	REDUCER	HYDRANT	HYDRANT	UNDERGROUND STRUCTURES	
VALVE	VALVE	COUPLING	COUPLING	VALVE	VALVE		
300 LDS	LAND DRAINAGE SEWER	300 LDS	ANODE	300 LDS	LAND DRAINAGE SEWER		
250 WWS	WASTE WATER SEWER	250 WWS	HYDRO	250 WWS	WASTE WATER SEWER		
MANHOLE	MANHOLE	MTS	MTS	PAVEMENT CROWN	PAVEMENT CROWN		
CATCH BASIN	CATCH BASIN	GAS	GAS	N/W PROPERTY LINE	N/W PROPERTY LINE		
CURB INLET	CURB INLET	TESTHOLE	TESTHOLE	S/E PROPERTY LINE	S/E PROPERTY LINE		
CULVERT	CULVERT	LAMP STANDARD	LAMP STANDARD	N/W GUTTER	N/W GUTTER		
PIPE ABANDONMENTS	PIPE ABANDONMENTS	TREE	TREE	S/E GUTTER	S/E GUTTER		
SURVEY BAR	SURVEY BAR						
EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PROFILE	NEW		

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES

BM 13-009 N.E. Cor. Jefferson Ave. & Main St., Tbl. in S. Conc. foundation of Lift Station, 0.5m W. & 0.1m below brick of S.E. Cor. of Bldg.  
ELEV 230.820m

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

DESIGNED BY	FMI	CHECKED BY	EDT
DRAWN BY	ADL	APPROVED BY	
HOR. SCALE	1:250	RELEASED FOR CONSTRUCTION	
VERT. SCALE	1:50	DATE	

**AECOM**  
Certificate of Authorization  
AECOM Canada Ltd.  
No. 4671 Date: Feb 26, 2016

**PROFESSIONAL'S SEAL**  
Ed J. Toupin  
Member 23484  
Feb 26, 2016  
CONSULTANT DRAWING NO.  
60219315-SHT-30-Ph02 C-0003

**RECORD DRAWING**  
BID OPPORTUNITY NO. 863-2012

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**JEFFERSON EAST**  
COMBINED SEWER RELIEF  
CONTRACT 2  
JEFFERSON AVENUE

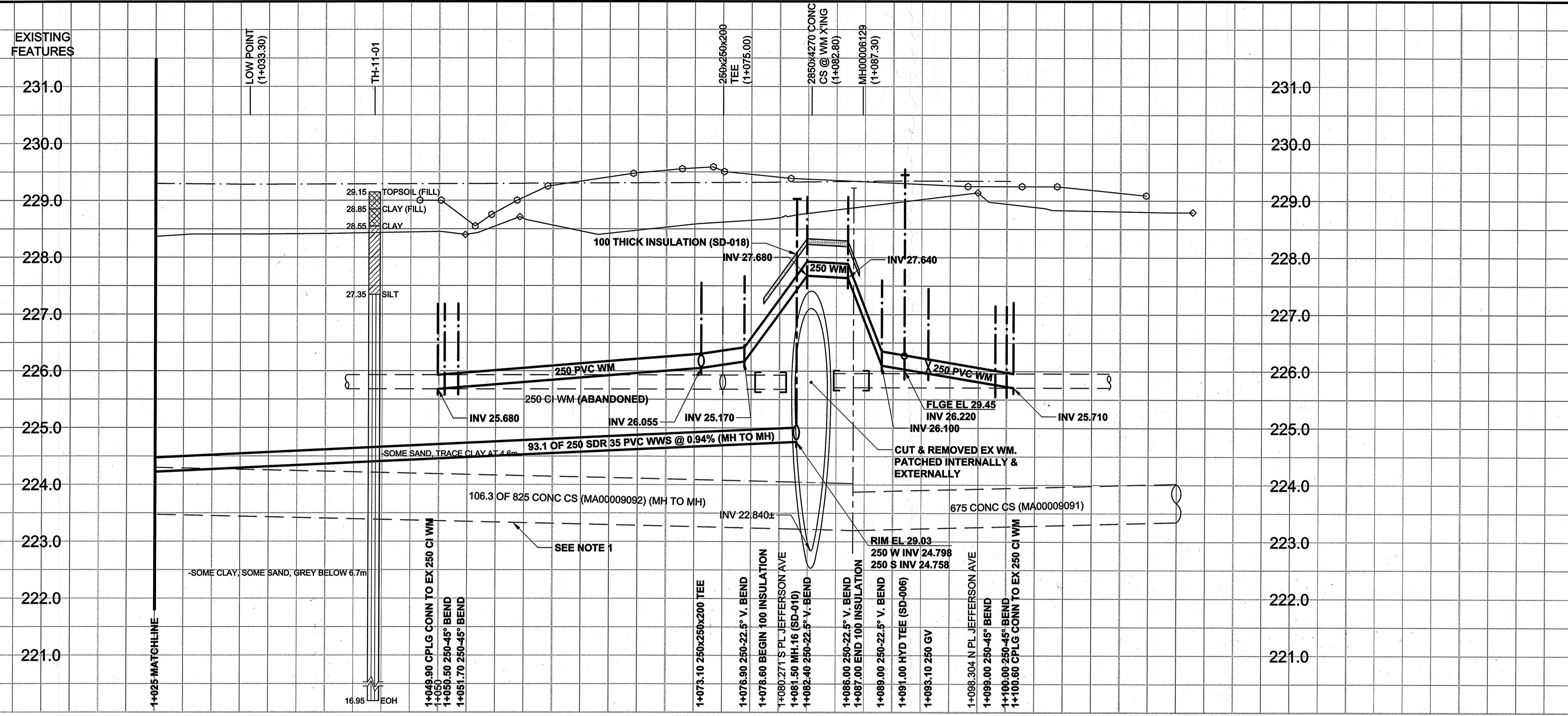
190m EAST OF JONES STREET TO SCOTIA STREET  
WATER MAIN & SEWER MAIN RENEWALS

SHEET 03 OF 19  
CITY DRAWING NUMBER  
**10438**  
REV 1

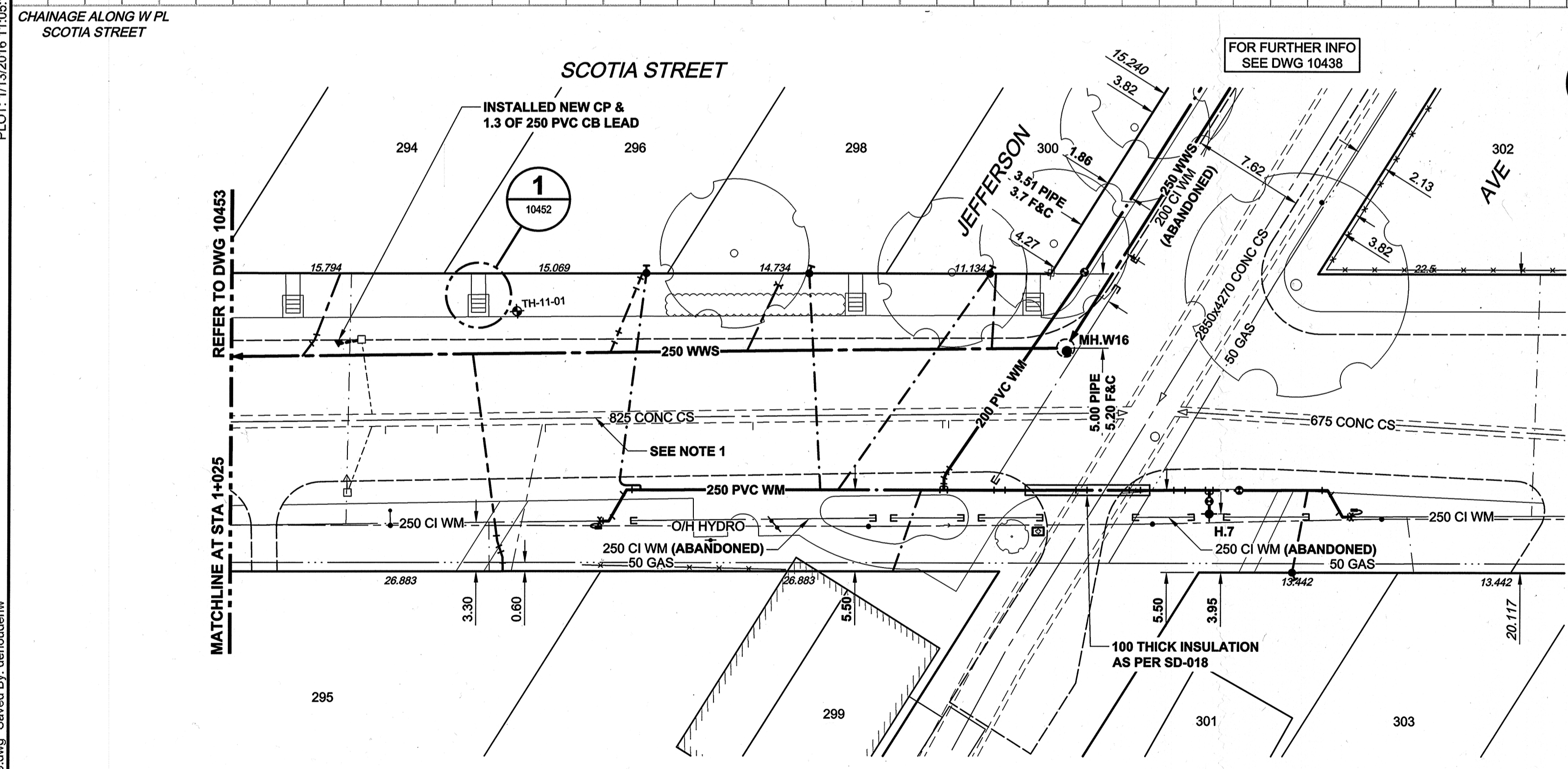
D SIZE 22" x 34" (559mm x 864mm)

PLOT: 11/3/2016 11:05:14 AM

AECOM REVIEW DRAFT CHK  
AECOM FILE NAME: 60219315-SHT-30-Ph02\_C-0019.dwg Saved By: demoulden



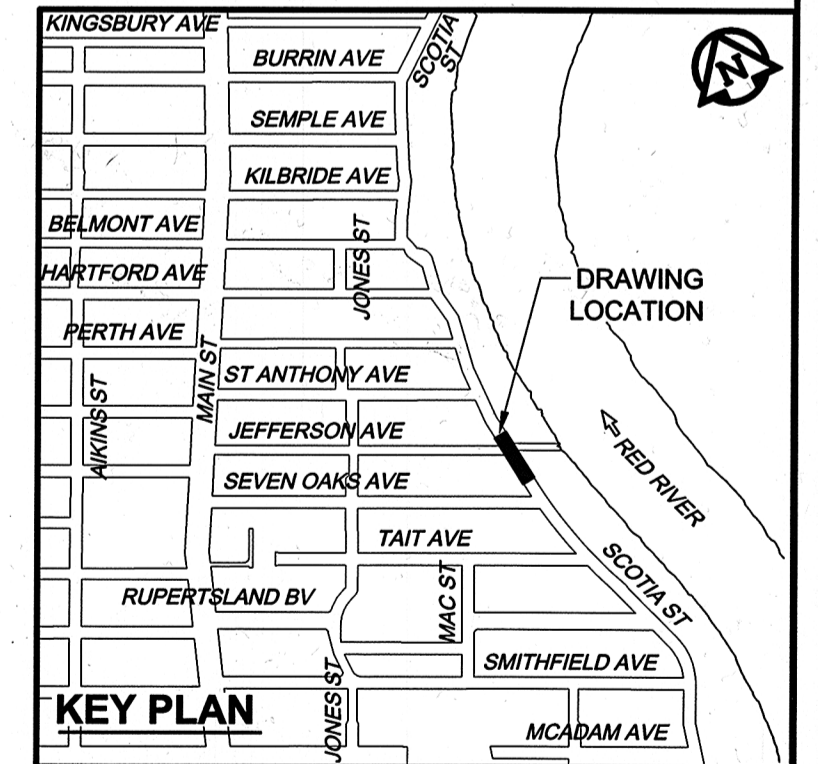
MATERIAL LIST ITEM	MANUFACTURER	MATERIAL SPECIFICATION	SPECIAL FEATURES
<b>WATER WORKS</b>			
150, 250 PVC PIPE	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
250 FABRICATED PVC FITTINGS TEES & BENDS	IPEX INC.	AWWA C900 CSA B137.3	"BLUE BRUTE" DR-18
FIRE HYDRANTS	MUELLER CANADA INC.	AWWA C502	CANADA VALVE "ALBERTVILLE"
250 GATE VALVES	MUELLER CANADA INC.	AWWA C509	RESILIENT WEDGE GATE VALVE COW TO OPEN (BLACK TOP)
VALVE BOX LOWER CASING	IPEX INC.	AWWA C900 CSA B137.3 CONFORMS TO AP-001	PVC DR18
VALVE BOX UPPER CASING	W.D. VALVE BOXES LTD.	AWWA C900 CSA B137.3 CONFORMS TO AP-001	CASING MARKED "WDVB", "AIL" & "WD46" LID MARKED "WDVB" & "W"
VALVE STEM EXTENSION	W.D. VALVE BOXES LTD.	CONFORMS TO AP-002	TOP MARKED "AIL" & STENCILED "WDVB"
IRON COUPLINGS	ROBAR INDUSTRIES LTD.	AWWA C219 AWWA C213 ASTM A536 GRADE 65-45-12 MODEL "1506"	FBE-COATED D.I. SLEEVE & END RINGS TYPE 304 S.S. NUTS, BOLTS, WASHERS AND D-ELECTRIC WASHERS
RIGID INSULATION	DOW CHEMICAL CANADA INC.	CANULC S701	STYROFOAM HI-40, TYPE 4 EXTRUDED POLYSTYRENE FOAM
ANODES - ZINC	INTERPROVINCIAL CORROSION CONTROL COMPANY LIMITED	ASTM B418 - TYPE II	ZINC WEIGHT 10.9 kg
<b>SEWER WORKS</b>			
250 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
250 FABRICATED PVC FITTINGS	IPEX INC.	ASTM F678 ASTM F1336 CSA B182.2	SDR-35 TEES, WYES & BENDS
250 FLEXIBLE SEWER COUPLINGS	MISSION RUBBER CO.	CSA B602 ASTM A240 MODEL "FLEX-SEAL"	FLEXIBLE PVC SEALING SLEEVE WITH TYPE 316 SS SHEAR RING AND STRAPS
MANHOLE COMPONENTS	INLAND PIPE LTD.	ASTM C76-CL2 ASTM C-478	PRECAST, STEEL REINFORCED
CATCHBASINS/CATCHPITS	INLAND PIPE LTD.	ASTM C478 CONFORMS TO SD-024	PRECAST CONCRETE COMPONENTS
MANHOLE & CATCHBASIN ADJUSTING RINGS	INLAND PIPE LTD.	ASTM C478	750 L.D. PRECAST CONCRETE ADJUSTING RINGS
MANHOLE/CATCHBASIN JOINT GASKETS	HAMILTON KENT OF CANADA LIMITED	ASTM C443 CSA A257.3 MODEL "165"	TYLOX SUPERSEAL
MANHOLE/CATCHBASIN JOINT GASKETS	HAMILTON KENT OF CANADA LIMITED	ASTM C990 MODEL "KENT SEAL NO. 2"	BTYL RUBBER SEALANT FLEXIBLE ROPE
MANHOLE FRAMES & COVERS	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-004 & AP-005 OR AP-008	MH FRAME W/50% & SOLID COVER W/50%, GRATED COVER W/50%
BARRIER CURB AND GUTTER INLET	W.D. VALVE BOXES LTD.	C.I. - ASTM A-48 CLASS 30B CONFORMS TO AP-008, AP-009	W/59 FRAME, W/59% COVER, W/59% BOX
<b>WATER SERVICE CONNECTIONS</b>			
20 COPPER WATER TUBE	CERRO COPPER PRODUCTS CO	ASTM B88 C12200 COPPER	TYPE K SEAMLESS TUBE
20 CORPORATION STOP	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODEL "A-220"	PLUG STYLE VALVE WITH AWWA THREAD INLET & FLARED OUTLET
20 CURB STOP	A.Y. MCDONALD MFG. CO.	AWWA C800 ASTM B62 MODEL "6104"	BALL VALVE WITH FLARED INLET/OUTLET MINNEAPOLIS PATTERN
20 CURB STOP BOXES	W.D. VALVE BOXES LTD.	MODEL "SB20CW"	IRON TOP, TYPE 304 S.S. RISERS & ABS BASE & CRADLE; WITH MAGNET FLARED FITTINGS
20, 38 CONNECTION FITTINGS - UNION	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODEL "H-1540F"	COPPER FLARE TO LEAD FLANGE
CONNECTION FITTINGS - ADAPTER	MUELLER CANADA INC.	AWWA C800 ASTM B62 MODELS "H-1550S", "H-15506" & "H-15510"	COPPER FLARE TO LEAD FLANGE
GROUND CLAMP	THOMAS & BETTS CORPORATION (BLACKBURN)	MODEL "GUV"	U BOLT GROUND CONNECTOR FOR COPPER CABLE
<b>SEWER SERVICE CONNECTIONS</b>			
150 PVC PIPE	IPEX INC.	ASTM D3034 CSA B182.2	SDR-35 "RING-TITE"
150 MOULDED PVC CONNECTION FITTINGS	GPX PRODUCTS INC.	ASTM D3034 CSA B182.2	SDR-35
150 FLEXIBLE SEWER COUPLINGS	MISSION RUBBER CO.	CSA B602 ASTM A240 MODEL "FLEX-SEAL"	FLEXIBLE PVC SEALING SLEEVE WITH TYPE 316 SS SHEAR RING AND STRAPS
<b>ROAD WORKS</b>			
CONCRETE	BUILDING PRODUCTS & CONCRETE SUPPLY LTD.		
<b>CONTRACT INFORMATION</b>			
CONTRACTOR:	BORLAND CONSTRUCTION LTD.		
CONSTRUCTION PERIOD:	MARCH - NOVEMBER 2013		
FIELD BOOK NO.:	1303, 1302, 1320, 1322		



**SEWER NOTES:**  
1. 825 CONC CS HAS BEEN CONVERTED TO A 825 CONC LDS

WATER SERVICE INFORMATION					
ADDRESS	DISTANCE PROPERTY	SIZE (mm) & TYPE	SHORT & LONG MEASUREMENT	CORPORATION LOCATION	REMARKS
294 SCOTIA	0.30	15 LEAD	0.4 SNL OF HOUSE 33.0 NNL OF SEVEN OAKS	0.45 S OF SIC	
295 SCOTIA	10.60	12 LEAD	2.8 NSL OF HOUSE 48.6 S HYD N JEFFERSON	SAME AS SIC	
296 SCOTIA	0.30	20 COPPER	0.7 SNL HOUSE 27.4 SSL JEFFERSON	0.25 S OF SC 17.7 SSL JEFFERSON	RECONN. TO NEW MAIN
298 SCOTIA	0.60	20 COPPER	2.1 SNL HOUSE 16.3 SSL JEFFERSON	0.8 N OF SC 5.6 SSL JEFFERSON	RENEWED TO NEW MAIN
299 SCOTIA		38 COPPER		0.4 NSL JEFFERSON	RECONN. TO NEW MAIN
300 SCOTIA	0.00	20 COPPER	2.1 SNL HOUSE 4.1 SSL JEFFERSON	10.2 S OF SC 4.2 SSL JEFFERSON	RENEWED TO NEW MAIN
301 SCOTIA		20 COPPER	2.25 NSL HOUSE 11.0 NNL JEFFERSON	0.4 N OF SC 8.5 NNL JEFFERSON	RENEWED TO NEW MAIN

SEWER SERVICE INFORMATION				
ADDRESS	PL TIE (SHORT/LONG)	JUNCTION TIE	REMARKS	INVERT @ PL
294 SCOTIA	0.6 SNL HOUSE 32.3 NNL SEVEN OAKS	41.6 N OF MH W18	RENEWED TO 4.2 W OF MAIN	26.090
295 SCOTIA	2.3 NSL HOUSE	40.0 S OF MH W16	RENEWED TO 15.6 E OF MAIN	24.910
296 SCOTIA	0.5 SNL HOUSE 29.7SSL JEFFERSON	30.9 S OF MH W16	RENEWED TO 5.0 W OF MAIN	25.980
298 SCOTIA	3.3 SNL HOUSE 18.0 SSL JEFFERSON	21.5 S OF MH W16	RENEWED TO 4.4 W OF MAIN	25.470
299 SCOTIA			JEFFERSON FPS	
300 SCOTIA	1.8 SNL HOUSE 3.7 SSL JEFFERSON	5.2 S OF MH W16	RENEWED TO 4.7 W OF MAIN	25.530



**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES



**RECORD DRAWING**  
BID OPPORTUNITY NO. 863-2012

150 WM	WATERMAIN	150 WM	150 WM	CURB STOP	150 WM	WATERMAIN	150 WM
○	HYDRANT	●	○	REDUCER	○	HYDRANT	○
○	VALVE	○	○	COUPLING	○	VALVE	○
○	LAND DRAINAGE SEWER	○	○	ANODE	○	LAND DRAINAGE SEWER	○
○	WASTE WATER SEWER	○	○	HYDRO	○	WASTE WATER SEWER	○
○	MANHOLE	○	○	MTS	○	PAVEMENT CROWN	○
○	CATCH BASIN	○	○	GAS	○	N/W PROPERTY LINE	○
○	CURB INLET	○	○	TESTHOLE	○	S/E PROPERTY LINE	○
○	CULVERT	○	○	LAMP STANDARD	○	N/W GUTTER	○
○	PIPE ABANDONMENTS	○	○	TREE	○	S/E GUTTER	○
○	SURVEY BAR	○	○		○		○
○	LEGEND - PLAN	○	○	LEGEND - PLAN	○	LEGEND - PROFILE	○

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES DATE COMMITTEE

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

NO.	REVISIONS	DATE	BY
1	ISSUED FOR RECORD	15/10/14	Wjd
0	ISSUED FOR CONSTRUCTION	12/11/13	ADL

**AECOM**

DESIGNED BY: FMI  
CHECKED BY: EDT

DRAWN BY: ADL  
APPROVED BY: [Signature]

HOR. SCALE: 1:250  
VERT. SCALE: 1:50

RELEASED FOR CONSTRUCTION

DATE

PROFESSIONAL SEAL

PROVINCE OF MANITOBA

REGISTERED PROFESSIONAL ENGINEER

Member 23484

CONSULTANT DRAWING NO. 60219315-SHT-30-Ph02\_C-0019

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**JEFFERSON EAST**  
COMBINED SEWER RELIEF  
CONTRACT 2

SCOTIA STREET  
25m NORTH OF SEVEN OAKS AVENUE TO JEFFERSON AVENUE

SHEET 19 OF 19  
CITY DRAWING NUMBER 10455











