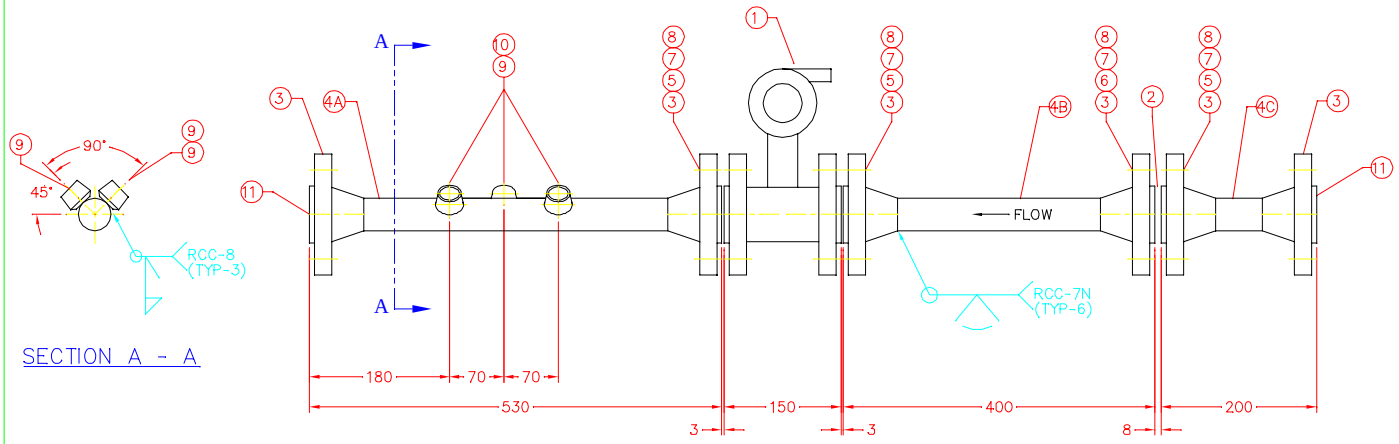

SECTION A - A

BILL OF MATERIAL

	ITEM	QTY	SIZE	DESCRIPTION	MATERIAL	HEAT NO.
*	1	1	1.5"	VORTEX METER, PN 100		
				FxF, -45°C, MODEL		
				JOHNSON, YOKOGAWA		
				DIGITAL DY 040		
*	2	1	1.5"	FLOW CONDITIONER,	SA516-70	
				PN 100, RF, (600#), SCH		
				80 BORE, PERFORATED		
				PLATE		
	3	6	1.5"	FLANGE, PN 100 (600#)	SA350-LF2	
				RFWN SCH 80		
	4A	1	1.5"	PIPE, 378 LG, SCH 80	SA333-6	
	4B	1	1.5"	PIPE, 248 LG, SCH 80	SA333-6	
	4C	1	1.5"	PIPE, 48 LG, SCH 80	SA333-6	
	5	3	1.5"	GASKET, PN 100 (600#)	TP304SS	
				RF, 3.2MM THK, FLEXITALIC		
				SPIRAL WOUND WITH		
				EXTERNAL C.S. RING		
	6	1	1.5"	GASKET, PN 100 (600#)	NON-ASB	
				RF, 1.6MM THK, WIRE		
				REINFORCED		
	7	12		STUD, 19.1MM x 115MM LG	SA320-L7	
	8	24		NUT, 19.1MM HEX. HEAD	SA194-L4/7	
	9	3	0.5"	THREDOLET, 3000#	SA350-LF2	
	10	3	0.5"	END PROTECTOR		
	11	2	1.5"	FLANGE PROTECTOR		

* SUPPLIED BY CB ENGINEERING

NOTES:

1. ASSEMBLY TO CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE CSA STANDARD Z662 AND ASME B31.3.
2. INTERNAL OF ALL WELDS TO BE GROUND SMOOTH TO MATCH INSIDE DIAMETER OF THE PIPE.
3. FABRICATED ASSEMBLY SHOP TESTED TO A MINIMUM HYDROSTATIC PRESSURE OF 14900 kPa(g) AND A MAXIMUM HYDROSTATIC PRESSURE OF 15600 kPa(g) FOR A PERIOD OF ONE HOUR.
4. EXTERNAL SURFACE OF PIPE SPOOLS TO BE COMMERCIALLY BLASTED TO SSPC-SP6 AND PAINTED IN ACCORDANCE WITH A TRANSCANADA APPROVED COATING.
5. RUST INHIBITOR LPS-3 TO BE APPLIED TO INTERNAL SURFACE OF SPOOL (530MM LONG) DOWN STREAM OF FLOW METER.
6. ALL DIMENSIONS IN MM.
7. TCPL REF DWG STDS-01-MS-03-502 R0

ISSUED FOR CONSTRUCTION

TOLERANCES UNLESS NOTED
DECIMAL: X.X ±0.100, X.XX ±0.010, X.XXX ±0.005
FRACTION ±1/8
ANGULAR ±0.5°

THE DESIGNS ON THIS SHEET ARE THE PROPERTY OF RAMBLER FABRICATION INC. AND MUST NOT BE USED FOR REPRODUCTION WITHOUT OUR PERMISSION

	D/M/Y	BY	CHKD	DESCRIPTION
1	21/1/04	SM	SJM	REVISED #9 TO 3 REQUIRED, RCC-7N TO RCC-8
0	17/12/03	AD	SJM	ISSUED FOR CONSTRUCTION

NDT REQUIREMENTS

RADIOGRAPHY: 100%, B31.3N, ASNT II	
HYDROTEST: SEE NOTE #3	
STRESS RELIEF: NO	DIA. INCHES: 24
HARDNESS TEST: NO	WEIGHT: 65 LBS
MAGNETIC PARTICLE: 100%	LIQUID DYE PENETRANT: NO
SURF. PREP.: SEE NOTE #4	

RAMBLER FABRICATION INC.

CLIENT: C B ENGINEERING FOR TRANSCANADA PIPELINES		DRAWN:	AD
		CHECKED:	SJM
PROJECT: 1.5" PN 100 "LF2" METER RUN			
DATE: DEC 17 '03	CODE NO.: SM-1	DRAWING NO.: RFI-2450-01	REV. 1