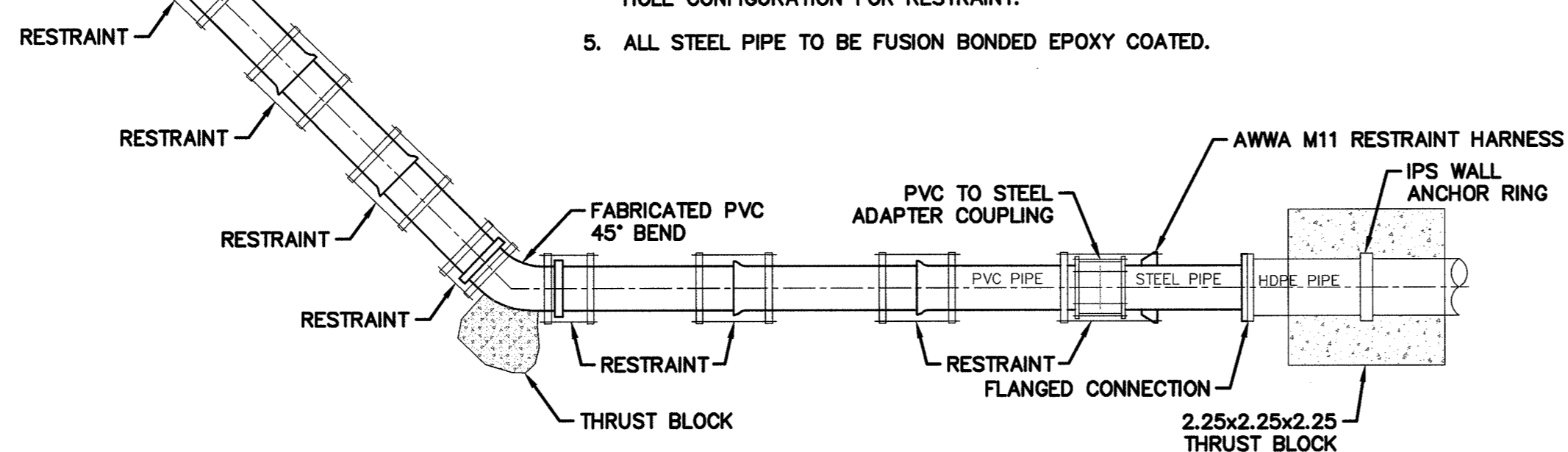


NOTES:

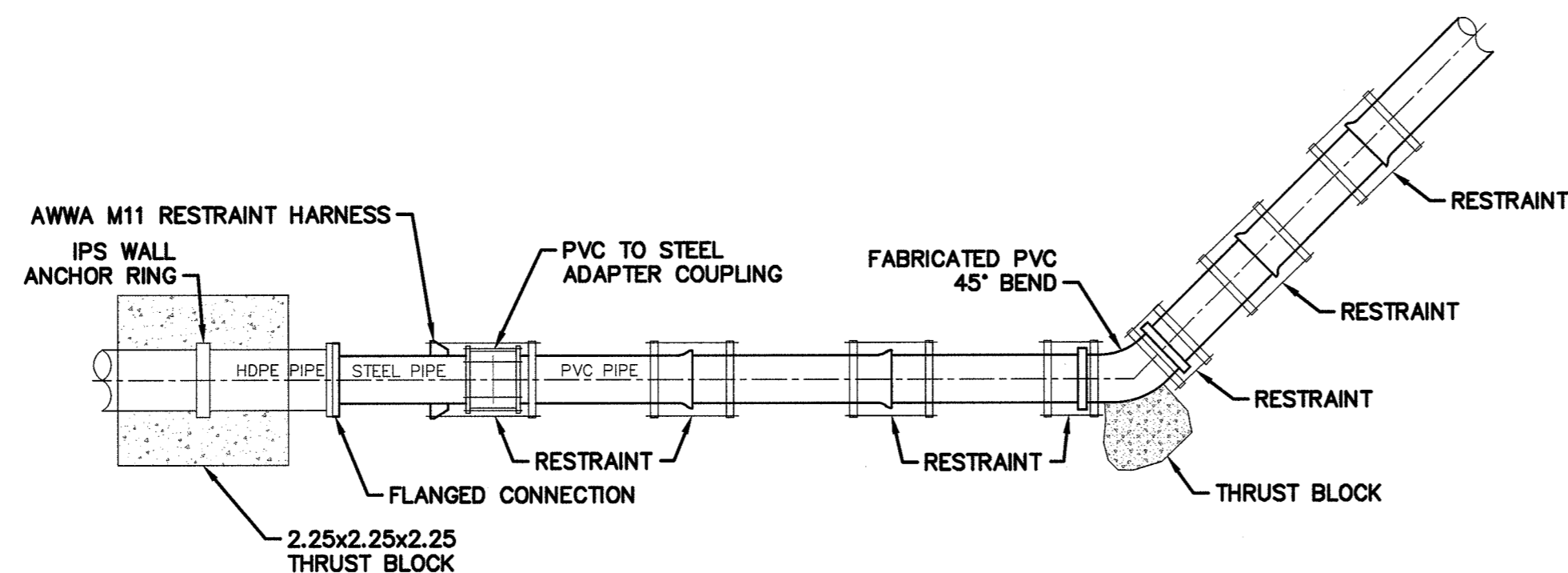
1. ALL JOINTS BETWEEN THE 45 DEGREE BEND AND STEEL TO HDPE TRANSITION SHALL BE RESTRAINED.
2. ALL JOINTS BETWEEN THE 45 DEGREE BENDS SHALL BE RESTRAINED.

GENERAL NOTES:

1. ALL COUPLINGS, HARNESSES, RESTRAINTS, AND BOLTS SHALL BE WRAPPED WITH DENSO MASTIC AND TAPE. ALL BOLTS SHALL BE STAINLESS STEEL. COUPLINGS SHALL BE NSF APPROVED EPOXY COATED, OUTSIDE AND IN.
2. PROVIDE CATHODIC PROTECTION.
3. ALL JOINTS WITHIN 12 m OF A 45 DEGREE BEND SHALL BE RESTRAINED.
4. M11 RESTRAINT HARNESS TO BE CONSTRUCTED TO MATCH APPROVED BOLT HOLE CONFIGURATION FOR RESTRAINT.
5. ALL STEEL PIPE TO BE FUSION BONDED EPOXY COATED.



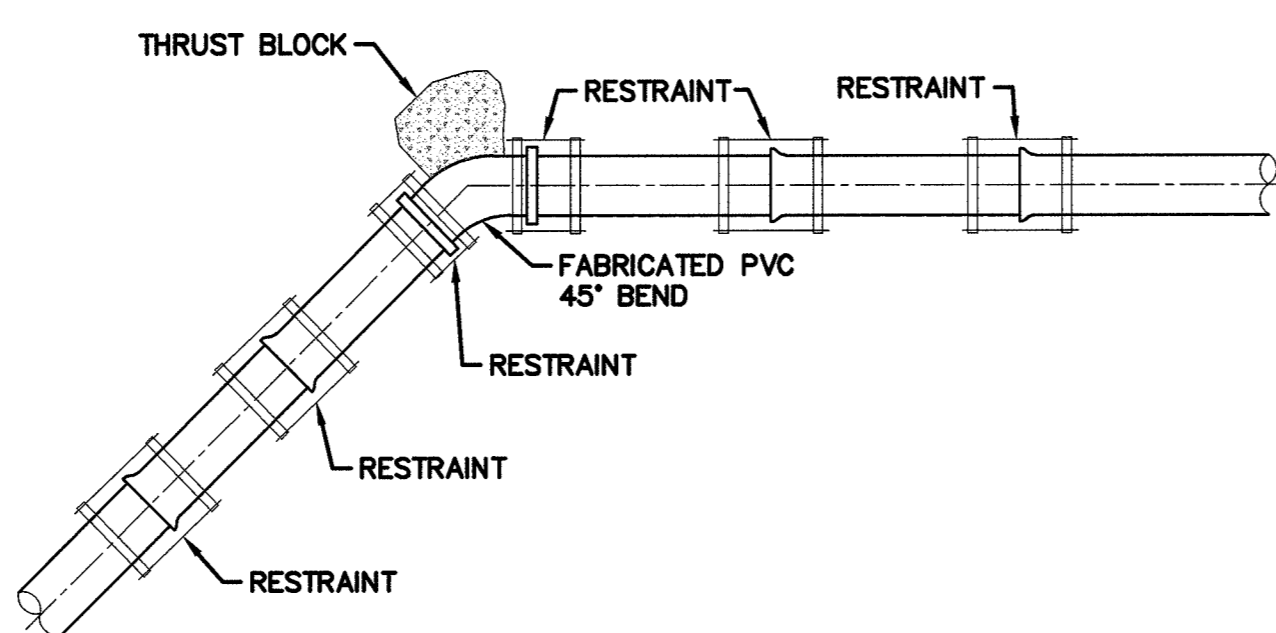
1 DETAIL N.T.S.
SHT 3 WEST SIDE VALVE CHAMBER TO HDPE



NOTE:

1. ALL JOINTS BETWEEN THE 45 DEGREE BEND AND STEEL TO HDPE TRANSITION SHALL BE RESTRAINED.

2 DETAIL N.T.S.
SHT 3 EAST SIDE HDPE TO PVC CONNECTION



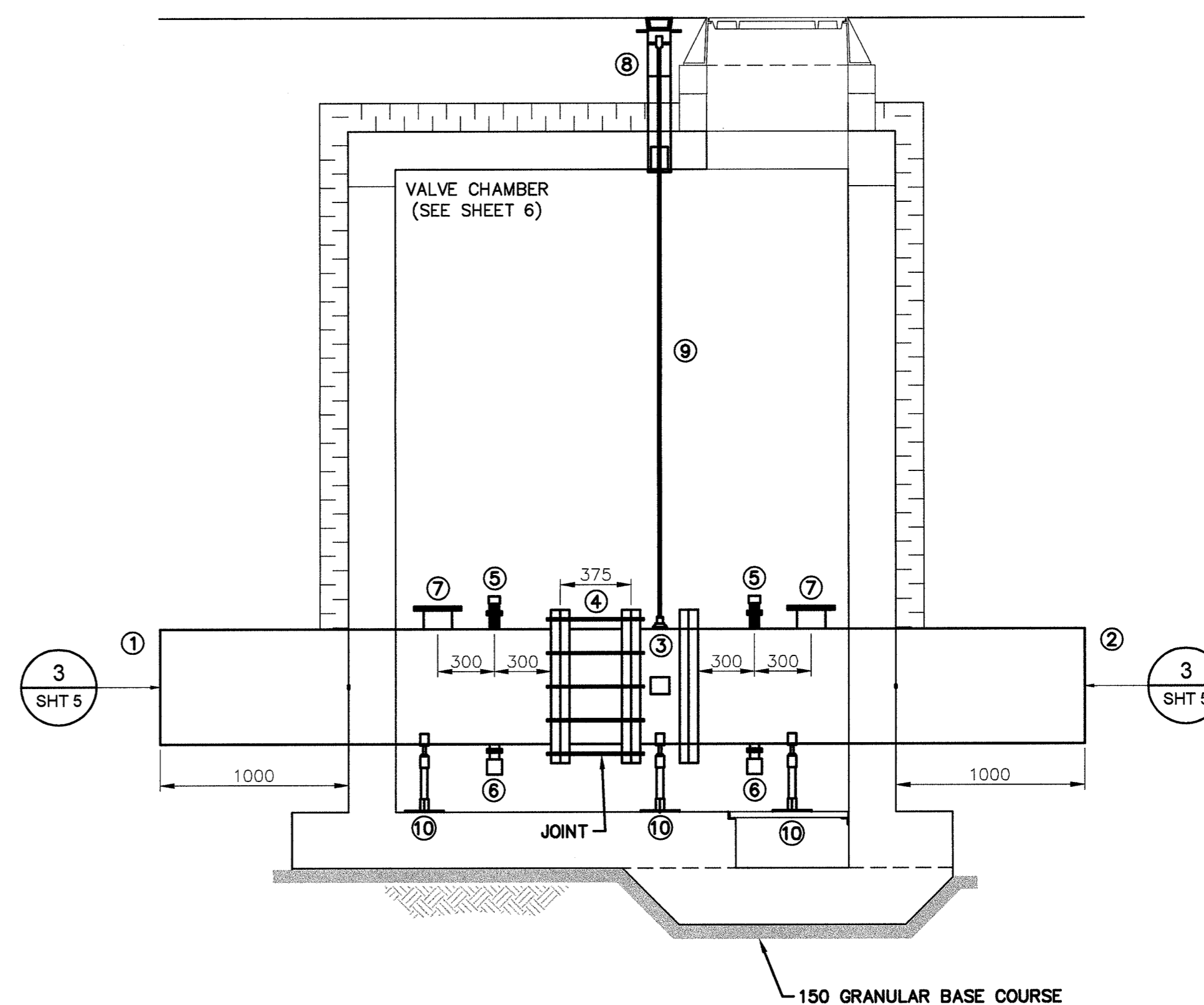
3 DETAIL N.T.S.
SHT 3 EAST SIDE BEND RESTRAINT

ITEM AND DESCRIPTION

QUANTITY **SIZE**

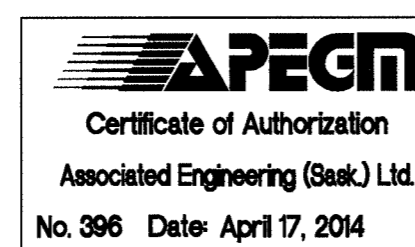
1. FL x PE DI WALL PIECE C/W FLANGE THRUST RESTRAINT, 50 TOP AND 75 BOTTOM THREADED PORTS AND 150 ACCESS PORT WITH BLIND FLANGE (CAST IN PLACE)	2	2156
2. FL x PE DI WALL PIECE C/W FLANGE THRUST RESTRAINT, 50 TOP AND 75 BOTTOM THREADED PORTS AND 150 ACCESS PORT WITH BLIND FLANGE (CAST IN PLACE)	2	2081
3. FL x FL 600 BUTTERFLY VALVE C/W WORM GEAR OPERATOR	2	320
4. 600 RESTRAINED DISMANTLING JOINT	2	375±
5. 50 VALVE PORT (SEE DETAIL 14, D-13511)	4	N/A
6. 75 DRAIN ASSEMBLY (SEE DETAIL 12, D-13511)	4	N/A
7. 150 INSPECTION ACCESS PORT WITH BLIND FLANGE (SEE DETAIL 13, D-13511)	4	N/A
8. VALVE BOX ASSEMBLY, (SEE DETAIL 12, D-13511)	2	N/A
9. VALVE STEM EXTENSION C/W STONE DISK	2	N/A
10. ADJUSTABLE PIPE SUPPORT	6	N/A

NOTE: QUANTITIES LISTED ARE FOR BOTH VALVE CHAMBERS



4 DETAIL 1:25
SHT 5 VALVE CHAMBER (TYP)

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.
CONSTRUCTION COMPLETION DATE: YYYY MM DD		
SUPV U/G STRUCTURES COMMITTEE	DATE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE 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.	ISSUED FOR TENDER	14-APR-17 MT
	REVISIONS	DATE BY

Associated Engineering	
DESIGNED BY: CL	CHECKED BY: JL
DRAWN BY: MT	APPROVED BY: JL
SCALE: HORIZONTAL AS SHOWN	RELEASED FOR CONSTRUCTION
VERTICAL AS SHOWN	
DATE: 2014 04 17	DATE:

ENGINEER'S SEAL
PROVINCE OF MANITOBA
J.S. LUEKE
Member
20827
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NUMBER
20134376

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION
NORTH KILDONAN FEEDERMAIN
CONNECTION DETAILS
SHEET 4 OF 8
CITY DRAWING NUMBER
D-13510