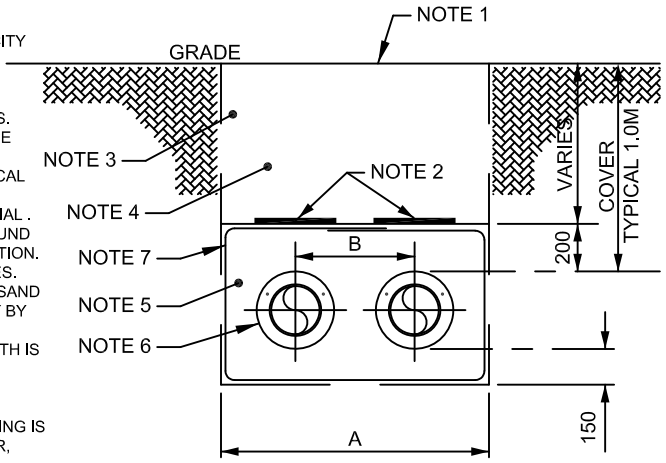
CITY OF VANCOUVER

STANDARD DETAIL DRAWINGS
ENGINEERING SERVICES - VANCOUVER, B.C.

DRAWING No.
NEU 1.0

TRENCH NOTES:

1. ALL SURFACE RESTORATION TO MEET CITY OF VANCOUVER ENGINEERING DESIGN MANUAL AND CONSTRUCTION SPECIFICATIONS. ALL RE-INSTATED SURFACES TO MATCH EXISTING GRADES.
2. BURY 'DISTRICT HEATING' WARNING TAPE ABOVE ALL PIPE.
3. OPTIONAL TRENCH SIDE SLOPES TO LOCAL OR PROVINCIAL REGULATORY AGENCY.
4. APPROVED SELECTED BACKFILL MATERIAL .
5. APPROVED SAND BEDDING AND SURROUND COMPACTED TO 95% AS PER SPECIFICATION.
6. PRE-INSULATED DISTRICT HEATING PIPES.
7. GEOTEXTILE TO BE WRAPPED AROUND SAND BEDDING. WHERE DEEMED NECESSARY BY OWNER OR THEIR CONSULTANT.
8. TYPICAL NEU PIPING INSTALLATION DEPTH IS WITH 1.0M OF COVER. CONFLICTS WITH OTHER UTILITIES AND SERVICING REQUIREMENTS MAY NECESSITATE VARIATIONS IN DEPTH. WHERE NEU PIPING IS INSTALLED WITH LESS THAN 0.9M COVER, REVIEW AND ACCEPTANCE BY THE OWNER/CONSULTANT IS REQUIRED AND ADDITIONAL PIPE PROTECTION MEASURES SUCH AS CONCRETE CAPS OR CDF ENCASEMENT MAY BE REQUIRED DEPENDING ON SURFACE USAGE AND DEPTH OF COVER (NOT SHOWN IN THE DETAIL).

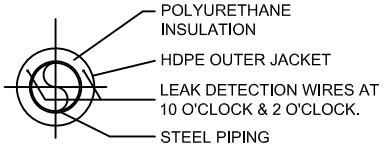


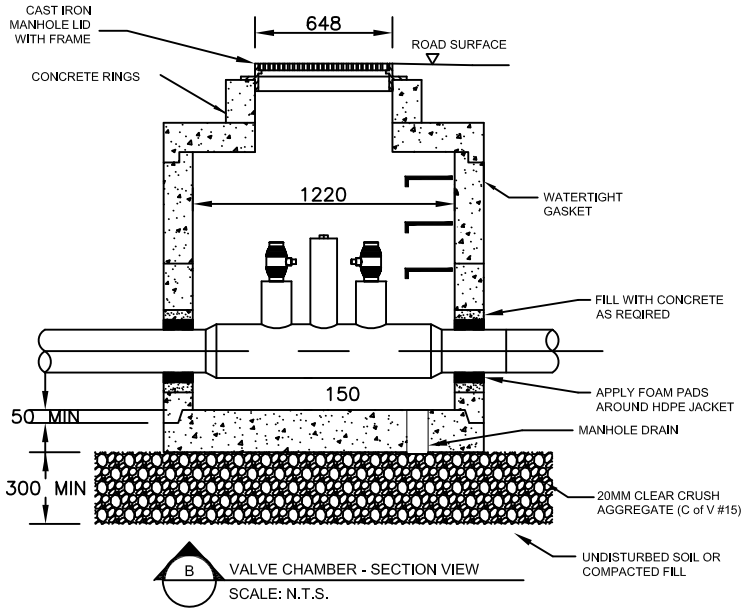
TYPICAL TRENCH CROSS-SECTION
PARALLEL DISTRICT HEATING PIPES
SCALE: N.T.S.

DESIGN NOTES:

1. ALL NEU DPS PIPING SHALL BE DESIGNED BY CONSULTANTS FAMILIAR WITH DISTRICT ENERGY SYSTEMS.
2. NEU PIPING SHALL BE DESIGNED AND INSTALLED TO CONFORM TO CSA B51, ASME B31.1, AND MEET TECHNICAL SAFETY BC REQUIREMENTS.
3. ALL PIPE WELDING TO BE PERFORMED BY FULLY QUALIFIED AND CERTIFIED WELDERS. ALL WELDED PIPE JOINTS SHALL BE INSPECTED VISUALLY AND RADIOGRAPHICALLY TESTED BY QUALIFIED INSPECTORS.
4. GENERAL SYSTEM DESIGN PARAMETERS
   - DESIGN TEMPERATURE 110°C
   - DESIGN PRESSURE 1100 kPag
   - HYDROTEST PRESSURE 1.5x DESIGN PRESSURE

ORIENTATION OF NEU PIPING FOR LEAK DETECTION WIRING



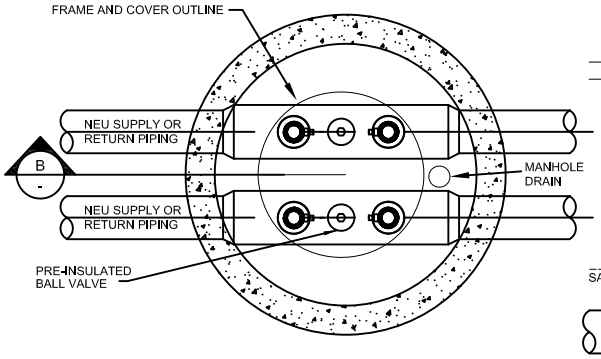


B VALVE CHAMBER - SECTION VIEW
SCALE: N.T.S.

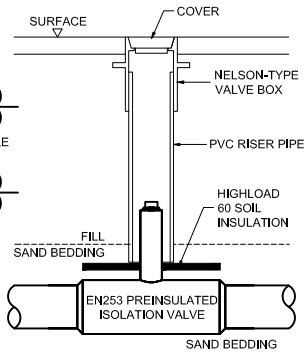
TYPICAL TRENCH DIMENSIONS
(RECOMMENDED MINIMUMS)

PIPE SIZE	NPS(mm)	NPS(in)	A(mm)	B(mm)	A(ft-in)	B(ft-in)
48.3/110	40Ø	1 1/2"	800	300	2'-8"	1'-0"
60.3/125	50Ø	2"	825	325	2'-9"	1'-1"
76.1/140	65Ø	2 1/2"	850	325	2'-10"	1'-1"
88.9/160	80Ø	3"	900	350	3'-0"	1'-2"
114.3/200	100Ø	4"	975	400	3'-3"	1'-4"
139.7/225	125Ø	5"	1025	425	3'-5"	1'-5"
168.3/250	150Ø	6"	1075	450	3'-7"	1'-6"
219.1/315	200Ø	8"	1200	500	4'-0"	1'-8"
273/400	250Ø	10"	1375	600	4'-6"	2'-0"
323.9/450	300Ø	12"	1475	650	4'-10"	2'-2"
355.6/500	350Ø	14"	1600	700	5'-3"	2'-4"
406.4/520	400Ø	16"	1640	720	5'-5"	2'-5"
457.2/560	450Ø	18"	1720	760	5'-8"	2'-6"

NOTE: 114.3/200 - REFERS TO: OD OF PIPE / OD OF INSULATION JACKET



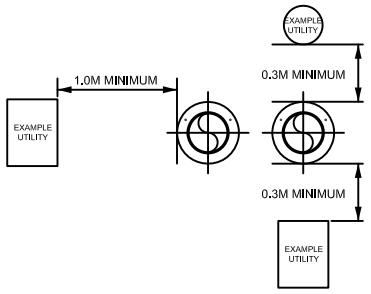
A VALVE CHAMBER - TOP VIEW
SCALE: N.T.S.



NOTES:

1. VALVE BOX & COVER TO ACCOMMODATE TEE KEY FOR VALVE, AND PORTABLE GEAR OPERATOR
2. VALVE BOX TO BE INSTALLED AS PER MANUFACTURER'S INSTALLATION PROCEDURES
3. THE ADJUSTABLE TOP MUST NOT REST ON THE VALVE BOX WHEN THE INSTALLATION IS COMPLETED
4. INSTALL COVER FLUSH WITH FINAL ROAD SURFACE, COORDINATE WITH OWNER'S REPRESENTATIVE
5. VALVE BOX WITH ADJUSTABLE FRAME AND COVER TO CONFORM TO CITY OF VANCOUVER STANDARD SPECIFICATIONS

DIRECT BURIED DES ISOLATION VALVE
- TYPICAL DETAIL -
SCALE: N.T.S.



NEU HEATING PIPE CLEARANCES
- TYPICAL -
SCALE: N.T.S.

REV.	REVISION DATE	APPROVED
1	1/31/2022	DEREK POPE

NEIGHBOURHOOD ENERGY UTILITY DESIGN STANDARDS

ISSUE DATE: JANUARY 2022

APPROVED BY: D. POPE

PATH: H:\NEIGHBOURHOOD ENERGY UTILITY\NEU Team\SC Work Folder\Standard Details\COV STANDARD NEU DETAILS-APR-2022.dwg