



LOCATION: CAMBRIDGE BAY, NUNAVUT

PROJECT NO: 02-4604

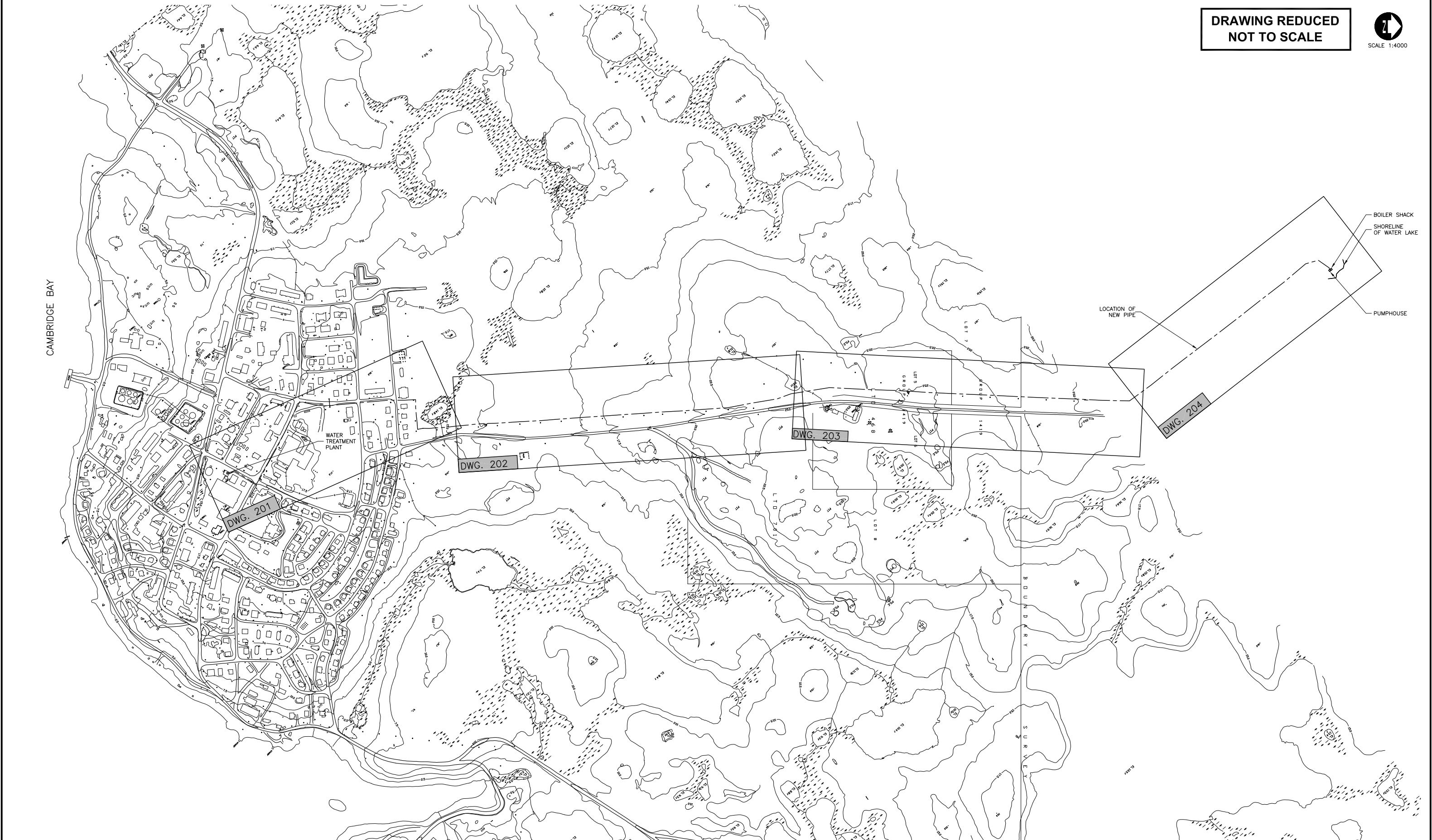
CONTRACT NO: CT03-2002




FIGURE 100	COVER SHEET
FIGURE 101	SITE LOCATION PLAN
FIGURE 201	PIPELINE PLAN & PROFILE STA 0+123.00 TO 0+600.00
FIGURE 202	PIPELINE PLAN & PROFILE STA 0+600.00 TO 1+350.00
FIGURE 203	PIPELINE PLAN & PROFILE STA 1+350.00 TO 2+100.00
FIGURE 204	PIPELINE PLAN & PROFILE STA 2+100.00 TO 2+627.78
FIGURE 205	CONNECTIONS AND MISC. DETAILS
FIGURE 206	SERVICE CONNECTIONS AND MISC. DETAILS
FIGURE 207	TYPICAL ACCESS VAULT AND DETAILS
FIGURE 208	VAULT CONFIGURATION DETAILS
FIGURE 209	VAULT CONFIGURATION DETAILS
FIGURE 301	EXISTING WATER SUPPLY SYSTEM SCHEMATIC
FIGURE 401	BOILER SHACK LAYOUT & SCHEMATIC
FIGURE 402	INTAKE PUMPHOUSE DETAILS



DRAWING REDUCED
NOT TO SCALE





DILLON
CONSULTING


LEGEND

- EXISTING PIPELINE ALIGNMENT
- - - PROPOSED PIPELINE ALIGNMENT
- ACCESS VAULTS
- ▲ HIGH POINT (AIR VENTS)
- LOW POINT (DRAIN)

THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS AND GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES

**PERMIT NUMBER
P 010**

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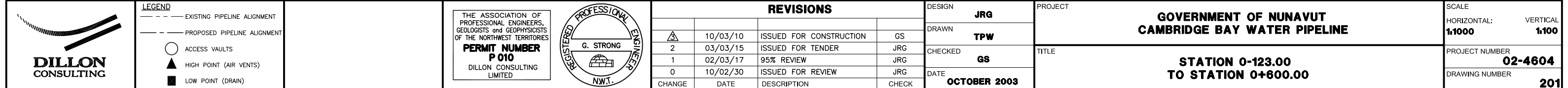
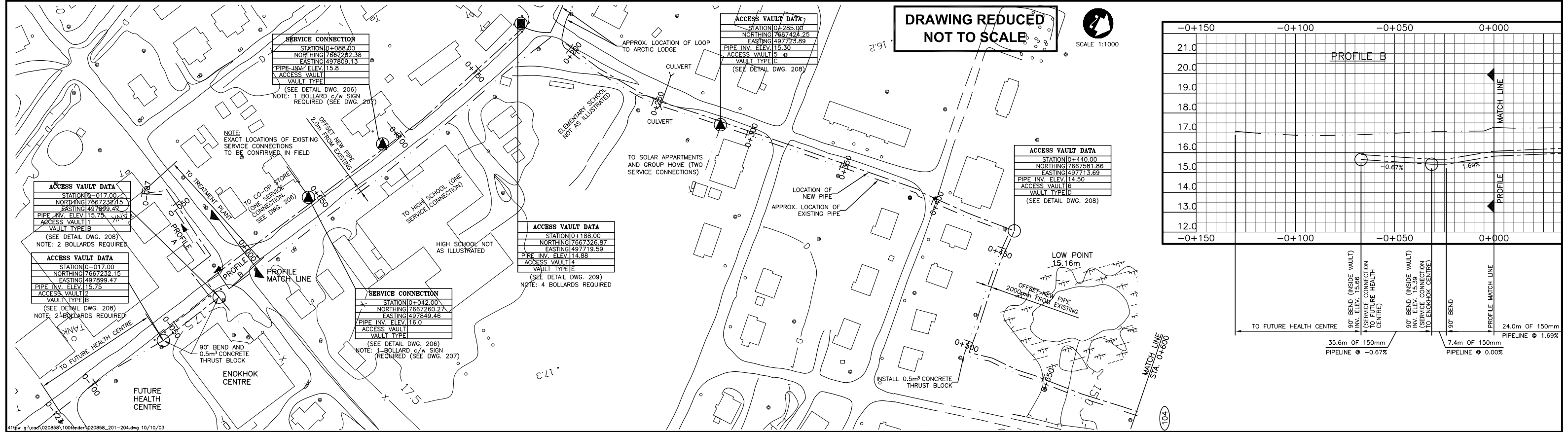


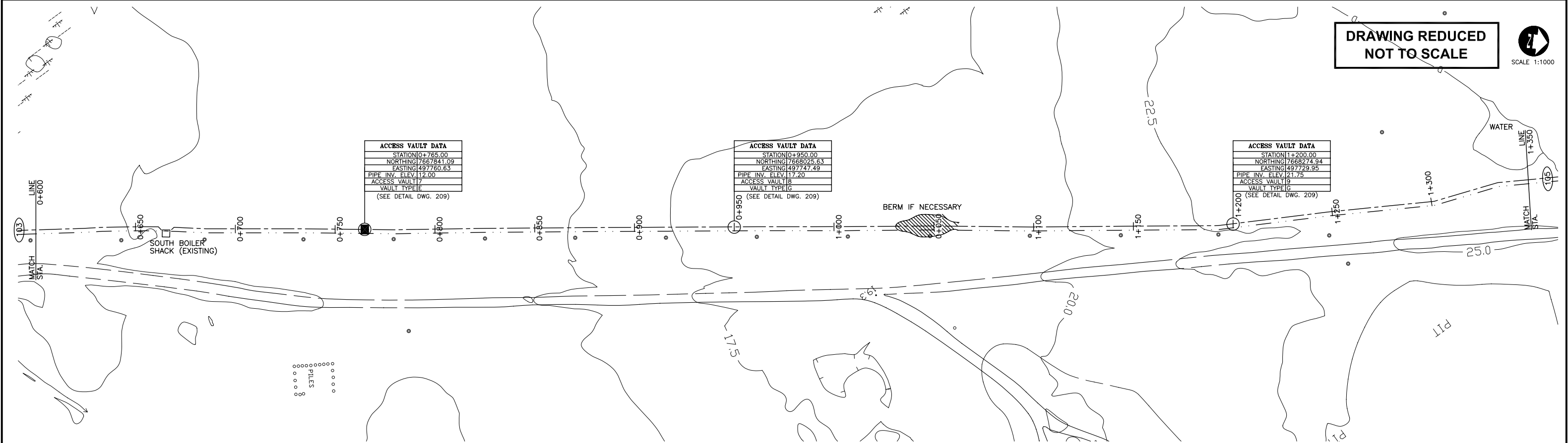
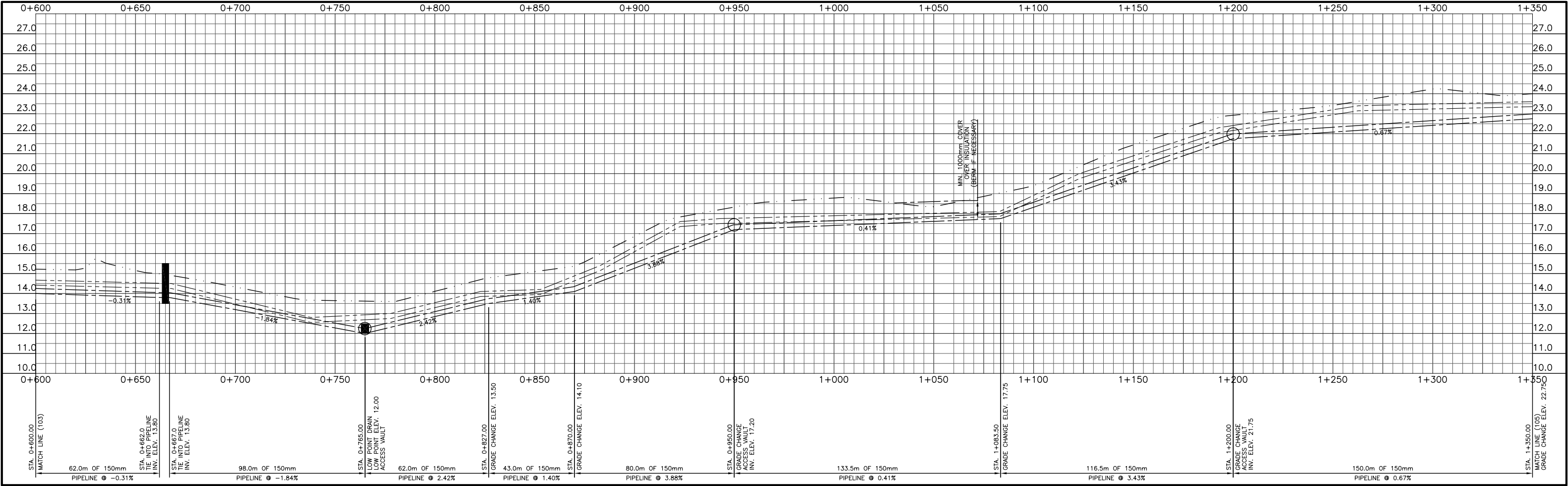
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2	03/03/15	ISSUED FOR TENDER	JRG	
1	02/03/17	95% REVIEW	JRG	
0	10/02/30	ISSUED FOR REVIEW	JRG	
CHANGE	DATE	DESCRIPTION	CHECK	

DESIGN	JRG
DRAWN	TPW
CHECKED	GS
DATE	OCTOBER 2003


PROJECT	GOVERNMENT OF NUNAVUT CAMBRIDGE BAY WATER PIPELINE
TITLE	SITE LOCATION PLAN

SCALE	HORIZONTAL: 1:4000	VERTICAL
PROJECT NUMBER	02-4604	
DRAWING NUMBER	101	





41tpw g:\cad\020858\100tender\020858_201-204.dwg 10/10/03




LEGEND

- EXISTING PIPELINE ALIGNMENT
- - - PROPOSED PIPELINE ALIGNMENT
- ACCESS VAULTS
- ▲ HIGH POINT (AIR VENTS)
- LOW POINT (DRAIN)

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LIMITED



REVISIONS				
2	10/03/10	ISSUED FOR CONSTRUCTION	GS	
2	03/03/15	ISSUED FOR TENDER	JRG	
1	02/03/17	95% REVIEW	JRG	
0	10/02/30	ISSUED FOR REVIEW	JRG	
CHANGE	DATE	DESCRIPTION	CHECK	

DESIGN
JRG

DRAWN
TPW

CHECKED
GS

DATE
OCTOBER 2003

PROJECT
**GOVERNMENT OF NUNAVUT
CAMBRIDGE BAY WATER PIPELINE**

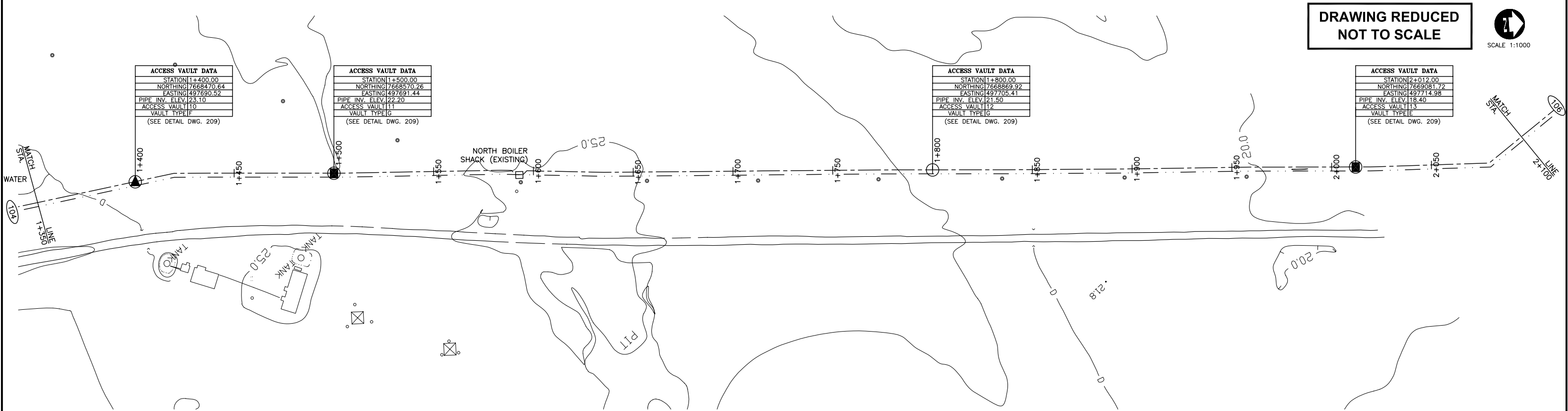
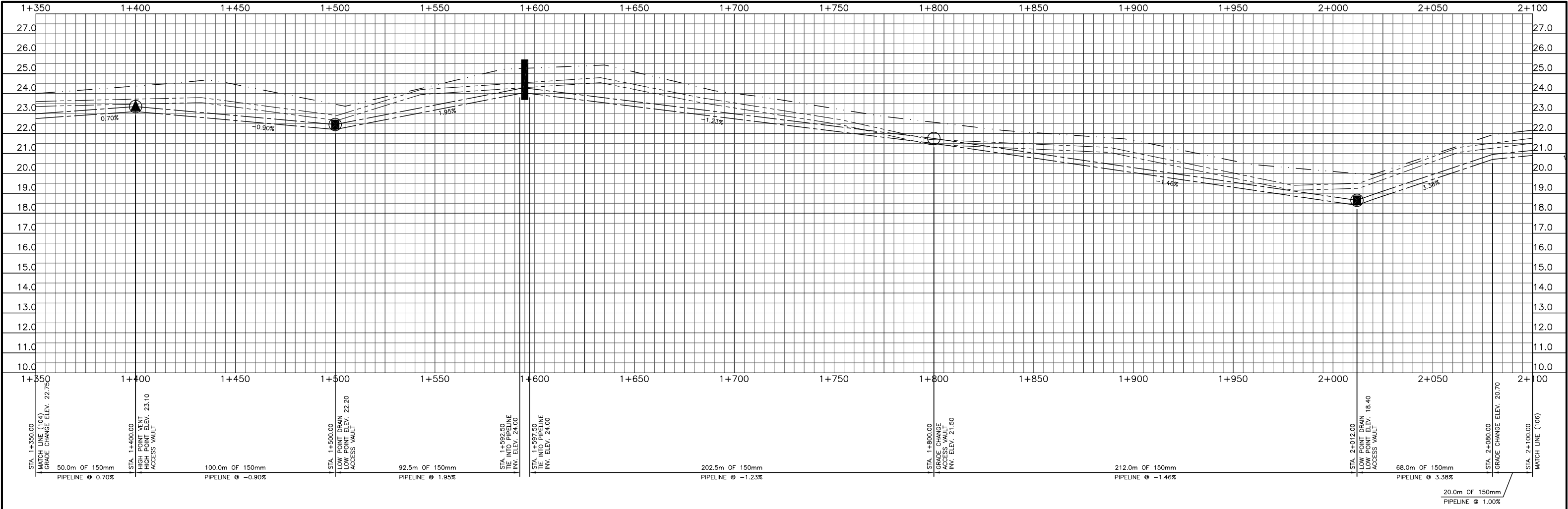
TITLE
**STATION 0+600.00
TO STATION 1+350.00**


SCALE
HORIZONTAL:
1:1000

VERTICAL
1:100

PROJECT NUMBER
02-4604

DRAWING NUMBER
202






LEGEND

- EXISTING PIPELINE ALIGNMENT
- - - PROPOSED PIPELINE ALIGNMENT
- ACCESS VAULTS
- ▲ HIGH POINT (AIR VENTS)
- LOW POINT (DRAIN)

THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
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**PERMIT NUMBER
P 010**

DILLON CONSULTING
LIMITED



REVISIONS			
1	10/03/10	ISSUED FOR CONSTRUCTION	GS
2	03/03/15	ISSUED FOR TENDER	JRG
1	02/03/17	95% REVIEW	JRG
0	10/02/30	ISSUED FOR REVIEW	JRG
CHANGE	DATE	DESCRIPTION	CHECK

DESIGN **JRG**

DRAWN **TPW**

CHECKED **GS**

DATE **OCTOBER 2003**

PROJECT

**GOVERNMENT OF NUNAVUT
CAMBRIDGE BAY WATER PIPELINE**

TITLE

**STATION 1+350.00
TO STATION 2+100.00**

SCALE

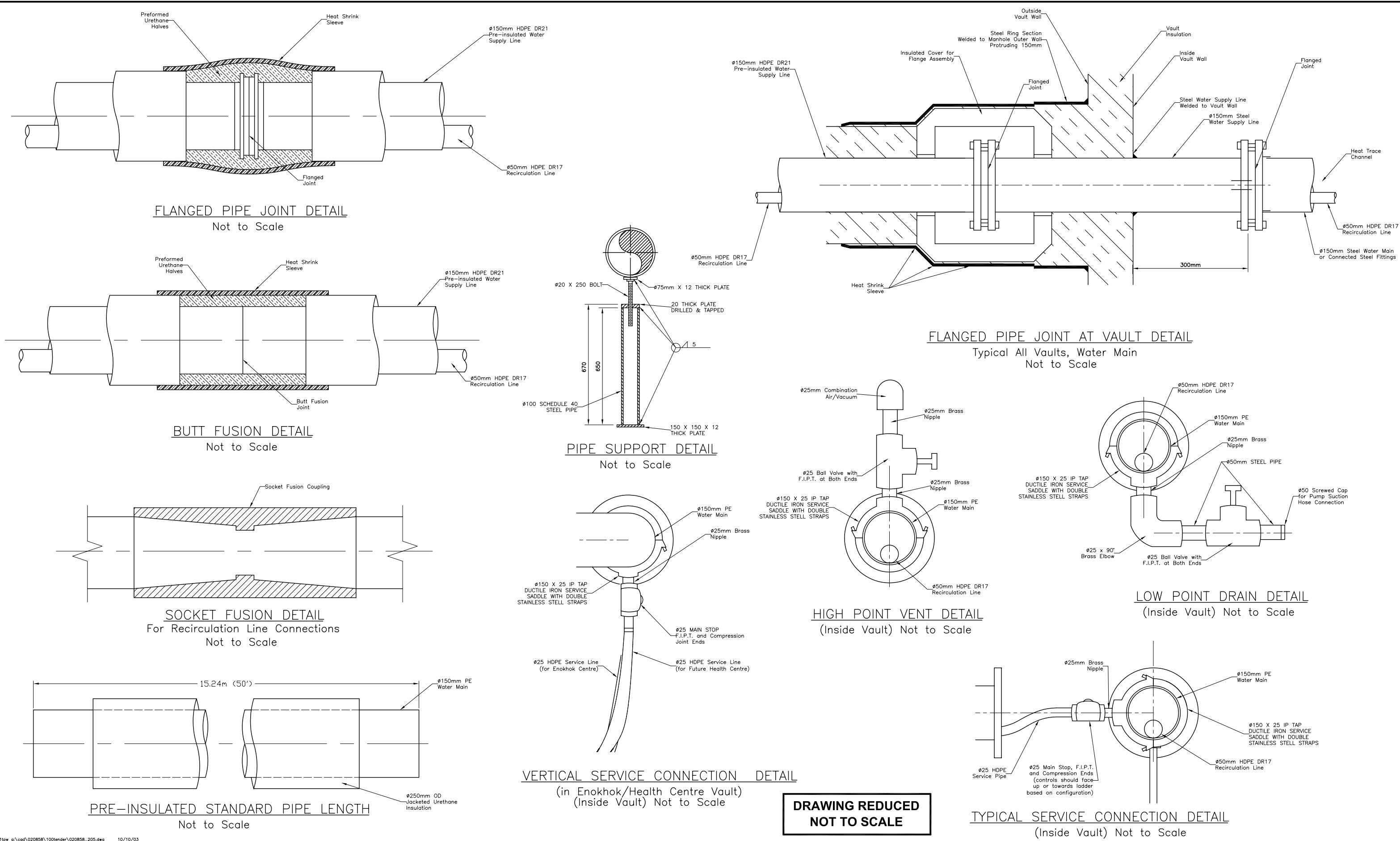
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VERTICAL: **1:100**

PROJECT NUMBER **02-4604**

DRAWING NUMBER **203**

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FLANGED PIPE JOINT DETAIL
Not to Scale

BUTT FUSION DETAIL
Not to Scale

PIPE SUPPORT DETAIL
Not to Scale

FLANGED PIPE JOINT AT VAULT DETAIL
Typical All Vaults, Water Main
Not to Scale

SOCKET FUSION DETAIL
For Recirculation Line Connections
Not to Scale

HIGH POINT VENT DETAIL
(Inside Vault) Not to Scale

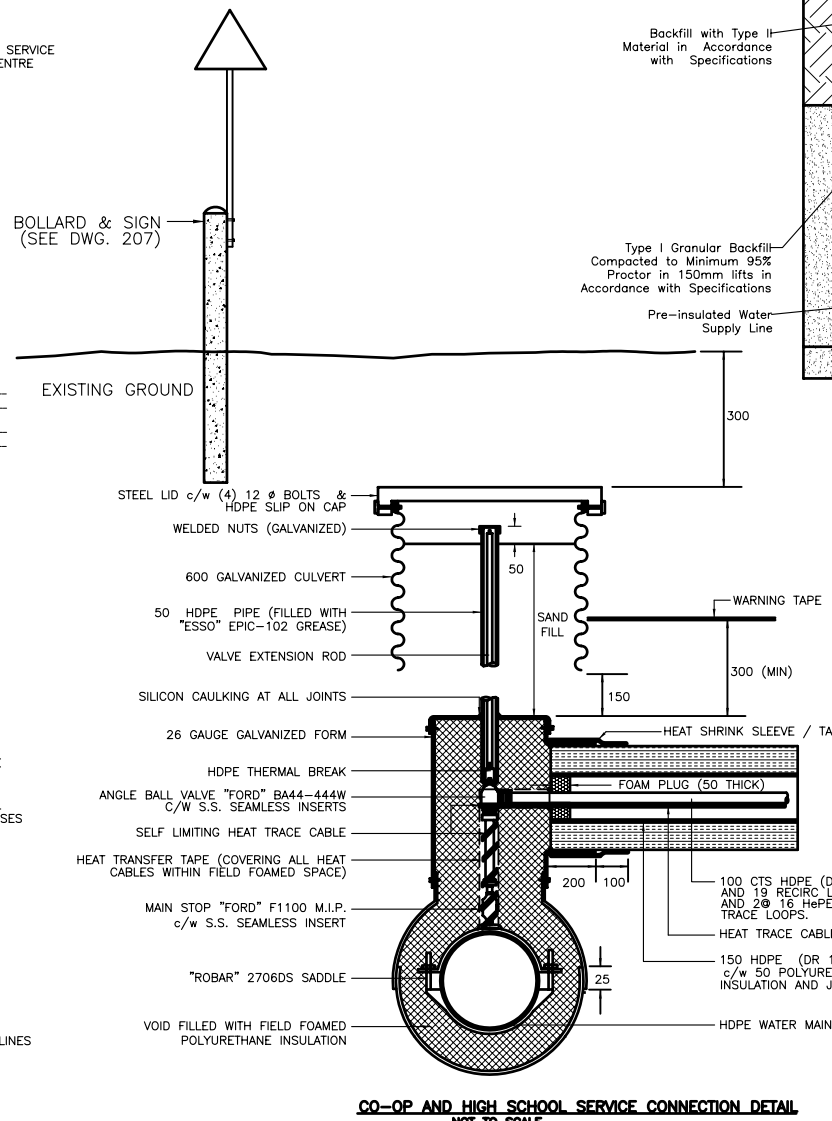
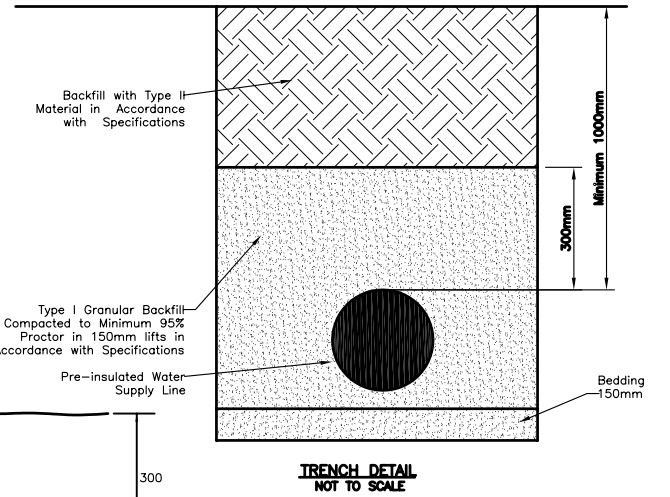
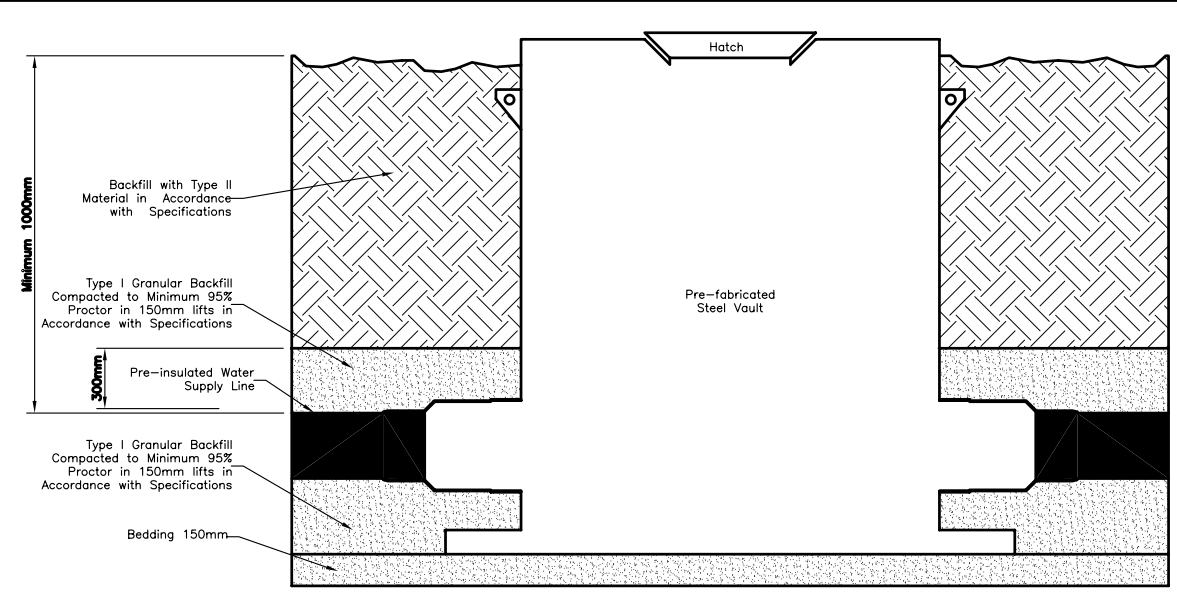
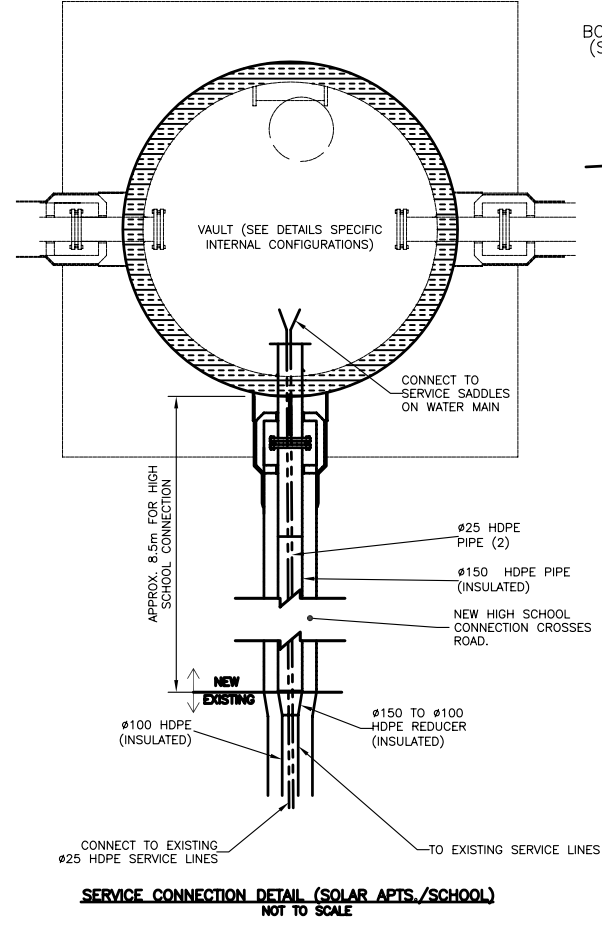
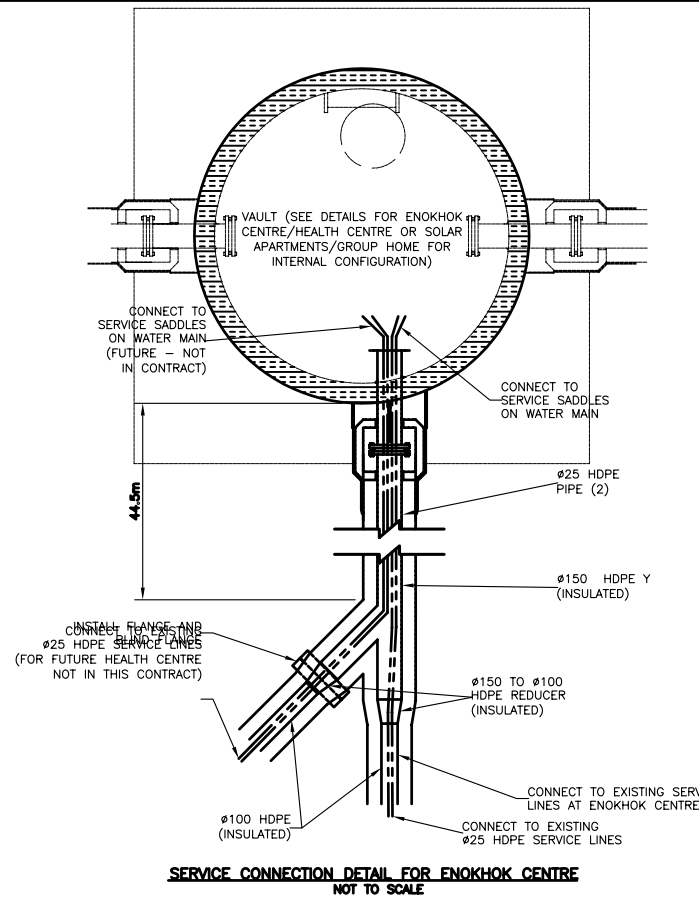
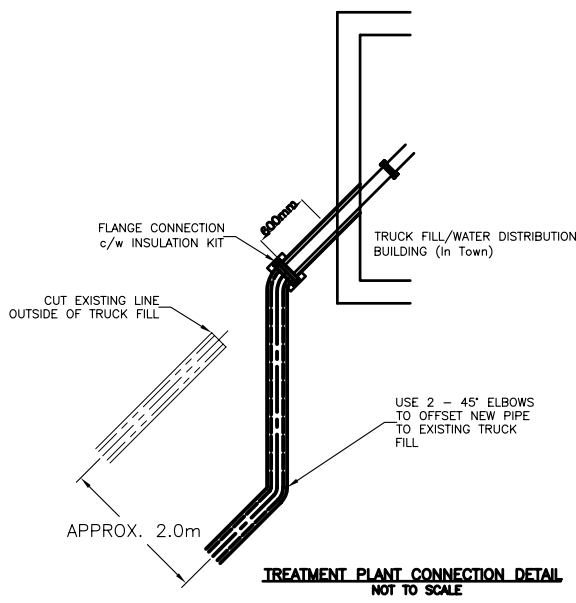
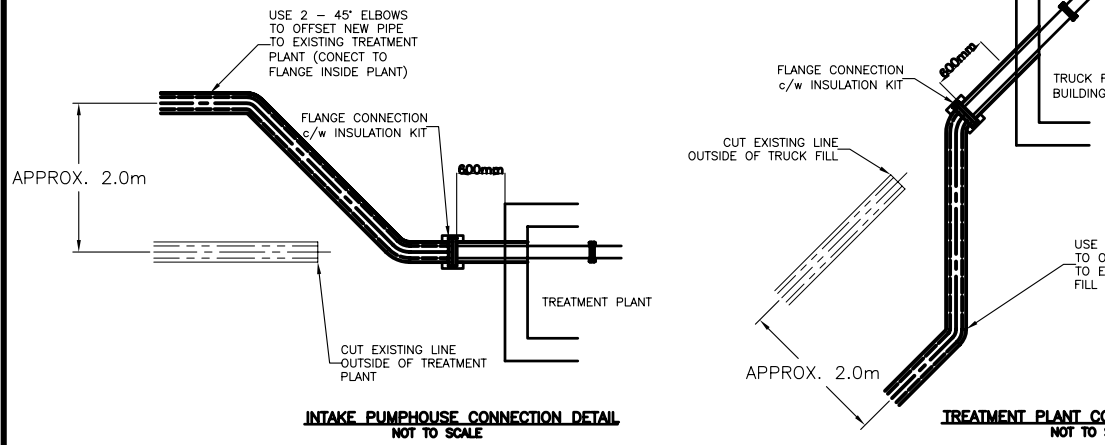
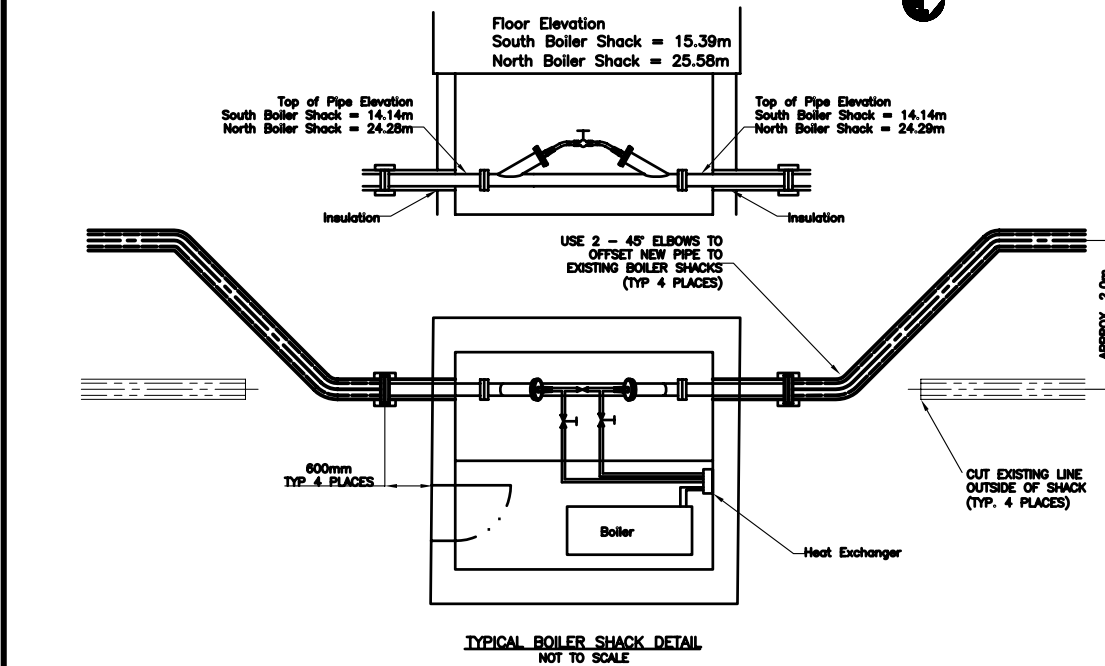
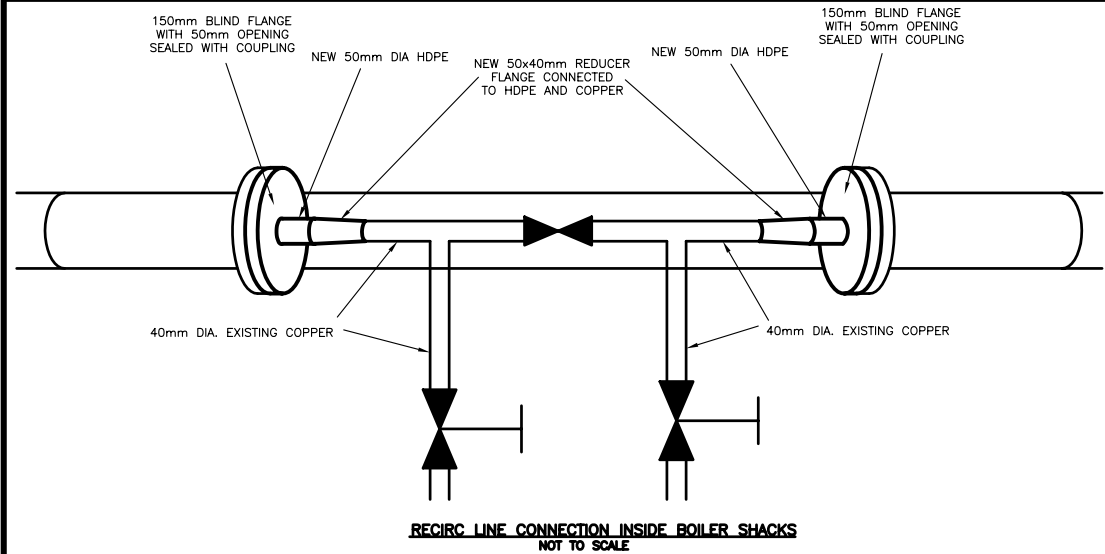
LOW POINT DRAIN DETAIL
(Inside Vault) Not to Scale

PRE-INSULATED STANDARD PIPE LENGTH
Not to Scale

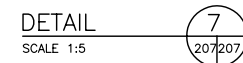
VERTICAL SERVICE CONNECTION DETAIL
(in Enokhok/Health Centre Vault)
(Inside Vault) Not to Scale

DRAWING REDUCED
NOT TO SCALE

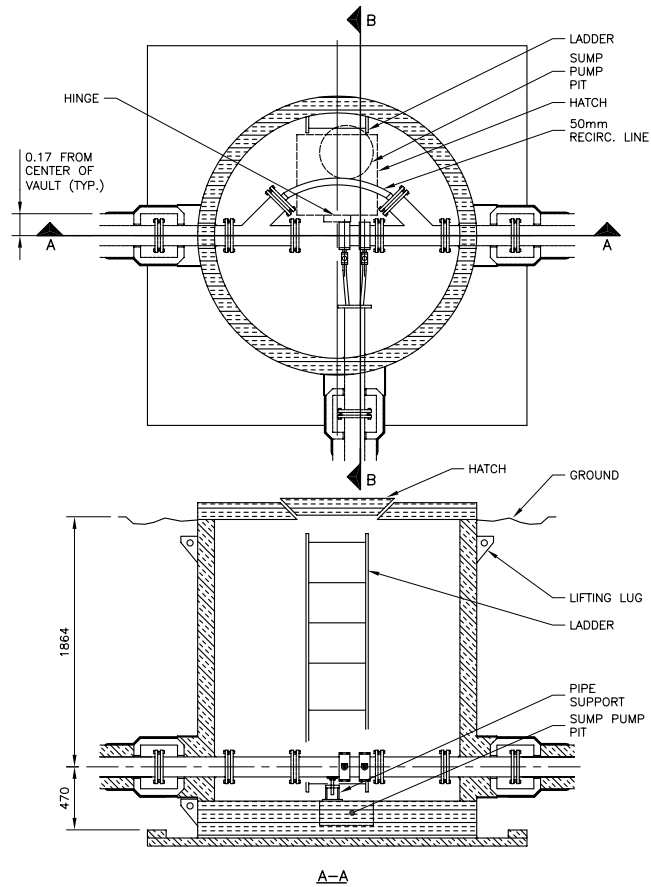
TYPICAL SERVICE CONNECTION DETAIL
(Inside Vault) Not to Scale



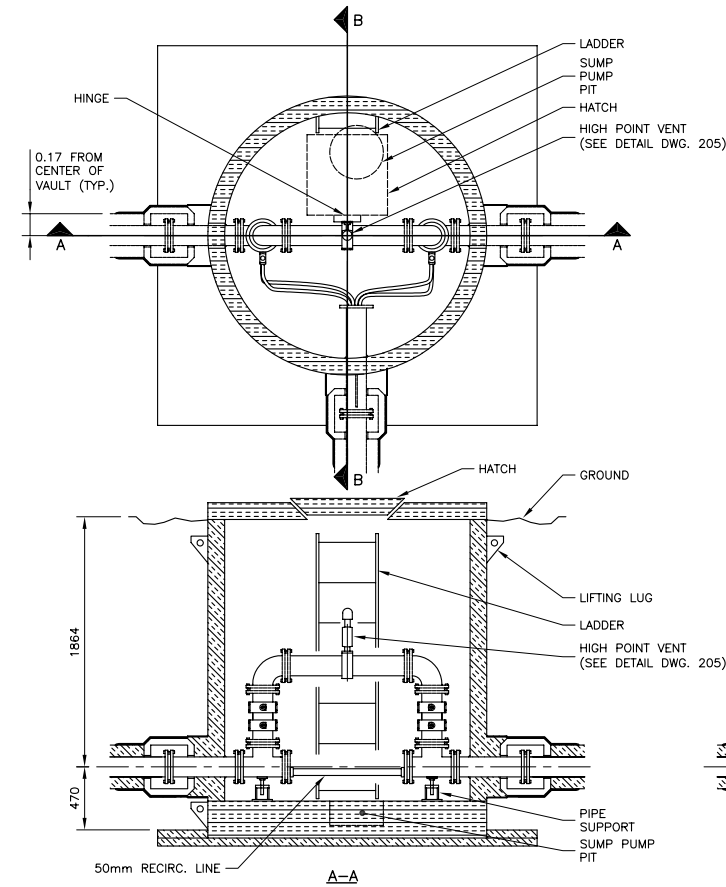
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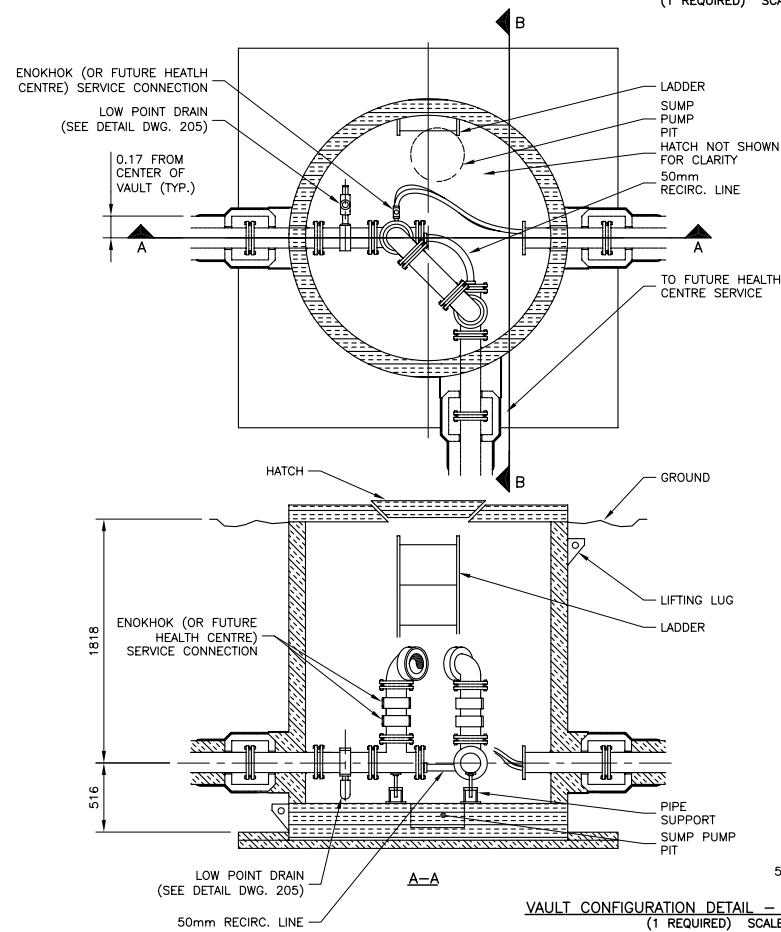
-
- 2-9mm ϕ X 76 LG. GALVANIZED BOLTS (TOP & BOTTOM)
- LETTER ACCORDING TO ACTUAL ACCESS VAULT NUMBERS. SIGN TO INDICATE OFFSET TO SERVICES.
- 3mm THICK STEEL PLATE SIGN PAINTED RED WITH WHITE LETTERS 100mm HIGH DRILL 2-11mm ϕ BOLT HOLES
- 50
- AV-22N
- 600 (TYP. ALL SIDES)
- N.T.S.
- 3000
- 50
- 300
- 50
- 1200
- 50mm ϕ STANDARD STEEL PIPE MAST. DRILL 4-11mm ϕ BOLT HOLES (GALVANIZED)
- 2-9mm ϕ X 89mm LONG GALV. BOLTS THROUGH SLEEVE & MAST.
- 65mm ϕ STANDARD STEEL SLEEVE WELDED TO POST. DRILL 2-11mm ϕ HOLES
- 200mm ϕ STANDARD STEEL PIPE POST. EPOXY COATED FILLED WITH CONCRETE PAINTED RED.
- FINAL GRADE
- NOTE:
- ONLY ONE SIGN PER ACCESS VAULT.
 - # OF BOLLARDS REQUIRED - 2 (UNLESS OTHERWISE NOTED ON PLAN DRAWING.)
- NOTE:
- POST SLEEVE & MAST TO BE PAINTED RED AFTER FABRICATION.
- DRAWING REDUCED NOT TO SCALE**



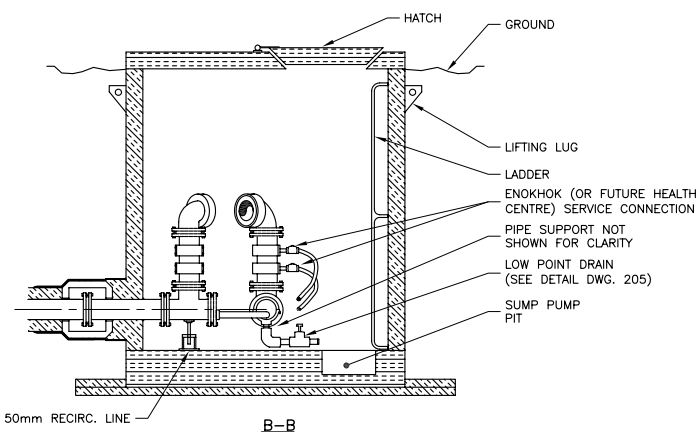
VAULT CONFIGURATION DETAIL - TYPE A SINGLE SERVICE CONNECTION
(1 REQUIRED) SCALE= 1:50



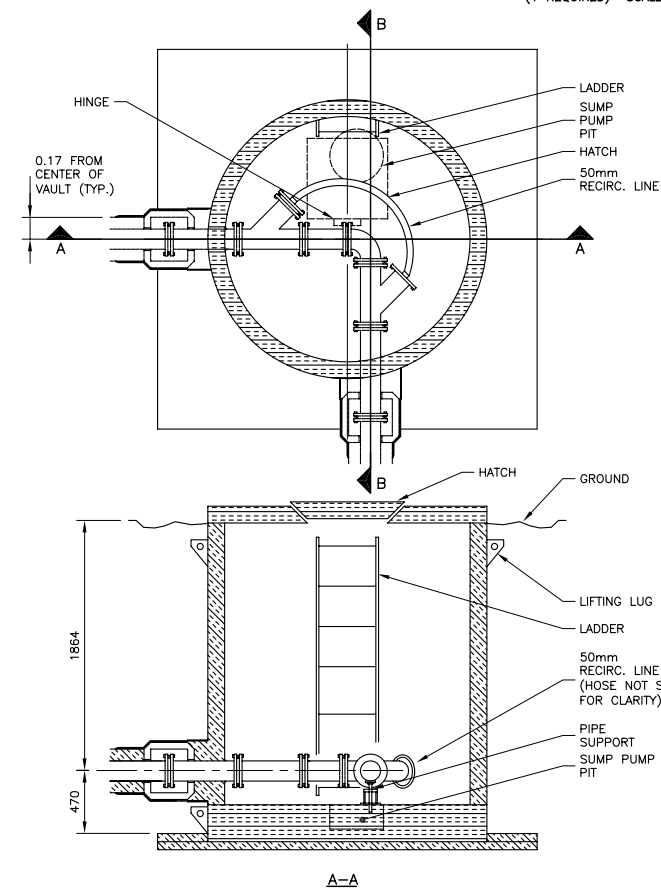
VAULT CONFIGURATION DETAIL - TYPE C SOLAR APTS/GROUP HOME
(1 REQUIRED) SCALE= 1:50



VAULT CONFIGURATION DETAIL - TYPE B ENOKHOK/HEALTH CENTRE
(1 REQUIRED) SCALE= 1:50





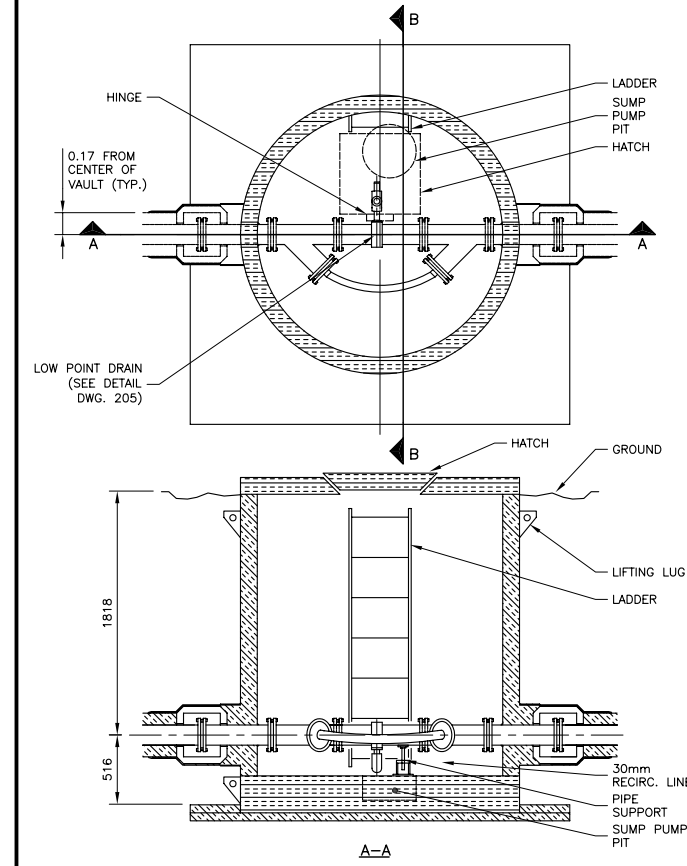
DRAWING REDUCED
NOT TO SCALE



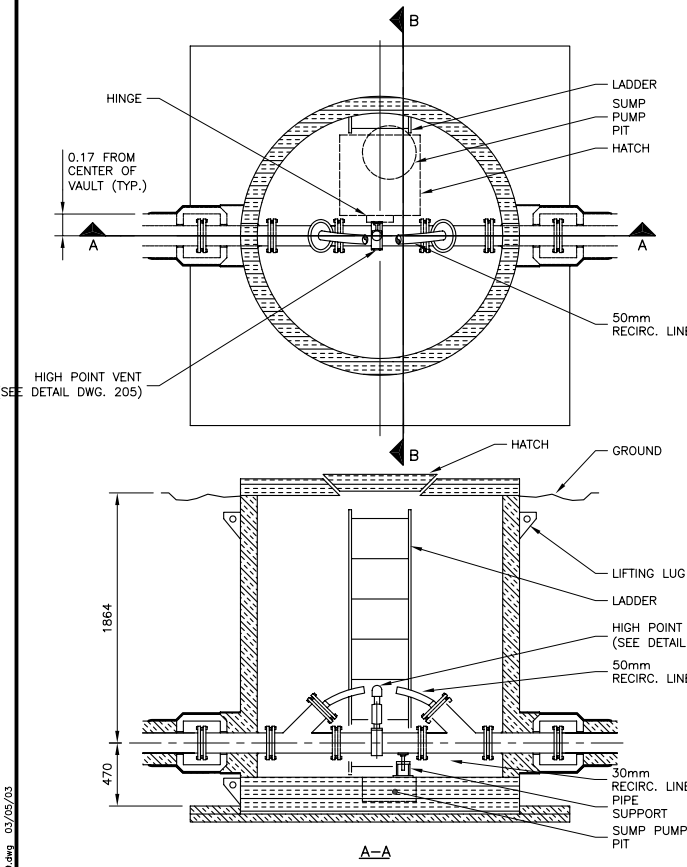
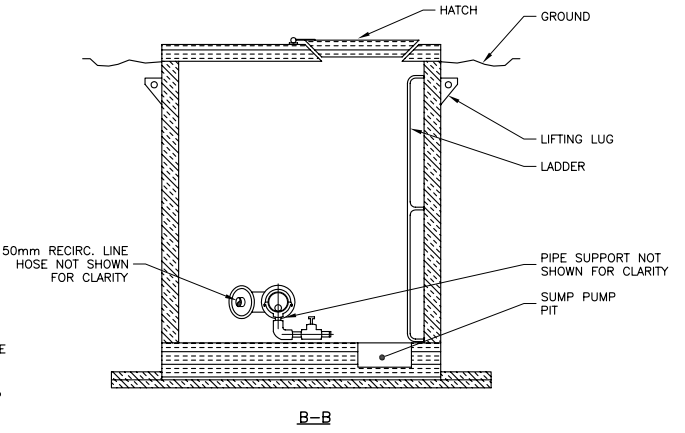
VAULT CONFIGURATION DETAIL - TYPE D 90° BEND
(1 REQUIRED) SCALE= 1:30

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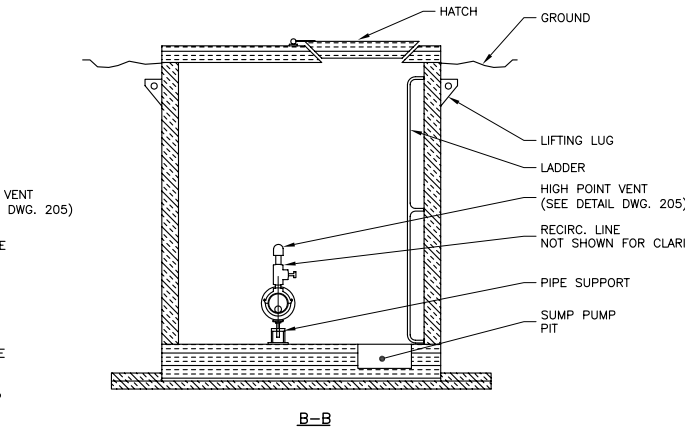
 DILLON CONSULTING			<div>THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS OF THE NORTHWEST TERRITORIES PERMIT NUMBER P 010 DILLON CONSULTING LIMITED</div>		REVISIONS				DESIGN JRG	PROJECT GOVERNMENT OF NUNAVUT CAMBRIDGE BAY WATER PIPELINE	SCALE
									DRAWN TPW		
									CHECKED GS	TITLE VAULT CONFIGURATION DETAILS	PROJECT NUMBER 02-4604
									DATE OCTOBER 2003		DRAWING NUMBER 208
					CHANGE	DATE	DESCRIPTION	CHECK			



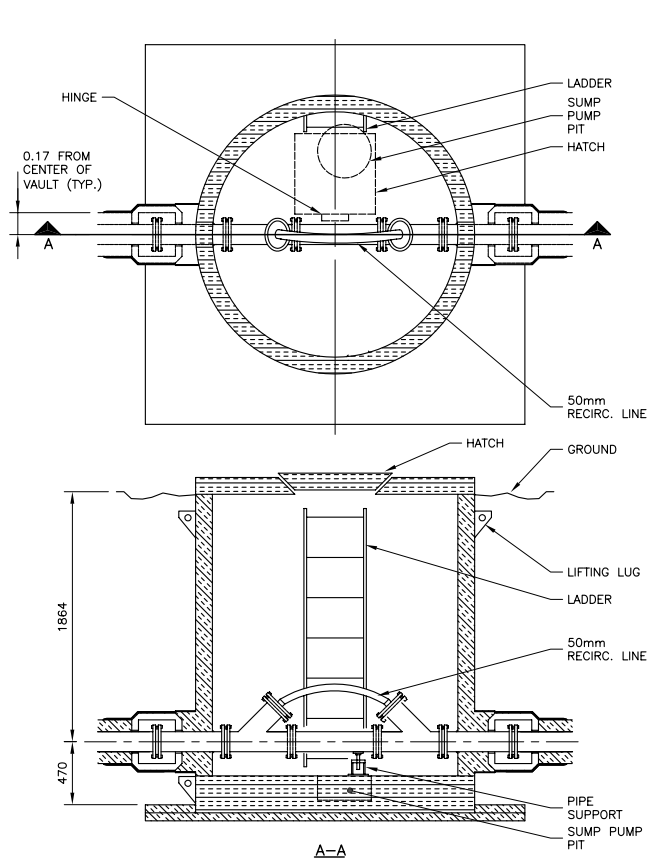
ACCESS VAULT TYPICAL DETAIL - TYPE E LOW POINT DRAIN
(4 REQUIRED) SCALE= 1:50



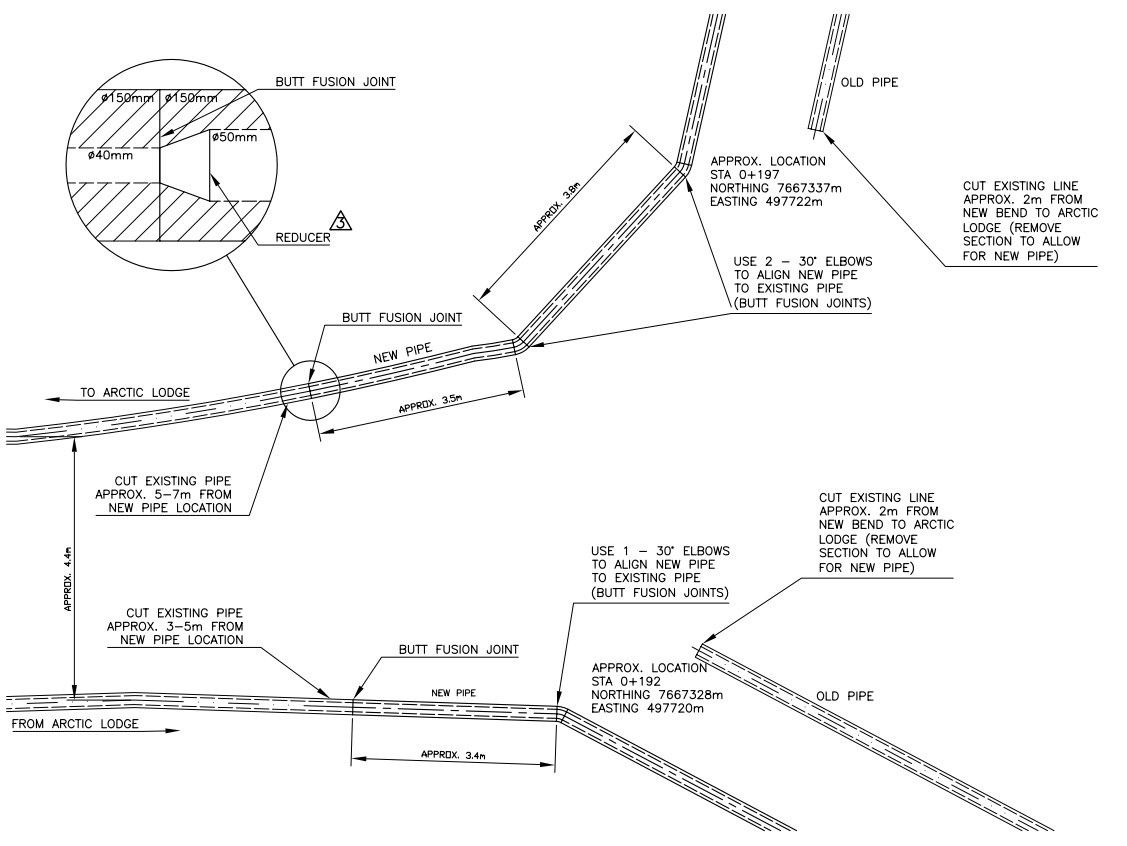
VAULT CONFIGURATION DETAIL - TYPE F HIGH POINT VENT
(2 REQUIRED) SCALE= 1:50



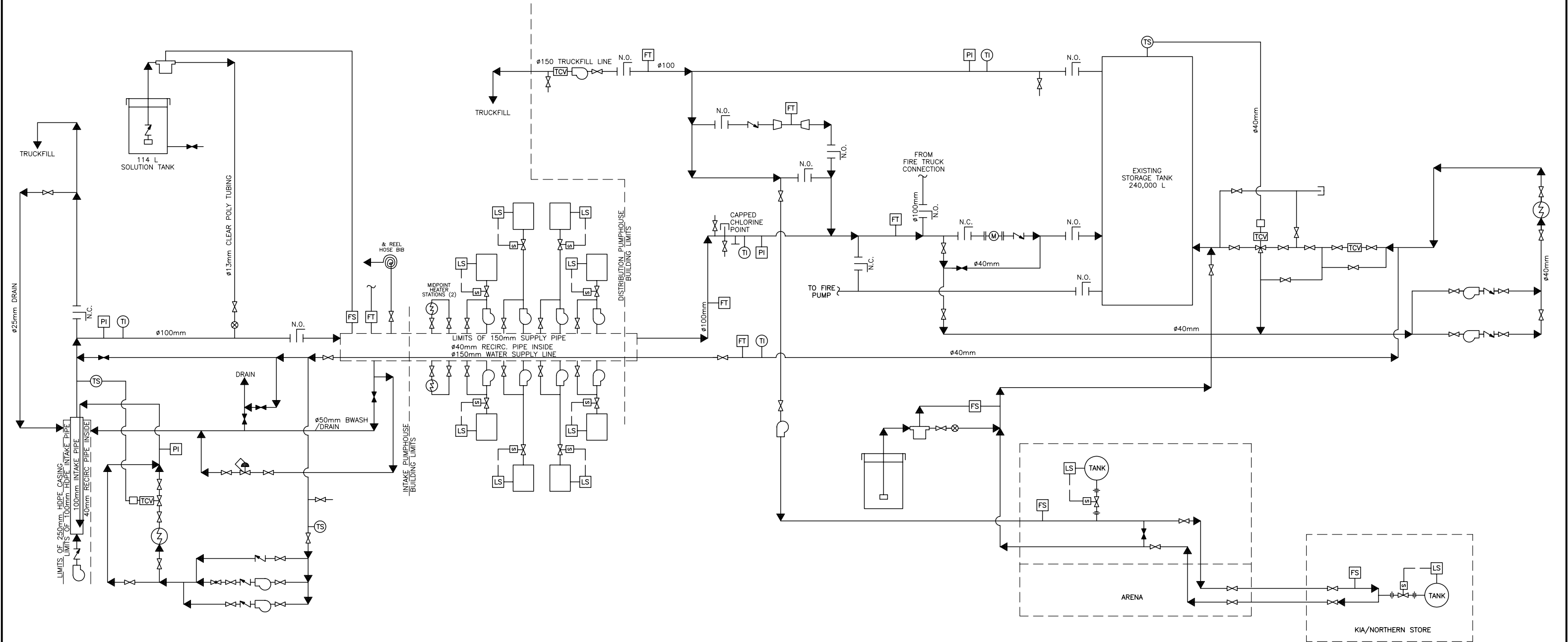
DRAWING REDUCED
NOT TO SCALE



VAULT CONFIGURATION DETAIL - TYPE G THROUGH
(4 REQUIRED) SCALE= 1:50



ARCTIC LODGE LOOP DETAIL
NOT TO SCALE



EXISTING WATER SUPPLY SYSTEM SCHEMATIC

- LEGEND:**
- | | | | |
|--|---------------------------------|--|---------------------------|
| | VALVE (GLOBE) NORMALLY OPEN | | LEVEL SWITCH |
| | VALVE (GLOBE) NORMALLY CLOSED | | FLOW TRANSMITTER |
| | SOLENOID VALVE | | FLOW SWITCH |
| | CHECK VALVE | | FLOW INDICATOR |
| | VALVE (BUTTERFLY) | | TEMPERATURE SENSOR |
| | MOTORIZED VALVE (NORMALLY OPEN) | | TEMPERATURE INDICATOR |
| | PRESSURE RELEASE VALVE | | TEMPERATURE CONTROL VALVE |
| | NORMALLY OPEN | | PRESSURE INDICATOR |
| | NORMALLY CLOSED | | FLOW DIRECTION |
| | HEAT EXCHANGE | | WATER METER |
| | PUMP | | CORPORATION STOP |
| | CHLORINE PUMP | | Y AND BLIND FLANGE |
| | REDUCER | | |



- ### LEGEND:
- | | | | |
|--------------|------------------------------------|--|------------------------------|
| | VALVE (GLOBE)
NORMALLY OPEN | | FLOW TRANSMITTER |
| | VALVE (GLOBE)
NORMALLY CLOSED | | FLOW SWITCH |
| | SOLENOID VALVE | | FLOW INDICATOR |
| | CHECK VALVE | | FLOW SENSOR |
| | VALVE (BUTTERFLY) | | TEMPERATURE SENSOR |
| | MOTORIZED VALVE
(NORMALLY OPEN) | | TEMPERATURE INDICATOR |
| | PRESSURE RELEASE
VALVE | | PRESSURE SENSOR |
| N.O.
N.C. | NORMALLY OPEN
NORMALLY CLOSED | | TEMPERATURE
CONTROL VALVE |
| | HEAT EXCHANGE | | PRESSURE INDICATOR |
| | PUMP | | FLOW DIRECTION |
| | CHEMICAL METERING PUMP | | WATER METER |
| | REDUCER | | CORPORATION STOP |
| | LEVEL SWITCH | | Y AND BLIND FLANGE |

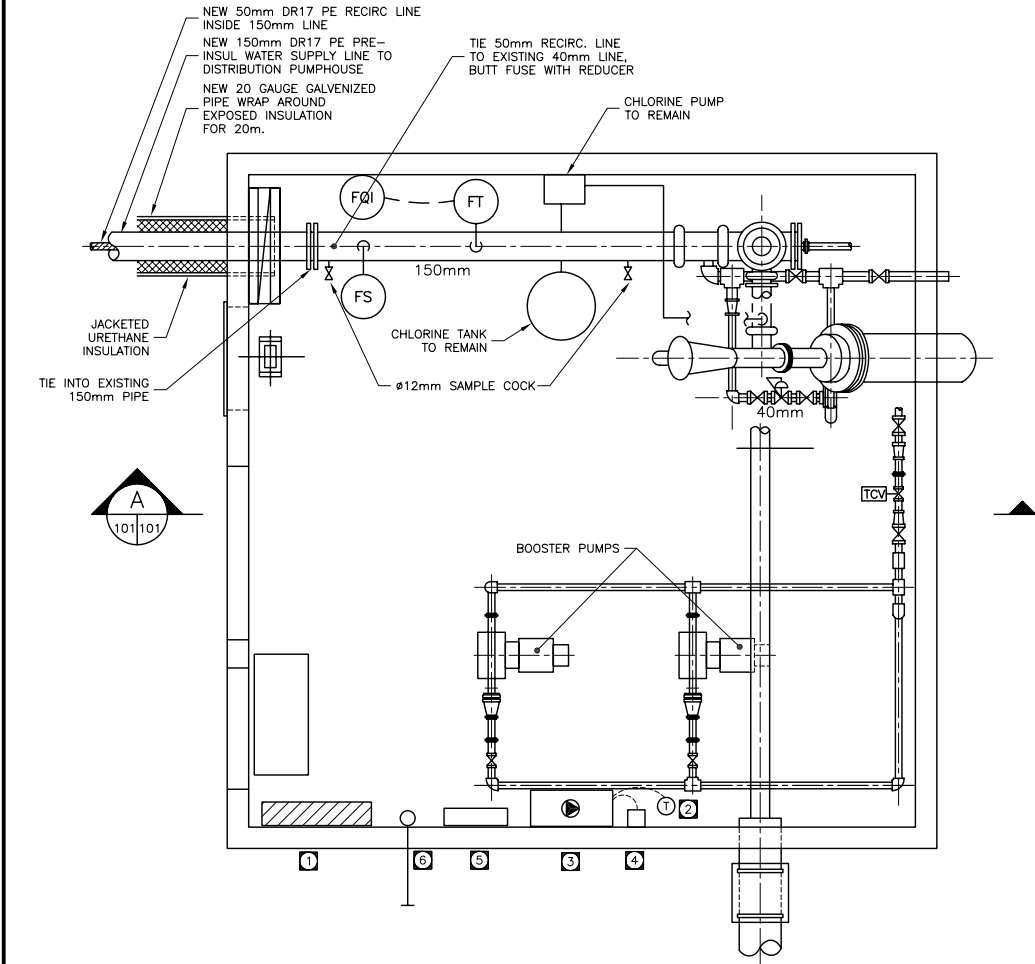
1. DO COMPLETE INSTALLATION IN ACCORDANCE TO NATIONAL ELECTRICAL CODE AND BYLAWS AND STANDARDS OF LOCAL AUTHORITIES.
2. SUBMIT TO ELECTRICAL INSPECTION DEPARTMENT AND SUPPLY AUTHORITY NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK AND PAY ASSOCIATED FEES.
3. FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL INSPECTION DEPARTMENT ON COMPLETION OF WORK TO ENGINEER.
4. EQUIPMENT AND MATERIALS TO BE CSA CERTIFIED.

- 1 EXISTING 125A 120V/240V 1 PH/3W PIONEER LOAD CENTRE. VERIFY LOCATION ON SITE. INSTALL ONE 20A, 2P AND ONE 15A, 1P BREAKERS TO MATCH EXISTING IN THE SPACE PROVIDED. PROVIDE REWired PANEL DIRECTORY TO REFLECT CHANGES.
- 2 PROVIDE HEATING THERMOSTAT, SPST 240V, ALMOND CO. SET AT 10°C STANDARD OF ACCEPTANCE: DIMPLEX TS902.
- 3 PROVIDE UNIT HEATER 3 kW 240V/1/60 C/W CEILING CHROME BRACKET. STANDARD OF ACCEPTANCE: CHROMALOX EUH03B31T.
- 4 PROVIDE 30A, 1P/3W DISC. SWITCH. INSTALL 2 #12 AWG COPPER CONDUCTORS IN 19mm RIGID GALVANIZED STEEL CONDUIT TO THE EXISTING LOAD CENTRE. ACCEPTABLE PRODUCTS: SQUARE D; CUTLER HAMMER; SIEMENS.
- 5 PROVIDE A 15A/120V, 1 PH CIRCUIT TO THE MONITORING SYSTEM. RUN 2 #12AWG IN 19mm RIGID GALVANIZED STEEL CONDUIT TO THE EXISTING LOAD CENTRE.
- 6 PROVIDE AN EMPTY TELEPHONE CONDUIT, 50mm RIGID GALVANIZED STEEL, TERMINATE AND CAP CONDUIT FROM BUILDING AND ANOTHER END STUB AT 150mm ABOVE FLOOR.

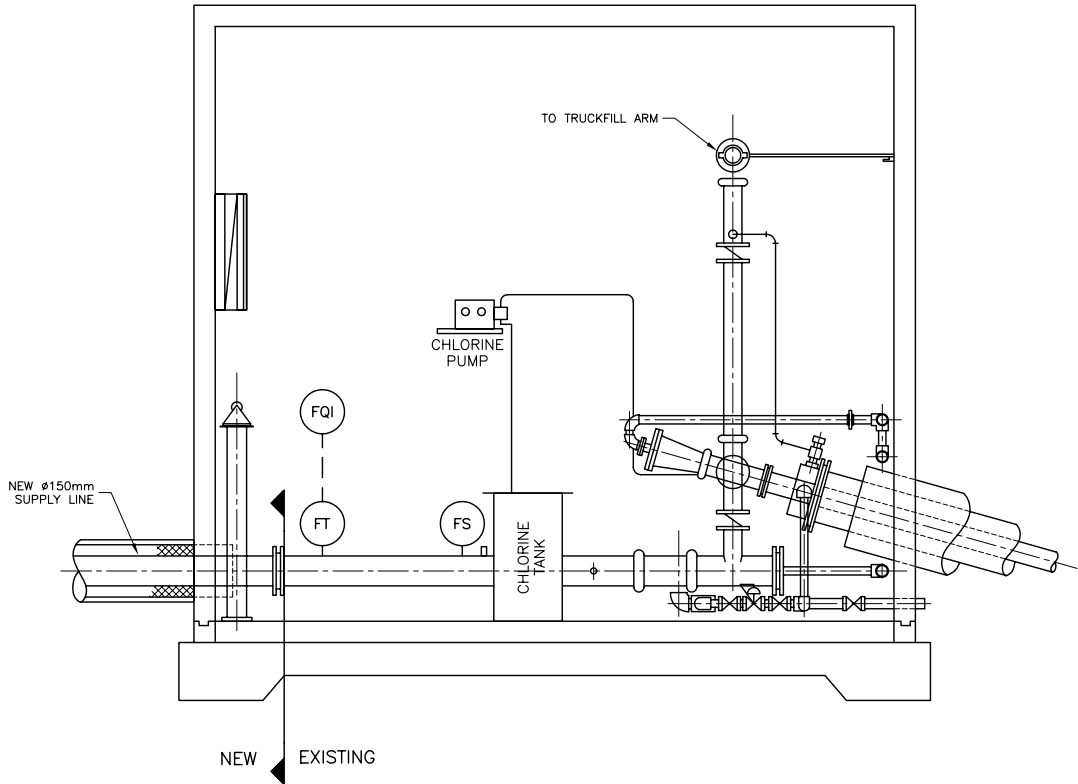
The diagram illustrates the layout of the North Boiler Shack. At the top, a horizontal pipe line features two pressure gauges labeled 'TS' and 'PS'. This line connects to a vertical riser pipe that branches into two parallel vertical pipes, each equipped with a check valve. These pipes then lead to a horizontal manifold on the right, which is connected to a 'BOILER' unit. A dashed line with an arrow points from the 'ELEVATION 23.7m' label to a specific point on the left-side piping. In the lower-left corner, a rectangular area is marked with circled numbers 1, 2, and 3, with a note indicating the installation of new electric heater power from an existing panel. Along the bottom edge, there are two rectangular panels: the 'EXISTING ELECTRICAL PANEL' on the left (marked with a circled 5) and the 'NEW SIEMEN CONTROL PANEL' on the right (marked with a circled 1). A small circular component (marked with a circled 6) is located between these panels. A dashed line with an arrow points from the 'INSTALL NEW ELECTRIC HEATER POWER FROM EXISTING PANEL' label to the area marked with circled numbers 1, 2, and 3.

The diagram illustrates the layout of the South Boiler Shack. Key components and annotations include:

- Flow Switch:** Indicated by a label pointing to a valve symbol on the main horizontal pipe.
- Chlorine Injection Point:** Indicated by a label pointing to a vertical pipe connection on the main horizontal line.
- Pressure Switch (PS):** Located at the far right of the main horizontal pipe.
- Temperature Switches (TS):** Two are shown; one is on the main horizontal pipe, and the other is on a vertical branch pipe.
- Boiler:** A large rectangular unit located in the lower right quadrant of the shack.
- Electrical Panels:**
 - Existing Electrical Panel:** Located in the bottom right corner.
 - New Siemens Control Panel:** Located in the bottom right corner, adjacent to the existing panel.
 - Heater Installation:** A dashed line indicates the path for a new electric heater, with a label pointing to the area: "INSTALL NEW ELECTRIC HEATER POWER FROM EXISTING ELECTRIC PANEL".
- Dimensions and Elevation:**
 - A horizontal dimension of **100mm (TYP.)** is shown near the top left.
 - An **ELEVATION 13.5m** is indicated on the left side.
- Numbered Callouts:** Circled numbers 1, 2, 3, and 4 are placed near the heater installation area.



INTAKE PUMPHOUSE PLAN
Not to Scale

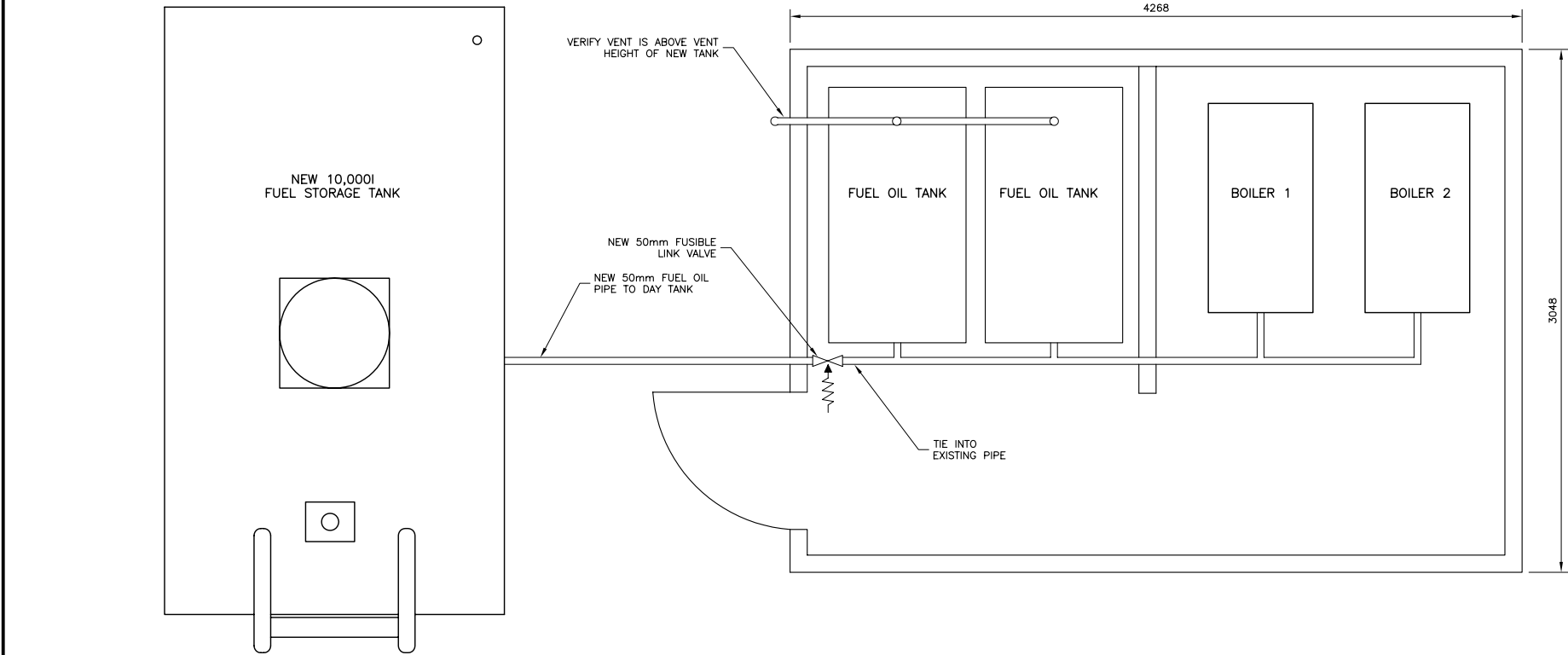


SECTION A
Not to Scale






- LEGEND:
- | | | | |
|--|------------------------------------|--|------------------------------|
| | VALVE (GLOBE)
NORMALLY OPEN | | LEVEL SWITCH |
| | VALVE (GLOBE)
NORMALLY CLOSED | | FLOW TRANSMITTER |
| | SOLENOID VALVE | | FLOW SWITCH |
| | CHECK VALVE | | FLOW INDICATOR |
| | VALVE (BUTTERFLY) | | TEMPERATURE SENSOR |
| | MOTORIZED VALVE
(NORMALLY OPEN) | | TEMPERATURE INDICATOR |
| | PRESSURE RELEASE
VALVE | | TEMPERATURE
CONTROL VALVE |
| | FUSIBLE LINK VALVE | | PRESSURE INDICATOR |
| | N.O.
NORMALLY OPEN | | FLOW DIRECTION |
| | N.C.
NORMALLY CLOSED | | WATER METER |
| | HEAT EXCHANGE | | CORPORATION STOP |
| | PUMP | | Y AND BLIND FLANGE |
| | CHLORINE PUMP | | |
| | REDUCER | | |

- GENERAL NOTES:
- DO COMPLETE INSTALLATION IN ACCORDANCE TO NATIONAL ELECTRICAL CODE AND BYLAWS AND STANDARDS OF LOCAL AUTHORITIES.
 - SUBMIT TO ELECTRICAL INSPECTION DEPARTMENT AND SUPPLY AUTHORITY NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK AND PAY ASSOCIATED FEES.
 - FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL INSPECTION DEPARTMENT ON COMPLETION OF WORK TO ENGINEER.
 - EQUIPMENT AND MATERIALS TO BE CSA CERTIFIED.

- NOTES:
- EXISTING 125A 120/240V 1 PH/3W PIONEER LOAD CENTRE. VERIFY LOCATION ON SITE. INSTALL ONE 20A, 2P AND ONE 15A, 1P BREAKERS TO MATCH EXISTING IN THE SPACE PROVIDED. PROVIDE REVISED PANEL DIRECTORY TO REFLECT CHANGES.
 - NEW HEATING THERMOSTAT, SPST 240V, ALMOND COLOUR, SET AT 10°C STANDARD OF ACCEPTANCE: DIMPLEX TS902.
 - NEW UNIT HEATER, 3 kw 240V/1/60 C/W CEILING HANG BRACKET. STANDARD OF ACCEPTANCE: CHROMALOX EUH03B31T.
 - NEW 30A, 1P/3W DISC. SWITCH. INSTALL 2 #12 AWG, RW90 COPPER CONDUCTORS IN 19mm RIGID GALVANIZED STEEL CONDUIT TO THE EXISTING LOAD CENTRE. ACCEPTABLE PRODUCTS: SQUARE D; CUTLER HAMMER;SIEMENS.
 - NEW 15A/120V, 1 PH CIRCUIT TO THE MONITORING SYSTEM. RUN 2 #12AWG IN 19mm RIGID GALVANIZED STEEL CONDUIT TO THE EXISTING LOAD CENTRE.
 - NEW EMPTY TELEPHONE CONDUIT, 50mm RIGID GALVANIZED STEEL, TERMINATE AND CAP CONDUIT 1500mm FROM BUILDING AND ANOTHER END STUB AT 150mm ABOVE FLOOR.



DRAWING REDUCED
NOT TO SCALE

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