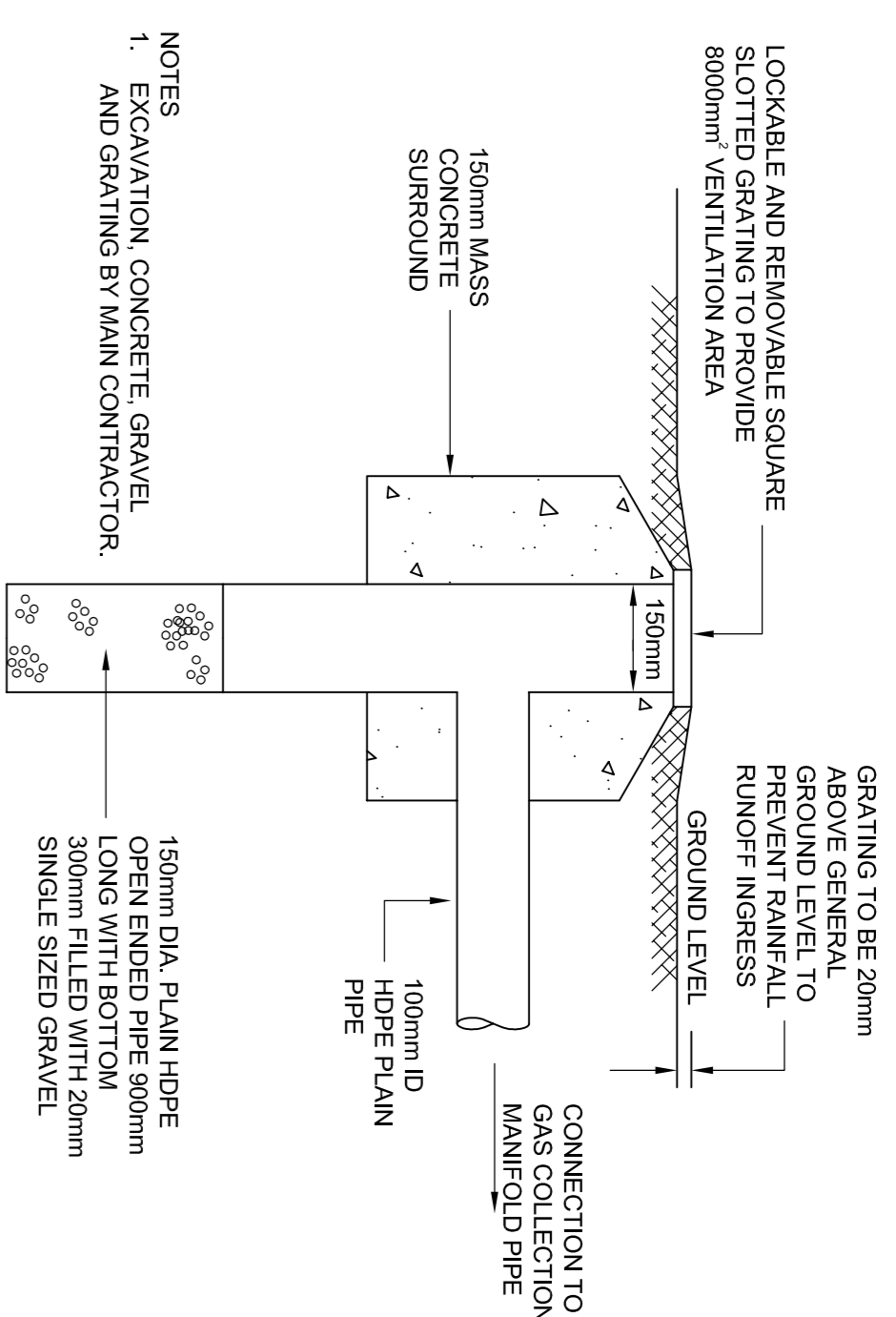


SPECIFICATION FOR GAS PROTECTION MEASURES

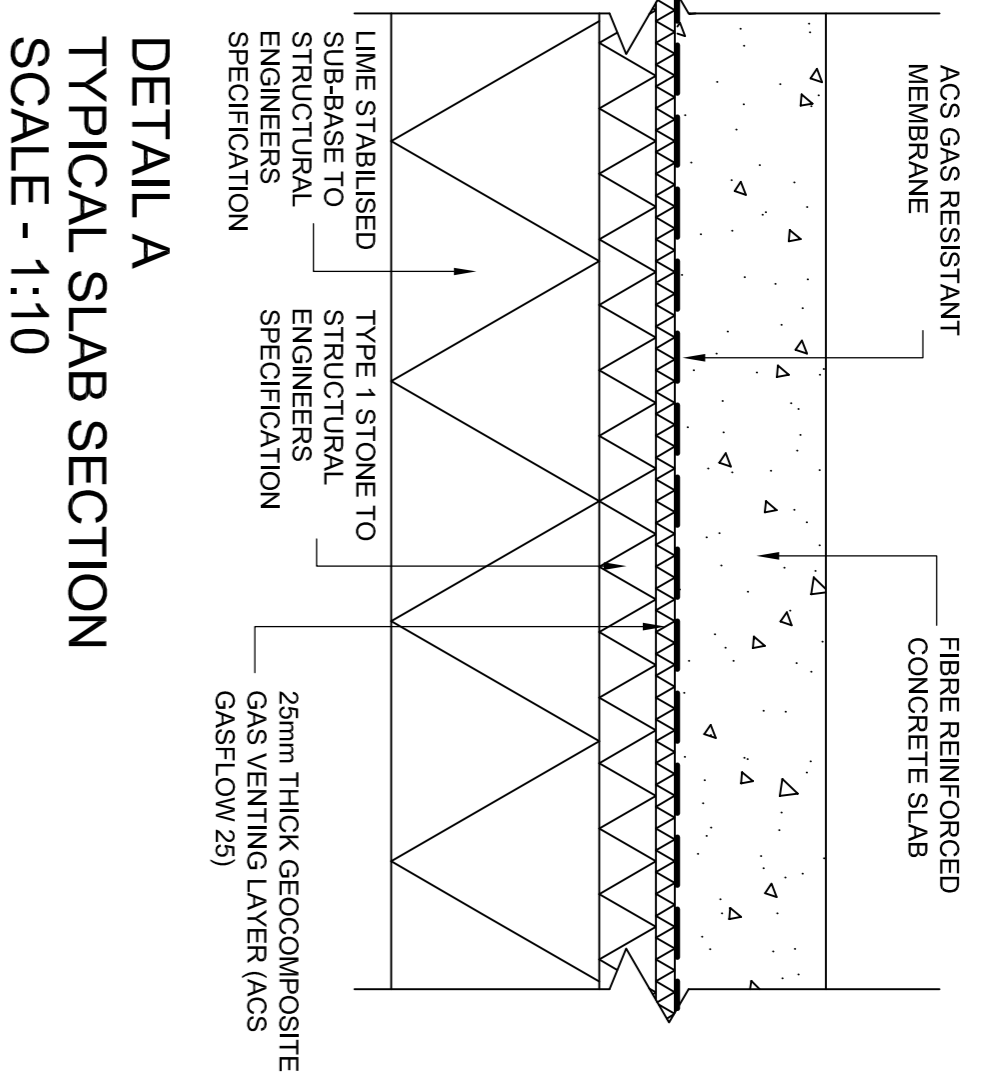
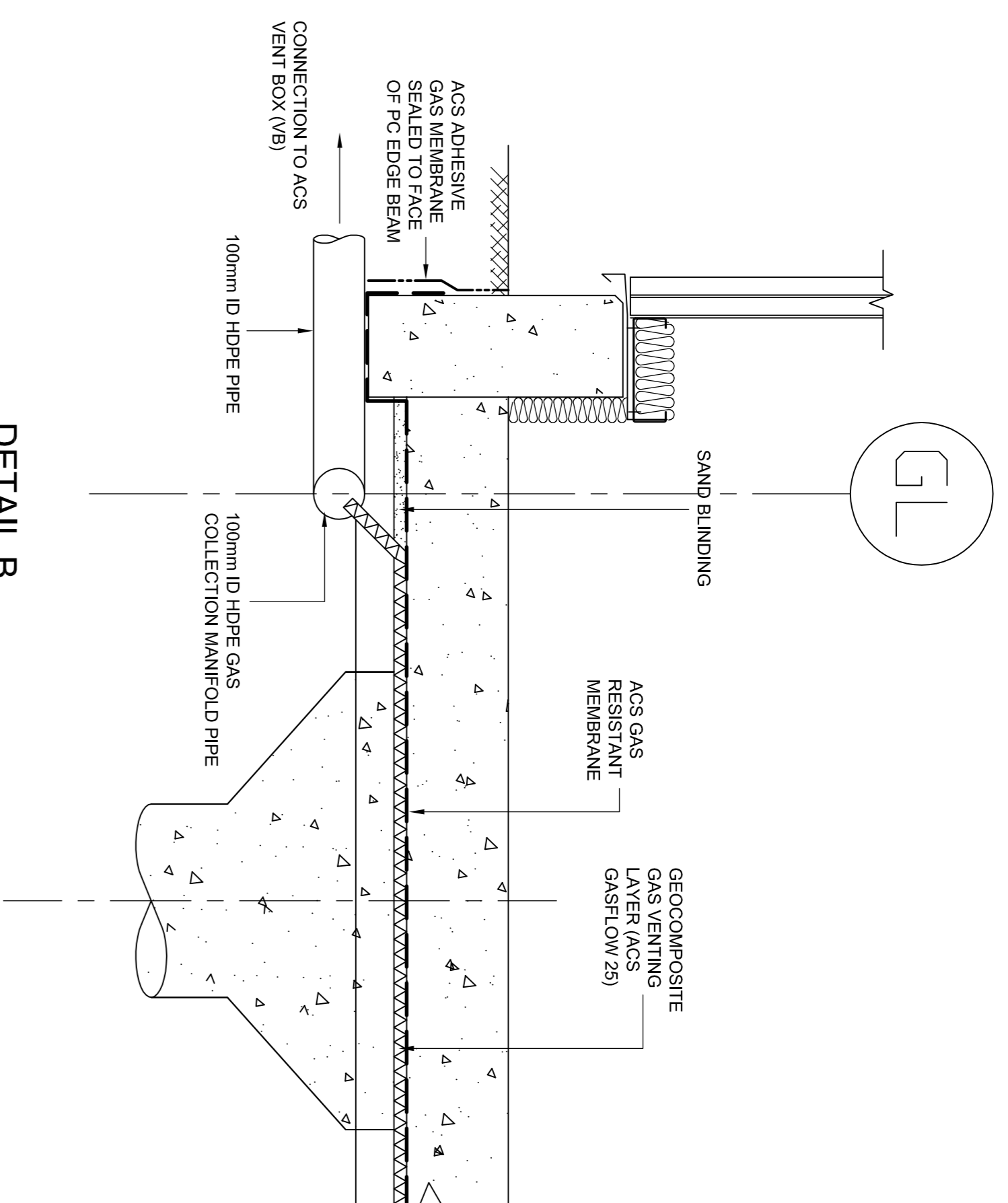
1. Membrane
Gas resistant membrane to be high performance loose lay membrane containing 20 micron encapsulated aluminium core. Maximum methane permeability 1 x 10⁻¹⁰ m³ m² / m² s. (ACS Gas Resistant Membrane)
2. Installation and protection in accordance with manufacturers recommendations. Membrane to be laid on minimum 25mm blinding throughout except where laid directly above geocomposite gas venting layer.
3. Individual membrane sheets to be lapped minimum 100mm and sealed with 30mm wide proprietary butyl tape (ACS Butyl Sealant Tape).
4. All services and other penetrations to be sealed with self adhesive gas resistant membrane (ACS Adhesive Gas Membrane).
5. Geocomposite Gas Venting Layer
6. Geocomposite to comprise single sided 25mm thick cusped high density polyethylene core with high permeability geotextile fabric bonded to core dimples (ACS Gasflow 25).
7. Core to have a minimum 13mm equivalent clear void and a minimum crushing strength of 100kN/m². Geocomposite venting layer to entire building footprint with connectors to 100mm diameter high density polyethylene gas collection manifold pipes along the two long sides of the building.
8. Air Vents
Ground level vent boxes (VB) to be provided to front and rear elevation at approximate locations shown. Vent boxes to be locally repositioned around door openings etc.

**DETAIL C
GROUND LEVEL VENT BOX (VB)
SCALE - 1:10**



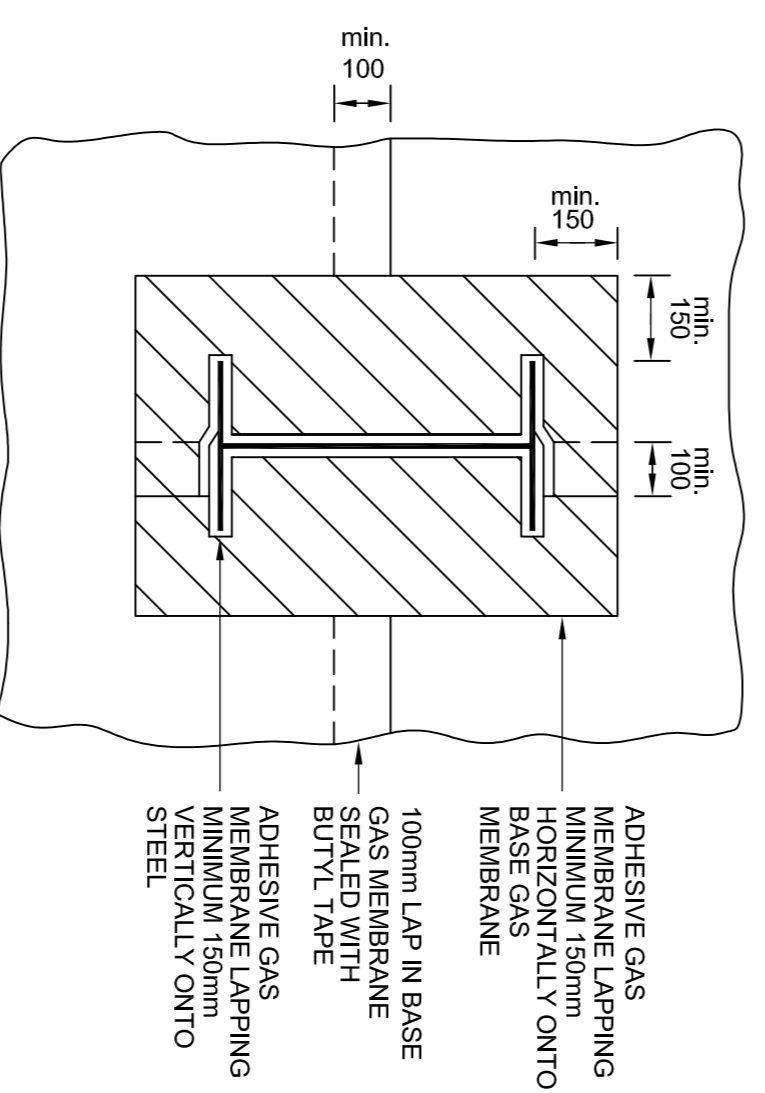
NOTES
1. EXCAVATION, CONCRETE GRAVEL AND GRATING BY MAIN CONTRACTOR.

**DETAIL B
TYPICAL PERIMETER SECTION
SCALE - 1:10**



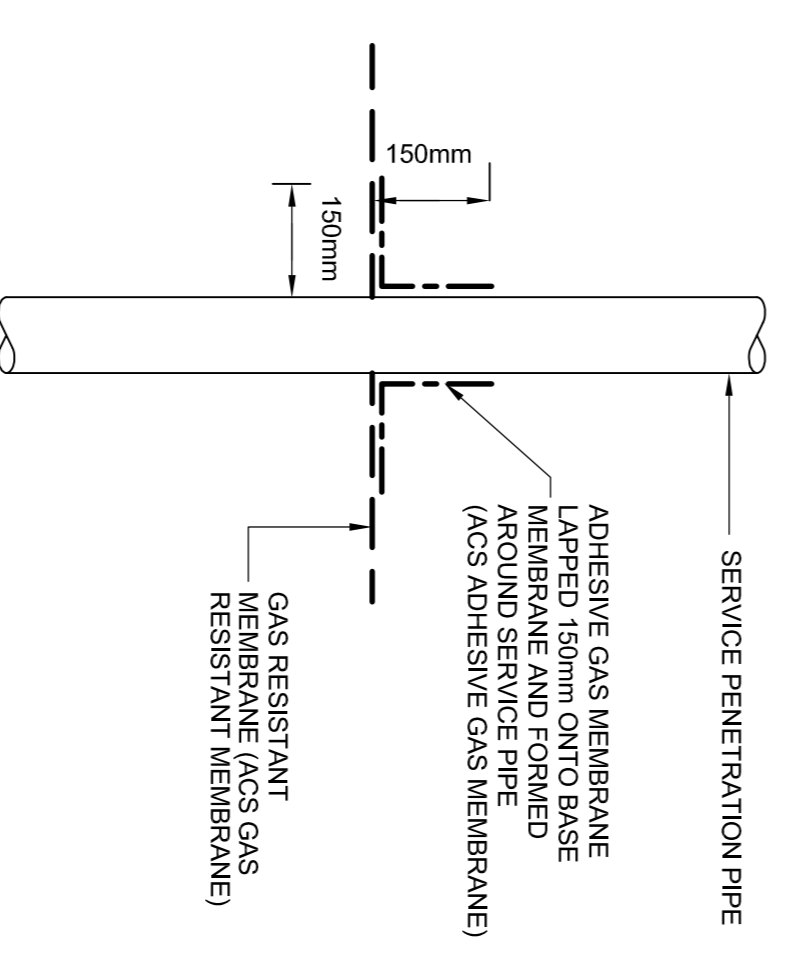
**DETAIL A
TYPICAL SLAB SECTION
SCALE - 1:10**

**DETAIL E
STEEL COLUMN FLASHING
NOT TO SCALE**



ADHESIVE GAS MEMBRANE LAPPING MINIMUM 150mm HORIZONTALLY ONTO MEMBRANE
100mm LAP IN BASE MEMBRANE LAPPING HORIZONTALLY ONTO MEMBRANE
ADHESIVE GAS MEMBRANE BUTYL TAPE
ADHESIVE GAS MEMBRANE LAPPING VERTICALLY ONTO STEEL

**DETAIL F
SEAL TO PIPE PENETRATION
NOT TO SCALE**



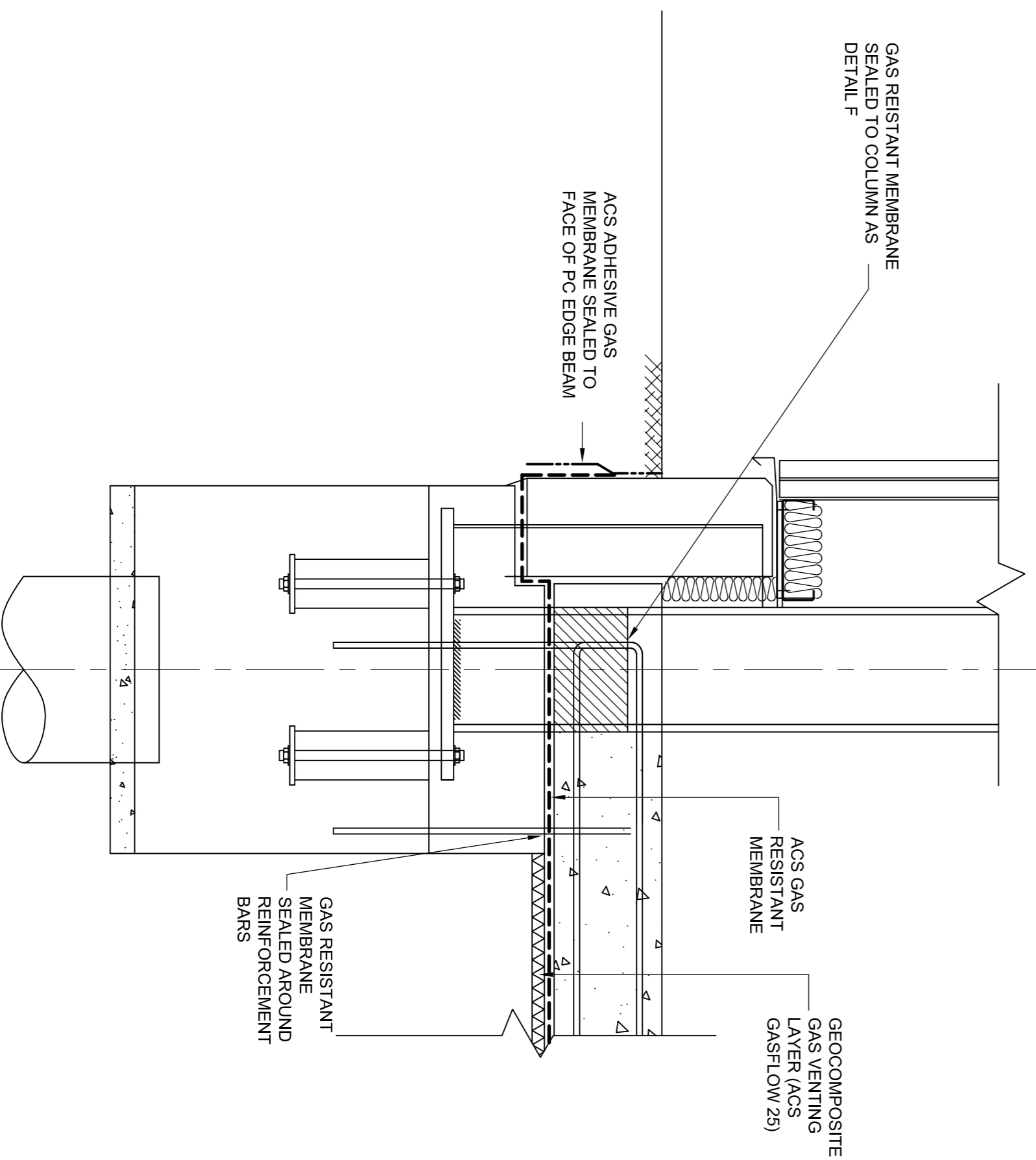
SERVICE PENETRATION PIPE
ADHESIVE GAS MEMBRANE LAPPED 150mm ONTO BASE AROUND SERVICE PIPE (ACS ADHESIVE GAS MEMBRANE)
GAS RESISTANT MEMBRANE (ACS GAS RESISTANT MEMBRANE)

CONSTRUCTION STATUS

REVISION	DESCRIPTION	CHECKED	APPROVED	DATE
A	Minor amendments.			22/05/02

SPLIMAN ASSOCIATES Geotechnical & Environmental Engineers	CLIENT R.G. CARTER	TITLE GAS PROTECTION MEASURES (DETAILS - STARTER UNITS)
Tel: 01384-420578 Fax: 01384-423251	DRAWN SAHR	APPROVED HDS
DATE APRIL 2002	REF	SCALE AS SHOWN
		DRAWING NO. J0202412

**DETAIL D
TYPICAL PERIMETER SECTION (AT COLUMN)
SCALE - 1:10**



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