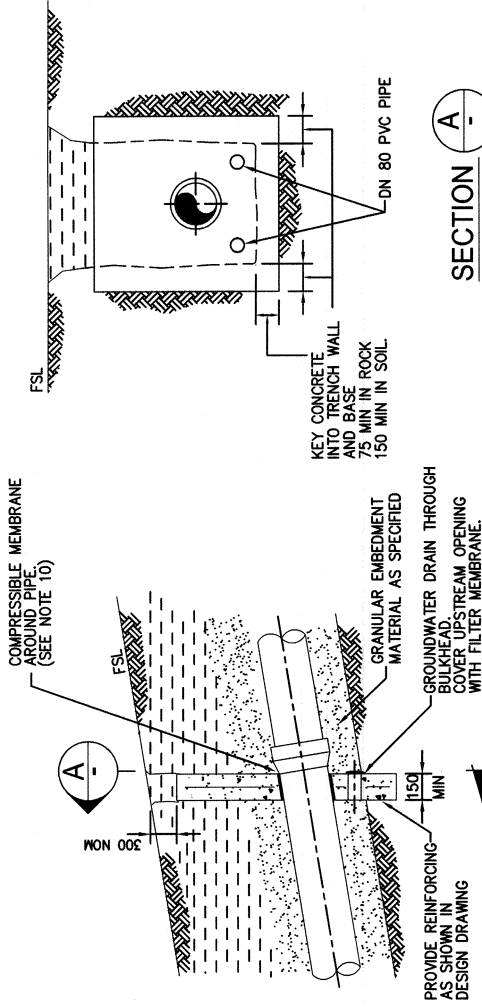


TYPICAL ROAD CROSSING BULKHEAD

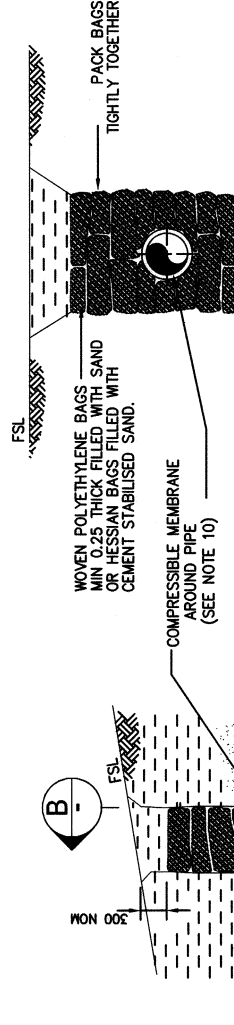
NOTES:

1. ALL DIMENSIONS IN MILLIMETRES.
2. CONSTRUCT CONCRETE BULKHEADS AND TRENCH STOPS AT LOCATIONS SPECIFIED IN DESIGN DRAWINGS.
3. CONSTRUCT BULKHEAD ADJACENT TO KERB AND GUTTER SHOULDER OF SEALED ROADS.
4. BULKHEAD AT A RETAINING WALL TO BE UNDER THE WALL.
5. KEY CONCRETE BULKHEADS INTO SIDES AND BOTTOM OF TRENCH AGAINST A BEARING SURFACE OF UNDISTURBED SOIL.
6. CONCRETE TO BE CLASS N25.
7. DO NOT DEFORM PIPES DURING PLACEMENT OF CONCRETE.
8. SEAL BAGS TO PREVENT LEAKAGE OF CONTAINED MATERIAL.
9. PROVIDE A CONTINUOUS DRAINAGE PATH
 - THROUGH BULKHEADS AND TRENCHSTOPS
 - AROUND VALVE CHAMBERS.
 - IN TRENCH EXCAVATIONS ACROSS ROADWAYS.
 TRENCH DRAINAGE TO BE IN ACCORDANCE WITH A3-04286.
10. COMPRESSIBLE MEMBRANE AROUND PIPE TO BE 10 THICK POLYSTYRENE FOR BULKHEADS ADJACENT TO KERBS AND 3 THICK RUBBER FOR BULKHEADS AND TRENCHSTOPS ON SLOPES.
11. FOR SLOPES >30% CONTINUOUSLY ENCASE THE PIPE TO PREVENT MOVEMENT AND TRANSFER OF GROUND WATER. WRAP JOINTS TO PREVENT DAMAGE TO RRI.



CONCRETE BULKHEAD DETAIL

SECTION A-A



TRENCH STOP DETAIL

SECTION B-B

MRC STANDARD DRAWINGS SUPERCEDES WSAA STANDARD DRAWINGS

| | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------|--|
| Mackay REGIONAL COUNCIL | | DRAWING No. A3-04285 | |
| STANDARD DRAWING TRENCH DRAINAGE BULKHEADS & TRENCHSTOP | | AMEND. C | |
| COMMERCIAL SERVICES | | SHEET 1 OF 1 | |
| EXECUTIVE MANAGER MACKAY WATER & WASTE RPEPQ 7506 JASON DEVITT DATE | | WSAA NO. WAT-1209 WATER SERVICES ASSOCIATION of Australia | |
| DRAWING FILE NAME M:\Engineering Services\Technical Services\Design\Projects\Standard drawings\Mackay Water\WSAA MRC\WAT CODE\A3-04285B | | DATE OF LAST EDIT May 21, 2009 | |
| SURVEY FILE No N/A | | LEVEL DATUM A.H.D. | |
| SURVEY N/A | | MERIDIAN MGA-55 | |
| T'SFER TO MRC TBLOCK | | APPVD. | |
| WSAA ORIG. | | DESCRIPTION | |
| NO. DATE | | JOB No | |
| 5/9 AMEND M.C.B. SKN. | | MGA-55 | |
| B MAY08 NOTE ADDED | | JOB No | |
| A MAY08 T'SFER TO MRC TBLOCK | | MGA-55 | |
| 0 WSAA ORIG. | | MGA-55 | |