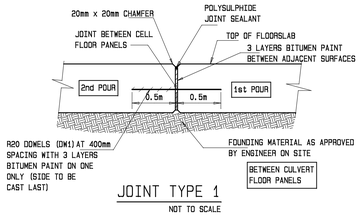
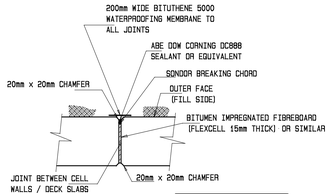


JOINT TYPE 1

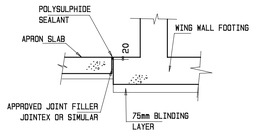
NOT TO SCALE



JOINT TYPE 2

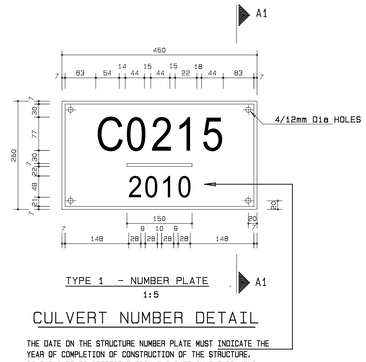
NOT TO SCALE

BETWEEN PANELS IN CULVERT WALLS AND DECK SLAB



JOINT TYPE 3

(TIPICAL DETAIL)

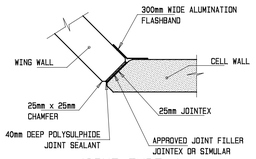


TYPE 1 - NUMBER PLATE

1:5

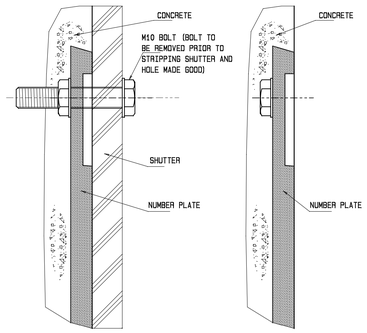
CULVERT NUMBER DETAIL

THE DATE ON THE STRUCTURE NUMBER PLATE MUST INDICATE THE YEAR OF COMPLETION OF CONSTRUCTION OF THE STRUCTURE. IF THE DATE IS DIFFERENT FROM THE DATE ON THE DRAWING THEN THE FINAL DATE/YEAR OF CONSTRUCTION MUST BE USED.



JOINT TYPE 4

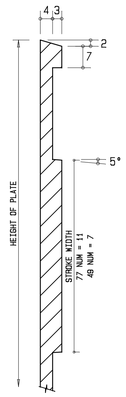
NOT TO SCALE



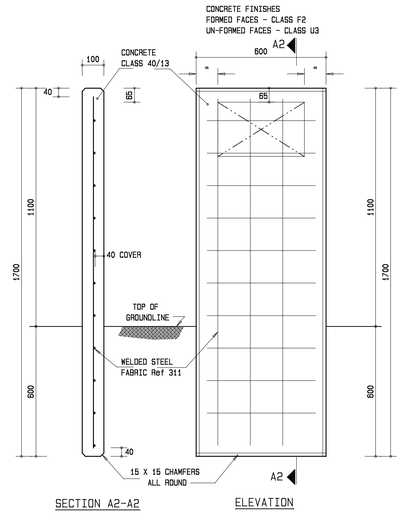
DURING CONSTRUCTION FINAL

PREFERRED NUMBER PLATE FIXING DETAIL

NTS



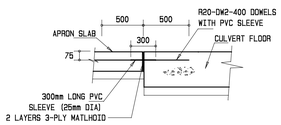
SECTION A1-A1



SECTION A2-A2 ELEVATION

PRECAST CONCRETE MOUNTING BLOCK (TYPE 2)

SCALE 1:10



JOINT TYPE 5

(TIPICAL DETAIL)

NOT TO SCALE

NOTE: JOINING NEW CONCRETE TO OLD

1) ALL CONTACT SURFACES SHALL BE ROUGHENED AND CLEANED OF ALL DIRT AND LOOSE PARTICLES TO EXPOSE COARSE AGGREGATE.

2) DOWELS SHALL BE INSTALLED IN HOLES DRILLED INTO THE EXISTING STRUCTURE AS SHOWN ON DRAWINGS.

3) DRILLED HOLES MUST BE FREE OF DUST AND DEBRIS.

4) ALL HORISONTAL DOWELS TO BE BONDED BY AN APPROVED EPOXY - SIKADUR 31 OR SIMILAR APPROVED

5) ALL CONTACT SURFACES SHALL BE PAINTED WITH AN APPROVED WET-TO-DRY EPOXY.

LEGEND

① - 200mm WIDE FILTER ELEMENTS SECURED TO BACK FACE OF STRUCTURE AT 45° SLOPE.

② - CONCRETE NAILS WITH 25 X 25mm HOOP IRON WASHERS, TO SECURE FILTER ELEMENTS TO STRUCTURE AT 1m CENTRES.

③ - CONCRETE SCREED TO GRADE AND LEVEL OF DRAINAGE PIPES PRIOR TO PLACING OF DRAINAGE PIPES.

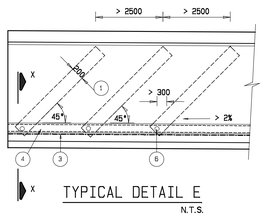
④ - 65mm dia PERFORATED DRAINAGE PIPES WRAPPED IN GEOTEXTILE. THE GEOTEXTILE SHALL HAVE AN OVERLAP OF NOT LESS THAN 150mm AND BE TIED AT CENTRES NOT GREATER THAN 200mm.

⑤ - 3.5mm dia STAINLESS STEEL WIRE BARIER.

⑥ - 50mm DIA uPVC WEEPHOLES AT 2.0m CENTRES. THE CONTRACTOR SHALL ENSURE THAT THE WEEPHOLES ARE CLEAR AND APPROVED BY THE ENGINEER BEFORE THE FILTER ELEMENTS ARE INSTALLED

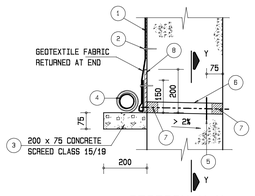
⑦ - TEMPORARY POLYSTYRENE PLUG TO PREVENT INGRESS OF GROUT DURING PLACING OF CONCRETE.

⑧ - 200mm WIDE FILTER ELEMENT SECURED TO BACK FACE OF STRUCTURE AT SAME GRADE AS WEEPHOLES.



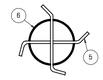
TYPICAL DETAIL E

N.T.S.



SECTION X-X

NOT TO SCALE



SECTION Y-Y

N.T.S.

FOR TENDER PURPOSES ONLY

No.	DATE	REVISION	CONSULT. ENG

CONSTRUCTION RECORD

WORKS CONTRACT ENGINEER

Name :
Prof. Reg. No. :
Date :

SANRAL PROJECT MANAGER

Name :
Date :

Worley Parsons RSA retains the copyright in all intellectual property, including designs and/or documents prepared in terms of this appointment or the project covered by the appointment.The client may use the designs and/or documents for the sole purpose of their intended use on this project only subject to payment for the design having been received. Use for any other purpose, whether or not the design and/or documents have been paid for constitutes an infringement of copyright, and all rights are reserved

All dimensions to be checked on site before any work is put in hand. Refer any discrepancies to the engineer.

Copyright reserved

DESIGNED BY
NAME
Prof. Reg. No.
CHECKED BY
NAME
Prof. Reg. No.
DRAWN BY
NAME

CONSULTANT APPROVAL

Name :
Prof. Reg. No. :
Date :

HEAD OFFICE
48 Tambotie Avenue
Val de Grace
Pretoria
0184

PO Box 415
PRETORIA 0001
South Africa

Tel:(012) 844 8000

SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
Reg. No. 1998/00360/06
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

NORTHERN REGION

38 Ida Street
Menlo Park
Pretoria
0081

Private Bag X17
Lynnwood Ridge
0040

Tel: (012) 426 6200

ACCEPTANCE

THE ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING.

for CEO : SA NATIONAL ROADS AGENCY LTD

Date:

REHABILITATION OF NATIONAL ROUTE 11 SECTION 13
FROM R518 INTERSECTION(km 8.340) TO GROOTSANDSLOOT RIVER (km 24.280)

NEW 3/3.00 x 0.90m CULVERT AT km 12.156 399
GENERAL DETAILS

SCALE: AS SHOWN SHEET 3 OF 4

PROJECT NUMBER	NRA N.011-130-2010/1	
DRAWING LOCATION DATA	START	END
ROUTE	N11	N11
SECTION	13	13
DRAWING km DISTANCE	12.156	12.156
DRAWING TYPE	STRUCTURES - CULVERTS	
BRIDGE/STRUCTURE No.		
CONSULTANT DRAWING No.	251020-PPO-MC13-03	VER V1
SANRAL DOC #		

SCALE FOR REDUCED PLAN
100mm ON ORIGINAL PLAN