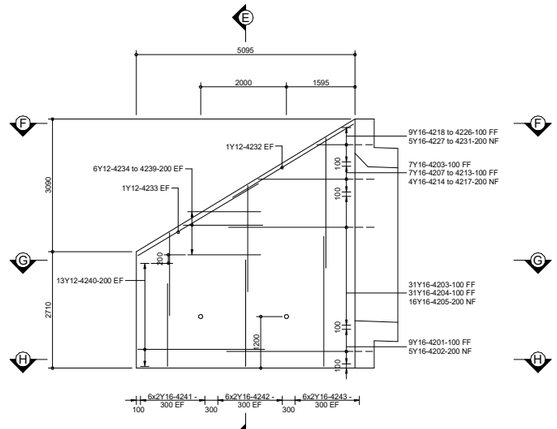
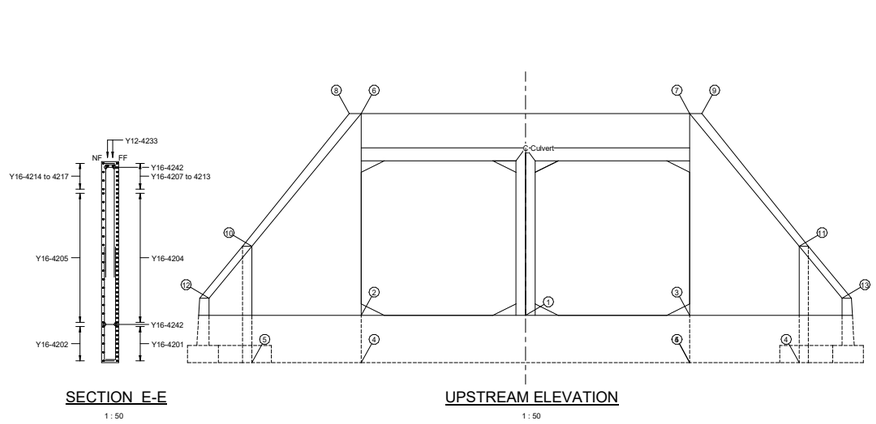
Note:
All dimensions to be checked on site before any work is put in hand.
Refer any discrepancies to the Engineer.



EARWALL 2 ELEVATION

1 : 50

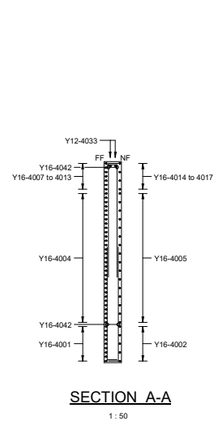


SECTION E-E

1 : 50

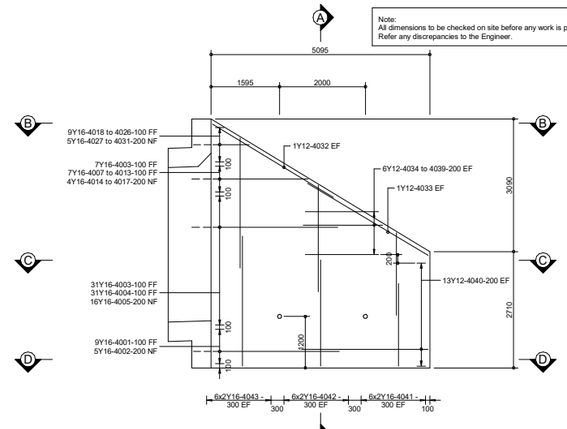
UPSTREAM ELEVATION

1 : 50



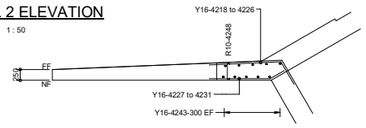
SECTION A-A

1 : 50



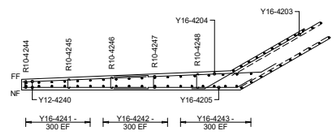
EARWALL 1 ELEVATION

1 : 50



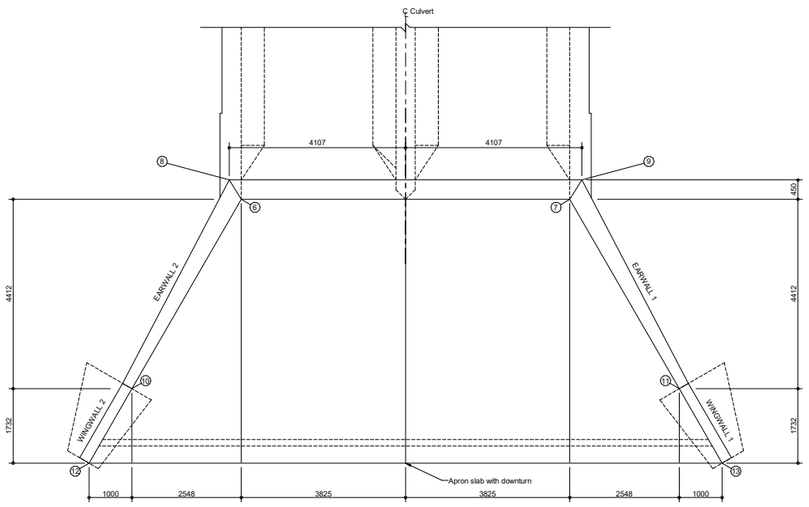
SECTION F-F

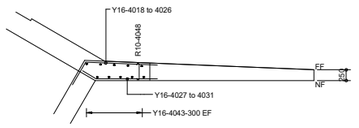
1 : 50



SECTION G-G

1 : 50



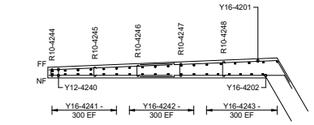


SECTION B-B

1 : 50

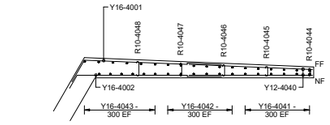
SECTION C-C

1 : 50



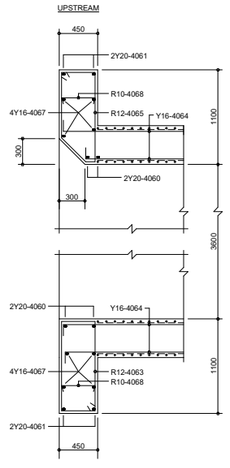
SECTION H-H

1 : 50



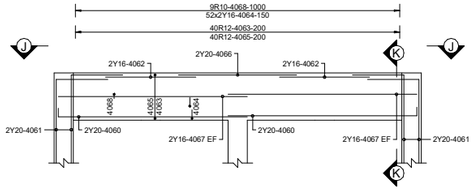
SECTION D-D

1 : 50



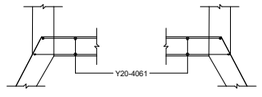
SECTION K-K

1 : 25



UPSTREAM PARAPET DETAIL

1 : 50

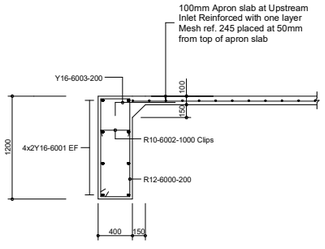


SECTION J-J

1 : 50

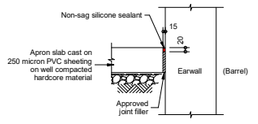
UPSTREAM PLAN

1 : 50



UPSTREAM APRON SLAB SECTION
APRON SLAB REINFORCEMENT DETAILS

1 : 25



APRON SLAB ISOLATION JOINT DETAIL

Not to scale

LEVELS		
POINT	UPSTREAM	DOWNSTREAM
1	563.233	561.788
2	563.233	561.788
3	563.233	561.788
4	562.133	560.688
5	562.133	560.688
6	567.933	566.488
7	567.933	566.488
8	567.933	566.488
9	567.933	566.488
10	564.843	563.398
11	564.843	563.398
12	563.633	562.188
13	563.633	562.188

NOTES

1. **Concrete class:**
   C12/15-20 Blinding
   D25/30-XC4(100)-20 Barrels, Earwings, Wingwalls & Apron Slabs
2. **Clear Cover to Steel Reinforcement**
   Concrete cover to reinforcement shall be 40mm.
3. **Steel Reinforcement**
   Reinforcement to conform to SANS-920-2011.
   Reinforcement shall be bent in accordance with SANS-282 Edition 6.

   Characteristic strengths:
   Mild steel (R) bars : 250 MPa
   High yield stress (Y) bars : 450 MPa

   Unless otherwise shown, the minimum reinforcement lap length shall be 45 x dia. of the smaller bar.
4. **Legend**
   EF - Each face
   NF - Near face
   FF - Far face
   EW - Each way
   BS - Bottom slab
   TS - Top slab
   T1, T2, T3, T4, B2, B4, B1, B3
5. **Chamfers:**
   All exposed sharp concrete edges to be chamfered 20mmx 20mm unless otherwise shown.
6. **Formed concrete surface finishes:**
   Class F1 Concealed surfaces (Rough)
   Class F2 Visible surfaces (Smooth)
7. **Unformed concrete surface finishes:**
   Class U1 Concealed surfaces
   Class U2 Visible surfaces

No.	DATE	REVISION	CONSULT. ENG.

CONSTRUCTION RECORD (AS-BUILT)
WORKS CONTRACT ENGINEER
Name :
Prof. Reg. No. :
Date :
SANRAL PROJECT MANAGER
Name :
Date :

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
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BUILDING SOUTH AFRICA THROUGH BETTER ROADS

NORTHERN REGION
38 Ida Street
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Pretoria
0081

Private Bag X17
Lynnwood Ridge
0040

Tel: (012) 426 6200

ACCEPTANCE
THIS 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 the SA NATIONAL ROADS AGENCY SOC LTD.
Date:

PROJECT DESCRIPTION
R531 SECTION 2 - EMERGENCY REPAIR OF DAMAGED STEEL ARMCO
MAJOR CULVERT C9521 AT KM 6.94
UPSTREAM EARWALL DETAILS

SCALE : **SHEET 04 OF 12**

PROJECT NUMBER	N.XXXX	
DRAWING LOCATION DATA	START	END
ROUTE	R531	R531
SECTION	2	2
DRAWING km DISTANCE	6.94	6.94
DRAWING TYPE	STRUCTURES - CULVERTS	
BRIDGE/STRUCTURE No.		
CONSULTANT DRAWING No.	G156-07-6000/04	VER
SANRAL DOCUMENT #		

SANRAL TITLE BLOCK #164823/4(DWG/PDF) VERSION V11.1