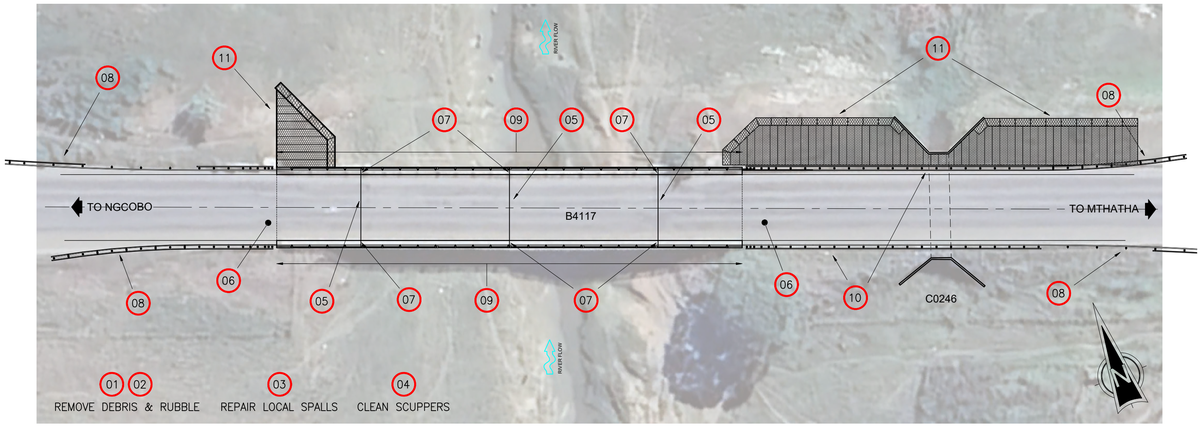
FOR TENDER ONLY

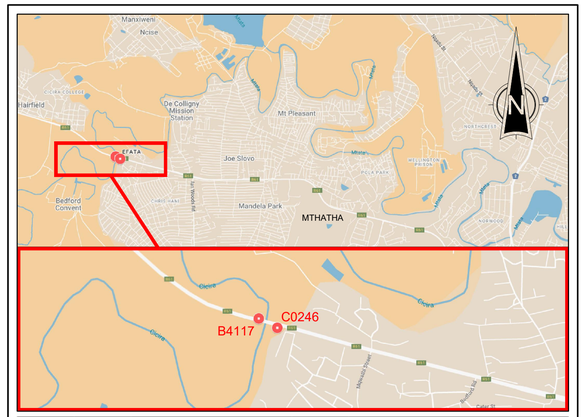


PLAN ON BRIDGE B4117 & CULVERT C0246 - (R61/8 @ km 43.65)

NTS

B4117 & C0246 - REMEDIAL WORKS

ITEM	DESCRIPTION
01	REMOVE DEBRIS FROM WATERCOURSE
02	REMOVE DAMAGED GUARDRAILS, CONCRETE BALUSTRADES AND END BLOCKS
03	REPAIR ALL SPALL DAMAGE / DAMAGED CONCRETE WHERE CONCRETE BALUSTRADES WERE DEMOLISHED / REMOVED
04	CLEAN / UNBLOCK SCUPPERS
05	REPLACE EXISTING EXPANSION JOINTS WITH NEW ASPHALTIC PLUG TYPE EXPANSION JOINTS AT PIER AND ABUTMENTS
06	REPAIR APPROACHES AND DEPARTURES (OF BOTH STRUCTURES) BY MILLING OUT AND PLACE BTB BEFORE RE-SEALING
07	SEAL JOINTS AT SHOULDERS TO B4117
08	REINSTATE GUARDRAILS AT APPROACHES / DEPARTURES
09	PROVIDE GUARDRAIL OVER DECK ATTACHED TO NEWLY CONSTRUCTED CONCRETE BALUSTRADES
10	PROVIDE DOUBLE GUARDRAIL (BACK TO BACK) BETWEEN B4117 AND C0246
11	REINSTATE DOWNSTREAM EMBANKMENTS AND PROVIDE GABION PROTECTION AS PER DETAILS



Route	Km	Co-ordinates Lat	Co-ordinates Long	Structure No.	Structure Name/Description	Structure Type
R61/07	43.65	-31.5693611	28.7144444	B4117	Cicira River Bridge	Bridge
R61/07	43.75	-31.5697500	28.7153333	C0246	Cicira River Tributary	Culvert

LOCALITY

TYPICAL DETAIL - TREATMENT OF REINFORCEMENT

STEP 1

REMOVE LOOSE OR DELAMINATED CONCRETE AND/OR CONCRETE AREAS INDENTIFIED BY THE ENGINEER

STEP 2

SAW CUT REPAIR PERIMETER TO 10mm DEEP AT RIGHT ANGLES & REMOVE CONCRETE AREAS IDENTIFIED BY THE ENGINEER.

EXTENT OF EXPOSURE OF REINFORCEMENT
- -SAW CUT 50mm BEYOND RUSTED AREAS
- -EXPOSE FULL PERIMETER OF REINFORCING BARS

STEP 3

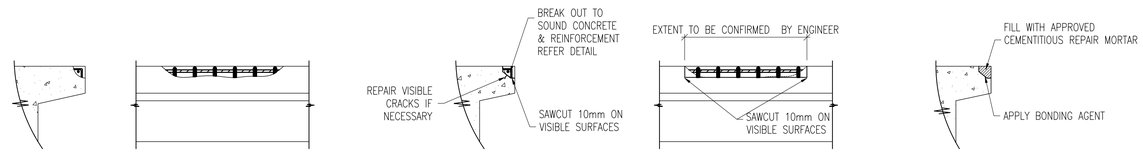
ALL HEAVY CORROSION AND SCALE TO BE REMOVED USING HYDROJETTING (WITH GRIT) OR OTHER APPROVED METHOD TO EXPOSE SOUND METAL.

STEP 4

APPLY ANTI-CORROSIVE COATING TO THE SATISFACTION OF THE ENGINEER TO CLEANED AND DERUSTED REINFORCING STEEL.

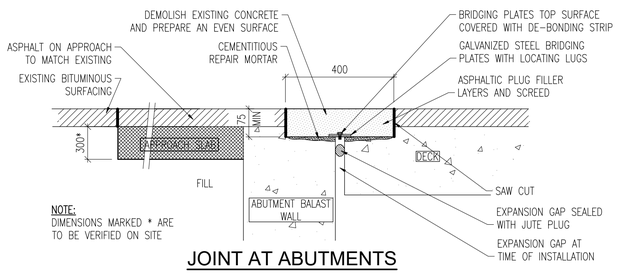
NOTE:
IF SECONDARY REINFORCING STEEL HAS LOST MORE THAN 15% OF DIAMETER OR IF MAIN REINFORCING STEEL HAS LOST MORE THAN 5% OF DIAMETER, STRUCUTRAL ENGINEER TO ADVISE ON THE ADDITION OF SUPPLEMENTAL REINFORCEMENT.

TYPICAL DETAIL - CONCRETE REPAIR



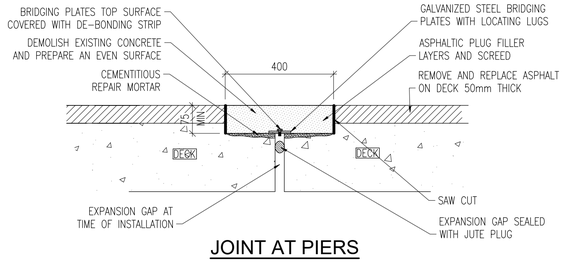
EXTENT OF REMOVAL OF DAMAGED CONCRETE

TYPICAL DETAIL - ASPHALTIC PLUG JOINT AT ABUTMENTS



NOTE:
DIMENSIONS MARKED * ARE TO BE VERIFIED ON SITE

JOINT AT ABUTMENTS

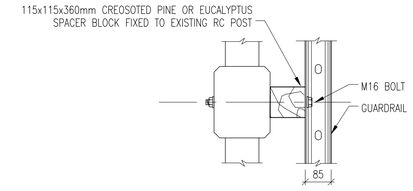


JOINT AT PIERS

EXPANSION JOINT NOTES:

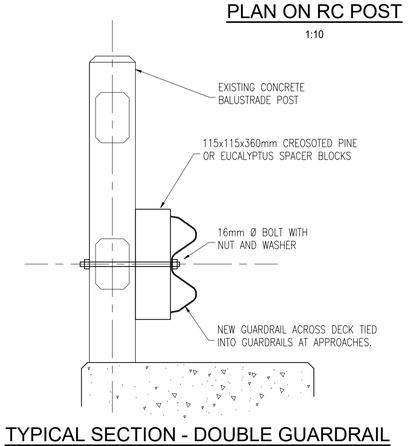
1. EXPANSION JOINT TO BE 400x75 ASPHALTIC PLUG JOINTS
2. INSTALLATION TO BE DONE UNDER TRAFFIC CONDITIONS
3. THESE JOINTS SHALL BE INSTALLED BY SPECIALISTS OR UNDER THE SUPERVISION OF THE MANUFACTURER.
4. THE JOINTS MUST BE AGREMENT SA APPROVED WITH IDENTIFICATION DETAILS
5. SEAL PARAPET JOINTS IN LINE WITH ASPHALTIC PLUG JOINTS WITH AN APPROVED SILICON HIGHWAY SEALANT

DETAIL - GUARDRAIL FIXED TO BALUSTRADE



PLAN ON RC POST

1:10

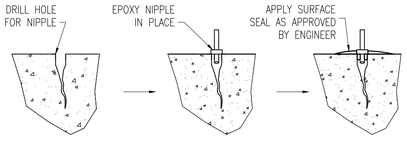


TYPICAL SECTION - DOUBLE GUARDRAIL FIXED TO EX RC POST

1:10

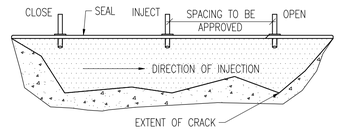
TYPICAL DETAIL - CRACK REPAIR (>0.5mm)

NOTE:
1) INSTALL INJECTION NIPPLES – POSITIONS AS APPROVED BY ENGINEER



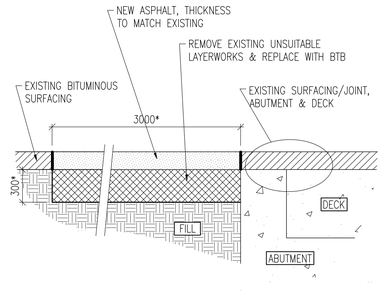
PREPARATION OF CRACK

NOTE:
1) START AT ONE END OF CRACK WITH INJECTION.
2) START INJECTING AT LOWEST POINT.
3) INJECT UNTIL CONSTANT FLOW OF EPOXY IS VISIBLE AT THE NEXT NIPPLE.
4) CLOSE CURRENT NIPPLE AND PROCEED TO NEXT NIPPLE.
5) WHEN COMPLETE, GRIND OFF NIPPLES AND SURFACE EPOXY SEAL.



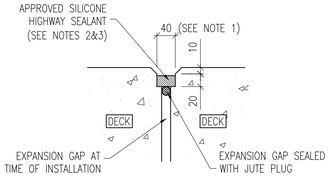
INJECTION OF CRACK

TYPICAL DETAIL - BTB APPROACH REPAIR



NOTE:
DIMENSIONS MARKED (*), EXTENT TO BE CONFIRMED ON SITE BY THE ENGINEER

TYPICAL DETAIL - JOINT AT SHOULDERS

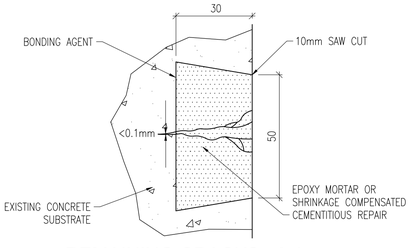


NOTES:

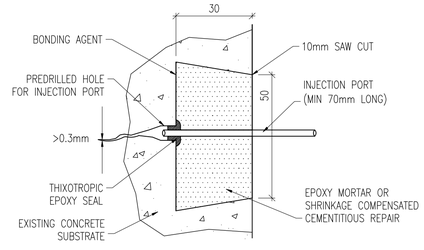
1. IF CURRENT EXPANSION GAP IS LESS THAN 40mm WIDE, A 40mm WIDE GAP SHALL BE FORMED BY MEANS OF A SAWN GROOVE. 10x10MM CHAMFERS SHALL ALSO BE FORMED.
2. IF THE SAWN FACES OF THE EXPANSION JOINT IS CONTAMINATED PRIOR TO THE INSTALLATION OF THE SEALANT, THE JOINT FACES SHALL BE CLEANED BY MEANS OF SANDBLASTING IMMEDIATELY PRIOR TO THE INSTALLATION OF THE SEALANT.
3. ENSURE THAT THE EXPANSION GAP IS CLEAN AND DRY BEFORE INSTALLING THE SEALANT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

TYPICAL DETAIL - LARGE CRACK REPAIR

NOTE:
IF ONCE CRACK HAS BEEN SAW CUT AND REAMED OUT IT IS DISCOVERED THE REMAINING CRACK IS LARGER THAN 0.3mm, CRACK INJECTION WILL BE REQUIRED.



REMAINING CRACKS <0.1mm



REMAINING CRACKS >0.3mm

No.	DATE	REVISION	CONSULT. ENG.
VA		FOR TENDER	

CONSTRUCTION RECORD
WORKS CONTRACT ENGINEER
Name :
Prof. Reg. No. :
Date :
SANRAL PROJECT MANAGER
Name :
Prof. Reg. No. :
Date :

FOR TENDER ONLY

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
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

SOUTHERN REGION
20 Shoreward Drive
Baywest
Port Elizabeth
6025
P.O. Box 27230
Greenacres
6057
Tel: (041) 398 3200
Fax: (041) 398 3222

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 CEO: SA NATIONAL ROADS AGENCY LTD.
Date:

PROJECT DESCRIPTION
AD-HOC STRUCTURAL AND DRAINAGE SERVICES IN THE SOUTHERN REGION – EMERGENCY BRIDGE REPAIR WORKS

DRAWING TITLE
R61 SECTION 7 km 43.65
BRIDGE REPAIRS - LAYOUT AND DETAILS

SCALE : AS SHOWN | SHEET 1 OF 1

PROJECT NUMBER	X.003-080-2024/1-C	
DRAWING LOCATION DATA	START	END
ROUTE	R61	R61
SECTION	07	07
DRAWING km DISTANCE	KM 43.65	KM 43.65
DRAWING TYPE	STRUCTURES - BRIDGES	
BRIDGE/STRUCTURE No.	B4117 & C0246	
CONSULTANT DRAWING No.	201931-R61-07-44-100	VER
SANRAL DOCUMENT #	#########	VA