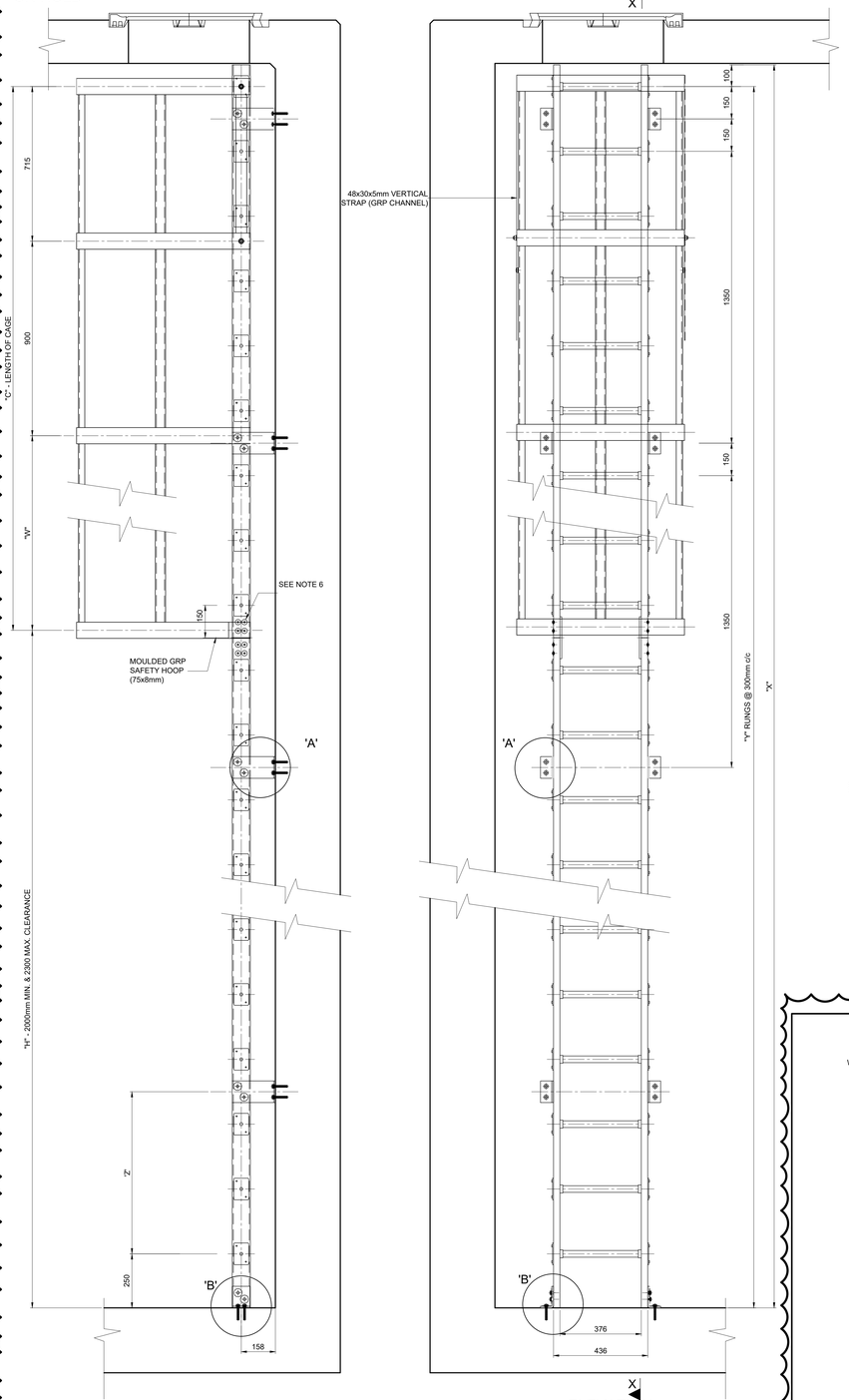
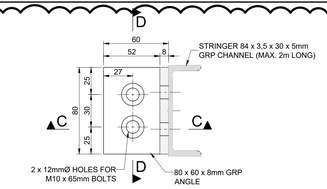
ON HOLD



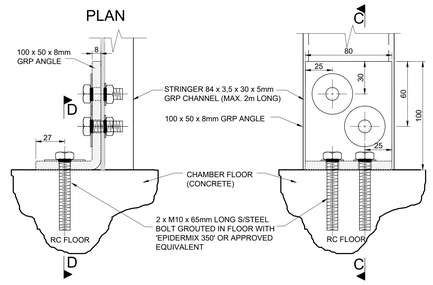
SECTIONAL VIEWS ON ACCESS LADDER AND SAFETY CAGE

SCALE 1 : 10

GRP ACCESS LADDER DETAILS



PLAN

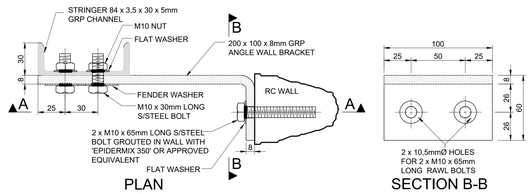


SECTION C-C

SECTION D-D

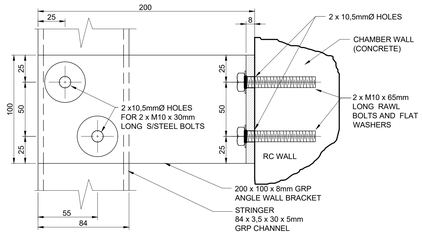
DETAIL 'B' - BASE ANGLE DETAIL (OPTIONAL)

SCALE 1 : 2



PLAN

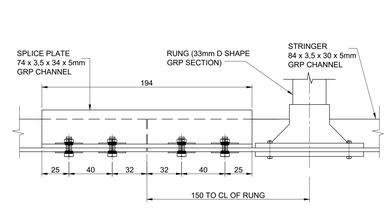
SECTION B-B



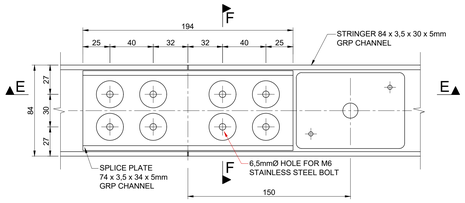
SECTION A-A

DETAIL 'A' - WALL BRACKET DETAIL

SCALE 1 : 2

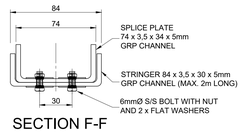


SECTION E-E



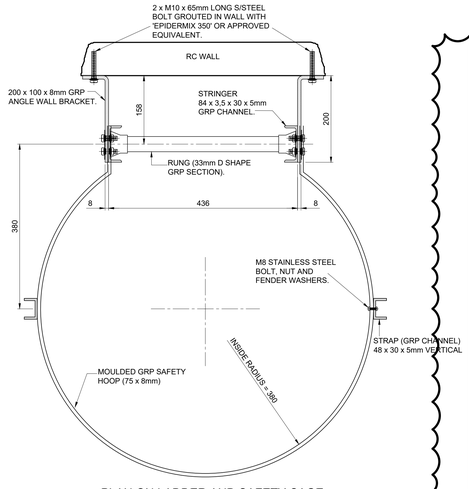
VIEW ON STRINGER AT SPLICE PLATE

SPLICE PLATE DETAIL



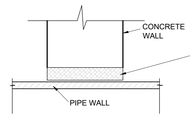
SECTION F-F

SCALE 1:2



PLAN ON LADDER AND SAFETY CAGE

SCALE 1:5

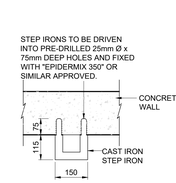


NOTE:

1. WIDTH TO SUIT CONCRETE WALL PLUS 20mm ON EITHER SIDE (EXCESS FOAM TO REMAIN IN PLACE UNTIL SHUTTERS HAVE BEEN REMOVED)
2. EXCESS FOAM TRIMMED FLUSH WITH THE CHAMBER WALLS USING A ROUND TIPPED KNIFE.

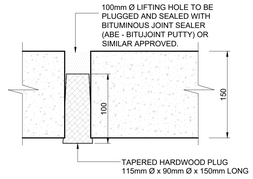
PIPE/WALL SEALING DETAIL

N.T.S



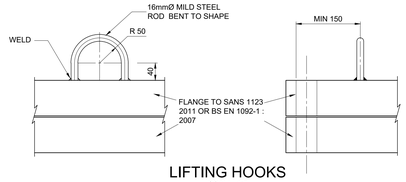
STEP IRON DETAIL

SCALE 1:10



LIFTING HOLE SEALING DETAILS

N.T.S



LIFTING HOOKS

SCALE 1:5



PLAN

MOUNTING BRACKET FOR AIR VENT AT 1m

SCALE 1:10

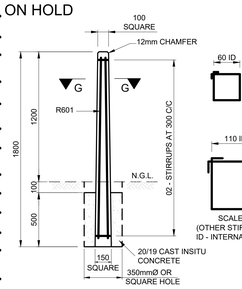
ITEM	DESCRIPTION	QTY
1	DN100/200 x 90° SHORT RADIUS BEND (ANSI B16.28)	1
2	DN100/200 x 4.5mm THK GMS PIPE, MIN 500mm LONG	1
3	DN100/200 x 4.5mm THK GMS PUDDLE FLANGE	1
4	3 No. 10mmØ BARS WELDED ACROSS OPENING AT EQUAL CENTERS	1
5	DN100/200 x 4.5mm THK GMS PIPE, LENGTH TO SUIT ON SITE	1

AIR VENT DETAIL

SCALE 1 : 25

NOTE: AIR VENT TO BE HEAVY DUTY HOT DIPPED GALVANIZED TO SABS 763

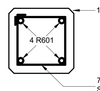
ON HOLD



SCALE 1 : 5
(OTHER STIRRUP DIMENSIONS PRO-RATA)
ID - INTERNAL DIMENSIONS

ELEVATION

SCALE 1 : 20



SECTION G-G

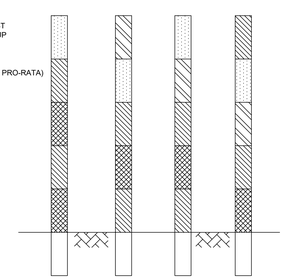
SCALE 1 : 5

Member	Bar mark	Type and size	No. of mbrs	No. of bars in each	Total no.	Length of each bar mm	Shape code	A mm	B mm	C mm	D mm	E/R mm	TOTAL LENGTH
	01	R6	1	4	4	1700	20	1700					6.8
	02	(12 GAUGE WIRE) TO BE TIED AS SHOWN											
ALL BENDING DIMENSIONS ARE IN ACCORDANCE WITH SABS 82 * LENGTH SPECIFIED TO NEAREST 50mm													

BAR DIAMETER	R8	R10	Y10	Y12	Y20	Y25	Y32	TOTAL MASS
UNIT MASS (kg/m)	0.395	0.616	0.616	0.838	2.466	3.654	6.313	

LEGEND	
	Reflective yellow (Nitelite reflex road marking paint)
Red	(Enamel post office red)
Yellow	(Enamel golden yellow)
Blue	(Enamel arctic blue)

NOTE: One coat of undercoat and two coats of required colour must be applied



PRECAST CONCRETE PIPELINE MARKER POSTS AND REINFORCING DETAILS

ORIGINAL SCALE: 1 : 100

NOTE:
ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF WORKS. REFER ANY DISCREPANCIES TO THE ENGINEER.

NOTES :

LADDER

1. THE TOPMOST RUNG TO BE 300mm OR LESS BELOW TOP OF FLOOR.
2. THE FIRST SUPPORT BRACKET TO BE 150mm BELOW THE TOPMOST RUNG.
3. SUPPORT BRACKETS TO BE SPACED AT 1500mm CENTRES.
4. THE MAXIMUM LENGTH OF EACH STRINGER TO BE NOT MORE 2000mm.
5. LEGEND : "X" = HEIGHT FROM TOP OF FLOOR TO SOFFIT OF ROOF
   "Y" = TOTAL NUMBER OF RUNGS (RUNGS @ 300mm c/c)
   "Z" = HEIGHT FROM BOTTOM RUNG TO LOWEST SUPPORT
   NOTE "Z" MUST NOT EXCEED 1500mm.
6. IF THE HEIGHT OF THE LADDER IS MORE THAN 2000mm, SPLICE PLATES SHALL BE USED TO JOIN THE SECTIONS (SEE SPLICE PLATE DETAIL).
7. BASE PLATE TO BE USED AS AN OPTION ONLY WHEN REQUIRED. OR AS DIRECTED BY THE ENGINEER / TECHNICIAN.
8. WHERE A LADDER USED IS MORE THAN 2,3m ABOVE GROUND LEVEL OR PLATFORM, OR WHERE DIRECTED BY THE ENGINEER / TECHNICIAN, A SAFETY CAGE MUST BE FITTED.
9. IF HEIGHT OF LADDER EXCEEDS 2,3m, SAFETY RINGS MUST BE FITTED TO TOP RUNGS.

SAFETY CAGE

1. PULTRUDED PROFILES TO BE MANUFACTURED WITH AN ISO POLYESTER RESIN AND E-GLASS FIBER.
2. THE COLOUR OF THE STYLES AND CAGE HOOPS ARE GOLDEN YELLOW.
3. THE COLOUR OF THE RUNGS AND THE CAGE STRAPS ARE CLOUD GREY.
4. ALL BOLTS, NUTS AND FENDER WASHERS TO BE USED TO MANUFACTURE THE PRODUCT MUST BE STAINLESS STEEL GRADE 316.
5. LEGEND "L" = HEIGHT TO TOP OF FLOOR PLUS 1228mm.
   "C" = ("L" - "H"). WHERE "H" = 2000mm MIN. AND 2300mm MAX.
   "W" = 900mm OR 600mm (WHERE 900mm IS TYPICAL HEIGHT AND 600mm IS USED IN ORDER TO AVOID COINCIDENCE BETWEEN SAFETY HOOPS AND WALL BRACKETS.) EXCEPT FOR THE TWO TOPMOST SPACES (715mm & 900mm) WHICH HAVE FIXED HEIGHTS.
6. THE TOTAL NUMBER OF SPACES ("W") BETWEEN SAFETY HOOPS ARE DEPENDENT ON THE LENGTH OF "C".

No.	DATE	REVISION	CONSULT. ENG.
V1	23/11/2023	ORIGINAL VERSION	

CONSTRUCTION RECORD (AS-BUILT)

WORKS CONTRACT ENGINEER

Name :
Prof. Reg. No. :
Date :

SANRAL PROJECT MANAGER

Name :
Date :

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Pretoria
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South Africa

Tel: (012) 844 8000

SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
Reg No. 1998/009884/30
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

WESTERN REGION
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Oakdale
Bellville
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Private Bag X19
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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
THE CAPACITY IMPROVEMENT OF THE NATIONAL ROUTE 1 SECTION 1 FROM OLD OAK INTERCHANGE (KM 18.90) TO TO KOELENOFF INTERCHANGE (KM 33.00)

DRAWING DESCRIPTION
N1 - WEMMERSHOEK PIPELINE RELOCATION
SECTION A - KOELENHOF TO KRAAIFONTEIN
STANDARD DETAILS

SCALE : AS SHOWN | SHEET 1 OF 1

PROJECT NUMBER	N.001-010-2021/1	
DRAWING LOCATION DATA	START	END
ROUTE	N01	N01
SECTION	01	01
DRAWING km DISTANCE	18.90	33.00
DRAWING TYPE	ROADS-UTILITIES	
BRIDGE/STRUCTURE No.	-	
CONSULTANT DRAWING No.	312-0828-A-E04	VER
SANRAL DOCUMENT #	-	V1