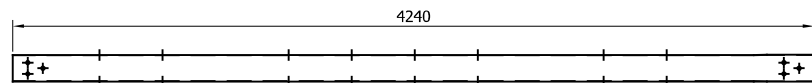
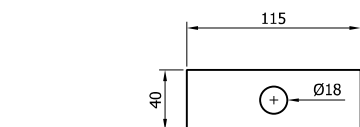


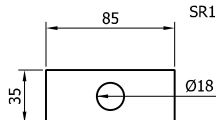
SR567 - SAFESTAR 431 TRI-WAVE BEAM



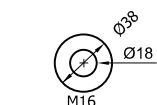
SR568 - SAFESTAR 431 TOP RAIL



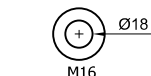
SR151 - WASHER PLATE
115x40x6 18Ø



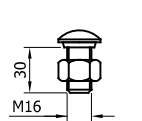
SR155 - WASHER PLATE
85x35x4 18Ø



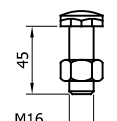
WASHER 18Ø HOLE
x 38 - SR209



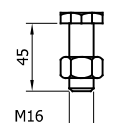
WASHER 18Ø HOLE
- SR300



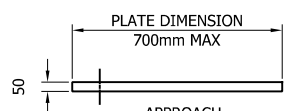
M16x30 PANHEAD
BOLT GRADE 8.8
SR207



M16x45 PANHEAD
BOLT GRADE 8.8
SR201

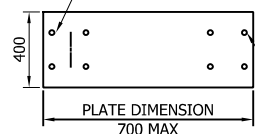


M16x45 HEXHEAD
BOLT GRADE 10.9
SR556



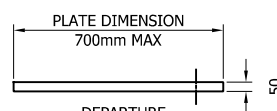
APPROACH
OFFSET POST

CAN BE FIXED WITH
CAST IN ANCHORS, DRILL
AND FIX ANCHORS OR
PUSHED IN ANCHORS
AT 180x180 CENTERS



*BASEPLATE DRILL
& TAPPED FOR
LIFTING EYE

4 No. THREADED
M20 HOLES



DEPARTURE
OFFSET POST

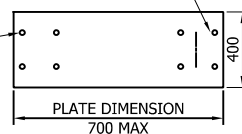
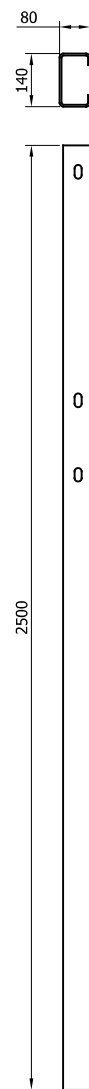
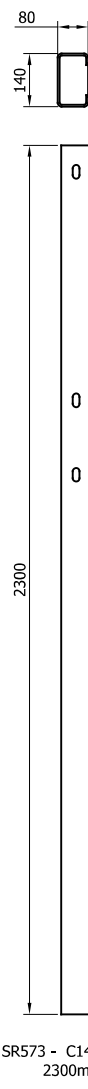


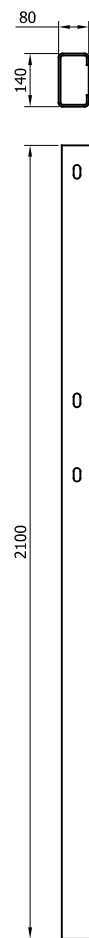
PLATE DIMENSION
700 MAX



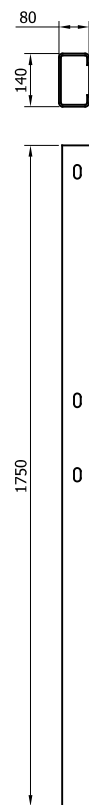
SR574 - C140 POST
2500mm



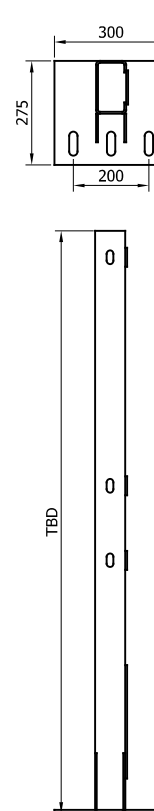
SR573 - C140 POST
2300mm



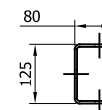
SR572 - C140 POST
2100mm



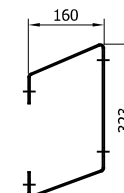
SR571 - C140 POST
1750mm



SR563 - SURFACE
MOUNTED C140 POST



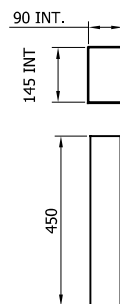
SR570 - TOP
RAIL BEAM
SPACER



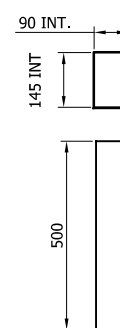
SR569 -
TRI-WAVE BEAM
SPACER



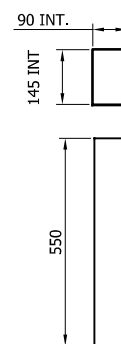
SR100 - A21
REINFORCING
RING



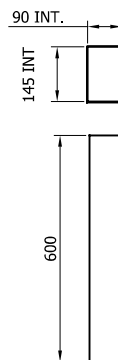
SR546 - C140
POST SOCKET
x 450



SR547 - C140
POST SOCKET
x 500



SR548 - C140
POST SOCKET
x 550



SR549 - C140
POST SOCKET
x 600

REVn	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	01/02/23	DRAWING CREATED	H.B

SAFESTAR 431 H4b W3 A

H4b W3A VEHICLE RESTRAINT
SYSTEM COMPONENTS SCHEMATIC



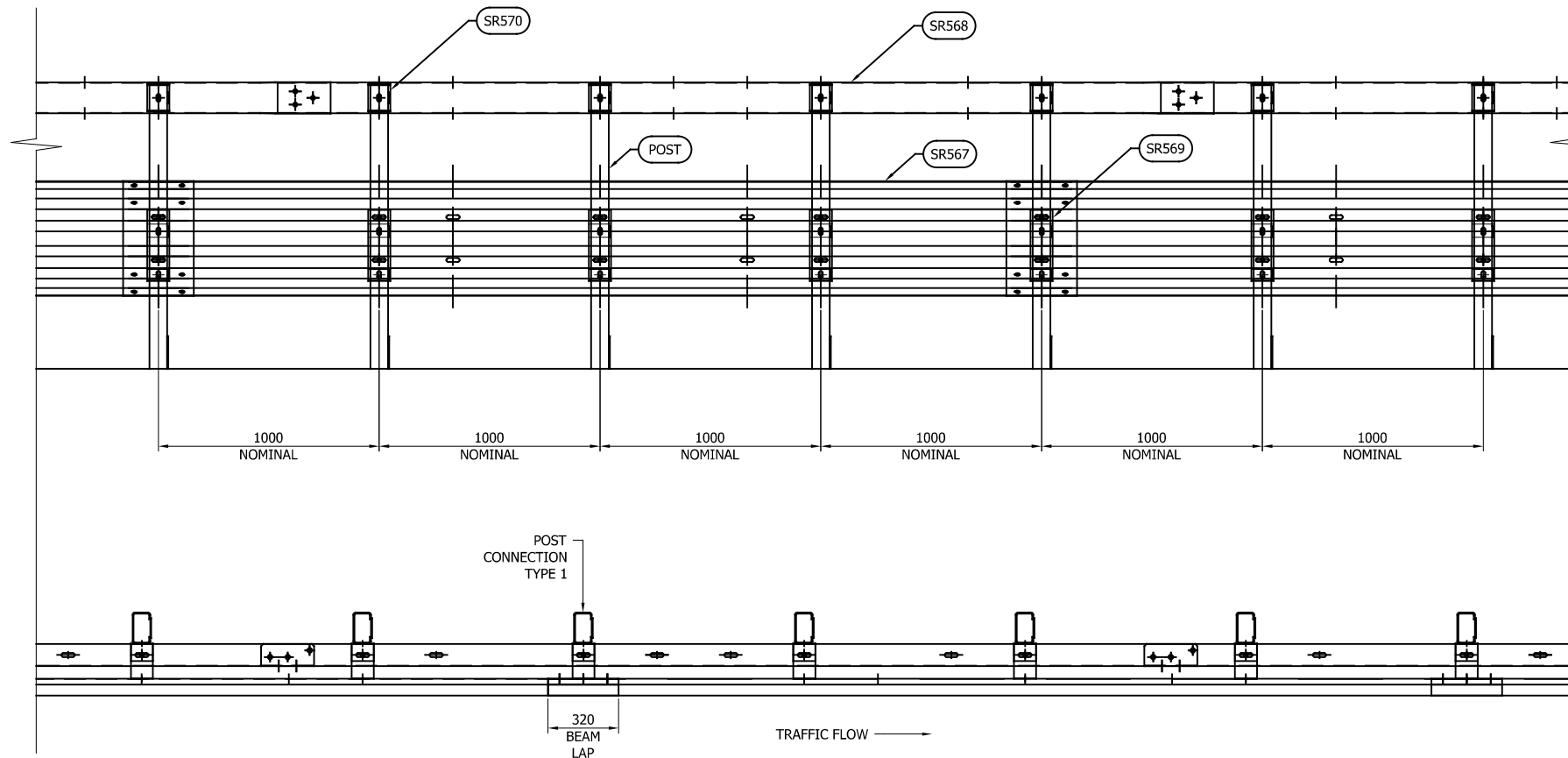
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:

MR-H4bW3-GA-00

REVn:

01

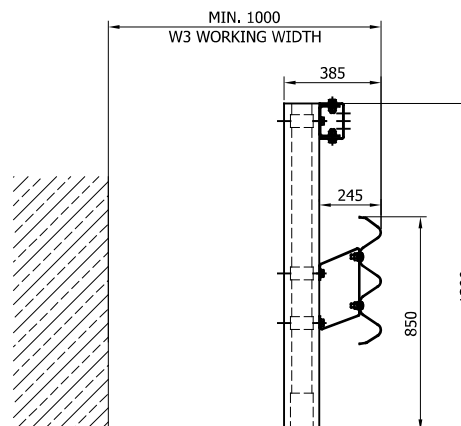


GENERAL NOTES:

1. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
2. FOR OPTIONS ON POST FOUNDATIONS REFER TO DRAWING NUMBERS: MR-GA-H4bW3-41/42/43/44
3. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
4. WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 125mm.
5. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.

TABLE 'A' - SYSTEM IDENTIFICATION SCHEDULE		
PART NUMBER	DESCRIPTION	QUANTITY'S PER 4M
SR567	TRI-WAVE BEAM	1
SR568	TOP RAIL	1
SEE TABLE 'B'	POST "C" 140	3
SR569	TRI-WAVE BEAM SPACER BRACKET	3
SR570	TOP RAIL SPACER BRACKET	3
FOR SCHEDULE OF BOLTED CONNECTIONS REFER TO DRAWING NUMBER MR-H4bW3-GA-02		

TABLE 'B' - SCHEDULE OF POST PART NUMBERS AND LENGTHS	
PART NUMBER	POST LENGTH
SR571	1750
SR572	2100
SR573	2300
SR574	2500
SR563	SURFACE MOUNTED POST



REVn	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	01/02/23	DRAWING CREATED	H.B

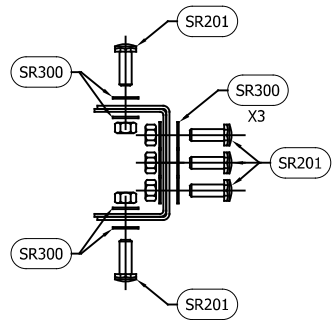
SAFESTAR 431 H4b W3 A

H4b W3 VEHICLE RESTRAINT SYSTEM
ASSEMBLY AND SETTING OUT
ARRANGEMENT

SAFEROAD

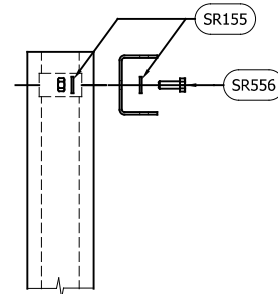
CONCORD HOUSE,
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NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER: **MR-H4bW3-GA-01** REVn: **01**



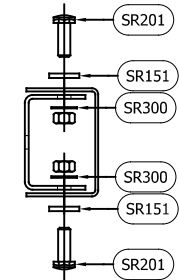
TOP RAIL LAP
CONNECTION
(1No. CONNECTION P/RAIL END)

QUANTITIES PER RAIL REQUIRED		
PART NUMBER	DESCRIPTION	QUANTITY
SR201	M16x45 PANHEAD GRADE 8.8 C/W NUT	5
SR300	M16 WASHER 18Ø HOLE X 30o/d	10



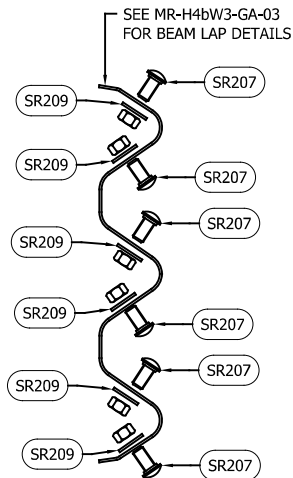
TOP RAIL BRACKET TO
POST CONNECTION

QUANTITIES PER POST REQUIRED		
PART NUMBER	DESCRIPTION	QUANTITY
SR556	M16x45 HEXHEAD GRADE 10.9 C/W NUT	1
SR155	M16x85x35x4 WASHER PLATE	2



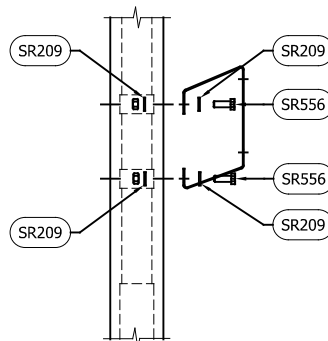
TOP RAIL BRACKET TO RAIL
CONNECTION

QUANTITIES PER POST REQUIRED		
PART NUMBER	DESCRIPTION	QUANTITY
SR201	M16x45 PANHEAD GRADE 8.8 C/W NUT	2
SR151	M16x115x40x6 WASHER PLATE	2
SR300	M16 WASHER 18Ø HOLE X 30o/d	2



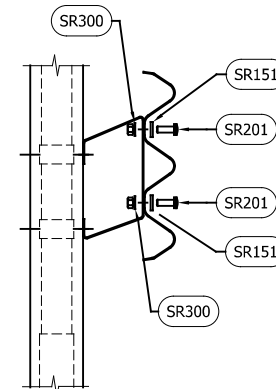
TRI-WAVE BEAM LAP
CONNECTION
(1No. CONNECTION P/BAM END)

QUANTITIES PER BEAM REQUIRED		
PART NUMBER	DESCRIPTION	QUANTITY
SR207	M16x30 PANHEAD GRADE 8.8 c/w NUT	12
SR209	M16 WASHER 18Ø HOLE x 38o/d	12



TRI-WAVE BEAM SPACER
TO POST CONNECTION

QUANTITIES PER POST REQUIRED		
PART NUMBER	DESCRIPTION	QUANTITY
SR556	M16x45 HEXHEAD GRADE 10.9 C/W NUT	2
SR209	M16 WASHER 18Ø HOLE X 38o/d	2



TRI-WAVE BEAM SPACER
TO BEAM CONNECTION

QUANTITIES PER POST REQUIRED		
PART NUMBER	DESCRIPTION	QUANTITY
SR201	M16x45 PANHEAD GRADE 8.8 C/W NUT	2
SR151	M16x115x40x6 WASHER PLATE	2
SR300	M16 WASHER 18Ø HOLE X 30o/d	2

REVn	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	01/02/23	DRAWING CREATED	H.B

SAFESTAR 431 H4b W3 A

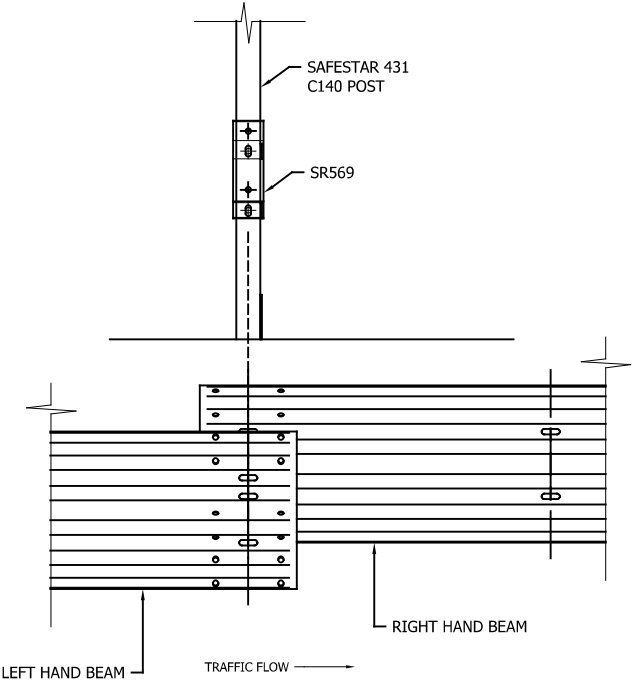
H4bW3 VEHICLE RESTRAINT SYSTEM
BOLTING ARRANGEMENTS



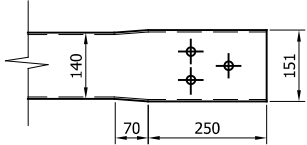
CONCORD HOUSE,
BESSEMER WAY, SCUNTHORPE,
NORTH LINCOLNSHIRE, DN15 8XE
t: 01724 289119
FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:	REVn:
MR-H4bW3-GA-02	01

- GENERAL NOTES:
1. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.

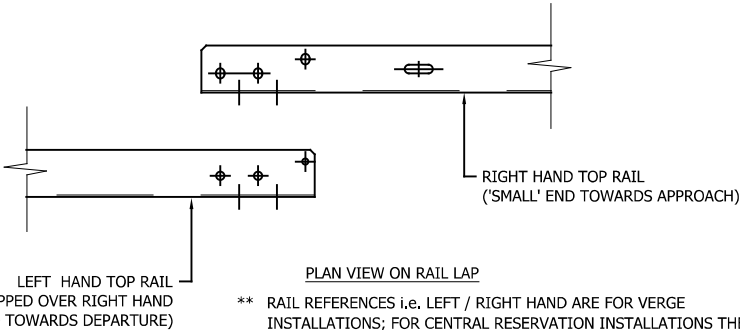


** BEAM REFERENCES i.e. LEFT / RIGHT HAND ARE FOR VERGE INSTALLATIONS; FOR CENTRAL RESERVATION INSTALLATIONS THE REFERENCES ARE REVERSED



PLAN VIEW ON RAIL END

** NOTE: TOP RAIL IS TAPERED AT DEPARTURE END. SEE ABOVE DETAIL.



** RAIL REFERENCES i.e. LEFT / RIGHT HAND ARE FOR VERGE INSTALLATIONS; FOR CENTRAL RESERVATION INSTALLATIONS THE REFERENCES ARE REVERSED

REVn	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	01/02/23	DRAWING CREATED	H.B

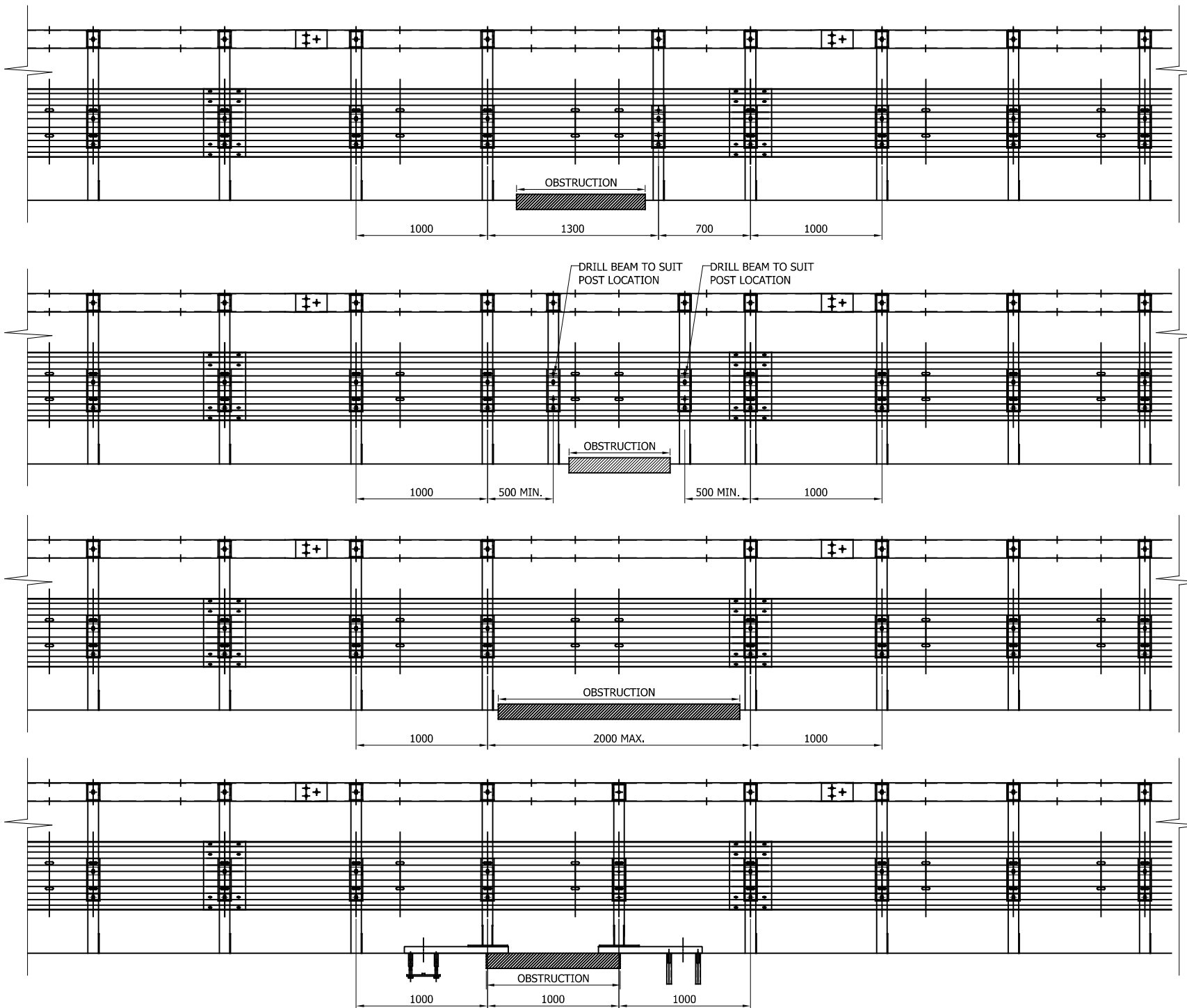
SAFESTAR 431 H4b W3 A

H4bW3 VEHICLE RESTRAINT SYSTEM.
BEAM LAPPING DETAIL



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DRAWING NUMBER:	REVn:
MR-H4bW3-GA-03	01



GENERAL NOTES:

1. IF THE SITE CONDITIONS DO NOT ALLOW A POST TO BE INSTALLED ON THE SYSTEM PITCH DEVIATIONS CAN BE APPLIED. THE OBSTRUCTED POST CAN BE LEFT OUT AND EXTRA POSTS INSTALLED TO SPAN THE OBSTRUCTION AS PER THIS DRAWING. ALTHOUGH IT WOULD BE BENEFICIAL TO USE THE HOLES ALREADY IN THE BEAM IT IS ACCEPTABLE TO DRILL NEW HOLES IN THE DESIRED POSITIONS AND TREAT WITH ZINC RICH PAINT.
2. OFFSET POSTS SHOWN ON DRAWING MR-H4bW3-GA-00 CAN BE USED.
3. IF SITE CONDITIONS DO NOT ALLOW REGULAR DISTANCE BETWEEN THE POSTS, POSTS CAN BE SHIFTED BY 300MM. ALTERED POST CENTRES MUST NOT BE WITHIN A BEAM LAP OR TOP RAIL LAP BAY
4. IF IT IS NOT POSSIBLE TO USE THE SOLUTION DESCRIBED IN NOTE 3, THE POST SPACING CAN BE REDUCED WITH AN ADDITIONAL POST. THE MINIMUM DISTANCE OF 500MM BETWEEN POSTS MUST BE OBSERVED.
5. IF IT IS NOT POSSIBLE TO USE THE SOLUTION DESCRIBED IN NOTE 4, IN EXCEPTIONAL CASES, THE POST DISTANCE CAN BE EXTENDED TO 2M.

REV	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	01/02/23	DRAWING CREATED	H.B

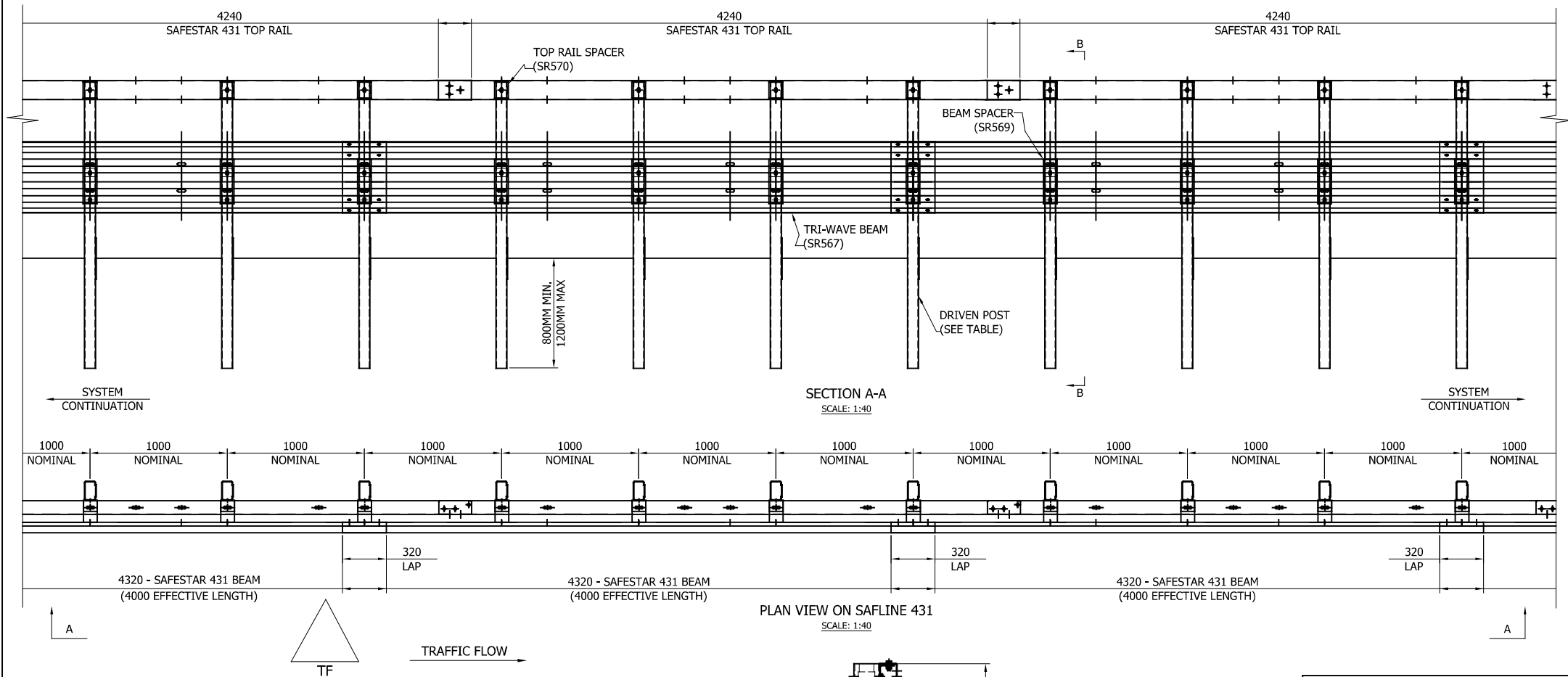
SAFESTAR 431 H4b W3 A

H4bW3 VEHICLE RESTRAINT SYSTEM
DEVIATION SETTING OUT
ARRANGEMENT

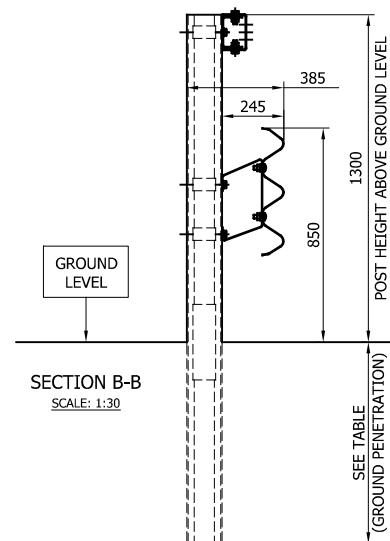


CONCORD HOUSE,
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john.cudlipp@saferoad.co.uk

DRAWING NUMBER:	REV:
MR-H4bW3-GA-40	01



PLAN VIEW ON SAFELINE 431
SCALE: 1:40



SECTION B-B
SCALE: 1:30

DRIVEN POST LENGTHS		
PART NUMBER	POST LENGTH	GROUND PENETRATION
SR572	2100	800
SR573	2300	1000
SR574	2500	1200

GENERAL NOTES:

1. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
2. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
3. WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 125mm.
4. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.
5. DRIVEN POSTS TO BE PROVIDED AT LENGTH THAT SUITS CONTRACT REQUIREMENTS

SAFESTAR 431 H4b W3 A

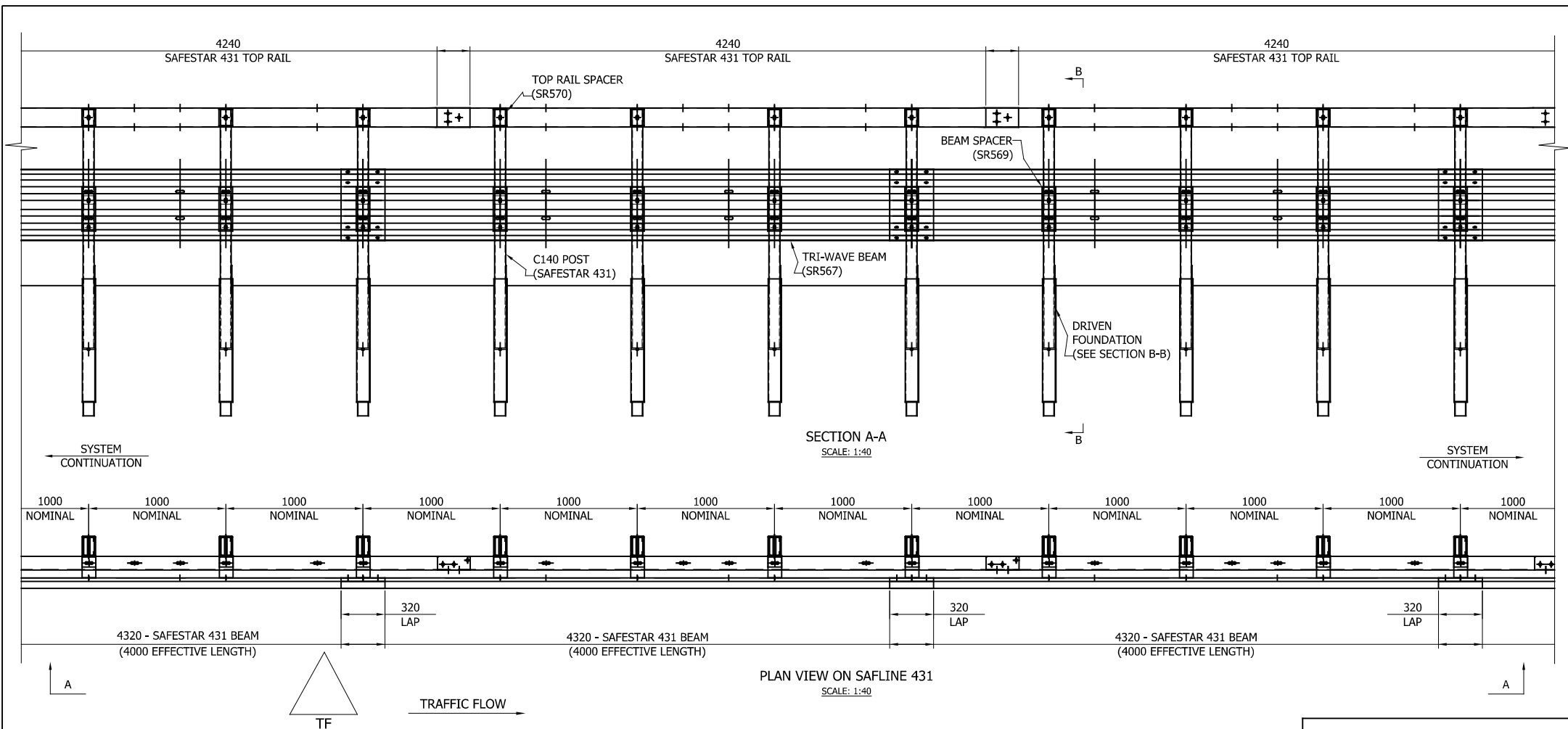
H4bW3 VEHICLE RESTRAINT SYSTEM
DRIVEN POST GENERAL DETAILS



CONCORD HOUSE,
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REV#	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	23/03/23	DRAWING CREATED	H.B

DRAWING NUMBER:	REV#:
MR-H4bW3-GA-41	01



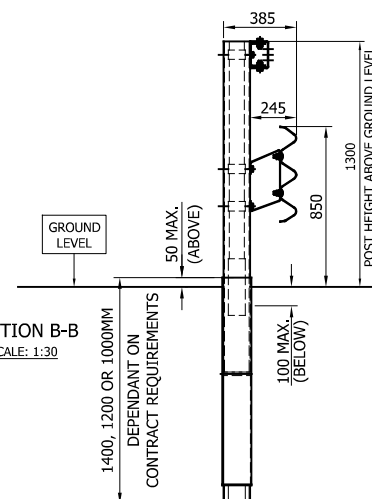
GENERAL NOTES:

1. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
2. WHEN TYING INTO ADJACENT VRS ONLY ONE WORKING WIDTH DIFFERENCE IS PERMITTED.
3. WHERE A KERB IS PRESENT THE MAXIMUM KERB HEIGHT IS 125mm.
4. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.
5. DRIVEN FOUNDATIONS TO BE PROVIDED AT LENGTH THAT SUITS CONTRACT REQUIREMENTS

LIMITS ON FOUNDATION
(WITH GROUND LEVEL AS 0MM DATUM)

ABOVE GROUND LEVEL: +50MM
BELOW GROUND LEVEL: -100MM

SECTION B-B SCALE: 1:30



REV	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	23/03/23	DRAWING CREATED	H.B

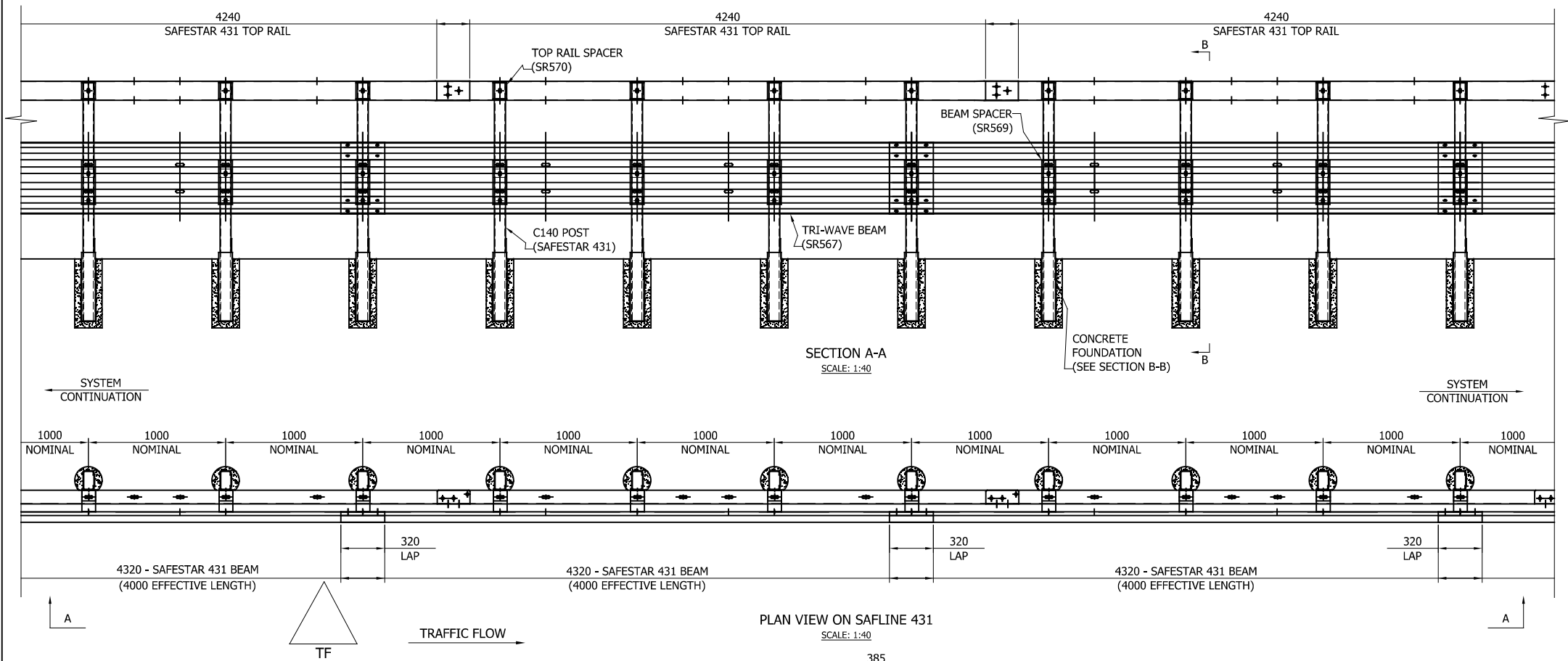
SAFESTAR 431 H4b W3 A

H4bW3 VEHICLE RESTRAINT SYSTEM
DRIVEN FOUNDATION GENERAL
DETAILS



CONCORD HOUSE,
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t: 01724 289119
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john.cudlipp@saferoad.co.uk

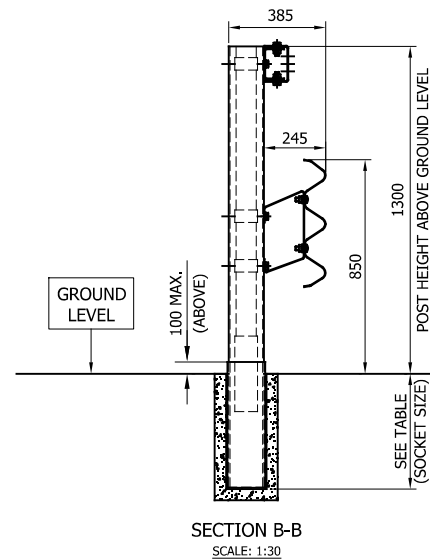
DRAWING NUMBER:	REV:
MR-H4bW3-GA-42	01



GENERAL NOTES:

1. POSTS ARE TO BE INSTALLED WITH THE CLOSED FACE OF THE CHANNEL TOWARDS THE ON-COMING TRAFFIC.
2. FOR MINIMUM LENGTH OF FULL HEIGHT VRS REFER TO SAFEROAD MEGARAIL MANUAL.
3. WHERE A KERB IS PRESENT, THE MAXIMUM KERB HEIGHT IS 125mm
4. CONCRETE TO BE DESCRIBED MIX ST5 OR C20/C25. STRONGER GRADES OF STRUCTURAL CONCRETE ARE ACCEPTABLE
5. SOCKETS MAY BE INSTALLED FLUSH WITH THE TOP OF CONCRETE, HOWEVER THE PROTRUSION SHOULD NOT EXCEED 100mm.
6. MINIMUM SOCKET AND OR POST EMBEDMENT IS 350MM

SOCKET LENGTHS		
PART NUMBER	SOCKET LENGTH	SOCKET SIZE
SR546	450	145x90 (INTERNAL)
SR547	500	145x90 (INTERNAL)
SR548	550	145x90 (INTERNAL)
SR549	600	145x90 (INTERNAL)



REVn	DATE	DETAILS	INITIAL
01	15/07/24	DRAWING UPDATED	H.B
00	23/03/23	DRAWING CREATED	H.B

SAFESTAR 431 H4b W3 A

H4bW3 VEHICLE RESTRAINT SYSTEM
CONCRETE FOUNDATION GENERAL DETAILS



CONCORD HOUSE,
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NORTH LINCOLNSHIRE, DN15 8XE
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FOR TECHNICAL ASSISTANCE CONTACT
john.cudlipp@saferoad.co.uk

DRAWING NUMBER:	MR-H4bW3-GA-43	REVn:	01
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